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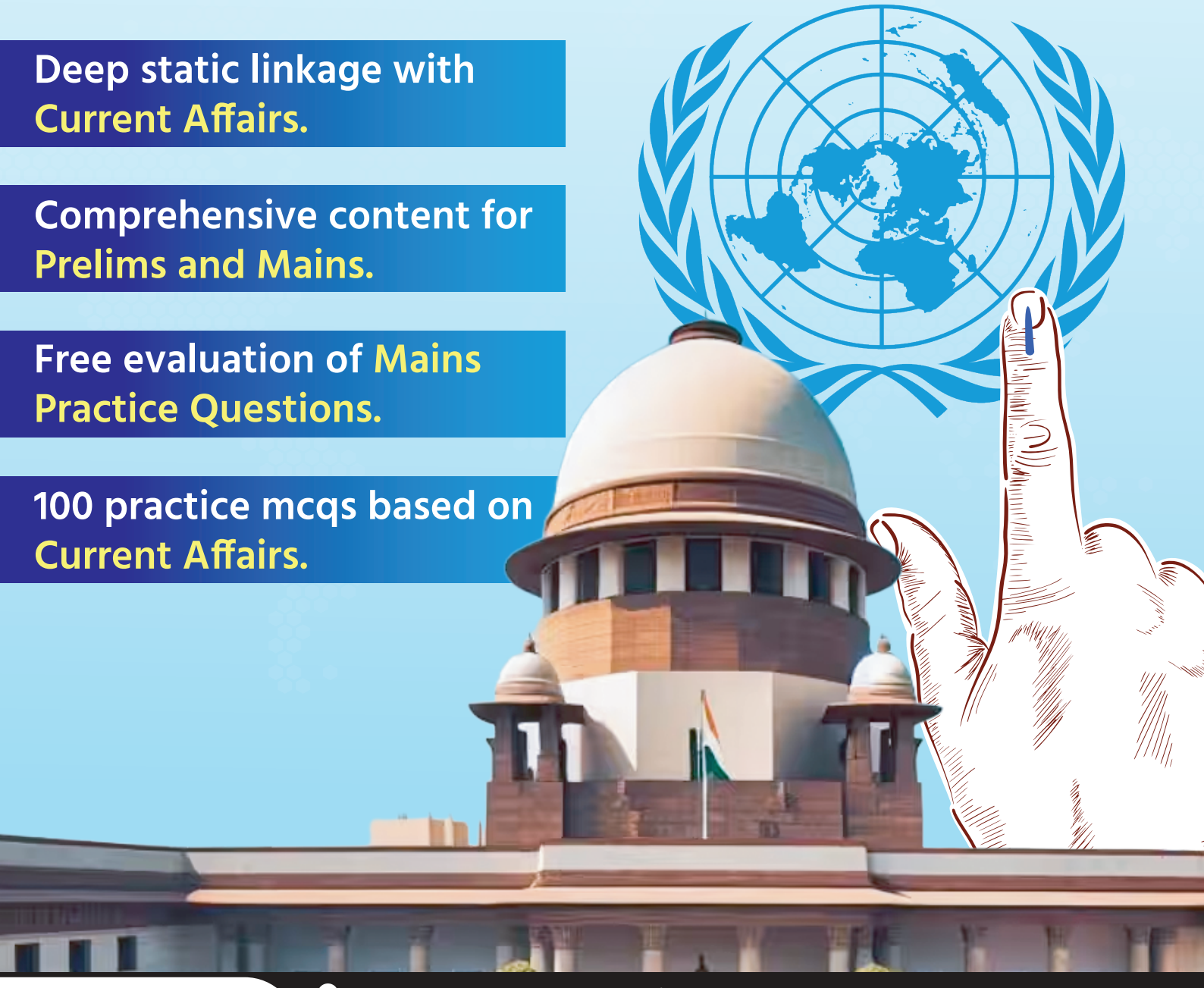
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POLITY AND GOVERNANCE

1. RIGHT TO VOTE

Why in News

The Supreme Court upheld the ECI's authority to conduct **Special Intensive Revision (SIR)** and verify voter eligibility, subject to procedural safeguards, including notice, hearing and appeal. The ruling also renewed discussions on the legal status of voting rights.

Democratic Role and Constitutional Status

Voting translates **popular sovereignty into representative government**, enabling citizens to shape public policy and hold rulers accountable. Voting is not expressly recognised as a standalone fundamental right.

Constitutional Basis	• **Article 325:** Prohibits exclusion from electoral rolls solely on grounds of **religion, race, caste or sex**. • **Article 326:** Provides **universal adult suffrage** for Lok Sabha and State Assembly elections, subject to prescribed disqualifications. • **61st Constitutional Amendment Act, 1988** reduced the voting age from **21 to 18 years**.
Legal Basis	• **Section 16, RPA, 1950:** Disqualifies **non-citizens**, persons declared of **unsound mind** by a **competent court**, and persons disqualified under laws concerning corrupt practices or electoral offences. • **Section 62, RPA, 1951:** Governs voting by **registered electors**, subject to statutory restrictions, and prohibits multiple voting. • **Section 62(5), RPA, 1951:** Bars voting by persons confined in prison or held in lawful police custody; **preventive detainees are exempt**.
Judicial Interpretation	• In **Rajbala v. State of Haryana (2015)**, the Supreme Court described the rights to **elect and be elected as constitutional rights**.

Arguments for Fundamental-Right Status

- **Direct remedy:** Voting is currently a **legal right**, not a Fundamental Right **(Kuldip Nayar, 2006).** If it becomes a Fundamental Right, voters **who are wrongly denied the right to vote** can directly approach the Supreme Court under Article 32.
- **Consistency with case law: PUCL (2003)** treated casting a vote as expression under **Article 19(1)(a)**, so the right to vote itself also deserves equal protection.
- **Inclusion of migrants:** About **45.36 crore internal migrants** (Census 2011) often cannot vote where they work. A Fundamental Right would push the State to offer options such as the ECI's proposed **Remote EVM**.
- **Global practice: South Africa (Section 19)** and **Canada (Section 3)** guarantee the right to vote in their constitutions, and India is bound by **International Covenant on Civil and Political Rights (ICCPR) Article 25**.
- **Safeguard during roll revisions:** Bihar's **2025 Special Intensive Revision** left about **65 lakh names off the draft roll**. A Fundamental Right would require every deletion to be fair and proportionate.

CONSTITUENT ASSEMBLY VIEWS

- **B. R. Ambedkar:** Every eligible adult should have the **right to vote**, without exclusion due to prejudice or arbitrary official decisions.
- **Brajeshwar Prasad:** Opposed giving **all adults the vote**, arguing that political awareness was necessary to exercise it meaningfully.

Arguments Against Fundamental-Right Status

- **Already protected: Articles 325 and 326** already guarantee non-discriminatory adult suffrage; the gaps lie in implementation.
- **Risk of delaying elections: Article 329(b)** and ***N.P.Ponnuswami (1952)*** limit election disputes to election petitions. Direct writ petitions over roll entries could stall elections.
- **Valid restrictions at risk:** Age and residence conditions, the ban on double registration, and the bar on voting from prison (**Section 62(5), RPA 1951**) could face repeated challenges.
- **Less legislative flexibility:** Under **Article 327**, Parliament can quickly reform electoral law, as it did with the **four qualifying dates for enrolment in 2021**.

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- **Does not solve turnout:** Turnout in **2024 was 65.79%**. Migration, distance and low awareness need administrative solutions, not a change in legal status.

Way Forward

- **Strengthen the statute first:** Give **notice, a hearing and a written reason** for every deletion a legal requirement under the RPA 1950, with action taken against officials for wrongful removals.
- **Portable voting:** Pilot **remote voting for domestic migrants**, building on the **Electronically Transmitted Postal Ballot System (ETPBS) postal ballots** already used by service voters.
- **Fast-track roll disputes:** Set up time-bound appeals before electoral rolls are frozen for an election, so wrongly excluded voters are restored before polling day.

BEST GLOBAL PRACTICES

- **Individual protection South Africa's Section 19** protects every adult citizen's voting right-supporting protection of individuals irrespective of whether their exclusion changes the result.
- **Institutional trust: Australia's direct-enrolment system uses verification and advance notification**, illustrating how transparent procedures can strengthen confidence.

- **Voluntary and secure data linkage:** Keep **Aadhaar-voter ID linkage voluntary**, as the ECI told the Supreme Court in 2023, and follow ***Puttaswamy (2017)*** on using voter data lawfully and proportionately.
- **Accessible voting:** Expand **home voting**, the **Saksham app** and booth-level support so that voters who are elderly, disabled or living far away can actually vote.

Conclusion

A right that works in practice, backed by strong legal safeguards and quick remedies, may achieve more than a constitutional amendment alone.

PYQ ESSENTIALS

Q. Right to vote and to be elected in India is a **(UPSC-2017)**

(a) Fundamental Right (b) Natural Right (c) Constitutional Right (d) Legal Right

2. DELIMITATION OF CONSTITUENCIES

Why in News?

The **Constitution (131st Amendment) Bill, 2026** proposed raising the maximum strength of the Lok Sabha from **550 to 850 seats**. However, the bill was **defeated in the Lok Sabha in April 2026**.

Delimitation

- **Meaning:** Redrawing **Lok Sabha and State Assembly constituency boundaries** based on population.
- **Constitutional basis: Article 82** for Lok Sabha; **Article 170** for State Assemblies.
- **Census basis:** Inter-state seat allocation uses **1971 Census**; the last nationwide boundary revision used **2001 Census**.
- **Seat freeze: 84th Amendment** extended it until publication of the **first post-2026 Census figures**; **87th Amendment** allowed boundary revision using the 2001 Census.

Delimitation Commission

- **Statutory body**: **Under article 82 and delimitation act provided provision to** constitute this by the Central Government; comprises
  - A serving/retired Supreme Court judge as Chairperson.
  - CEC or nominated Election Commissioner.
  - Concerned State Election Commissioner**.**
- **Judicial Review of Delimitation Orders: Article 329(a)** and **Section 10(2), Delimitation Act, 2002** bar court challenges to published orders, which have the **force of law**.
  - However, **Kishorchandra Rathod (2024)** recognised **limited judicial review under Article 226** for manifest arbitrariness or mala fide exercise of power.
  - **Powers:** Demarcates constituencies and identifies seats reserved for **SCs/STs**.

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- **Legislative Scrutiny Without Modification:** Under **Section 10(3)**, published orders are laid before the **Lok Sabha and concerned State Assemblies**, which **cannot modify them**. Legislative approval is not required.
- **Commissions constituted : 1952, 1963, 1973 and 2002.**

Major Challenges

- **Too many voters per MP:** India had about **98 crore voters and 543 seats in 2024**, so each MP represents about **18 lakh voters** on average. That makes it hard for an MP to stay in touch with people and resolve their problems.
- **Unequal seat sizes: Malkajgiri (Telangana)** has about **37.8 lakh voters**, while **Lakshadweep** has about **58,000**. A vote in a small seat therefore carries far more weight than one in a large seat.
- **North-South imbalance:**
  - If seats were allocated by current population, States with high population growth would gain the most.
  - A **Carnegie Endowment (2019)** projection for an **848-seat House** gave **Uttar Pradesh 143** and **Bihar 79** seats, while **Keralam stayed at 20**.
  - This would effectively penalise States that controlled their population.
- **Trust deficit between States:** The 131st Amendment Bill failed amid objections from **southern and north-eastern States**, which feared their voice in Parliament would shrink.
- **Women's reservation is delayed:** Under the **106th Amendment (2023)**, **one-third of seats are reserved for women** only after a fresh delimitation. Any delay in delimitation also delays women's reservation.
- **Old population data:** The **2021 Census was postponed**, so constituencies still rest on **2001 data** and do not reflect migration or the growth of cities.
- **Weak debate in Parliament:** A bigger House is of little use if debate is poor. In the **17th Lok Sabha**, **Question Hour ran for only about 60%** of its scheduled time, and **only 16% of Bills were sent to committees** for detailed examination.

Way Forward

- **Build consensus first:**
  - Discuss the issue with all States through the **Inter-State Council** and an **all-party meeting** before bringing the Bill back.
  - Such an amendment needs a **special majority in both Houses** and, because it changes States' representation in Parliament, **approval by at least half of the State Legislatures** (Article 368).
- **No State should lose seats:**
  - Increase the total size of the Lok Sabha so that every State **keeps at least its present number of seats**, and share the new seats fairly.
  - The **new Lok Sabha chamber already has 888 seats**.
- **Learn from Europe:** The **European Parliament** follows **degressive proportionality**: every member country gets at least **6 seats** and no country more than **96**, so smaller units are not overshadowed.
- **Reward population control:** Compensate States that controlled population growth through financial transfers. For example, the **15th Finance Commission** gave **12.5% weight to demographic performance** when sharing taxes.
- **Use fresh data and listen to people:**
  - Base seat allocation on **Census 2027**, not old figures.
  - Hold **public hearings on draft proposals**, as the **2002 Commission** did.
- **Make Parliament work better:**
  - The **NCRWC** recommended **120 sitting days a year** for the Lok Sabha, whereas the 17th Lok Sabha averaged only about **55**.
  - Send all major Bills to committees.

Conclusion

Delimitation has to balance two ideas: **'one person, one vote'** and **fairness to every State**. A process built on consensus and fresh data, which does not penalise States for controlling population and comes with a Parliament that has the time and committees to debate properly, can make representation both fairer and more meaningful.

PYQ ESSENTIALS

Q. How many Delimitation Commissions have been constituted by the Government of India till December 2023? **(UPSC-2024)**

(a) One (b) Two (c) Three (d) Four

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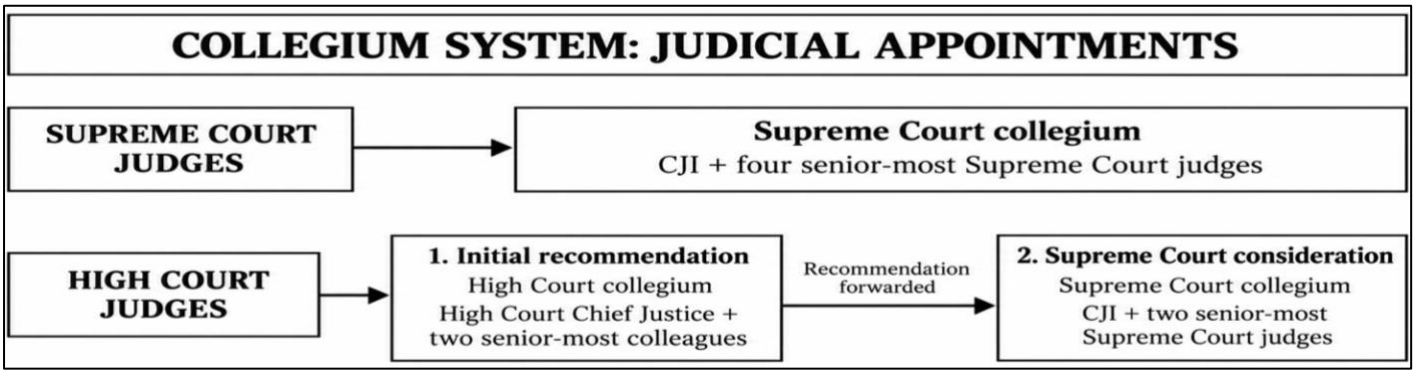
3. COLLEGIUM SYSTEM

Why in News

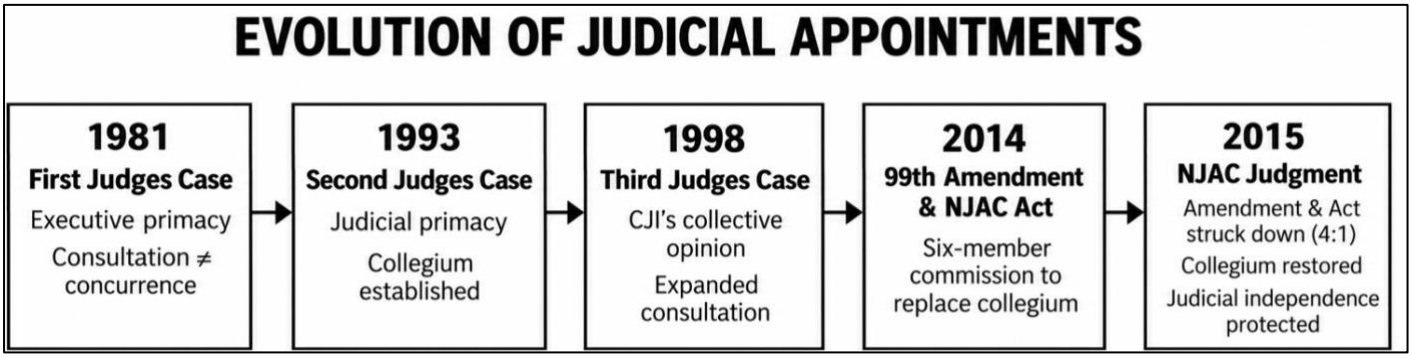
Justice Sanjay Kishan Kaul's remarks on alleged pre-collegium consultations with the Centre have renewed debate on transparency and collective decision-making in judicial appointments.

About Collegium System

- The Supreme Court developed the **Collegium System** through its interpretation of the Constitution. Under this system, senior judges recommend who should be appointed to the Supreme Court and High Courts and which High Court judges should be transferred. **Articles 124(2) and 217(1)** govern appointments to the Supreme Court and High Courts, respectively, while **Article 222(1)** governs transfers between High Courts.



- **President makes the formal appointment**; executive authorities provide inputs and process recommendations.



Major Challenges

1. Lack of transparency:

- Since October 2017, collegium decisions have been published **online but rarely explain** candidate **comparisons or reasons for rejection.**

2. Informal pre-consultation:

- If names are informally agreed upon in advance, the collegium may lose the **collective discussion** that the Third Judges Case requires.
- Recent allegations of this kind should be treated as **claims, not proven facts**.

3. "Uncle judge" syndrome:

- This is the concern that relatives of sitting or former judges get preference over equally capable outsiders.
- The **Law Commission's 230th Report (2009)** flagged it. It hurts **merit, equal opportunity and public trust**.

4. Delays after recommendation:

- Even after the collegium recommends a name, the government can take a long time to act on it.
- A **parliamentary reply in August 2024** showed **24 collegium recommendations** still pending.

5. Few women judges: 406 candidates recommended for High Courts between November 2022 and May 2025**, only** 34 were women (about 8.4%)**.**

6. No proper support system:

- In **December 2015**, the Supreme Court said the system needed a **permanent secretariat** and a **complaints mechanism**.
- The **Memorandum of Procedure (MoP)**, the rulebook for appointments, is still **not finalised**.

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Judicial Appointment Processes in India and the United States

Feature	India	United States
Selection system	Judicial collegium	Presidential nomination and Senate confirmation
Who recommends?	**CJI and four senior-most Supreme Court judges**	**President** nominates
Formal appointment	President appoints through the constitutional process	President appoints after **Senate approval by simple majority**
Legislature's role	No confirmation hearing or vote	**Senate Judiciary Committee hearings**, followed by Senate consideration
Transparency	Selected resolutions published; deliberations confidential	Public hearings and recorded confirmation votes
Tenure	Retirement at **65 years**	Life tenure during **good behaviour**; no compulsory retirement age.
Removal	President removes for **proved misbehaviour or incapacity**, following an address by each House supported by a **majority of its total membership and two-thirds present and voting.**	**House of Representatives impeaches**; **Senate convicts by two-thirds of members present**, resulting in removal

Way Forward

- **Strengthen collective decisions:** Record **each member's views in writing**, as the Third Judges Case (1998) requires, so that decisions are truly collective.
- **Finalise the rulebook (MoP):** Set **clear timelines** and a fair process for handling objections.
  - In **April 2021**, the Supreme Court said that if the collegium **unanimously repeats** a recommendation, the government should appoint the judge within **3-4 weeks**.
- **Set up a permanent secretariat:** It would maintain a **database of candidates** and **verify their records**, as the Supreme Court suggested in **December 2015**.
- **Give reasons, while respecting privacy:** Build on the **2017 practice** of publishing decisions by also explaining **why** a candidate was chosen, without revealing personal details.
- **Widen the talent pool:** Actively consider **women and other under-represented groups**; only **34 of 406** recent High Court recommendations were women.
- **Reform within constitutional limits:** Any new appointments commission must address the concerns raised in the **2015 NJAC judgment** and protect **judicial independence**, which is part of the basic structure.

Conclusion

The **NJAC judgment (2015)** confirmed that judicial independence cannot be compromised. The goal now is not to replace the collegium hastily but to **improve it** with more transparency, written collective decisions and timely appointments, so that people trust both the judges and the process that selects them.

PYQ ESSENTIALS

Q. Consider the following statements **(UPSC-2019)**

1. The 44th Amendment to the Constitution of India introduced an Article placing the election of the Prime Minister beyond judicial review.
2. The Supreme Court of India struck down the 99th Amendment to the Constitution of India as being violative of the independence of judiciary.

Which of the statements given above is/are correct?

(a) 1 only (b) 2 only (c) Both 1 and 2 (d) Neither 1 nor 2

Q. Discuss the evolution of collegium system in India. Critically examine the advantages and disadvantages of the system of appointment of the Judges of the Supreme Court of India and that of the USA. **(UPSC-2025)**

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4. INTER-STATE COUNCIL (ISC)

Why in News

Renewed debate over delimitation **(After the 131st Amendment Bill's defeat in April 2026)** and Centre-State consultation has revived calls to convene the Inter-State Council (ISC), which last met in July 2016.

Constitutional and Institutional Framework

- **Constitutional basis: Article 263** empowers the President to establish an Inter-State Council (ISC) for intergovernmental consultation and coordination.
- **Establishment:** Set up on **28 May 1990** through a **Presidential Order**, following the **Sarkaria Commission's recommendation**.
- **Chairperson: Prime Minister**.
- **Members:**
  - Chief Ministers of States and UTs with legislatures.
  - Administrators of other UTs.
  - Governors of states under President's Rule.
  - Nominated Union Cabinet Ministers.
- **Mandate:** Article 263 permits inquiry into and advice on inter-State disputes; however, the **1990 Council's assigned mandate focuses on discussing common interests and coordinating policy and action**.
- **Nature and powers:** An **advisory body** without adjudicatory powers; its recommendations are not binding, and it does not replace courts or tribunals.
- **Procedure:** Meetings are held **in camera**, and decisions are taken by **consensus**.
- **Standing Committee:** Established in **1996** and chaired by the **Union Home Minister**.

Major Challenges

- **Irregular meetings:** The **11th meeting in July 2016 followed a nearly ten-year gap**,(**MHA Annual Report 2024-25**) weakening regular consultation.
- **Limited autonomy:** The Secretariat sits inside the **Union Home Ministry**, which raises doubts about whether the agenda gives States' concerns equal weight.
- **Weak follow-through:** Despite Standing Committee of Inter-state-council scrutiny in **2017-2018**, the **273 Punchhi recommendations (2010)** still awaited updated State/UT comments for full Council consideration**(MHA Annual Report 2024-25)**
- **Political friction:** Governor-State disputes make **consensus harder**. An example is the Supreme Court's **April 2025 ruling on 10 Bills** withheld by the Tamil Nadu Governor.
- **Overlapping platforms:** Zonal Councils have met **137 times,** against just **11 ISC meetings (MHA Annual Report 2024-25).** This leaves national-level consultation thin and fragmented.

Way Forward

- **Ensure regular consultation:** Follow the **three-meetings-a-year requirement**, circulating agendas in advance so States can prepare informed positions and resolve differences before they escalate.
- **Strengthen institutional capacity:** Give the ISC Secretariat **(set up in 1991)** dedicated research staff and more autonomy. This would help it assess proposals, preserve institutional memory and track decisions.
- **Give States an effective voice:** Develop agendas jointly with States and consider their proposals within fixed timelines, reflecting the **Punchhi Commission's emphasis on meaningful State consultation**.
- **Build consensus before major reforms:** Use **Article 263's consultation framework** to discuss delimitation and other federal reforms early, allowing State concerns to shape policy before decisions are finalised.
- **Connect regional and national deliberations:** Refer unresolved issues of national importance from **Zonal Councils** to the **Inter-State Council (ISC)** and use their **shared secretariat (since 2011)** to coordinate action, monitor progress and ensure accountability.

Conclusion

Regular **ISC meetings under Article 263**, **State-led agendas** and timely **Action Taken Reports** can turn consultation into effective coordination. Sustained political engagement is essential to build consensus on **delimitation and other federal reforms**.

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5. ELECTORAL INTEGRITY IN INDIA

Why in News

The ECI allowed voters removed from draft rolls during the SIR to re-apply using **Form 6** without facing prosecution. This followed Supreme Court observations on a PIL alleging mass deletions in Maharashtra.

Electoral Integrity

- Free and fair elections form part of the basic structure of the Constitution. Their credibility rests on inclusive voter rolls, an independent Election Commission and transparent procedures that protect every eligible citizen's participation.

Why Electoral Credibility Matters?

- **Sovereignty of the people:** Article 81 provides for direct election of the Lok Sabha, and Article 75(3) makes the Council of Ministers collectively responsible to it. Thus, people choose the House, and the House holds the government accountable, giving real meaning to **"We, the People."**
- **Equal political voice:** Article 326 guarantees **universal adult suffrage,** extended to 18-year-olds by the **61st Amendment (1988).** Article 325 adds that no one can be left off the electoral roll only due to **religion, race, caste or sex,** upholding **"one person, one vote."**
- **Peaceful transfer of power:** As the ballot decides who governs, power changes without conflict, as seen in the smooth NDA-to-UPA transition in 2004.
- **No voter left behind:** In 2024, the ECI offered home voting to electors aged 85+ and persons with **40%+ benchmark disability,** making elections inclusive for those who cannot reach a booth.
- **Global democratic standing:** With 97.98 crore electors and 64.64 crore votes in 2024, India held the world's largest election. Its training institute, **IIIDEM,** also trains foreign election officials, adding to India's soft power.

Major Challenges

- **Exclusion risks: Bihar's August 2025** draft roll left out about 65 lakh names. This raised fears that genuine, eligible voters may have been dropped along with ineligible ones.
- **Delayed grievance redress:** In **West Bengal**, the final roll deleted **27.28 lakh voters** from the 'under adjudication' list after marking them '**not eligible',** and over 22 lakh appeals were filed by persons whose names were deleted. Yet as of August 7, 2026, tribunals had decided only about **2% of appeals,** leaving voters unsure if their **names will return in time.**
- **Procedural ambiguity:** New voters filing Form 6 during the SIR had to submit extra declarations. This raised questions on whether such conditions fit the existing electoral law.
- **Incorrect deletion requests:** In Aland (Karnataka), 6,018 Form 7 deletion applications were filed online, of which only 24 were genuine and 5,994 were rejected as incorrect. This shows how **bulk objections** can be misused to target real voters.
- **Digital bottlenecks:** Technical glitches have disrupted notices, hearings and restoration of names, slowing down electoral officers' work.
- **Data communication gaps:** In Maharashtra's 2024 Assembly polls, turnout stood at 58.22% at 5 p.m. but rose to 66.05% in the final figure. The unexplained gap between provisional and final data created public confusion and eroded trust.

Way Forward

- **Due process before deletion:** Give every voter notice and a hearing before deleting their name **(Section 22, RPA 1950),** and a right of appeal against the decision **(Section 24).** This protects adult suffrage under Article 326.
- **Guard against misuse of Forms 6 and 7:** Verify inclusion requests and deletion objections before acting on them. **Section 31, RPA 1950,** already punishes knowingly false declarations with up to **one year in prison**, a fine, or both, and it should be enforced.
- **Secure the digital backbone:** ECINET brings together 40+ electoral apps and portals. Protect its data with role-based access, tamper-evident logs and independent security audits.
- **Make turnout data transparent:** Reconcile turnout figures with Form **17C records (Rule 49S, Conduct of Elections Rules, 1961).** Label provisional trends clearly so they are not mistaken for final figures.
- **Make appointments transparent:** Under Article 324(2) and the 2023 appointments law, **publish selection criteria and reasons for each choice**. This would strengthen the Commission's independence and public trust.
- **Protect the mandate:** Strengthen disclosure of political funding. Enforce the **ECI's 6 May 2024 direction** that parties **remove fake content** within **three hours of being notified.** Decide Tenth Schedule disqualification cases faster.

Conclusion

Electoral credibility requires accurate rolls, meaningful remedies and independently examinable procedures.

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6. LEGAL AID IN INDIA

Why in News

An analysis of **Prayas (TISS) and NLU Delhi's Fair Trial Fellowship programme**, covering **22,000+ Maharashtra undertrials (2018-2023)**, highlighted **higher bail success but delayed legal aid**.

About Legal Aid

Free legal advice, representation, related assistance, enabling access to justice irrespective of economic disadvantage.

Major Challenges

- **High undertrial share: 75.8% of prisoners were awaiting trial in 2022 (NCRB)**, highlighting the scale of detention without conviction.
- **Delayed assistance:** Participants spent an average of **171 days in custody between arrest and enrolment in the legal-aid programme**.
- **Socio-economic disadvantage:** Nearly **half had only primary schooling and 57% were casual workers**, limiting their ability to understand legal procedures and afford representation.
- **Procedural barriers:** Even after joining the **legal aid programme,** undertrials struggled to arrange documents, coordinate with lawyers and meet bail conditions. Those granted bail spent an average of **115 more days** in custody after enrolment.
- **Uneven service quality:** Limited awareness and inconsistent assistance prevented legal-aid entitlements from translating into **effective representation**.
- **Household income losses: Over 60% earned below ₹80,000 annually**, while estimated earnings lost during detention reached **₹2 lakh for some age groups**, deepening economic vulnerability.

CONSTITUTIONAL LINK

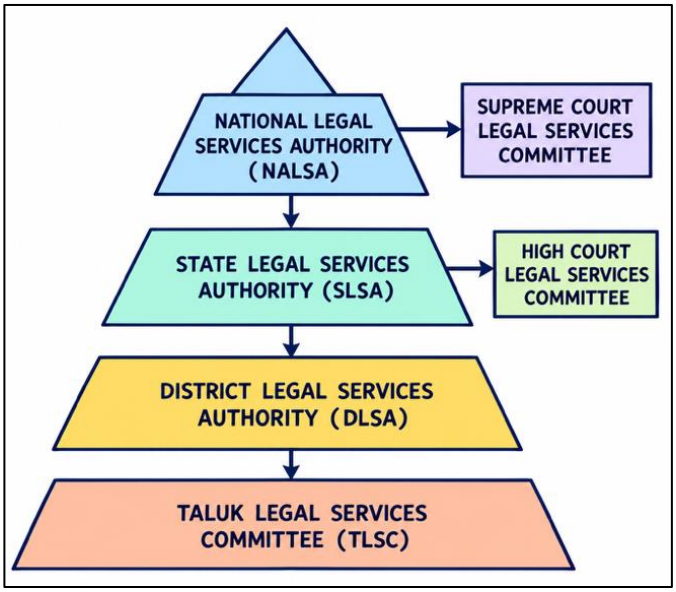
- **Article 39A:** Equal justice and free legal aid.
- **Article 21:** Fair procedure and speedy trial.
- **Legal Services Authorities Act, 1987:** Institutional framework; **persons in custody eligible under Section 12**.

Eligibility: Section 12 of the Legal Services Authorities Act, 1987 provides free legal services to:

- SC/ST members.
- Women and children, irrespective of income.
- Victims of human trafficking or begar (forced labour).
- Persons with disabilities.
- Persons in distress due to disasters, ethnic violence or caste atrocities.
- Industrial workmen.
- Persons in custody, including prisoners and undertrials.
- Persons below the prescribed annual income ceiling: limits vary by State; below **₹5 lakh** for Supreme Court cases.

Institutional and Government Measures

- **NALSA network:** National, State and District Legal Services Authorities provide **free legal assistance to eligible persons**, including prisoners.
- **Custody-based eligibility: Section 12(g), Legal Services Authorities Act, 1987** makes persons in custody eligible for legal aid, **irrespective of income**.
- **Prison legal-aid clinics:** Clinics identify inmates' legal needs and connect them with **lawyers and legal-services authorities**.
- **Para-legal volunteers:** Trained volunteers spread **legal awareness**, help inmates seek assistance and coordinate with legal-services institutions.
- **Undertrial release provisions: Section 479, BNSS** provides detention-based release for eligible undertrials, including **release on bond after one-third of the maximum imprisonment for first-time offenders**, subject to statutory conditions and exclusions.



- **Prison-superintendent responsibility:** Superintendents must **apply to the court when eligible undertrials reach the prescribed detention thresholds**, helping prevent prolonged incarceration.

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Way Forward

- **Early assistance:** Deploy **duty lawyers at police stations and remand courts** under NALSA's Early Access to Justice framework to provide support from the first stages of custody.
- **End-to-end support:** Combine representation with help meeting bail conditions through the **Support to Poor Prisoners Scheme**, allocated **₹20 crore annually during 2023–26**.
- **Quality accountability:** Strengthen **Monitoring and Mentoring Committees** and six-monthly counsel evaluations to assess the quality of representation.
- **Targeted outreach:** Publicise **NALSA helpline 15100** through multilingual information and para-legal volunteers to reach prisoners with limited legal awareness.
- **Timely release:** Ensure prison authorities inform **DLSAs when prisoners remain unreleased seven days after bail**, enabling assistance with release formalities.
- **Stronger coordination:** Hold regular **Undertrial Review Committee meetings** to identify eligible prisoners; the **2023 campaign recorded 21,304 releases**.
- **Rigorous evaluation:** Maintain **case-level records** and assess legal, livelihood and household outcomes at **3, 6 and 12 months after release** to measure lasting benefits.

Conclusion

Legal aid fulfils its purpose when timely representation prevents unnecessary detention.

PYQ ESSENTIALS

Q. In India, Legal Services Authorities provide free legal services to which of the following type of citizens? **(UPSC-2020)**

1. Person with an annual income of less than Rs 1,00,000
2. Transgender with an annual income of less than Rs 2,00,000
3. Member of Other Backward Classes (OBC) with an annual income of less than ₹3,00,000
4. All Senior Citizens

Select the correct answer using the code given below:

(a) 1 and 2 only (b) 3 and 4 only (c) 2 and 3 only (d) 1 and 4 only

7. CORPORATE SOCIAL RESPONSIBILITY(CSR)

Why in News

CSR expenditure reached **₹40,479 crore in FY 2024-25**, involving approximately **29,500 companies and 72,000 projects**, according to the supplied report.

About CSR

- Corporate contribution towards social development under **Section 135, Companies Act, 2013**, operational since **2014**.
- **Applicability:** Net worth **₹500 crore**, turnover **₹1,000 crore**, or net profit **₹5 crore or more** in the immediately preceding financial year.
- **Spending obligation:** At least **2% of average net profits of the preceding three financial years**.

Companies (CSR Policy) Rules, 2014.

- **Employee benefits:** Activities exclusively benefiting employees and their families are excluded. Employees may be **incidental beneficiaries** of projects serving the public.
- **Normal business:** Activities undertaken in the company's ordinary course of business generally do **not qualify as CSR**.
- **Marketing** Sponsorship intended to derive marketing benefits for products or services is excluded.
- **Incidental reputation:** Brand recognition arising incidentally from genuine CSR activities **does not disqualify the expenditure**.

Major Challenges

- **Regional inequality:** Maharashtra, Gujarat, Karnataka and Delhi received approximately **₹19,328 crore in FY 2024-25**, highlighting geographic concentration and **distributive justice concerns**, viewed against **Article 38(2)'s goal of reducing inequalities**.
- **Corporate-location bias:** Local-area preference under **Section 135(5), Companies Act, 2013** can favour industrial regions over areas with deeper development deficits.

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- **Spending-impact gap:** Compliance with the **2% CSR spending requirement** does not establish improvements in learning, health or livelihoods, reflecting an **output-outcome gap**.
- **Fragmented interventions:** Around **72,000 projects in FY 2024-25** create risks of dispersed funding, duplication and limited **collective impact**.
- **Uneven impact assessment: Companies (CSR Policy) Rules, 2014 8(3)** covers only qualifying companies and projects, leaving smaller interventions outside compulsory independent assessment and limiting comparable evidence.
- **Underused corporate capabilities:** Donating school computers without **training or maintenance** may leave them underused, reflecting limited use of corporate expertise.

Way Forward

- **Outcome-Based CSR Funding:** Link CSR funding to measurable results rather than expenditure alone. **The Educate Girls Development Impact Bond (Rajasthan, 2015–18)** demonstrated this approach, achieving 160% of its learning target and 116% of its enrolment target.
- **Use common indicators:** Adapt the **49** Key Performance Indicators (KPIs) across five sectors from **NITI Aayog's Aspirational Districts Programme.** This would make CSR projects comparable across regions, while still leaving room for local priorities.
- **Pool resources:** Companies can collaborate on projects under **Rule 4(4) of the CSR Policy Rules, 2014** to avoid scattered efforts. For example: **Suvidha initiative,** in which **HUL, HSBC and JSW** Foundation partnered with the BMC to run **20 sanitation centres in Mumbai**.
- **Ensure long-term sustainability:** Use the '**ongoing project'** provision under Rule 2(1)(i), which allows CSR projects to continue **for up to three financial years** beyond the year of commencement. Include maintenance and exit plans to sustain benefits even after funding ends.

BEST PRACTICES

- **Social Stock Exchange (NSE, 2023):** Lets non-profits raise funds through **Zero-Coupon Zero-Principal instruments** with mandatory social-impact reporting.
- **SEBI's BRSR:** Business Responsibility and Sustainability Reporting, mandatory for the **top 1,000** listed companies, links CSR with ESG disclosure.

- **Share expertise, not just funds:** Expand skills-based employee volunteering in Schedule VII activities. **TCS's goIT programme,** which mentors students in technology and design thinking, is one model.
- **Strengthen accountability:** Combine beneficiary feedback with independent impact assessments under Rule 8(3). Assessments are mandatory for companies with an average **CSR obligation of ₹10 crore** or more over the three preceding years, covering projects of ₹1 crore or more completed at least a year earlier.

Conclusion

Infosys Foundation's partnership with Akshaya Patra, supporting an automated kitchen in **Kandi, Telangana**, illustrates how sustained corporate support can strengthen school-meal delivery. CSR's success lies in converting contributions into **lasting public benefits**.

PYQ ESSENTIALS

Q. With reference to Corporate Social Responsibility (CSR) rules in India, consider the following statements: **(UPSC 2024)**

1. CSR rules specify that expenditures that benefit the company directly or its employees will not be considered as CSR activities.
2. CSR rules do not specify minimum spending on CSR activities.

Which of the statements given above is/are correct?

(a) 1 only (b) 2 only (c) Both 1 and 2 (d) Neither 1 nor 2

Q. Corporate social responsibility makes companies more profitable and sustainable. Analyse.(**UPSC-2017)**

8. RIGHT TO PROTEST

Why in News

Delhi protests involving **closure of 45 Metro stations** and market disruptions renewed debate on balancing **peaceful protest, public convenience and livelihoods**.

Meaning

- A **non-violent way for people to express dissent, demand change and hold authorities accountable**, exercising freedoms of **speech and peaceful assembly**.

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Democratic Significance

- **Democratic voice: Articles 19(1)(a) and 19(1)(b)** protect expression and peaceful, unarmed assembly, enabling citizens to raise grievances **beyond elections**.
- **Public accountability:** Protests bring governance failures into public debate; **paper-leak protests** highlight demands for **transparent recruitment and equal opportunity**.
- **Non-violent participation:** Peaceful collective action strengthens democratic legitimacy; **Gandhi's withdrawal of Non-Cooperation after Chauri Chaura (1922)** emphasised **non-violent discipline**.
- **Balanced regulation: Mazdoor Kisan Shakti Sangathan v. Union of India (2018)** stressed balancing **protesters' freedoms with residents' rights**, supporting proportionate regulation.
- **Protection of public access: Amit Sahni v. Commissioner of Police (2020)** held that public ways cannot remain occupied indefinitely, balancing protest with **public mobility**.
- **Institutional redress: Articles 32 and 226** provide constitutional remedies for rights violations; responsive courts, legislatures and authorities strengthen **democratic trust**.

RIGHT TO PEACEFUL ASSEMBLY

Constitutional Provisions

- **Article 19(1)(a):** Guarantees freedom of speech and expression.
- **Article 19(1)(b):** Guarantees citizens the right to **assemble peaceably and without arms**.
- **Article 19(3):** Allows reasonable restrictions on assembly only in the interests of:
  - **Sovereignty and integrity of India**
  - **Public order**
- These rights are available **only to citizens**, and are not absolute.

Section 163, BNSS, 2023

- Corresponds to **Section 144 of the former CrPC**.
- Empowers the **District Magistrate, Sub-divisional Magistrate or specially empowered Executive Magistrate** to issue preventive orders in urgent cases of nuisance or apprehended danger.
- An order ordinarily lasts **up to two months**. The State Government may extend it for a **further period of up to six months**, subject to statutory conditions.
- An **ex parte order**, without prior hearing, may be issued in emergencies.

Regulation of Protests

- Reasonable regulation of the **time, place and manner** of assembly is permitted.
- Peaceful assembly and expression must be considered together when regulating demonstrations.

CHILDREN IN POLITICAL CAMPAIGNING

- **ECI directions:** Political parties and candidates must **not use children in campaigning**, including r**allies, slogan-shouting** and **distributing posters or pamphlets.**
  - The restriction also covers using children in **campaign songs, poems, speeches or displays of party symbols**.
- **Exception:** A child merely accompanying a parent or guardian near a political leader, **without participating in campaigning**, does not violate these directions.

Legal Provisions

- **UN Convention on the Rights of the Child**
  - **Article 12** protects children's right to express views on matters affecting them;
  - **Article 13** protects freedom of expression. Children's views receive weight according to their **age and maturity**.
- **Section 123(2), RPA, 1951: Undue influence**-interference or attempted interference with the free exercise of an electoral right-is a **corrupt practice**.
- **Article 326:** Elections to the Lok Sabha and State Legislative Assemblies are based on **adult suffrage**, with a minimum voting age of **18 years**.

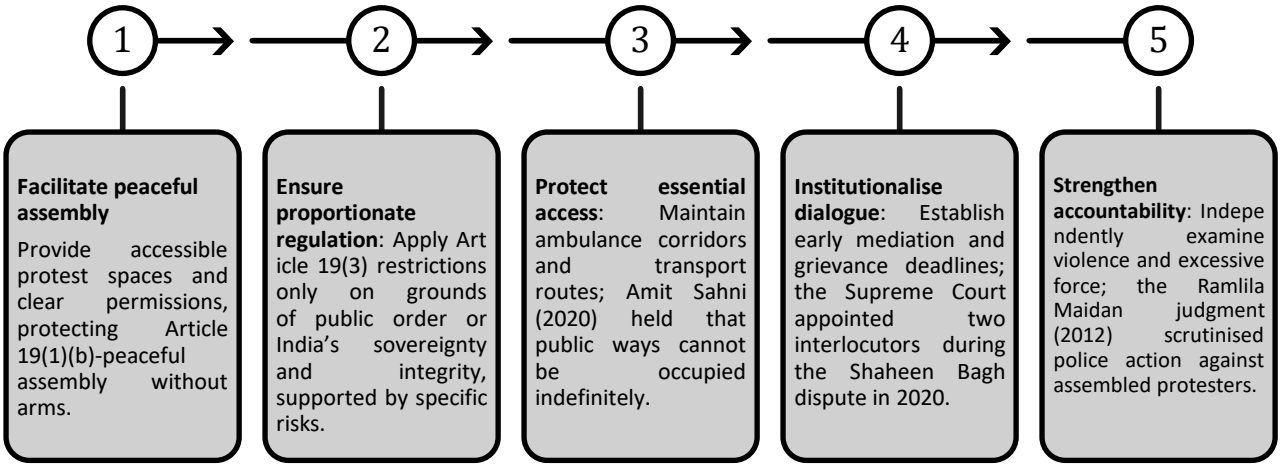
Major Challenges

- **Costs to non-participants:** Disrupted mobility, work and healthcare access; **45 Delhi Metro stations closed** during the protests.

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- **Unequal livelihood burden:** Immediate earnings lost by daily-wage workers; poorer households' limited capacity to absorb disruption.
- **Business and credit stress:** Khan Market traders' estimated **₹1-1.5 lakh loss per shop for a day's closure**; Chandni Chowk's credit-financed festive inventories facing repayment pressure.
- **Supply-chain disruption:** Delayed deliveries and uncertain sales; Bangladesh research associating multi-day strikes with a **6.3-percentage-point decline in firms' export-shipment likelihood**.
- **Pressure on policy priorities:** Mobilisation capacity influencing bargaining; prolonged disruption diverting administrative attention from other public needs.
- **Uncertain economic estimates:** Postponed or relocated purchases complicating loss assessment; **ASSOCHAM's December 2020 estimate of ₹3,000-3,500 crore daily losses** a rough estimate, not verified permanent output loss.

Way Forward



Conclusion

Peaceful protest strengthens democracy; proportionate regulation and responsive institutions reconcile democratic voice with public welfare, especially vulnerable livelihoods.

PRELIMS SNAPSHOT

1. PARLIAMENTARY PRIVILEGES VS FREEDOM OF SPEECH

Why in News

A seven-judge Supreme Court Bench is examining legislative privileges, alleged abuse of power, press freedom and fundamental rights.

About Parliamentary Privileges

- Special rights, immunities and exemptions of **Parliament/State Legislatures**, their committees and members, ensuring independent and effective legislative functioning.
- Also extend to persons entitled to speak or participate (e.g., Union ministers and Attorney General), **but not to the President.**
- Parliamentary **privileges originated** in the **English parliamentary tradition**.

KEY SUPREME COURT PRECEDENTS

- **M.S.M. Sharma v. Sri Krishna Sinha (1959) -** Searchlight case: addressed legislative privilege versus press freedom in the context of publishing expunged proceedings.
- **Sita Soren v. Union of India (2024) -** Seven-judge Bench held that legislators cannot claim immunity from prosecution for bribery linked to a vote or speech; overruled the contrary aspect of **P.V. Narasimha Rao (1998)**.

Privilege vs Fundamental Rights

- **Article 105(2)/194(2)** immunity for speech or votes inside the House differs from any claim of immunity for bribery or conduct outside legislative functions.

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- **Article 361A -** protection for substantially true reports of legislative proceedings, except secret sittings and reports published with malice.
- **44th Constitutional Amendment Act, 1978 -**removed the direct reference to the British House of Commons for uncodified privileges; Parliament has not comprehensively codified them.

Classification of Parliamentary Privileges

Collective Privileges (House as a Whole)	Individual Privileges (Members)
• **Publication:** Right to publish reports, debates and proceedings and regulate their publication. • **Secret sittings:** Power to exclude strangers and conduct secret proceedings. • **Rule-making:** Regulate internal procedures and legislative business. • **Disciplinary powers:** Punish members or outsiders for breach of privilege or contempt through reprimand, admonition or imprisonment; members may also face suspension or expulsion. • **Information:** Right to receive information about the arrest, detention, conviction or release of members. • **Inquiry:** Summon witnesses and demand relevant documents. • **Legislative autonomy:** Courts cannot question proceedings merely on grounds of procedural irregularity (Articles 122 and 212) • **Protection of precincts:** Arrest or service of legal process within the House precincts is subject to applicable rules and the presiding officer's permission.	• **Freedom from civil arrest:** During a session and **40 days before and after it**; not applicable to criminal cases or preventive detention. • **Freedom of speech:** Immunity from court proceedings for speeches and votes in Parliament or its committees, subject to constitutional provisions and legislative rules. • **Jury service:** Traditional exemption from jury service; largely historical in India.

Breach of Privilege vs Contempt of the House

Breach of Privilege	Contempt of the House
Violation of a specific parliamentary privilege	Act obstructing legislative functioning or undermining the authority of the House
Narrower concept	Wider concept
Eg: Obstructing a member in performing legislative duties	**Eg:** Disobeying a lawful order of the House

2. ARREST VS DETENTION

Why in News

Recent protests have raised questions about the difference between **detention and arrest** and the extent of police powers.

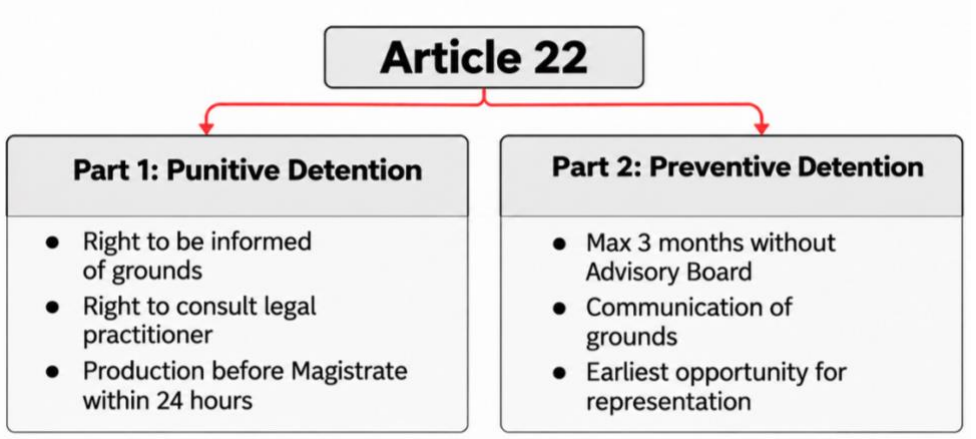
New Developments

- **BNSS, 2023:** Allows preventive police action to prevent cognizable offences.
  - **Section 172:** Police can issue directions to prevent unlawful conduct; non-compliance may lead to temporary detention.
- **Safeguards:** Detained/arrested persons are protected by **constitutional and legal safeguards**.

Arrest versus Detention

Arrest	Detention
• Arrest means taking a person into **custody in connection with an offence/criminal proceedings**. • It triggers important legal safeguards. • Police may arrest **with or, in specified cases, without a warrant**.	• Detention can refer to **temporary custody or restraint** of a person. • In protest situations, police may temporarily detain persons to **prevent breach of peace or maintain public order**. • Preventive detention is a distinct legal concept and can operate under **special laws.**

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Supreme Court Case

- **Mazdoor Kisan Shakti Sangathan v. Union of India (2018):** Restrictions on protests may be imposed to maintain public order, but authorities must **balance restrictions with the right to protest**.

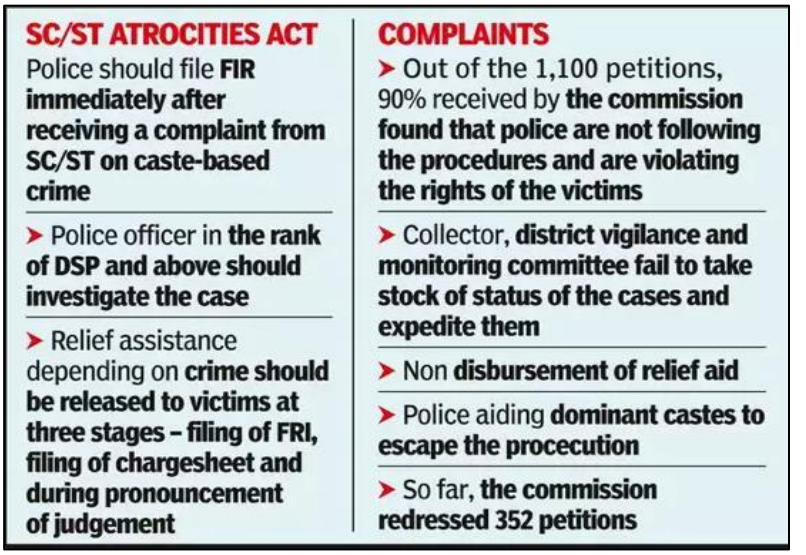
3. SC/ST (PREVENTION OF ATROCITIES) ACT, 1989

Why in News

The **Calcutta High Court** held that the expression **within public view** under the SC/ST (Prevention of Atrocities) Act, 1989 can extend to the **digital domain**.

What does the Law say?

- **Section 3(1)(r):** Intentional insult/intimidation with **intent to humiliate** an SC/ST person **within public view**.
- **Section 3(1)(s): Caste-name abuse** of an SC/ST person **within public view**.
- **Public View:** Traditionally linked to a place where the public can **see/hear** the incident; a purely private enclosed space generally does not qualify.
- **Section 3(2):** Enhanced punishment where an offence under the **IPC/BNS or specified law** is committed against a person/property knowing the victim is SC/ST.
- **Section 18: Bar on anticipatory bail** for offences under the Act.
    - However, SC has held that where a **prima facie offence is not made out**, the bar does not operate mechanically.
- **Section 18A:** Reinforces that **no preliminary enquiry is required** before registration of an FIR and **prior approval for arrest is not required**, subject to the statutory framework.
- **Section 14A:** Provides for **appeal** against judgments, sentences and certain orders of Special/Exclusive Special Courts.



Important SC Judgment

- **Ramkrishna Chauhan v. State of U.P. (2026):** SC reiterated that an enclosed private space without public presence does not automatically constitute "public view."

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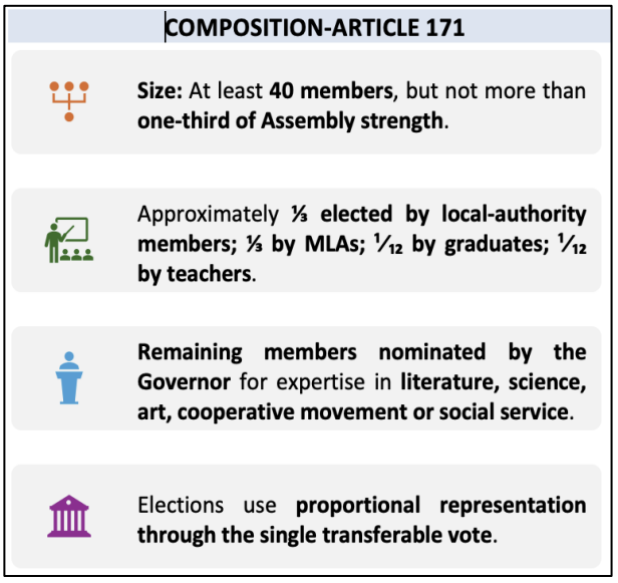
4. STATE LEGISLATIVE COUNCILS

Why in News

Legislative Council elections have renewed discussion on their **composition, powers and role**.

Background

- **Legislative Council (Vidhan Parishad):** Upper House of a bicameral State Legislature.
- **Six States:** Andhra Pradesh, Telangana, Uttar Pradesh, Bihar, Maharashtra and Karnataka.
- **Permanent House:** Not dissolved; approximately **one-third retire every two years**. Members serve **six years**.
- **Minimum age:** 30 years.



Creation or Abolition-Article 169

- The Assembly must pass a resolution supported by **a majority of its total membership and a majority not less than two-thirds of members present and voting**.
- **Parliament then legislates**; this is **not a constitutional amendment under Article 368**.

Powers

- **Ordinary Bills:** Can delay Assembly-originated Bills for **three months initially and one month subsequently**.
- **Money Bills:** Can only recommend changes and must return them within **14 days**.
- **No joint sitting** of the two Houses.
- The Council **cannot remove the government through a no-confidence motion**; the Council of Ministers is collectively responsible to the **Assembly**.

Feature	Rajya Sabha	State Legislative Council
Article	**Article 80**	**Article 171**
Strength	Maximum **250**: 238 representatives + 12 nominated	Maximum **⅓ of Assembly strength**; minimum **40**
Electorate	State representatives elected **only by elected MLAs**	Approximately **⅓ local bodies, ⅓ MLAs, 1/12 graduates, 1/12 teachers**; remainder nominated
Nomination	**President nominates 12**	**Governor nominates approximately ⅙**
Nominated fields	Literature, science, art and social service	Literature, science, art and social service, **cooperative movement**
Election method	**State representatives:** Proportional representation by single transferable vote system **(PR-STV)**	**All elected categories:** Proportional representation by single transferable vote system **(PR-STV)**
Continuity	Permanent; approximately **⅓ retire every two years**	Same; however, Council itself can be **abolished under Article 169**

5. NATIONAL TRIBUNALS COMMISSION (NTC)

Why in News

The **Centre has framed rules** to standardise recruitment, qualifications and service conditions for posts in various tribunals.

About NTC

- It is a Proposed independent body to ensure **uniformity, transparency and independence** in tribunal appointments.
- It aims to safeguard **judicial independence** and improve the **efficiency and functioning of tribunals**.
- Selection process includes:
  - Expert evaluation**,** Personal interaction**,** Writing exercises**,** where applicable.
- Vacancies should be filled **at least six months before** the post falls vacant.
- A selection committee will assess candidates.

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Composition

- Chairperson + 4 members.
- **Two members** would be judicial members.
- **Chairperson:** Retired Supreme Court judge or retired Chief Justice of a High Court.

- **Tribunals:** Quasi-judicial bodies established to adjudicate specialised disputes.
- **Constitutional basis:** Articles 323A and 323B.
- **Article 323A:** Administrative tribunals.
- **Article 323B:** Tribunals for other specified matters.
- **Key distinction:** Tribunals are **not courts**, but perform **quasi-judicial functions**.

Supreme Court on Tribunal Independence

- In **Madras Bar Association v. Union of India, 19 November 2025**, the Supreme Court invalidated provisions of the **Tribunals Reforms Act, 2021**, including:
  - **Minimum appointment age of 50 years:** Arbitrarily excluded otherwise eligible younger advocates.
  - **Four-year tenure:** Undermined security of tenure and judicial independence; earlier directions prescribing **five-year tenure** to govern.

6. MACHINE-READABLE ELECTORAL ROLLS

Why in News

The **ECI** directed distribution of draft and final electoral rolls to parties in **readable PDF format**, renewing demands for machine-readable lists.

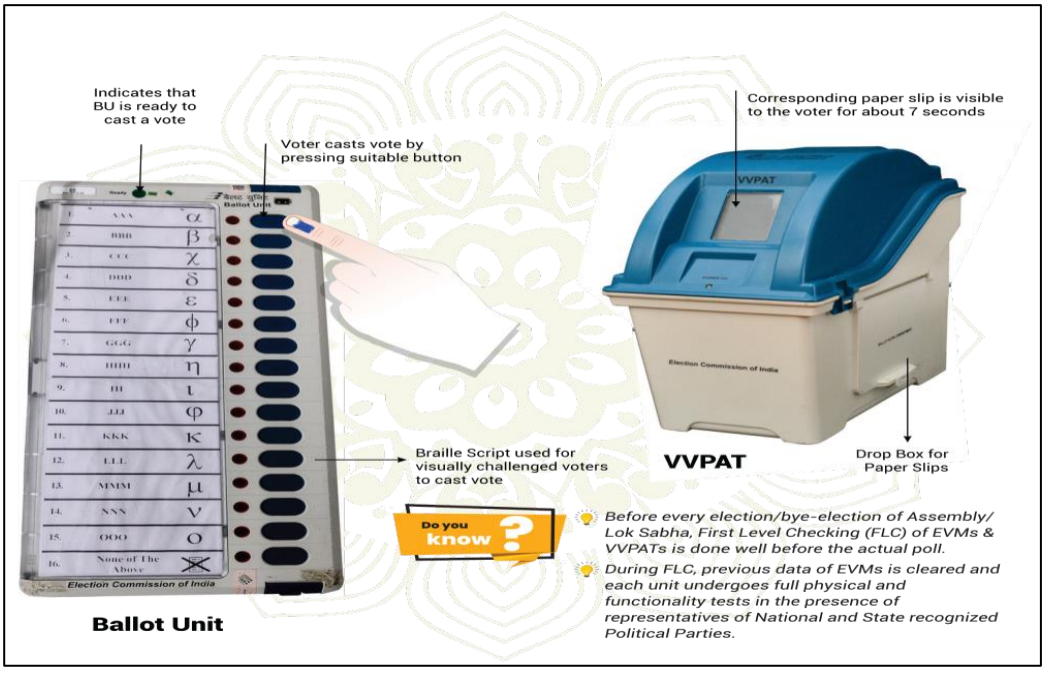
What Does Machine-Readable Mean?

- Data stored in a format that computers can **identify, search and process**, rather than merely display as an image.

Technology	Features
Scanned image PDF	Displays a photograph of text; usually cannot be searched directly
Text-based/searchable PDF	Allows text searching and copying
Structured data	Organises information into fields for easier automated analysis
Optical Character Recognition (OCR)	Converts text in images into computer-readable text; errors may occur

Electoral-Roll Framework

- **Representation of the People Act, 1950:** Governs preparation and revision of electoral rolls.
- **Registration of Electors Rules, 1960:** Prescribe procedures for publication and supply of rolls.
- **Electoral Registration Officer (ERO):** Statutory authority responsible for preparing the constituency's electoral roll.



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7. APPOINTMENT OF SUPREME COURT JUDGES

Why in News

The swearing in of three new judges has filled the Supreme Court of India's sanctioned strength of **38** judges – 1 Chief Justice of India (CJI) and **37** other judges, bringing the Court to its full sanctioned capacity.

Constitutional Basis

- Under **Article 124(1)**, Parliament can increase the number of Supreme Court judges **by law**.
- Under **Article 124(2)**, Supreme Court judges are appointed by the **President by warrant under his hand and seal**. Selection operates through the **collegium system**, developed through judicial decisions.

Appointment Mechanism

- **Initiation:** The **Chief Justice of India (CJI)** initiates the proposal.
- **Collegium recommendation:** The **CJI and four senior-most Supreme Court judges** consider and recommend names. The successor CJI is also consulted if outside this group.
- **Government consideration:** The recommendation goes to the **Union Law Minister**, who places it before the **Prime Minister**.
- **Presidential appointment:** The Prime Minister advises the **President**, who formally appoints the judge.

Removal Process

- **Constitutional basis: Article 124(4)-(5)** and the **Judges (Inquiry) Act, 1968**; grounds are **proved misbehaviour or incapacity**.
- **Initiation:** Notice signed by at least **100 Lok Sabha members or 50 Rajya Sabha members**; the **Speaker/Chairman** may admit or reject it.
- **Inquiry committee:** If admitted, a **three-member committee** investigates: **a Supreme Court judge, a High Court Chief Justice and a distinguished jurist**.
- **Committee finding:** If charges are **not proved**, proceedings end; if proved, Parliament may consider the removal motion.
- **Parliamentary approval: Each House separately** must pass it by **a and at least two-thirds of members present and voting**.
- **Presidential removal:** The address is presented to the **President in the same session**, followed by the President's removal order.

PYQ ESSENTIALS

Q. The power to increase the number of judges in the Supreme Court of India is vested in **(UPSC-2014)**

(a) the President of India (b) the Parliament (c) the Chief Justice of India (d) the Law Commission

8. REMOVAL OF THE CHIEF ELECTION COMMISSIONER

Why in News

The **ECI told the Supreme Court** that the CEC can be removed only in the same manner and on the same grounds as a Supreme Court judge**.**

PROCEDURE

Under **Article 324(5)**, the **Chief Election Commissioner (CEC)** can be removed in the same manner and on the same grounds as a **Supreme Court judge**:

1. **Grounds:** Proved misbehaviour or incapacity.
2. **Inquiry into grounds of removal:** Following the **Supreme Court judge removal model**, the **Speaker/Chairman**, after admitting the motion, constitutes a **three-member inquiry committee** comprising:
    - A Supreme Court judge**,** A High Court Chief Justice**,** A distinguished jurist
3. **Parliamentary address:** Both the **Lok Sabha and Rajya Sabha** must pass an address seeking removal in the **same session**.
4. **Special majority:** Each House must approve it by:
    - A majority of its total membership,
    - At least two-thirds of members present and voting.
5. **Removal:** The **President** removes the CEC after the required address is passed.

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Other Election Commissioners

- Under **Article 324(5)**, an Election Commissioner other than the CEC cannot be removed except on the **recommendation of the CEC**.
- The Constitution does **not** prescribe the same parliamentary removal procedure for them.

Immunity to CEC and Election Commissioners

- **Law:** Chief Election Commissioner and Other Election Commissioners (Appointment, Conditions of Service and Term of Office) Act, **2023**.
    - **Section 16:** Bars courts from entertaining or continuing **civil or criminal proceedings** against serving or former CECs and ECs for acts or words connected with **acting, or purporting to act, in discharge of official duties**.
- **Duration:** Protection extends **beyond retirement**, but concerns official functions; it is not immunity for every private act.
- **Nature:** This protection is **statutory**, rather than directly conferred by the Constitution.

9. PRESS COUNCIL OF INDIA (PCI)

Why in News

The **PCI issued guidelines for journalists covering protests**, emphasising identification, neutrality, safe distance from confrontations and accurate reporting.

Key Guidelines

- Display a valid **press identity or accreditation card**.
- Maintain **neutrality**; avoid participating in demonstrations or provoking confrontations.
- Keep a **safe distance** and avoid obstructing police operations.
- Distinguish **verified facts from allegations and unconfirmed claims**.

Background

Parameter	Facts
Nature	Statutory, autonomous, quasi-judicial body, Press Council Act, 1978
Mandate	Preserve press freedom and maintain standards of newspapers and news agencies
Composition	Chairperson + 28 members
Chairperson	By convention, a retired Supreme Court judge
Selection committee	Rajya Sabha Chairman, Lok Sabha Speaker and one person elected by Council members
Tenure	Three years
Powers	Can warn, admonish or censure newspapers, news agencies, editors or journalists; has specified civil-court powers for inquiries

10. ENTRY OF FOREIGNERS INTO INDIA

Why in News

The **Delhi High Court** held that a **valid visa does not create an inherent or legally enforceable right of entry into India** for a foreign national.

New Developments

- The case involved a **Turkmenistan citizen** who was denied entry at **Indira Gandhi International Airport, New Delhi**.
- The Court held that admission of foreigners into India is subject to immigration laws and the powers of competent authorities**.**

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- A foreigner cannot claim entry merely because:
  - She possesses a **valid visa**, or
  - Another person holding a visa of the same category was permitted entry.
- The Court rejected the petitioner's claim that denial of entry violated **Article 14**.

About VISA

- **A** Permission/document issued to a foreigner to seek entry into a country for a specified purpose.
- **Important distinction:** Visa ≠ unconditional right to enter India.
- Entry and stay of foreigners are regulated by **immigration laws and government authorities**.
- **Immigration and Foreigners Act, 2025** provides the present legal framework governing foreigners in India.
- **Section 3:** Requires a foreigner seeking entry into India to **possess a valid passport or travel document and a valid visa**.
- The law also empowers the government to **regulate, restrict or prohibit** entry and departure of foreigners.
- **Foreigners can be denied entry on grounds including:**
  - National security**,** Sovereignty and integrity of India**,** India's relations with foreign States**,** Public health**,** Other specified grounds under law.
- **Constitutional distinction:** Fundamental rights are not uniformly available to citizens and foreigners.
- Articles Available ***Only*** to Indian Citizens: **15,16,19,29,30.**
- **Henley Passport Index 2026:** India Ranks **84th** (as per October) Globally.
- Indian passport holders gain visa-free or visa-on-arrival access to **55 destinations**.
  - **Visa on Arrival (VoA):** A visa issued to eligible foreign travellers **upon arrival at a designated airport or border checkpoint**, subject to document verification and immigration approval.
  - It **does not guarantee entry.**
- **Supreme Court precedent:** *Hans Muller of Nuremberg v. Superintendent, Presidency Jail*-recognised the **Central Government's power to regulate the entry and expulsion of foreigners**.

11. OVERSEAS CITIZEN OF INDIA (OCI)

Why in News

An OCI cardholder was issued a **Leave India notice** following participation in a protest, bringing government powers over OCI holders into focus.

About OCI

- Introduced in **2005** under the **Citizenship Act, 1955**.
- A status granting specified privileges to eligible foreign nationals, primarily of Indian origin.
- **OCI is not dual citizenship**: the holder remains a foreign citizen with a foreign passport.

Rights and Restrictions	
Available privileges	**Rights not available**
Multiple-entry, lifelong visa, subject to conditions	Voting or contesting elections
Exemption from **FRRO registration**, irrespective of stay duration	Holding constitutional offices such as President
Specified parity with NRIs in economic and educational matters	General entitlement to public employment under **Article 16**
Article 19 freedoms are citizen-specific; **Articles 14 and 21** protect persons, including foreigners.	

Government Powers

- **Leave India/removal order:** Governed by the **Immigration and Foreigners Act, 2025**. Section **29** permits removal for statutory contraventions or an adverse security report.

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- **Cancellation of OCI:** A separate process under **Section 7D of the Citizenship Act**, covering grounds such as fraud, concealment of material facts and specified security concerns.
- OCI cancellation requires a **reasonable opportunity of being heard**. A Leave India notice does not itself mean that OCI registration has been cancelled.

12. SPECIAL SUMMARY REVISION (SSR)

Why in News

The **Election Commission of India (ECI)** ordered Special Summary Revision in **17 States and Union Territories**, with **January 1, 2027** as the qualifying date.

About (SSR)

- **Eligibility:** An **Indian citizen aged 18 or above**, ordinarily resident in the constituency and not otherwise disqualified.
- **Four qualifying dates: January 1, April 1, July 1 and October 1**. Prospective voters can apply in advance.
- **Legal framework: Representation of the People Act, 1950**, and **Registration of Electors Rules, 1960**.
- **Electoral Registration Officer (ERO):** Decides applications for inclusion, deletion and correction.

Parameter	Special Summary Revision (SSR)	Special Intensive Revision (SIR)
Nature	Updates the existing electoral roll	Involves extensive enumeration and verification
Process	Draft publication, claims and objections, followed by final publication	House-to-house enumeration and verification under ECI directions
House visits	No house-to-house enumeration in the announced exercise	House-to-house enumeration is a core component
Citizenship	Indian citizenship is mandatory	Indian citizenship is mandatory

13. SPECIAL EXECUTIVE MAGISTRATE (SEM)

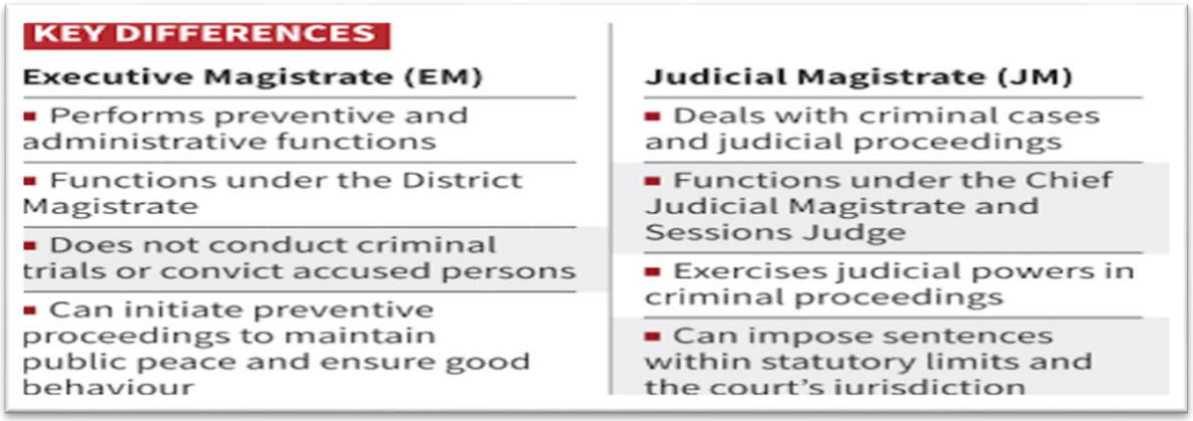
Why in News

The detention and subsequent release of two protesters by a **Special Executive Magistrate in Delhi** brought the powers of police officers acting as S.E.Ms into focus.

Background

- **Legal basis:** Section 15 of the Bharatiya Nagarik Suraksha Sanhita (BNSS), 2023.
- **Appointing authority:** The **state government**, which determines the appointment's **term, territorial jurisdiction, functions and powers**.
- **Who can be appointed?**
    - Executive Magistrates or police officers not below the rank of **Superintendent of Police** or equivalent.

Executive vs Judicial Magistrate



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Important Powers under B.N.S

- **Section 126:** Require security for **keeping the peace**.
- **Section 163:** Issue urgent Prohibitory orders against apprehended danger, **when specifically empowered**; corresponds to **Section 144 of the CrPC**.
- **Duration of Section 163 orders:** Normally **up to two months**; the State Government may extend them for **up to six additional months** on specified grounds.

14. RELIGIOUS CONVERSION AND RESERVATION

Why in News

The Supreme Court upheld the invalidation of Tamil Nadu's order granting **Backward Class Muslim certificates automatically to specified Hindu-category converts to Islam**.

Background

- **Conversion alone does not establish membership of a notified backward community**. Eligibility requires a lawful basis for classification and community membership.
- **Scheduled Caste status:** Paragraph 3 of the **Constitution (Scheduled Castes) Order, 1950** restricts recognition to persons professing **Hinduism, Sikhism or Buddhism**. Conversion to Islam or Christianity therefore does not preserve SC status under this Order.
- **S.C recognition has a religion-based restriction under the 1950 Order; O.B.C recognition is not confined to these three religions.**
- Muslims and Christians may qualify through recognised backward communities, subject to applicable eligibility rules.

Constitutional Provisions

- **Article 341:** President specifies SC communities; **Parliament alone can amend the list by law**.
- **Article 15(4):** Enables special provisions for socially and educationally backward classes and SCs/STs.
- **Article 16(4):** Enables reservation in public employment for backward classes **inadequately represented in State services**.
- **Article 342A and 105th Amendment, 2021:** States/UTs can maintain their **own SEBC lists**, which may differ from the Central List.

RAPID WRAP

CENTRAL ARMED POLICE FORCES (GENERAL ADMINISTRATION) ACT, 2026

The **Ministry of Home Affairs notified the Act's commencement from October 8, 2026**, amid a constitutional challenge before the Supreme Court.

Recent Developments

- The Act prescribes **IPS deputation quotas in senior CAPF posts**.
- The dispute is linked to the **May 23, 2025 Supreme Court judgment**, which directed progressive reduction of IPS deputation to senior CAPF positions.

Background

An **umbrella law governing recruitment, promotion, deputation and service conditions** of officers in specified CAPFs.

- **Administrative Ministry:** Ministry of Home Affairs.
- **Forces covered: CRPF, BSF, CISF, ITBP and SSB**.
  - Assam Rifles and NSG are **not listed in its First Schedule**.
- **Group A General Duty Officers:** Officers of **Assistant Commandant rank and above**.

Rank	Posts filled through IPS deputation
Inspector General	50%
Additional Director General	At least 67%
Special Director General and Director General	100%

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SNAP ELECTIONS

A call for **snap elections in Spain** amid protests and difficulty securing parliamentary support.

About Snap Election

- **Meaning:** Elections held before the legislature completes its normal term, following early dissolution.
- **Reasons:** Coalition instability, political deadlock or a government seeking a fresh mandate.
- **Spain's procedure:** The Prime Minister proposes dissolution after Council of Ministers' deliberation; the **King formally decrees it** under **Article 115**.
- **Restriction:** Dissolution cannot be proposed while a **motion of censure is pending**.

J&K STATEHOOD RESOLUTION

The Jammu & Kashmir Assembly passed a resolution seeking restoration of Statehood to J&K.

Key Points

- **J&K Assembly resolution 2024:** Sought restoration of **statehood** and constitutional safeguards for the people of J&K.
- **Autonomy Resolution 2000 :** Passed by the then J&K Assembly; sought **greater autonomy** for J&K within the Indian Union.
  - The 2000 resolution was **rejected by the Union Government in 2000**.
  - The opposition objected to references to the **2000 Autonomy Resolution** in the recent debate.

CONSTITUTIONAL LINK

- **Article 370:** Provided special constitutional provisions for J&K; its effective abrogation occurred in **2019**.
- **J&K Reorganisation Act, 2019:** Reorganised the former State into:
  - **Union Territory of Jammu & Kashmir**-with legislature.
  - **Union Territory of Ladakh**-without legislature.
- **Article 3:** Parliament has the power to **form new States/UTs and alter their boundaries or names**.

Demand for 6th schedule: Leh Apex Body and Kargil Democratic Alliance demand **statehood and Sixth Schedule inclusion for Ladakh.**

Benefits

- **Autonomous councils: District and Regional Councils** enable tribal self-governance.
- **Law-making powers:** Cover **land allotment, non-reserved forests, shifting cultivation, inheritance, marriage and social customs**; laws require **Governor's assent**.
- **Land protection:** Regulation of land allotment and use helps safeguard tribal interests.
- **Judicial powers:** Village courts can try specified disputes **between Scheduled Tribe members**.
- **Financial powers:** Councils can assess land revenue and levy **specified taxes**.

FORM 7

The **Election Commission of India (ECI)** capped **Form 7 submissions** to curb bulk, unsubstantiated objections seeking deletion of voters' names.

Recent Developments

An individual elector may submit:

- **10 applications** during the entire **claims-and-objections period**.
- **Five applications per month** during continuous updating of electoral rolls.
- Limits apply to **both online and physical submissions**.

About Form 7

Aspect	Details
Purpose	Used to **object to a proposed inclusion** or **seek deletion of an existing entry**, including one's own name.
Grounds	Death, permanent shifting, duplicate registration or ineligibility.
Who can object?	An elector registered in the **same constituency**.
Deciding authority	The **Electoral Registration Officer (ERO)** decides the application. Filing Form 7 does **not automatically delete** a voter's name.
Related forms	**Form 6** -New voter registration. **Form 6A-**Overseas elector registration. **Form 8** -Shifting residence, corrections, replacement EPIC or marking disability.

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INTERNATIONAL RELATIONS

1. UNITED NATIONS: CRISIS OF TRUST AND REFORM

Why in News

Debate over **UN effectiveness, Global South representation and the UN80 reform initiative** has renewed calls for a more accountable and representative multilateral system.

UNITED NATIONS (UN)

- **Established:** 24 October 1945.
- **HQ:** New York, USA.
- **Secretary-General:** Appointed by UNGA on recommendation of UNSC for a **5-year renewable term**.

Six Principal Organs

- **General Assembly (UNGA):** Main **deliberative and policymaking body**; all **193 members** have equal representation and voting rights.
  - Important questions generally require **2/3 majority**; other questions generally **simple majority.**
- **Security Council (UNSC):** Primary responsibility for **international peace and security**; can impose **sanctions and authorise peacekeeping/collective action**.
- **ECOSOC:** Coordinates **economic, social and environmental** work of the UN system and promotes international cooperation on development.
- **Trusteeship Council:** Supervised **Trust Territories** and promoted their progress towards self-government/ independence; **operations suspended in 1994**.
- **International Court of Justice (ICJ):** Principal judicial organ; **settles legal disputes between States** and gives **advisory opinions** on legal questions.
  - Only one of the six principal organs **outside New York**.
- **Secretariat:** Carries out the UN's **day-to-day administrative and operational work**; headed by the **Secretary-General**.

India & UN

- India was among the **original 51 UN members**.

UN PEACEKEEPING

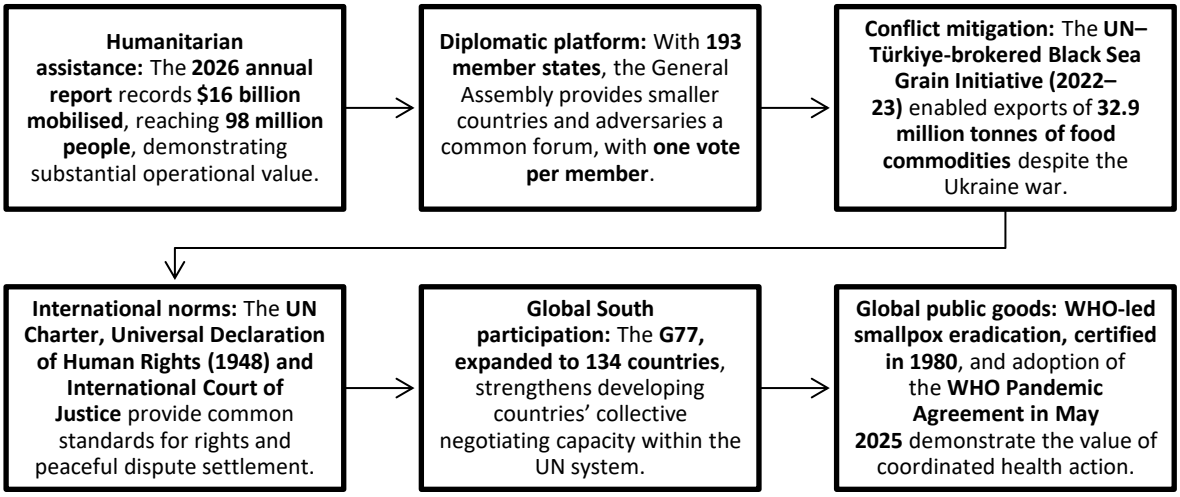
- **UNTSO →Middle East:** Established in **1948**, it is the **first UN peacekeeping mission**.
- **First Mission: India's first UN peacekeeping** mission was **Korea** in the **1950s**.
- **India →** largest cumulative troop contribution.

Why Is Trust Declining?

- **Security Council paralysis: Russia's February 2022 Ukraine veto** and the **US's June 2025 Gaza veto despite 14 supporting votes** show how permanent-member interests obstruct collective action.
- **Representation deficit:** Africa accounts for **28% of UN membership** and hosts nearly half its peacekeeping operations, yet lacks a **permanent Security Council seat**, weakening representative legitimacy.
- **Delayed accountability:** A **2025 MONUSCO report** recorded **113 sexual-exploitation and abuse allegations**, with **97 under investigation on 1 February 2025**, raising concerns about timely redress, without establishing guilt.
- **Financial vulnerability: $859 million in regular-budget arrears at end-2023** prompted a **$350 million cash-conservation target in 2024**, constraining approved activities.
- **Delivery-expectation gap:** The **June 2025 Gaza veto** blocked demands for a ceasefire and unrestricted aid, illustrating how political deadlock limits humanitarian agencies' ability to deliver.
- **Limited localisation:** Grand Bargain signatories provided only **0.6% of funding directly to local actors in 2023**, against a **25% "as directly as possible" commitment**, highlighting limited local control across the wider humanitarian system.

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The UN's Continuing Relevance



Way Forward

- **Democratise representation:** Advance Africa's **Ezulwini Consensus demand for at least two permanent and five non-permanent Security Council seats**, alongside geographical diversity in appointments.
- **Strengthen veto accountability:** Use **UNGA Resolution 76/262**, requiring debate within **10 working days of a veto**, alongside reasoned explanations and voluntary restraint during mass atrocities.
- **Ensure predictable financing:** Secure timely dues and flexible funding; build on the Peacebuilding Fund's **$50 million annual assessed financing from 2025**.
- **Improve institutional integrity:** Strengthen **OIOS investigations**, transparent procurement and enforcement of the UN's **2017 whistle-blower protection policy**.
- **Strengthen preventive diplomacy:** Replicate **UN-AU-ECOWAS cooperation during The Gambia's 2017 political transition**, supporting early regional mediation.
- **Measure substantive outcomes:** Track **SDG indicator 16.1.2-conflict-related deaths per 100,000 people**, alongside development gains, durable peace and equitable representation.

Conclusion

The UN's humanitarian relevance coexists with political and institutional limitations. Restoring trust requires representative decision-making, credible accountability and sustained delivery backed by member-state cooperation.

2. INDIA-U.S. RELATIONS

Why in News

The **October 8, 2026 suspension of PERM labour-certification applications involving eight employers**, including Indian IT firms, renewed concerns over professional mobility and policy predictability.

Term	Essential fact
PROGRAM ELECTRONIC REVIEW MANAGEMENT (PERM) PROGRAMME	• **Employer-led:** US employer files labour certification for the foreign worker. • **Prevailing wage:** Employer obtains the position's wage determination before filing. • **Recruitment test:** Prescribed recruitment checks availability of qualified US workers. • **Green Card pathway:** DOL certification enables subsequent immigration stages. • **Priority date:** Generally, the application's acceptance date establishes queue position. • **Indian applicants:** High demand and limited visa availability make priority dates crucial. Administered by the **Department of Labor**.
GREEN CARD	• Grants **lawful permanent resident status**; does not confer U.S. citizenship.
H-1B	• A **temporary, non-immigrant classification** for specialty occupations; distinct from permanent residency.

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Foundations of the Partnership

- **Economic interdependence:** Bilateral merchandise trade reached $140.79 billion in FY 2025-26, with India recording a $33.82 billion surplus, strengthening economic ties and creating shared commercial interests.
- **Defence cooperation:** Joint military exercises, logistics agreements and intelligence sharing **improve coordination between the armed forces and strengthen** their ability to address common security challenges.
- **Defence procurement:** India's purchase of over **$20 billion in US defence equipment** has created long-term cooperation in training, maintenance, technology and operational support.
- **Technology collaboration:** Cooperation in **AI, semiconductors, quantum technology, biotechnology** and space combines India's research and innovation potential with US technological expertise.
- **Professional linkages:** Indian-born professionals accounted for **nearly 70% of approved H-1B** petitions in **FY 2025,** reflecting their contribution to the US skilled workforce and strong professional ties between the two countries.
- **Strategic convergence:** Shared interests in maritime security, secure supply chains and a stable Indo-Pacific encourage closer cooperation on regional security and economic challenges.

Cooperation Initiatives and Responses

- **COMPACT, February 2025:** Framework for deeper military, commercial and technological cooperation.
- **TRUST initiative:** Government, academia and industry collaboration in critical and emerging technologies.
- **Critical-mineral cooperation:** Joint research, investment and supply-chain diversification.
- **INDUS-X, 2023:** Defence innovation partnerships connecting enterprises and innovation ecosystem **Defence agreements**

Agreement	Year	Main purpose
GSOMIA-General Security of Military Information Agreement	**2002**	Protects shared classified military information.
LEMOA-Logistics Exchange Memorandum of Agreement	**2016**	Reciprocal logistics support, including refuelling, supplies and maintenance.
COMCASA -Communications Compatibility and Security Agreement	**2018**	Enables secure military communications and interoperability.
BECA-Basic Exchange and Cooperation Agreement for Geospatial Cooperation	**2020**	Shares geospatial data for navigation and precision targeting.

Major Challenges

- **Immigration uncertainty:** Delays in PERM labour **certification can slow employer-sponsored green card applications,** creating uncertainty for Indian professionals planning to settle in the US. This process is separate from **H-1B visa approvals.**
- **Agricultural sensitivities:** US demands for greater access to **India's agriculture and dairy markets raise** concerns about the livelihoods of small farmers, domestic producers and their ability to compete with cheaper imports.
- **Energy-policy divergence:** India's reliance on **affordable Russian oil to meet its energy needs** can conflict with US sanctions policies, creating tensions between India's energy-security priorities and US strategic interests.
- **Defence dependence:** Delays in the supply of **GE F404 engines for Tejas highlight India's dependence** on foreign suppliers, potentially slowing aircraft production and affecting defence preparedness.
- **Technology-delivery gap:** Defence agreements and equipment purchases have not always translated into **sufficient joint development and technology transfer,** limiting India's ability to build indigenous capabilities and achieve defence self-reliance.
- **Regional-security differences:** US engagement with Pakistan and differing positions on **India–Pakistan de-escalation can create diplomatic friction,** particularly as India maintains its preference for bilateral resolution of disputes without third-party mediation

Way Forward

- **Institutionalised consultation:** Use the **2+2 Dialogue and Trade Policy Forum** to address disagreements early, with dedicated channels for immigration and sanctions concerns.
- **Predictable professional mobility:** Seek clear processing timelines and transition safeguards for Indian professionals, who accounted for **71% of approved H-1B petitions in FY2024**.

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- **Balanced trade negotiations:** Work towards the **$500-billion bilateral trade target by 2030** through reciprocal market access while protecting sensitive **agricultural and dairy livelihoods**.
- **Measurable cooperation:** Set delivery schedules and **co-development and technology-transfer milestones**, particularly for **GE engines and defence projects**, to translate commitments into operational capabilities.
- **Strategic autonomy:** Pursue cooperation based on shared interests while retaining independent choices, reflected in India's engagement with the **Quad, BRICS and SCO**.
- **Domestic capability:** Use the **₹50,000-crore ANRF framework for 2023-28** to strengthen industry–academia research and technology absorption, enabling India to contribute more effectively to joint innovation.

Conclusion

The **$500-billion trade target by 2030** and **TRUST initiative** must translate into predictable professional mobility, timely defence deliveries and joint innovation. Progress on these fronts, alongside respect for **India's strategic autonomy**, will determine the partnership's durability.

3. INDIA-NEW ZEALAND

Why in News

India-New Zealand Free Trade Agreement entered into force on 20 October 2026, expanding cooperation in goods, services, investment and professional mobility.

Free Trade Agreement (FTA)

An agreement reducing trade barriers among participating countries. Members retain **independent tariffs towards non-members**; preferential access depends on **rules of origin**.

Major Provisions

Area	Key Commitment
Goods exports	**Zero-duty access for all Indian exports** to New Zealand from entry into force, subject to applicable conditions.
Services	Commitments across **118 sectors/sub-sectors**; MFN treatment across **139 sectors/sub-sectors**.
Professional mobility	**5,000 Temporary Employment Entry visas at any given time**, with stays up to **three years**.
Youth mobility	**1,000 Working Holiday visas annually**.
Investment	New Zealand to **facilitate US$20 billion investment over 15 years**; distinct from investment already received.
Agricultural cooperation	Productivity partnerships for **apples, kiwifruit and honey**, alongside regulated market access.
Sensitive products	India retains exclusions for **dairy and several sensitive agricultural products**.

Potential for India

- **Export diversification:** Bilateral merchandise trade of approximately **US$1.2 billion**, indicates scope for expansion beyond established markets.
- **Labour-intensive manufacturing:** New Zealand imported nearly **US$1.2 billion of apparel in 2025**; India's share around **4%**. Removal of average tariffs near **10%** improves competitiveness.
- **Engineering exports:** Annual imports of approximately **US$7 billion in machinery** and **US$5.2 billion in vehicles and components**; India's share around **1% or lower**.
- **Pharmaceutical access:** India already enjoyed zero-duty access and supplied approximately **5.5% of pharmaceutical imports**; regulatory cooperation can reduce duplicative compliance.
- **Services expansion:** New Zealand's services imports reached **US$24.2 billion in 2024**, with India's share below **3%**; opportunities in IT, professional services, healthcare and education.
- **Skills and educational links:** Temporary employment pathways, student mobility and post-study opportunities can deepen professional networks.

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Challenges

1. **Limited market presence:** India supplies only around **1.9% of New Zealand's merchandise imports**, indicating a small foothold that tariff concessions alone may not substantially expand.
2. **Strong established competitors: China holds over 22%** of the import market, while **Australia, the US, South Korea and Japan together account for another 33%**, making price, quality and reliable supply crucial for Indian exporters.
3. **Non-tariff barriers:** Even after tariff removal, compliance with **product standards, certification and regulatory procedures** can raise costs and delay market entry.
4. **Uncertain investment realisation:** The **US$ 20-billion investment-facilitation commitment** is not guaranteed investment; actual inflows depend on viable projects, investor confidence and sustained commercial interest.
5. **Conditional professional mobility:** Visa provisions offer **temporary access subject to quotas and eligibility**, limiting opportunities to specified categories rather than unrestricted employment or permanent residence.
6. **Adjustment pressures on producers:** Agricultural concessions can expose sensitive domestic producers to competition; the effectiveness of **quotas, minimum import prices and safeguards** depends on clear rules and consistent enforcement.

Way Forward

- **Target priority sectors:** Develop product-specific export plans for **apparel, footwear and engineering goods**, converting zero-duty access into competitive pricing and sustained orders.
- **Build distribution networks:** Link Indian exporters with **New Zealand's importers, retail chains and pharmaceutical distributors** through buyer-seller meets and long-term supply partnerships.
- **Reduce regulatory duplication:** Use eligible **GMP/GCP inspection reports from comparable regulators**, as permitted under the FTA, to simplify compliance while maintaining safety standards.
- **Develop investible projects:** Offer project pipelines with **clear land availability, approvals and dedicated facilitation**, helping convert investment commitments into actual inflows.
- **Protect agricultural interests:** Monitor sensitive imports and enforce agreed safeguards, while using **productivity partnerships** to strengthen domestic producers' competitiveness.
- **Track actual outcomes:** Publish **tariff-preference utilisation, additional exports, realised investment and employment**, measuring progress towards the **NZ$7-billion bilateral trade ambition for 2030**.

Conclusion

The FTA's success will depend on converting **zero-duty access and investment commitments into sustained exports, jobs and realised investment**. Progress towards the **NZ$7-billion trade ambition by 2030** must combine deeper commercial ties with protection of **sensitive agricultural livelihoods**.

4. INDIA-CHINA RELATIONS

Why in News

Renewed debate on India-China relations highlights whether **border stability, sustained dialogue and selective cooperation** can support peaceful coexistence despite strategic competition.

Why Peaceful Coexistence Matters?

- **Border stability:** Preventing incidents along the **Line of Actual Control (LAC)** protects lives and limits escalation.
- **Development priorities:** Prolonged confrontation diverts resources and attention from economic and social development.
- **Economic interdependence:** In **2024-25**, India exported **US$14.25 billion** to China and imported **US$113.45 billion**; engagement coexists with significant dependence.
- **Regional stability:** Relations influence South Asia, the Indian Ocean and the wider Indo-Pacific.
- **Strategic autonomy:** Stable ties allow India to pursue independent partnerships without treating every relationship as a **zero-sum choice.**

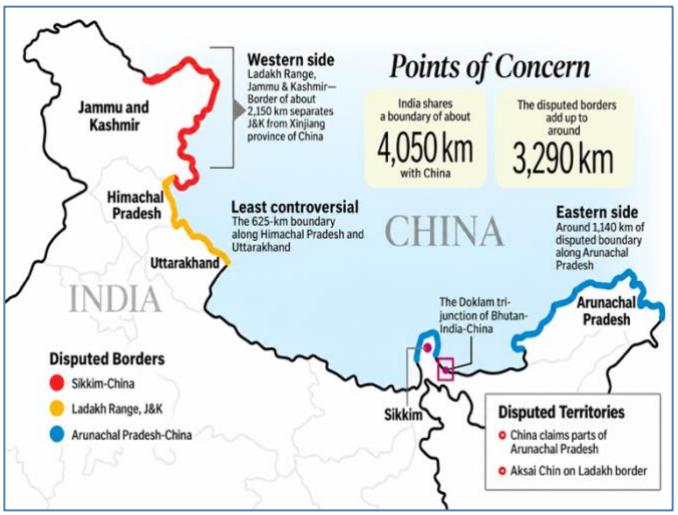
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Diplomatic Foundations

Milestone	Relevance
Rajiv Gandhi's China visit, 1988	Revived high-level engagement after prolonged estrangement.
Agreements 1993 and 1996	Frameworks for border peace and military confidence-building.
Special Representatives mechanism, 2003	Political-level engagement on the boundary question.
Political Parameters Agreement, 2005	Principles guiding a negotiated boundary settlement.
WMCC, 2012	Diplomatic coordination on border affairs.
Corps Commander-level talks	Military dialogue on friction points and operational arrangements.
Patrolling arrangement,2024.	Enabled disengagement at remaining 2020 friction points; **not a final boundary settlement**.

Major Challenges

- **Unresolved boundary:** India and China still dispute **Aksai Chin and Arunachal Pradesh**. China keeps pressing its claim, as in May 2025, when it **"renamed" 27 places in Arunachal,** which India rejected. Meanwhile, differing perceptions of the LAC lead to frequent patrol face-offs.
- **Trust deficit:** These repeated clashes have built deep mistrust. The 1962 war and the **Galwan clash** (2020), which killed 20 Indian soldiers, still shape India's view of China, and China's support to Pakistan during **Operation Sindoor** (May 2025) has deepened it further.
- **Risk of escalation:** With troops deployed so close, a small face-off can quickly turn serious, as the **Doklam standoff (2017)** and the **Yangtse clash in Tawang (2022)** showed.



- **Economic dependence:** Even as the border stays tense, trade dependence keeps rising. In 2025-26, imports from China rose to **$131.63 billion,** pushing the trade deficit to a **record $112.16 billion.** China's curbs on rare-earth magnet exports in 2025, which hit Indian automakers, exposed the risk of this dependence.
- **Weak implementation:** Agreements matter only when **followed on the ground.** The 1993 and 1996 border agreements could not prevent Galwan, and even after the October 2024 **Depsang–Demchok agreement, buffer zones** at earlier friction points still restrict patrolling.

Way Forward

- **Preserve border peace:** Enforce the **1993 and 1996 agreements** on respecting the LAC and limiting military deployments; verify subsequent patrolling arrangements.
- **Strengthen crisis communication:** Operationalise hotlines, flag meetings and escalation protocols, building on the **2013 Border Defence Cooperation Agreement**.
- **Separate resolution stages:** Treat **disengagement as separation at friction points, de-escalation as reduced deployments, and settlement as resolving territorial claims;** the October 2024 agreement addressed patrolling and disengagement.
- **Sustain political dialogue:** Combine leadership meetings with **Special Representatives, established in 2003, and WMCC, established in 2012**, alongside military talks.
- **Reduce critical dependencies:** Diversify industrial inputs and strengthen domestic capacity; **imports of US$113.46 billion against exports of US$14.25 billion in 2024-25** underline the imbalance.
- **Expand practical cooperation:** Strengthen flood-data exchanges through the **2006 Expert-Level Mechanism on trans-border rivers**, alongside climate, health and calibrated people-to-people cooperation.

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Conclusion

The **October 2024 patrolling arrangement** shows that dialogue can yield progress without resolving the boundary dispute. Durable coexistence requires **verified border peace, sustained engagement and reduced economic vulnerabilities**, while safeguarding India's **sovereignty and strategic autonomy**.

PRELIMS SNAPSHOT

1. INDIA-POLAND RELATIONS

Why in News

India and Poland reaffirmed the goal of **doubling bilateral trade by 2030** during Polish Prime Minister **Donald Tusk's visit to India in October 2026**.

Recent Developments

Area	Key outcomes
Trade	Target to **double bilateral trade by 2030**; revive the bilateral working group on agriculture.
Defence	**Defence Industry Dialogue** announced; cooperation in technology, co-development and co-production envisaged.
Critical minerals	Cooperation in **battery recycling and rare-earth refining**; geology, mining and critical minerals MoU **under negotiation**.
Technology	Collaborative research in **AI, semiconductors and quantum technologies**; stronger space cooperation.
Connectivity	Cooperation in ports, shipping and maritime security; connectivity through **IMEC** highlighted.
Climate initiatives	**Poland joined CDRI**; India invited it to join **ISA, Global Biofuels Alliance and IPOI**.

Background

- **Diplomatic relations:** Established in **1954**.
- **Strategic Partnership:** Announced in **August 2024**, supported by an **Action Plan for 2024-2028.**
- **Cooperation areas:** Defence, trade, agriculture, green technologies, pharmaceuticals and mining.
- **Historical ties:** Jam Saheb of **Nawanagar** and the **Kolhapur royal family** sheltered Polish refugees during **World War II**.
- **Military link:** Indian and Polish troops fought at **Monte Cassino, Italy (1944)**.



About Poland

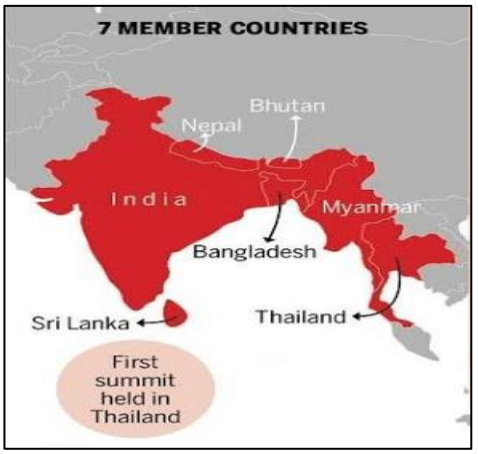
- **Location: Central Europe**, with a coastline on the **Baltic Sea**.
- **Capital: Warsaw**.
- **Neighbours:** Germany, Czech Republic and Slovakia, Ukraine, Belarus, Lithuania and Russia Kaliningrad exclave.
- **Membership:** European Union and NATO.
- **Currency: Polish złoty**, despite its EU membership; Poland does **not use the euro**.

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2. BIMSTEC DELHI DECLARATION

Why in News

BIMSTEC adopted the **Delhi Declaration** at its **first Home Ministers' Meeting**, held in **New Delhi on 13 October 2026**.



The declaration calls for:

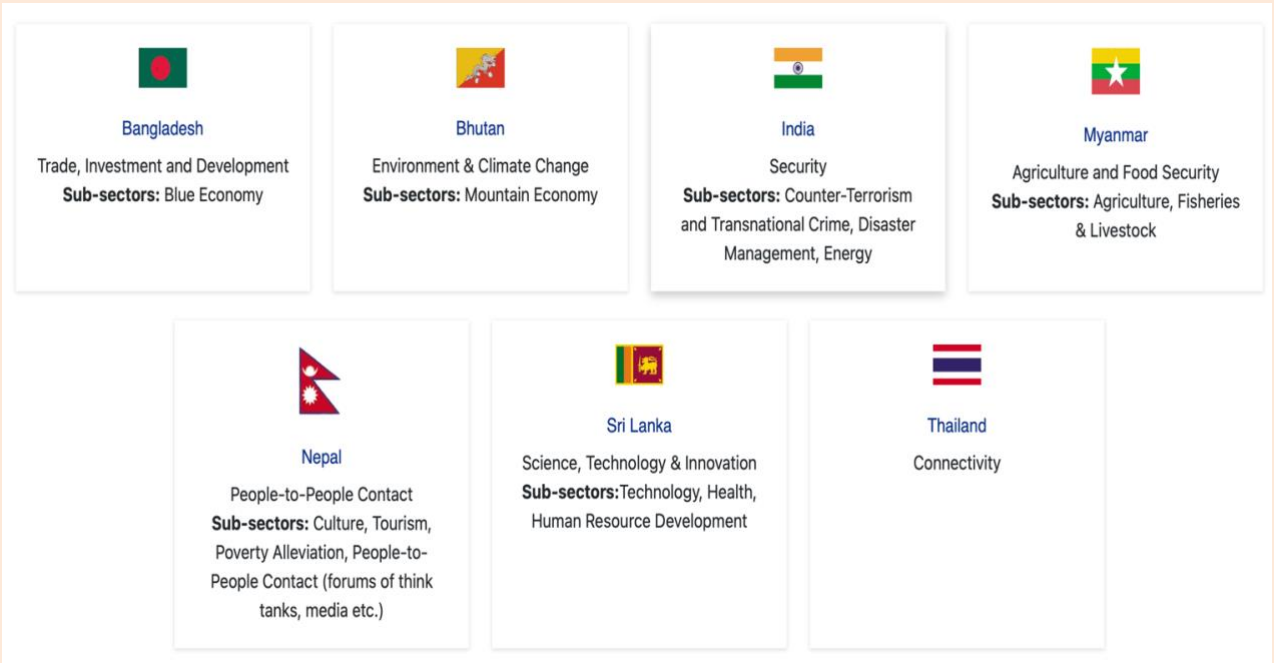
- **Counter-terrorism:** Condemning terrorism in all forms, including **cross-border terrorism**.
- **Preventing radicalisation:** Addressing violent extremism, terrorist recruitment and misuse of emerging technologies.
- **Curbing terror financing:** Implementing internationally agreed **anti-money laundering and counter-terror financing standards**.
- **UN sanctions:** Effective implementation of relevant UN Security Council sanctions, including those under the **1267 Sanctions Committee**.

About BIMSTEC

The **Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation** is a regional organisation connecting **South Asia and Southeast Asia**.

- **Established: 6 June 1997**, through the **Bangkok Declaration**.
- **Founding members: Bangladesh, India, Sri Lanka and Thailand.** With the admission of Myanmar on 22 December 1997, and Bhutan and Nepal in February 2004**.**
- **Seven members:** Bangladesh, Bhutan, India, Myanmar, Nepal, Sri Lanka and Thailand.
- **Secretariat: Dhaka, Bangladesh**, established in 2014.

Sectors of cooperation



BIMSTEC Centres and Establishments

Centre / Establishment	Location	Country
Centre for Weather and Climate (BCWC)	Noida, Uttar Pradesh	India
Energy Centre (BEC)	Bengaluru, Karnataka	India
Permanent Secretariat	Dhaka	Bangladesh
Cultural Industries Observatory (BCIO)	Thimphu	Bhutan
Technology Transfer Facility (TTF)	Colombo	Sri Lanka

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PYQ ESSENTIALS

Q. Match List I with List II and select the answer using the code given below the Lists **(UPSC-2026)**

List I (BIMSTEC Centre/Establishment)	List II (Location)
A. BIMSTEC Cultural Industries Observatory	1. NOIDA
B. BIMSTEC Energy Centre	2. Bengaluru
C. BIMSTEC Centre for Weather and Climate	3. Colombo
D. BIMSTEC Technology Transfer Facility	4. Thimphu

Option

	A	B	C	D
a.	3	2	1	4
b.	3	1	2	4
c.	4	2	1	3
d.	4	1	2	3

3. INDIAN SEAFARERS IN CONFLICT ZONES

Why in News

Attacks on merchant vessels in **West Asian waters** have highlighted risks to Indian seafarers, particularly those serving on **foreign-flagged ships**.

Background

- **Seafarer:** A person employed or working aboard a ship.
- **Flag State:** Country where a ship is registered. Its flag determines the ship's nationality, irrespective of the crew's citizenship.
- **Port State:** Country whose port a foreign ship visits; it can inspect compliance with applicable maritime standards.
- **Maritime Labour Convention, 2006:** An **ILO convention** covering seafarers' working conditions, accommodation, medical care, welfare and repatriation.

Navigation Rights under UNCLOS

- **Innocent passage:** Passage through territorial waters that does not prejudice the coastal State's peace, order or security.
- **Transit passage:** Navigation and overflight through qualifying international straits for continuous and expeditious transit.
- These are **different legal regimes**; passage rights do not guarantee protection against attacks.

Compensation

- Compensation may come through **employment contracts, shipowners' Protection and Indemnity (P&I) insurance and welfare schemes**.
- The amount depends on the applicable scheme and contract; there is no single universal payout.

RAPID WRAP

White House AI Accord	• Major **U.S. technology companies** signed the **White House AI Accord** with the U.S. government.
	• The agreement seeks to promote **safe and responsible development of AI** and strengthen public trust.
	New Developments
	• The accord outlines **four major safety measures**:
	  ○ Internal controls **to prevent unintended AI hacking/misuse.**
	  ○ Dedicated AI safety teams**.**
	  ○ Independent external audits**.**
	  ○ Independent board oversight of AI safety.
	• The measures are **voluntary**, **not legally binding**, and carry **no penalties** for non-compliance.
	• Companies mentioned include **Google, OpenAI, Anthropic, Meta and AI**; Microsoft was notably absent as a signatory.

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IAEA'S PHYSICAL PROTECTION REVIEW

The **International Atomic Energy Agency (IAEA)** found a robust nuclear-security framework during **Pakistan's first IPPAS mission**.

Recent Developments

- The mission reviewed **nuclear-security laws, regulatory arrangements and physical protection at a nuclear facility**, at Pakistan's request.

About International Physical Protection Advisory Service (IPPAS)

- Established by the IAEA in **1995**.
- **Nature:** A voluntary advisory and peer-review service, conducted at a country's request.
- **Purpose:** Strengthens protection against theft, unauthorised removal of nuclear material and sabotage, including during transport.
- **Responsibility:** Physical protection remains the **State's responsibility**.
- **IAEA:** Established in **1957**; headquarters in **Vienna, Austria**. Promotes the **safe, secure and peaceful use of nuclear technology**.

BADR MEMORANDUM OF UNDERSTANDING

Türkiye, Qatar, Pakistan and Indonesia signed the **Badr MoU** in **Doha, Qatar, on October 21, 2026**, to strengthen defence cooperation.

Differences

Parameter	Badr MoU	Mecca Defence Pact
Members	**Pakistan, Türkiye, Qatar and Indonesia**	**Pakistan, Türkiye and Saudi Arabia**
Signed	21 October 2026, **Doha, Qatar**	7 August 2026, **Mecca, Saudi Arabia**
Main focus	Cooperation in **defence production, research and development, and technical training**	**Joint defence and collective security**
Mutual defence	No mutual-defence commitment has been publicly stated	An armed attack on one member is regarded as an attack on all three

UNITED KINGDOM AND INDEPENDENCE MOVEMENTS

The leaders of Scotland, Wales and Northern Ireland signed the **Cardiff Agreement**, expressing support for self-determination and pathways to independence referendums.

Political Geography

Term	Components
Great Britain	England, Scotland and Wales
United Kingdom	Great Britain, Northern Ireland
Island of Ireland	Republic of Ireland, Northern Ireland
British Isles	Great Britain, Ireland and surrounding smaller islands



Historical Evolution

- **1535-42:** Wales legally incorporated into England.
- **1707 Acts of Union:** England and Scotland formed the **Kingdom of Great Britain**.
- **1800 Acts of Union:** Great Britain and Ireland united from 1801.
- **1922:** Most of Ireland became the Irish Free State.
- **1927:** Present Name-**United Kingdom of Great Britain and Northern Ireland**-was formally adopted.

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ALBERTA REFERENDUM

Preliminary results of Alberta's **non-binding referendum** showed a majority favouring remaining within **Canada**.

Background

- **Referendum:** A direct vote by citizens on a specific public issue.
- **Non-binding referendum:** Expresses public opinion but does **not automatically change the law**.
- **Secession:** Withdrawal of a territory from an existing country to form a separate state.
- **Alberta:** A **landlocked province in western Canada**; capital **Edmonton**, major city **Calgary**.
- **Resource significance:** Known for **oil sands**-sand, clay and water containing **bitumen**, a thick form of petroleum.

ANIMAL DIPLOMACY

The recent **US-China panda diplomacy** has brought attention to the long history of using animals as tools of **international diplomacy**.

New Developments

- **Panda diplomacy:** China uses the gifting or loaning of giant pandas to strengthen diplomatic relations.
- Recent examples include pandas sent to the **United States** and other countries.
- India has also used animals in diplomatic exchanges, including **elephants and other species**.

About ANIMAL DIPLOMACY

- It refers to the use of animals as **gifts, symbols or diplomatic instruments** to build political and cultural relations.
- Historical examples include:
  - **Ancient Egypt:** Animals such as elephants were used as diplomatic gifts.
  - **Roman period:** Elephants were exchanged as symbols of power.
  - **Medieval/early modern period:** Exotic animals were presented to rulers and courts.
- **Panda diplomacy:** Particularly associated with **China**, where giant pandas have been used to deepen relations with foreign countries.

CHILDREN'S RIGHT TO INTERNET ACCESS

The **Supreme Court recognised children's right to access and use the Internet under Article 21 read with Article 19(1)(a)**, while opposing blanket restrictions.

Recent Developments

- Favoured **parental consent, guidance and supervision**, age-appropriate safeguards and a dedicated **Child Mode**.
- Clarified that its observations **do not rule out age-based restrictions** or content moderation.
- Restrictions should be proportionate to the objective of protecting children.
- Internet access is **not an absolute right**. The Court favoured safeguards that protect children while preserving their access, rather than a complete prohibition.

Important Judgments	
Judgment	**Key principle**
Anuradha Bhasin v. Union of India, 2020	Speech and trade through the internet are constitutionally protected; restrictions must satisfy constitutional requirements
Pragya Prasun v. Union of India, 2025	Digital access forms part of Article 21; digital services must accommodate persons with disabilities

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SOCIAL ISSUES & SOCIAL JUSTICE

1. TB-FREE INDIA

Why in News

Declining TB incidence, expanded screening and the **JOSH community-mobilisation campaign**; continuing emphasis on early detection, treatment and nutritional support.

Tuberculosis (TB)

- Infectious disease caused by **Mycobacterium tuberculosis**, primarily affecting the lungs; may also affect other organs. **Airborne transmission**; latent TB infection does not itself transmit infection.

Progress

- **Declining incidence:** India's **TB incidence rate fell 21% during 2015-2024**, against **12% globally**, showing progress in reducing new cases, though elimination remains unfinished.
- **Wider treatment access: Treatment coverage rose from 53% in 2015 to 92% in 2024**, narrowing the gap between estimated cases and those receiving treatment.
- **Proactive case detection:** Screening of **over 28.1 crore people by June 2026** under the intensified campaign expanded efforts to identify TB early and link patients with care.
- **Stronger diagnostic capacity: 9,800-plus rapid molecular testing facilities and 107 culture/drug-susceptibility laboratories** support timely diagnosis and identification of drug resistance, guiding appropriate treatment.
- **Shorter treatment for resistant TB: Over 15,000 MDR/RR-TB patients started BPaLM**, offering eligible patients a **six-month regimen** that reduces treatment duration and burden.
- **Community mobilisation: JOSH (Joint Squad for Health)** brings together **MY Bharat volunteers, NCC cadets and designated officers across 11 States and 55 districts** to strengthen youth participation in TB awareness and outreach.

WHO GLOBAL TUBERCULOSIS REPORT 2026

- **Global mortality:** Approximately 1.13 million people died from TB in 2025. Multidrug-resistant TB (MDR-TB) remains a major public health challenge.
- **Regional distribution:** WHO South-East Asia Region accounted for 35% of new TB cases, followed by Western Pacific (27%) and Africa (25%).
- **High-burden countries:** Around 88% of new TB cases occurred in 30 countries. India accounted for approximately one-fourth of global cases, followed by Indonesia (10%) and the Philippines (6.8%).
- **Catastrophic costs:** About 50% of TB-affected households globally faced total TB-related costs exceeding 20% of annual household income, including medical expenses, transport and income losses.

Challenges

- **Continuing disease burden:** Persistent transmission shows that declining incidence has not yet translated into elimination; India's **2025 elimination target remains unmet**.
- **Missed and delayed diagnosis: Asymptomatic TB and limited diagnostic access** can leave cases undetected, allowing transmission to continue before treatment begins.
- **Drug resistance: MDR/RR-TB** complicates care because resistance must be identified early to select effective medicines and monitor treatment response.
- **Undernutrition and poverty:** Poor nutrition increases vulnerability to TB, while illness-related income loss further reduces access to food and care, creating a **poverty–disease cycle**.
- **Treatment interruption:** Long treatment duration, adverse effects and migration can disrupt medication, increasing the risk of **treatment failure, relapse and drug resistance**.
- **Unequal healthcare access:** Remote terrain, staff shortages and digital barriers delay diagnosis and follow-up; **winter isolation in Kashmir's Gurez Valley** illustrates difficulties in maintaining continuity of care.

Government Actions

1. **National TB Elimination Programme:** Detec–Treat–Prevent–Build framework; free diagnosis and treatment, private-sector engagement and patient support.
2. **Intensified TB Mukt Bharat Abhiyaan:** Initial **100-day campaign launched in December 2024**; vulnerability mapping and active case-finding subsequently expanded nationwide.
3. **Nikshay Poshan Yojana: ₹1,000 monthly nutritional assistance during treatment**, increased from ₹500; direct benefit transfer to notified patients.
4. **Ni-kshay Mitra initiative:** Community support through food baskets, psychosocial assistance and livelihood support; **45 lakh-plus food baskets distributed by November 2025.**
5. **BPaLM regimen: Bedaquiline, Pretomanid, Linezolid and Moxifloxacin**; shorter treatment option for eligible drug-resistant TB patients.

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Way Forward

- **Find missing cases:** Expand targeted screening beyond symptoms, building on the **100-day TB campaign launched in 347 districts in December 2024**, and link confirmed patients promptly with treatment.
- **Ensure treatment continuity:** Provide eligible drug-resistant TB patients with **six-month BPaLM treatment**, supported by counselling, adverse-effect management and follow-up to prevent interruption.
- **Address social determinants:** Deliver **₹1,000 monthly Nikshay Poshan assistance** on time and mobilise **Ni-kshay Mitras** for nutritional support, reducing barriers to recovery.
- **Strengthen local capacity:** Train healthcare staff through **Ni-kshay Setu** and ensure reliable sample transport to molecular-testing laboratories for timely diagnosis and appropriate treatment.
- **Protect patient dignity:** Provide **confidential counselling and voluntary, informed participation** in community support, helping reduce stigma without compromising privacy.
- **Measure actual outcomes:** Assess **mortality, treatment success and household costs** alongside the incidence decline from **237 to 187 per lakh during 2015-2024**, ensuring progress reflects better survival and reduced financial hardship.

Conclusion

TB elimination requires medical care combined with nutrition, social protection and community participation. Progress must translate into fewer infections, sustained recovery and equitable access.

2. ELDERLY CARE IN INDIA

Why in News

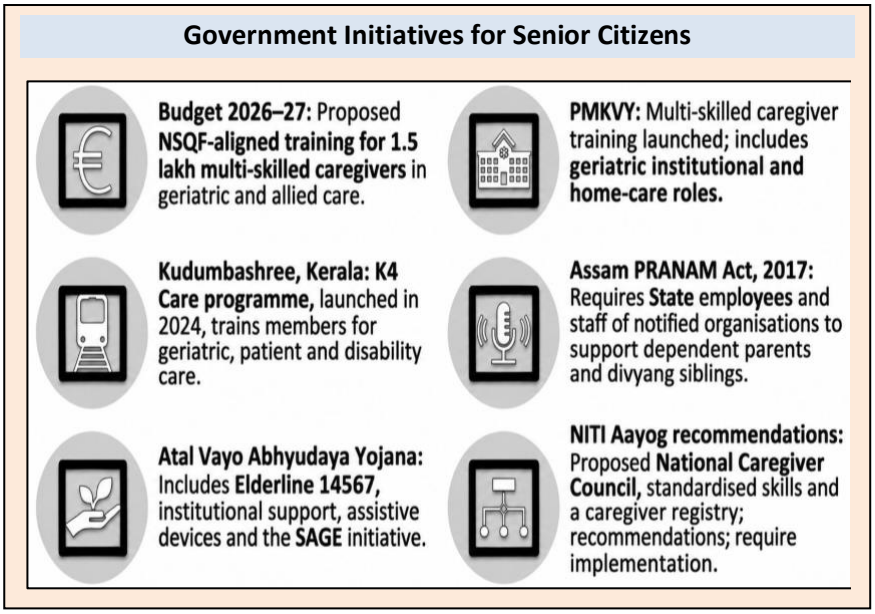
Union Budget 2026-27 announced training for **1.5 lakh multi-skilled caregivers**; NITI Aayog's *Reimagining Care* report calls for a stronger caregiving ecosystem.

Elderly Care

- **Elderly care** is the support older people need to live safely, stay healthy and age with dignity. It includes help with daily activities, access to healthcare, emotional and social support, and financial security.
- In India, the **National Policy on Older Persons, 1999** and the **Maintenance and Welfare of Parents and Senior Citizens Act, 2007** use **60 years** as the age threshold for senior citizens.

Challenges in Elderly Care

- **Growing demand for care**: UNFPA projects that India will have **347 million people aged 60 or above by 2050**, increasing the need for long-term care and services suited to older people.
- **Less family support at home**: Smaller households and migration can leave fewer relatives nearby to help older family members with daily tasks.
- **Varied care needs**: Older people with chronic illness, limited mobility or memory problems may need help with daily activities and emotional support alongside medical treatment.
- **Limited training for family caregivers**: Without basic training, relatives may struggle to recognise warning signs or assist someone safely. Providing care day after day can also lead to exhaustion.
- **Unequal burden on women**: Unpaid work can leave women with less time for paid employment and rest. The **2019 Time Use Survey** found that women who performed unpaid domestic services spent an average of **299 minutes a day** on them, compared with **97 minutes for men**. These figures cover unpaid domestic services overall.



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- **Shortage of trained care workers**: The proposal to train **1.5 lakh caregivers** could help expand the workforce. Reliable care at home and in institutions also requires enough staff, regular supervision and clear care standards.

Way forward

- **Support family caregivers:** Families provide most elderly care, often without training or breaks. Offer upskilling and respite services to prevent burnout, drawing on **WHO's iSupport** training in dementia care and caregiver self-care.
- **Set common training standards: Budget 2026-27** announced training for **1.5 lakh caregivers**. A common curriculum on safe mobility, emergencies, dementia care and care ethics would ensure consistent quality of care.
- **Build local training capacity: Link ITIs, hospitals and apprenticeships** to give trainees supervised, hands-on experience and to develop more trainers, as suggested in the March 2026 care-skilling consultations.
- **Share the care burden:** Women aged **15-59 spend 140 minutes a day** caring for household members, while men spend 74 **(Time Use Survey 2024).** Encouraging men to share caregiving would ease this load.

Global Best Practices

- **Japan: Long-Term Care Insurance (2000)** supports home and institutional care through **individual care plans**, reducing family burdens.
- **Singapore: Caregiver Support Action Plan (2019)** combines **training, financial aid and respite services** to support caregiver well-being.

- **Protect care workers:** Paid caregivers often face low pay and job insecurity. Ensure fair wages, clear duties, safe workplaces and accessible grievance redressal, in line with **WHO's focus on decent work.**

Conclusion

A trained care workforce can improve older persons' dignity while recognising the contribution of family caregivers. Skills, fair work and community support must grow together.

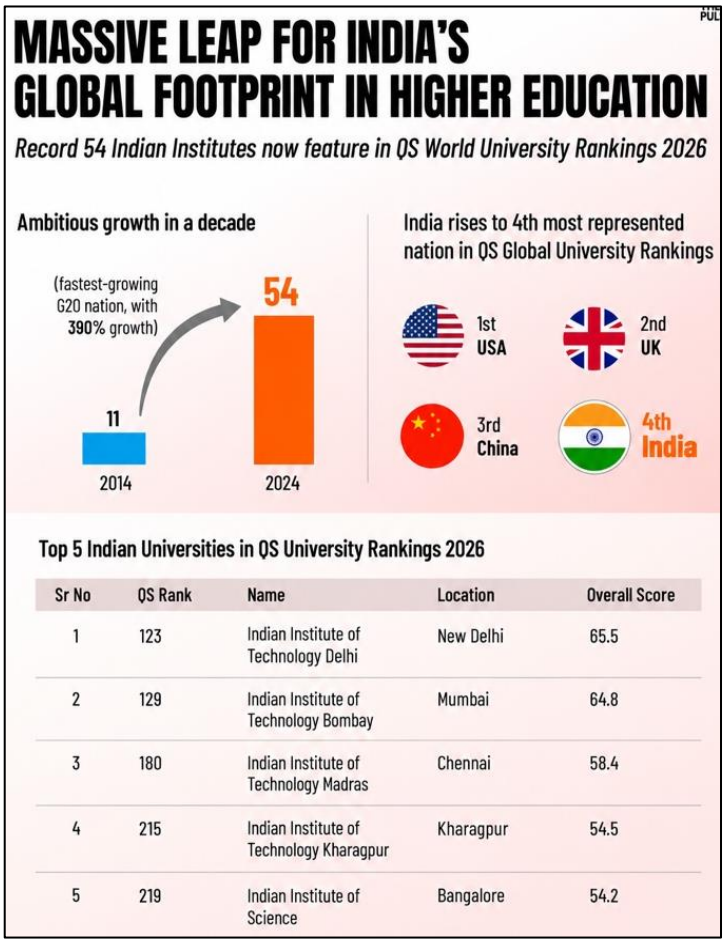
3. QUALITY IN HIGHER EDUCATION

Why in News

Debate over **standardised examinations, research metrics and university appointments** has renewed attention to academic judgment, institutional autonomy and quality in higher education.

Why Reform Matters

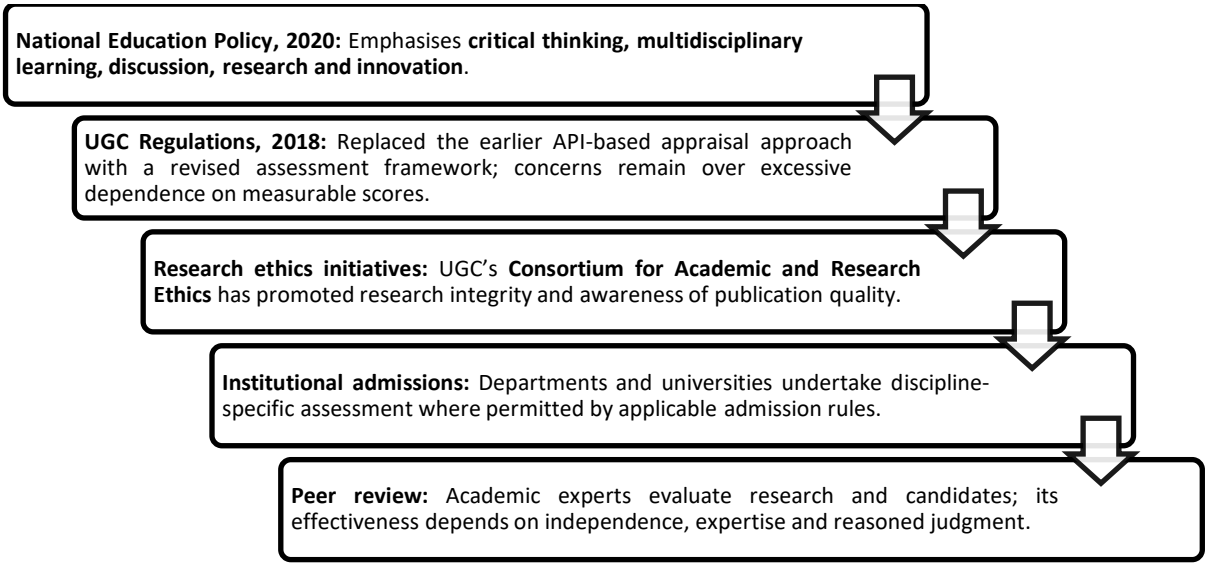
- **Quality at scale:** With **4.33 crore students and 1,168 universities and university-level institutions (AISHE 2021-22),** even small improvements in teaching and assessment can raise learning for millions.
- **Deeper learning:** Most exams reward memorisation. Better assessment can test critical thinking, analytical writing and conceptual understanding, shifting the focus from marks to learning.
- **Intellectual development:** When students learn to think rather than recall, they develop reasoning, creativity and independent inquiry, which prepares them for citizenship, not just jobs.
- **Research credibility:** The same focus on quality matters in research. Strong peer review and supervision make research more reliable, trusted and useful to society.
- **Curbing predatory publishing:** Valuing quality over quantity reduces the pull of journals with weak peer review. **An ISBN or ISSN** only identifies a publication and does not prove its merit.
- **Stronger doctoral standards:** Rigorous supervision, thesis evaluation and viva voce ensure that a PhD reflects genuine original research rather than a formality.



Sr No	QS Rank	Name	Location	Overall Score
1	123	Indian Institute of Technology Delhi	New Delhi	65.5
2	129	Indian Institute of Technology Bombay	Mumbai	64.8
3	180	Indian Institute of Technology Madras	Chennai	58.4
4	215	Indian Institute of Technology Kharagpur	Kharagpur	54.5
5	219	Indian Institute of Science	Bangalore	54.2

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Existing Measures



Way Forward

- **Diversify assessment methods:** Move beyond examinations by including **projects, presentations and analytical writing,** in line with **NEP 2020's** emphasis on continuous assessment. **For example,** students can study local employment trends to **apply economic concepts** to **real-world situations.**
- **Ensure fair admissions:** Publish clear selection **criteria and interview scores** to promote transparency and accountability. **The UGC PhD Regulations**, 2022 prescribe **70% weightage** for **entrance-test scores and 30%** for interviews in institution-conducted entrance routes.
- **Prioritise research quality:** Assess research based on its **originality, sound methodology and contribution to knowledge,** rather than the number of publications. **The UGC PhD Regulations, 2022** removed the mandatory requirement to publish a research paper before submitting a PhD thesis.
- **Strengthen research supervision:** Ensure **regular semester-wise reviews** by the **Research Advisory Committee,** thesis evaluation by at **least two external examiners, and meaningful viva voce** examinations to assess the scholar's research methods, findings and overall understanding.
- **Improve faculty recruitment:** Ensure **transparent and merit-based selection,** in line with **NEP 2020. Use teaching demonstrations, student interactions** and expert reviews of research to assess candidates' teaching skills and academic competence.
- **Respect disciplinary differences:** Adopt **subject-specific assessment methods**, as encouraged by NEP 2020. For example, use laboratory experiments in science, source-based essays in history and performance portfolios in the arts to **assess skills that written examinations** alone may not capture.

Conclusion

Higher education reforms must ensure that degrees reflect genuine knowledge and skills, while research contributes original ideas. **Fair assessment, effective supervision and transparent recruitment** can strengthen educational quality and advance **SDG 4 (Quality Education), particularly Target 4.3,** which promotes equal access to affordable and quality tertiary education.

PYQ ESSENTIALS

Q. The quality of higher education in India requires major improvements to make it internationally competitive. Do you think that the entry of foreign educational institutions would help improve the quality of higher and technical education in the country? Discuss. **(UPSC-2015)**

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PRELIMS SNAPSHOT

1. NATIONAL SOCIAL SECURITY BOARDS

Why in News

The **Union Labour Ministry** notified the constitution of national social security boards for **unorganised workers** and **gig and platform workers**.

Recent Developments

Board	Reported membership
National Social Security Board for Unorganised Workers	40 members
National Social Security Board for Gig and Platform Workers	22 members

- **Chairperson:** Union Minister for **Labour and Employment**.
- **Vice-Chairperson:** Union Labour Secretary**.**
- **Meetings:** At least **three times annually**.

Legal Framework and Functions

- **Statutory basis: Code on Social Security, 2020**; **Section 6** provides for the National Board, while **Section 114** addresses gig and platform workers.
- **Functions:** Recommend welfare schemes, advise the Union government, monitor implementation and review expenditure.
- **Welfare coverage:** Schemes may provide **life and disability cover, accident insurance, health and maternity benefits, and old-age protection**.

Funding and Registration

- **Aggregator contribution:** The Code provides for a **notified rate of 1–2% of annual turnover**, capped at **5% of payments payable to gig and platform workers**.
- **e-Shram:** National database of unorganised workers, including **gig and platform workers**.
- **Important:** Constitution of a board does **not automatically extend EPF, ESI or every welfare benefit**; entitlement depends on applicable provisions and schemes.

2. CHILD LEPROSY

Why in News

India recorded **3,832 new child leprosy cases** (children under 15 years old) during the 2025–26 period, according to the National Leprosy Eradication Programme (NLEP) Annual Report published by the Ministry of Health and Family Welfare.

Leprosy (Hansen's disease)

- It is a chronic infectious disease caused mainly by ***Mycobacterium leprae***.
- Primarily affects the **skin and peripheral nerves**.
- Transmission occurs mainly through **prolonged, close contact**, usually via respiratory droplets.
- **Grade-2 disability (G2D):** visible deformity/disability caused by nerve damage.
- **India:** One of the countries with the highest leprosy burden globally.
- **WHO:** Considers leprosy a **neglected tropical disease (NTD)**.
- **Treatment:** Leprosy is **curable with multidrug therapy (MDT)**.
- **Important distinction:** Child cases + G2D cases → indicators of ongoing transmission and delayed detection.

National Leprosy Eradication Programme (NLEP)

- India aims to **interrupt transmission at district level by 2027**.
- Key targets include:
  - **Zero disability** among new child cases.
  - **G2D rate <1 case per million population**.
  - Early detection through **active case detection and contact surveys**.

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3. MISLEADING CLAIMS IN FOOD ADVERTISEMENTS

Why in News

FSSAI sought scientific evidence from **Nestlé India and Zydus Wellness** over allegedly misleading infant nutrition and children's growth claims.

Legal provisions

- **Applicable rules:** Food Safety and Standards (Advertising and Claims) Regulations, 2018.
- **Basic requirement:** Food claims must be **truthful, clear, meaningful and scientifically substantiated**.
- **Disease claims:** Foods cannot claim to **prevent, alleviate, treat or cure diseases**, unless specifically permitted under applicable regulations.

Important Terms	
Term	**Meaning**
Nutrition claim	Describes a food's nutritional properties, such as High in Protein.
Health claim	Suggests a relationship between a food or ingredient and health, such as supporting normal growth.
HMO	Human Milk Oligosaccharides-complex carbohydrates present in human milk; their inclusion in formula does not make it equivalent to breast milk.

4. ADDED SUGARS IN INFANT FOODS

Why in News

FSSAI has proposed removing the allowance for added sucrose and fructose in foods intended for infants aged 0-6 months**.**

Recent Developments

- Restrictions covering the all added sugars in foods for children below two years. This is a recommendation; the draft should not be treated as an enacted ban.

Background

- **Added sugars:** Sugars added during manufacturing or preparation; **sucrose** is ordinary table sugar.
- **Complementary feeding:** Introducing foods **alongside breast milk from six months**, as milk alone becomes insufficient to meet nutritional needs.
- **WHO recommendation: Exclusive breastfeeding for the first six months**, followed by suitable complementary foods and continued breastfeeding **up to two years or beyond**.
- **Health concern:** Excess sugar can encourage a preference for sweet foods and increase risks of **dental caries and unhealthy weight gain**.

Institutions and Law

TERM	Provisions
Codex Alimentarius Commission	Joint **FAO-WHO** food-standards body established in **1963** to protect consumer health and ensure fair food-trade practices.
IMS Act, 1992	Infant Milk Substitutes, Feeding Bottles and Infant Foods **Act** regulates their production, supply and distribution and restricts promotion to protect breastfeeding.

5. TEMPERATURE-CONTROLLED HANDLING OF PERISHABLE FOODS

Why in News

FSSAI directed food business operators (FBOs) to maintain appropriate temperature and hygiene conditions while handling, storing and transporting **khoa, paneer, meat and fish**.

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Key Requirements

- Maintain appropriate temperatures throughout the supply chain, including loading and unloading.
- Protect food from dust, moisture, pests, physical damage and cross-contamination.
- Maintain **consignment records and traceability**.
- Follow hygiene and sanitary requirements under **Schedule 4** of the **Food Safety and Standards (Licensing and Registration of Food Businesses) Regulations, 2011.**

6. EARLY CHILDHOOD EYE CARE

Why in News

The **Health Ministry released RBSK 2.0 Guidelines** at the National Summit on Good Practices and Innovations in Public Healthcare Service Delivery to strengthen child health services.

Recent Developments

- **Rashtriya Bal Swasthya Karyakram (RBSK) 2.0 guidelines:** Introduce digital health cards and stronger referral tracking.
- **WHO SPECS 2030:** Targets a 40-percentage-point increase in effective refractive-error coverage by 2030.

Background

Early childhood eye care involves **detecting and treating eye disorders during visual development** to prevent avoidable impairment.

Condition	Fact
Amblyopia (lazy eye)	Impaired visual development; early treatment is crucial.
Cataract	Clouding of the **lens**; can occur at birth.
Refractive errors	Incorrect focusing of light on the **retina**; commonly corrected with spectacles.
Retinopathy of prematurity	Abnormal **retinal blood-vessel growth** in premature infants.
Retinoblastoma	**Cancer of the retina**, mainly in young children.

- **RBSK:** Under **NHM, Ministry of Health and Family Welfare**; covers children **from birth to 18 years**. Its **4 Ds** are **Defects at birth, Diseases, Deficiencies and Developmental delays, including disability**.
- **National Programme for Control of Blindness and Visual Impairment (NPCBVI):** India's blindness-control programme, originally launched in **1976**.

7. DIABETES AND CHILDHOOD HABITS

Why in News

World Food Day highlighted how school food environments, physical inactivity and unhealthy diets can increase the risk of **obesity and Type 2 diabetes**.

About Diabetes

- A **chronic non-communicable disease (NCD)** involving persistently high blood glucose because the body produces insufficient insulin or cannot use it effectively.
- **Insulin** is a hormone produced by pancreatic **beta cells** that helps regulate blood glucose.
- **Diabetes is not solely a disease of childhood habits:** genetics and other factors also matter, and Type 1 is not caused by unhealthy eating.

Major Types

Parameter	Type 1	Type 2
Main mechanism	Usually autoimmune destruction of insulin-producing cells	Insulin resistance and progressively inadequate insulin production

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Age	Can occur at any age, often begins in childhood	Can affect adults **and children**
Insulin treatment	Essential	May be required
Prevention	Not preventable through lifestyle measures	Risk can often be reduced through healthy diet, activity and weight management

8. CENSUS DUTY

Why in News

The Centre amended the **Census Rules, 1990**, expressly including **private-school teachers and employees of private establishments** among those who may be appointed as **census enumerators.**

Recent Development

The **Census (Amendment) Rules, 2026** include:

- Teachers of government, aided and **unaided private institutions**.
- Clerks or officials of establishments, including **banks, companies and public sector undertakings**.
- **Any person** considered suitable by the State government or Union Territory administration.

What Does the Census Act Say?

The **Census Act, 1948** provides the legal framework for conducting the census.

- **Section 4(2):** State governments may appoint persons as census officers; persons appointed are bound to serve.
- **Section 4A:** Local authorities must make staff available for census work when directed.
- **Sections 6 and 7:** Provide for assistance in specified circumstances, including counting people connected with certain establishments.

Can Private Persons Be Compelled to Serve?

- The extent of the government's power to require private individuals to perform census duty has been **contested before courts**.
- Eligibility under the amended rules does not, by itself, settle every question about compulsory deployment; the rules must operate within the Census Act.

AUTHORITY RESPONSIBLE FOR THE CENSUS

- **Central Government:** Authorises the conduct of the Census under **Section 3 of the Census Act, 1948**.
- **Nodal authority:** The **Office of the Registrar General and Census Commissioner, India**, under the **Ministry of Home Affairs**, is responsible for conducting it.
- **State and UT role:** State governments and UT administrations assist with field operations and the appointment of census officers.
- **Constitutional position:** Census is in the **Union List, Entry 69** of the Seventh Schedule.

CENSUS 2027

- **16th Census overall; eighth since Independence**.
- India's **first digital Census**, with mobile-based collection and optional self-enumeration.
- **Two phases:** House listing and Housing Census, followed by Population Enumeration.
- **Caste enumeration** is included in the Population Enumeration phase.

HISTORICAL FACTS

- **1872:** First non-synchronous Census.
- **1881:** First synchronous nationwide Census.

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RAPID WRAP	
LANCET COMMISSION REPORT	**A report**, launched at the **World Health Summit 2026 in Berlin**, identified **17 interconnected threats** to global health during **2025-2100**. **About** • **Publication:** It is published in the **international medical journal The Lancet.** • **Coverage:** Assessment of risks across **204 countries and territories**. • **Central finding:** Threats reinforce one another; climate change can worsen malnutrition, air pollution and infectious-disease risks. These are **conditional projections**, not inevitable outcomes. • **Catastrophic threat:** Could cause at least **1 billion disability-adjusted life years (DALYs)** by 2100, with sufficient data for modelling and scope for policy action. • **Potential extinction risks:** Nuclear conflict and malicious use of artificial intelligence.
PENICILLIN-G	The **Directorate General of Trade Remedies (DGTR)** initiated an investigation into **Penicillin G and its salts imported from China** on **September 28, 2026**. **Recent Developments** Domestic manufacturer **Lyfius Pharma** alleged dumped imports were hindering the establishment of domestic production. Initiating an investigation does not itself impose a duty**.** **About Penicillin G** • A **beta-lactam antibiotic**, also used as a **key starting material (KSM)** in manufacturing other antibiotics. • **Investigating authority:** DGTR-Department of Commerce, Ministry of Commerce and Industry. • **Duty-imposing authority: Department of Revenue, Ministry of Finance**, following DGTR's recommendation.

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ECONOMY

1. INCLUSIVE GROWTH AND EMPLOYMENT: BUILDING INDIA'S MIDDLE CLASS

Why in News

India's transition to a higher-income economy highlights a central challenge: **converting economic growth into productive employment, higher wages and widespread prosperity**.

Missing Middle

The gap between **low-productivity employment and a relatively narrow affluent segment**. India needs more productive firms, stable jobs and rising household incomes to build a broad middle class.

Five Structural Gaps in India's Growth

Employment versus productivity: India's labour force grew by over **100 million** in under a decade. More jobs, however, do not automatically mean better jobs, because many people are still in low-productivity work.

Self-employment versus secure earnings: This gap is clearest among women, who made up roughly two-thirds of the increase. Many of them joined agricultural self-employment, which often brings irregular and low incomes.

Factory expansion versus manufacturing depth: Better jobs usually come from manufacturing. **The Annual Survey of Industries 2024-25** records 2.67 lakh registered factories employing about 2.10 crore people. However, these figures cover only the registered sector, so they do not show whether manufacturing's overall share in jobs and output is rising.

Public investment versus private response: To expand such industry, the government is spending heavily on infrastructure. **The Economic Survey 2025-26** expects this to "crowd in" private investment, but a real investment revival will happen only if private companies also step up their spending.

Wealth creation versus shared prosperity: Growth is clearly creating wealth at the top. According to **World Wealth Report 2026,** India's high-net-worth population rose **3% to nearly 3.9 lakh** individuals in 2025. But rising wealth among the rich does not mean that ordinary households are earning more.

Government Actions

- **PM Gati Shakti:** Integrated infrastructure planning to address connectivity gaps and improve project coordination.
- **National Logistics Policy:** Logistics efficiency and coordination across transport systems.
- **Production Linked Incentive schemes:** Support for domestic manufacturing in selected sectors; employment outcomes vary by industry.
- **MSME support:** Credit guarantees, enterprise formalisation and cluster-based interventions for smaller firms.
- **Labour-market statistics: PLFS and Annual Survey of Industries** provide complementary evidence on employment, earnings and registered manufacturing.

Way Forward

- **Prioritise productive jobs:** Develop labour-intensive manufacturing clusters, including the **seven PM MITRA textile parks**, to connect investment with jobs, skills and stronger supply chains.
- **Enable enterprise expansion:** Improve access to **CGTMSE-backed credit and TReDS invoice financing**, alongside simpler compliance, so small firms can manage cash flow, expand production and hire workers.
- **Support agricultural transitions:** Combine higher farm productivity with **PMFME-supported food processing**, creating nearby non-farm jobs and additional markets for agricultural produce.
- **Strengthen women's employment:** Expand **Palna crèches, Sakhi Niwas hostels, safe transport and workplace protection** to reduce care and mobility barriers to sustained paid employment.
- **Measure shared prosperity:** Assess growth through **PLFS employment indicators, real wages and household consumption**, alongside GDP, to determine whether economic expansion improves ordinary households' living standards.

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2. NEXT-GEN GST 2.0

Why in News

GST 2.0 reforms, approved by the **56th GST Council**, came into effect largely from **22 September 2025**, moving towards a simpler **5% and 18% structure**, with a 40% special rate for select luxury/sin goods.

About Goods and Services Tax (GST)

- **Introduced: 1 July 2017**, following the **101st Constitutional Amendment Act, 2016**.
- **Nature:** A **destination-based, indirect tax on consumption**; revenue accrues to the jurisdiction where consumption occurs.
- **Taxable event: Supply of goods or services**, rather than manufacture or sale alone.
- **Input Tax Credit (ITC):** Eligible tax paid on inputs can offset output tax liability, reducing **tax cascading**.

Constitutional Provisions

Article	Provision
246A	Parliament and State Legislatures can legislate on GST; Parliament has exclusive power over **inter-State supplies**.
269A	GST on inter-State supplies is levied and collected by the Union and apportioned between the Union and States.
279A	Provides for the **GST Council**.
366(12A)	Defines GST; excludes **alcoholic liquor for human consumption**.

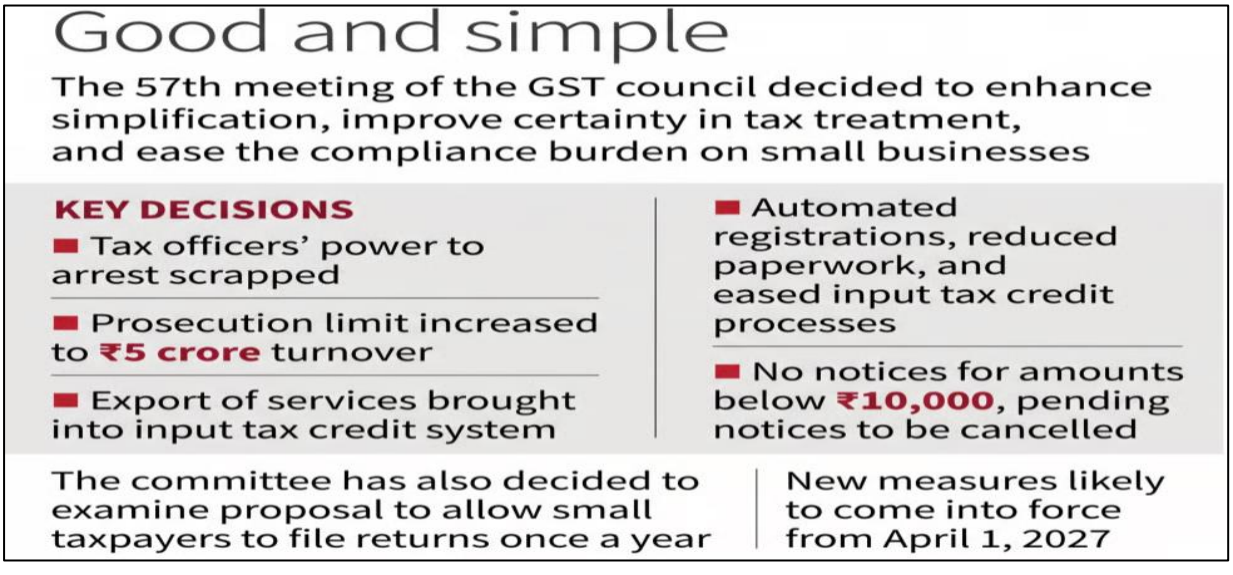
Types and Application

- **Intra-State supply: CGST + SGST**; **CGST + UTGST** in applicable Union Territories.
- **Inter-State supply: IGST**, including supplies treated as inter-State under law.
- **Imports:** Treated as inter-State supplies; **IGST applies**, alongside applicable customs duties.
- **Exports: Zero-rated**; zero-rating permits eligible ITC/refund, unlike ordinary exempt supplies.

GST Council

- **Chairperson:** Union Finance Minister.
- **Members:** Union Minister of State in charge of Revenue/Finance and a Finance/Taxation Minister or nominated minister from each State.
- **Quorum: Half of the total members.**
- **Voting:** Decisions require at least **three-fourths of weighted votes** of members present and voting.
- **Vote weight:** Union **one-third**; States collectively **two-thirds**.
- **Recommendations: Not binding** on Parliament or State Legislatures; GST operates through cooperative federalism.

Key GST 2.0 Reforms



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Challenges

- **Revenue uncertainty:** The **September 2025 GST rate cuts carried an estimated revenue loss of ₹48,000 crore**, creating uncertainty over collections and pressure on government finances.
- **Refund delays:** Pending refunds block **exporters' and MSMEs' working capital**, disrupting input purchases, wage payments and production.
- **Classification disputes:** Similar-looking products can attract different **GST rates**. eg, a **resin statue and a stone statue** may fall under different material-based categories, creating disputes over the applicable tax.
- **Federal fiscal pressures:** The **September 2025 GST cut on cement from 28% to 18%** reduced SGST on an intra-State sale from **14% to 9%**. On an unchanged taxable value of **₹1 lakh**, the State receives **₹5,000 less**, illustrating potential pressure on its finances.
- **Fraudulent input tax credit:** Fake invoices enable **ITC claims without genuine purchases**, causing revenue losses. **2026 DGGI detection of 229 dummy firms involving about ₹645 crore in fraudulent ITC** illustrates this risk.

Contribution

- **Textile manufacturing** : GST on man-made fibres fell from **18% to 5% and on yarn from 12% to 5%.** Aligning these rates with the 5% rate on fabrics helps reduce the build-up of input tax credits.
- **Affordable insurance**: Individual life and health insurance policies became GST-exempt in September 2025, removing the 18% tax on premiums.
- **Clean energy** : GST on renewable-energy devices **fell from 12% to 5%,** reducing the upfront cost of adopting clean energy.
- **Export competitiveness : Zero-rating keeps GST** from adding to the cost of exports. Eligible merchant exporters can also procure goods at 0.1% GST, freeing up working capital.
- **Simpler MSME compliance** : Under the **Quarterly Return Monthly Payment (QRMP) scheme**, eligible businesses with annual turnover **up to ₹5 crore** can file **GST returns quarterly** while **paying tax monthly.**

Way Forward

- **Ensure tax stability:** Provide advance notice and clear transition rules for rate changes. Eg, the **September 2025 cement rate cut from 28% to 18%** required businesses to adjust invoices, pricing and existing contracts.
- **Strengthen GSTN:** Use automated checks to identify **invoice mismatches and suspicious ITC claims**, while allowing genuine businesses to correct routine filing errors without prolonged scrutiny.
- **Accelerate refunds:** Release **risk-based provisional refunds** promptly. Eg, a textile producer facing higher GST on inputs than on finished goods needs timely refunds to finance its next production cycle.
- **Support MSME compliance:** Expand **assisted digital filing and practical guidance**, especially for small firms using the **Quarterly Return Monthly Payment (QRMP) scheme**, which permits quarterly returns with monthly tax payments.
- **Strengthen GSTAT:** Ensure adequate benches, staff and timely hearings. Consistent decisions on disputes such as **product classification and ITC eligibility** can reduce uncertainty and avoid repeated litigation.

Conclusion

GST 2.0's next phase should combine **pre-filled returns, time-bound refunds and faster GSTAT decisions** with regular **Centre–State revenue reviews**. These measures can turn rate simplification into lower business costs, stronger taxpayer trust and sustainable revenues.

PYQ ESSENTIALS

Q. What is/are the most likely advantages of implementing 'Goods and Services Tax (GST)'? **(UPSC-2017)**

1. It will replace multiple taxes collected by multiple authorities and will thus create a single market in India.
2. It will drastically reduce the 'Current Account Deficit' of India and will enable it to increase its foreign exchange reserves.
3. It will enormously increase the growth and size of economy of India and will enable it to overtake China in the near future.

Select the correct answer using the code given below:

(a) 1 only (b) 2 and 3 only (c) 1 and 3 only (d) 1, 2 and 3

Q. Explain the rationale behind the Goods and Services Tax (Compensation to States) Act of 2017. How has COVID-19 impacted the GST compensation fund and created new federal tensions? **(UPSC-2020)**

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3. DISINVESTMENT

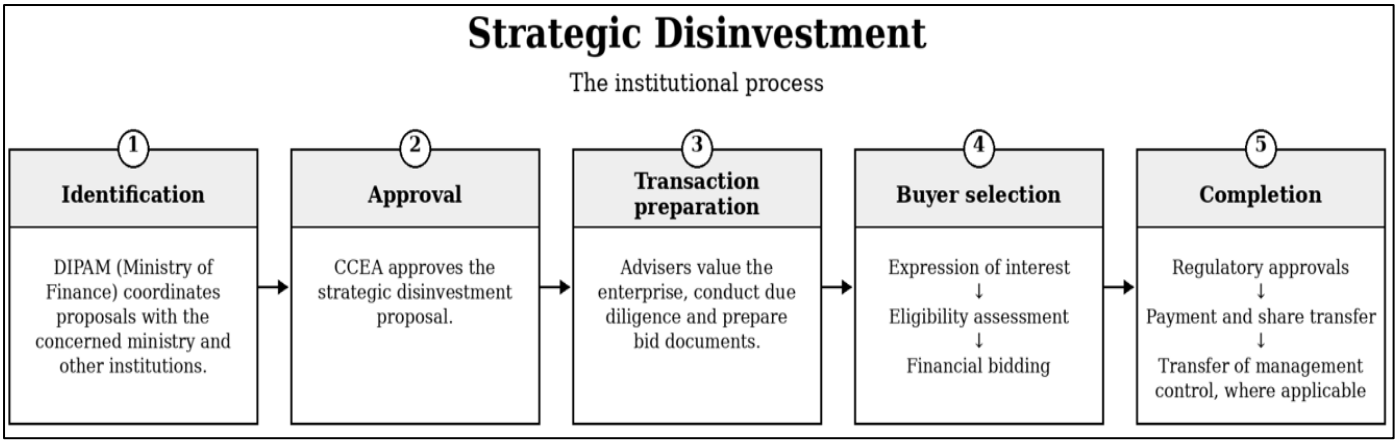
Why in News

Reported approval of **IDBI Bank's stake sale on 14 October 2026** renewed focus on disinvestment for **efficiency and fiscal consolidation**.

Mechanism of Disinvestment in India

Disinvestment means the government sells part or all of its shareholding in a public-sector enterprise.

Route	Mechanism	Management control
Minority stake sale	Shares sold through **IPO, Further Public Offer (FPO), Offer for Sale (OFS)** or other approved market routes.	Government retains control.
Strategic disinvestment	Entire or substantial government shareholding sold, generally through **competitive bidding**, with transfer of management control.	Passes to the buyer.
Privatisation	Strategic disinvestment in which ownership and management control pass to a **private buyer**.	Passes to the private sector.



Major Challenges

- **Pressure to meet annual targets**: When major deals are delayed, ambitious targets can push the government to sell at an unfavourable time or accept a lower price. **The ₹1.75 lakh crore** target for **2021-22 illustrates this pressure.**
- **Complex valuation**: The total deal value can differ substantially from what the government receives in cash. Air India's ₹18,000 crore deal included **₹2,700 crore in cash and ₹15,300 crore** in debt taken on by the buyer.
- **Limited bidder interest**: When few qualified bidders remain, competition weakens and the sale may stall. The government withdrew the **BPCL sale process in May 2022** after several bidders pulled out.
- **Limited impact on management**: Selling a minority stake can raise funds while leaving management and control with the government. **LIC's 2022 IPO illustrates** this form of disinvestment.
- **Employee concerns**: A sale can create uncertainty about jobs and service conditions, especially if the buyer plans to restructure. **Air India's sale included employee-retention** safeguards to give workers some protection during the transition.

Policy and Institutional Framework

- **New PSE Policy, 2021:** Envisages a **bare minimum public-sector presence in strategic sectors**; privatisation or closure in non-strategic sectors, subject to policy provisions.
- **DIPAM:** Department under the **Ministry of Finance** managing government equity disinvestment and related transactions.
- **Market-based instruments: IPOs, Offers for Sale and other approved methods** support calibrated minority stake sales.
- **Delegation to PSE boards:** Since **2022**, boards have been empowered to undertake specified transactions involving subsidiaries, units and joint ventures.
- **National Monetisation Pipeline 2.0:** Indicative monetisation potential of **₹16.72 lakh crore for FY2026-FY2030**, including **₹5.8 lakh crore in private investment**; not entirely government sale receipts.

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Way forward

- **Talk to buyers before inviting bids:** This helps the government understand what buyers are willing to pay and how much debt they can take on. **For Air India,** bids included **both a cash payment and a portion** of the **airline's debt.**
- **Sell shares in stages:** The government can sell a **small stake first and keep control of the company**. In **LIC's 2022 IPO**, the public could buy shares while the government remained the controlling shareholder.
- **Decide which companies to start with: The Confederation of Indian Industry (CII) suggests** starting with companies where the government owns **75% or less.** It proposes focusing on these companies for the first two years, then moving to those where the government owns a larger share.
- **Check buyers' eligibility early:** A dedicated team can check whether bidders meet the sale conditions before the process moves ahead. The government cancelled the **sale of Central Electronics Limited** after disqualifying the winning bidder.
- **Use revenue estimates as a guide:** CII estimates that bringing the government's stake down to 51% in 95 listed public sector companies could **raise ₹9 lakh crore.** The amount raised would depend on share prices, buyer interest and when the shares are sold.

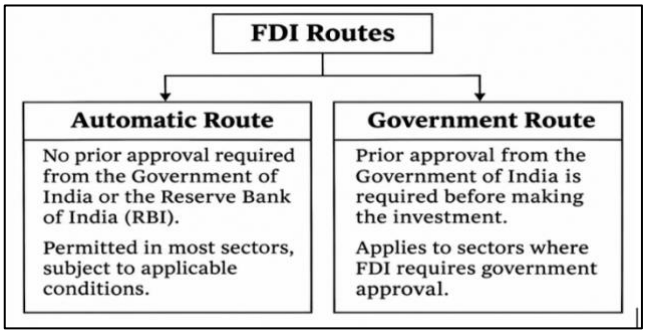
Conclusion

Under the **New PSE Policy, 2021**, disinvestment should prioritise **enterprise efficiency and fair value**, beyond annual revenue targets. Transparent valuation, competitive bidding and employee safeguards can turn stake sales into durable gains in **productivity and fiscal strength**.

4. FOREIGN DIRECT INVESTMENT IN INDIA

Why in News

India's expanding trade partnerships and rising FDI inflows highlight the need to **convert investment commitments into operational projects** through domestic institutional reforms.



About FDI

- RBI defines FDI as Cross-border investment involving a **lasting interest and significant influence** in an enterprise's management.
- **Major sources: United States, Singapore and Mauritius**, contributing about **72% of inflows**.

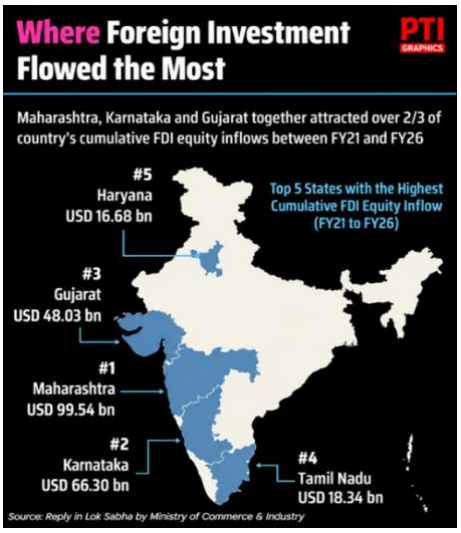
Basis	Foreign Direct Investment	Foreign Portfolio Investment
Main objective	Lasting interest in a business; often involves management influence.	Financial returns through investment in securities.
Ownership threshold in India	**Any equity investment in an unlisted Indian company**, or **10% or more** in a listed Indian company.	**Less than 10%** in a listed Indian company, for each FPI or investor group.
Investment instruments	Equity shares and eligible compulsorily convertible instruments.	Shares, government securities, corporate bonds and other permitted securities.
Stability	Generally **long-term and relatively stable**.	Generally **more liquid and volatile**; can exit quickly.
Economic contribution	Can bring **capital, technology and managerial expertise**.	Adds **market liquidity** and supports securities-market financing.

Major Challenges

- **Administrative fragmentation:** Multiple approvals delay projects even after major clearances. **POSCO's Odisha steel project** could not begin construction despite environmental clearance, as land was not handed over **(2016 NGT submission).**
- **Judicial delays:** Long disputes lock up capital and weaken contract enforcement. In ***White Industries v. India*(2011),** a nine-year delay in enforcing an arbitration award against Coal India led to a successful investment-treaty claim.

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- **Uneven labour regulation:** Despite four labour codes, uneven State readiness complicates compliance. In July 2025, Delhi had pre-published draft rules only under the Code on Wages.
- **Certification transition costs:** Mandatory standards force changes in products, testing and inventories. The 2026 extension of footwear legacy-stock clearance to July 2027 reflects the difficulty of meeting QCO norms.
- **Disproportionate MSME burden:** These costs hit small firms hardest. A Vietnamese supplier received a ₹16.5-lakh testing quote for 29 steel-fastener samples, as cited by FISME.
- **Divided approval accountability:** Related decisions also sit with different agencies. Under footwear QCOs, BIS handles certification, while DPIIT decides extensions and exemptions.
- **Limited treaty enforcement:** Internationally too, enforcement stays weak. Article 7.6 of the India-EFTA TEPA excludes the investment-promotion chapter from dispute settlement.



Government Actions

1. **Commercial justice: Commercial Courts Act, 2015; Mediation Act, 2023**; greater scope for specialised adjudication and alternative dispute resolution.
2. **Labour-law simplification: Four Labour Codes replacing 29 Central laws**; streamlined compliance alongside worker safeguards.
3. **Tax certainty: Taxation Laws (Amendment) Act, 2021**; conditional withdrawal of retrospective tax demands on specified offshore indirect transfers.
4. **QCO recalibration:** Article reports withdrawal of requirements for selected intermediate goods, including **PVC, aluminium and zinc**.
5. **Trade-investment linkage: India-EFTA TEPA: $100 billion investment objective over 15 years**, with facilitation and monitoring arrangements.
6. **Coordinated project facilitation: Tata Electronics' Dholera semiconductor facility**, cited as an example of administrative coordination accelerating investment.

Way Forward

- **Time-bound approvals:** Strictly enforce the **12-week approval timeline.** Public tracking, clear escalation and departmental accountability would turn this deadline into real delivery.
- **Centre-State coordination:** Align implementation schedules across the Centre and States. Clear roles for each **ministry and State authority** would make compliance smoother and more predictable.
- **Faster commercial justice:** Strengthen commercial benches with adequate staff and expand mediation centres. This would also make dispute resolution affordable for smaller enterprises.
- **Proportionate quality regulation: Frame QCOs** on a risk basis, backed by adequate testing capacity and fair transition periods. This way, consumers stay protected without disrupting MSME supply chains.
- **Replicate sectoral success:** Mobile manufacturing shows what coordinated policy can achieve. Between 2014-15 and 2025-26, mobile phone exports grew 165-fold from about ₹1,500 crore to ₹2.59 lakh crore, while production rose around 33 times, from ₹18,000 crore to ₹6.27 lakh crore. Similar models can be extended to other sectors.

Conclusion

Trade agreements open opportunities; institutional capacity converts them into growth. Predictable rules, coordinated approvals and faster dispute resolution remain essential.

PYQ ESSENTIALS

Q. With reference to Foreign Direct Investment in India, which one of the following is considered its major characteristic? **(UPSC-2020)**

(a) It is the investment through capital instruments essentially in a listed company.

(b) It is a largely non-debt creating capital flow.

(c) It is the investment which involves debt-servicing.

(d) It is the investment made by foreign institutional investors in the Government securities.

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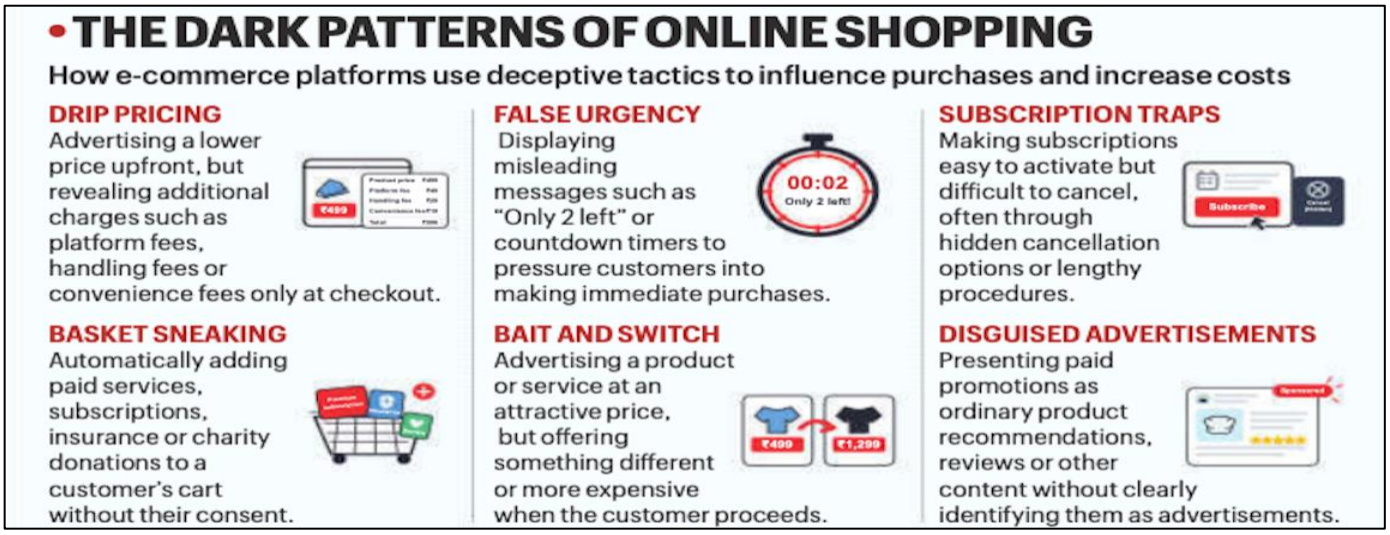
5. E-COMMERCE

Why in News

Growing use of platform fees, convenience charges and hidden add-ons across online services; widening gap between advertised prices and final payments.

About Dark Patterns

- **Deceptive interface designs** misleading users into unintended purchases or actions, impairing consumer choice; recognised under **CCPA's Guidelines for Prevention and Regulation of Dark Patterns, 2023**.



Major Challenges

- **Harder to compare prices:** The price shown at the start can be lower than the amount customers actually pay. On Yatra, for example, the convenience fee appears close to payment, making it harder to compare the total cost across booking sites.
- **Charges for things customers never chose:** Some platforms add memberships, insurance or donations to the cartwithout the customer selecting them. **The Central Consumer Protection Authority (CCPA)** fined **Zepto ₹7 lakh** for adding handling and membership charges at checkout.
- **Small fees add up:** Food delivery platform fees rose from ₹2 per order in 2023 to ₹17.58 by March 2026. More broadly, deceptive design practices known as **dark patterns** are estimated to cost Indian consumers up to ₹28,000 crore a year.
- **Late disclosure makes it harder to walk away:** By the time customers see the full price, they may have already spent time selecting a product and entering their details. In 2026, 69% of the major platforms surveyed disclosed extra charges only at the final checkout stage.
- **Fees have become a source of revenue: IRCTC earned ₹248 crore** from convenience fees in the **quarter ended June 2026,** accounting for more than 18% of its revenue.

Regulatory Measures

1. **Consumer Protection Act, 2019:** The Act protects consumers against unfair trade practices and misleading advertisements. It established the Central Consumer Protection Authority (CCPA) to enforce these protections.
2. **Consumer Protection (E-Commerce) Rules, 2020:** Online platforms must clearly disclose the total price, obtain consent through an explicit action, and provide a way for customers to resolve complaints.
3. **Dark Patterns Guidelines, 2023:** The guidelines identify 13 deceptive design practices. These include revealing charges late (**drip pricing**), adding items without consent (**basket sneaking**), and creating a false sense of urgency.
4. **Platform self-audits:** In 2025, the CCPA advised online platforms to review their websites and apps within three months to identify and remove dark patterns.
5. **Enforcement action:** The CCPA fined Zepto ₹7 lakh and directed it to stop the deceptive checkout practices. Zepto subsequently removed them.

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Way Forward

- **Upfront total pricing:** Show all mandatory charges before selection; curb **"drip pricing"**, identified under the **2023 Dark Patterns Guidelines**. .
- **Explicit consent:** Require active opt-in for paid extras; the **E-Commerce Rules, 2020 prohibit consent through pre-ticked checkboxes**.
- **Comparable disclosures:** Standardise fee labels and itemised bills, separately showing **base price, taxes, delivery and platform charges**.
- **Simple cancellation:** Provide easy subscription exits and timely refunds; **2023 guidelines identify "subscription traps" as dark patterns**.
- **Consumer awareness:** Expand regional-language guidance and reporting through **National Consumer Helpline 1915, available in 17 languages**.
- **Affordable digital access:** Review essential-service charges while sustaining delivery; **RBI's free online NEFT facility for savings-account holders** offers a precedent.

Conclusion

Transparent pricing, informed choice and effective redress are essential to consumer confidence and a competitive digital economy.

PYQ ESSENTIALS

Q. What are the impediments in marketing and supply chain management in developing the food processing industry in India? Can e-commerce help in overcoming these bottlenecks? (**UPSC-2015)**

6. RAISING FARMERS' INCOMES

Why in News

Despite agricultural growth and food security gains, higher production has not ensured comparable growth in farmers' real incomes.

Progress in Indian Agriculture

- **Gujarat's growth:** Gujarat shows what focused policy can achieve in agriculture. Between 2001-02 and 2013-14, its agricultural growth exceeded 9% a year, well above the national average.
- **Reliable electricity:** A key driver was power supply. Under the **Jyotigram Yojana**, Gujarat separated agricultural and household feeders, giving farmers assured, timely power for irrigation.
- **Extension and connectivity:** Along with power, the State brought knowledge and markets closer to farmers. **Krishi Mahotsav** took technology to villages, while rural roads linked farmers to markets.
- **National growth:** At the national level, however, the pace has been slower. Agricultural GDP grew at around 4% a year on average between 2014-15 and 2025-26, as reported.

Agrivoltaics

- Simultaneous cultivation and solar-power generation on the same land, using appropriately spaced or elevated panels.

- **Trade performance:** India still remains a net agricultural exporter, with **exports at $53.1 billion in 2025-26 and imports of around $40 billion.** Yet the surplus has narrowed, as imports stay concentrated in edible oils (about $19.5 billion) and pulses, where domestic output falls short.

Major Challenges

- **Production-demand mismatch:** India grows more rice and wheat than it needs, yet falls short in pulses and oilseeds. It meets only about **40% of its edible oil demand and around 80%** of its pulse needs domestically.
- **Distorted incentives:** This mismatch is driven by skewed subsidies. **Paddy in Punjab-Haryana receives** input subsidies of nearly ₹40,000 per hectare through cheap power, fertilisers and canal irrigation, so farmers have little reason to switch crops.
- **Groundwater depletion:** These incentives push water-intensive paddy in water-scarce regions. As a result, **Haryana's water table** is reportedly falling by about **1.7 feet every year.**
- **Income-output gap:** Even where output grows, farmers do not gain equally. Agricultural growth has not translated into a matching rise in farmers' real incomes.

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- **Surplus-use concerns:** Excess grain also raises questions on how it is used. The proposed diversion of nearly 7 million tonnes of rice for ethanol has raised doubts over its economic viability and net energy balance.

Way forward

- **Diversification incentive:** Approximately **₹35,000 per hectare** proposed for farmers shifting towards pulses and oilseeds.
- **Centre–State partnership:** Proposed **50:50 funding arrangement**, initially in Haryana.
- **Agrivoltaic expansion:** Panels approximately **10-11 feet above ground**, allowing cultivation below where technically suitable.
- **Pilot evidence:** ICRIER's Rajasthan pilot reportedly increased one farmer's income **eight–tenfold**; a site-specific result, not a general income guarantee.
- **"Surya Khet Kranti":** Proposed programme combining capital support and assured electricity purchase.

Conclusion

The next farm revolution must combine higher net incomes with resource conservation. Diversification and carefully designed agrivoltaics can strengthen farmers' roles as both **annadata and urjadata**.

7. CONNECTIVITY KASHMIR: BUILDING THE INFRASTRUCTURE FOR GROWTH

Why in News

Expanding **rail, road, tunnel, airport and freight infrastructure** in Jammu and Kashmir; opportunities for economic integration, tourism and strategic connectivity.

Major Infrastructure Developments

1. **National rail connectivity: 272-km Udhampur-Srinagar-Baramulla Rail Link**, inaugurated in **June 2025**; project cost **₹43,780 crore**, with **36 tunnels and 943 bridges**.
2. **Engineering capability: Chenab Bridge**, the world's highest railway arch bridge, rises **359 metres above the riverbed**; **Anji Khad**, India's first cable-stayed railway bridge.
3. **Improved passenger mobility: Katra-Srinagar Vande Bharat**, launched in June 2025, extended to **Jammu Tawi in April 2026**; Jammu-Srinagar journey under **five hours**.
4. **All-weather road access: 6.4-km Sonamarg tunnel**, inaugurated in January 2025; **13.153-km Zojila tunnel under construction**, intended to strengthen year-round connectivity with Ladakh.
5. **Rural connectivity:** Foundation stones laid for **110 PMGSY-IV road projects**, covering approximately **598 km**, costing over **₹1,500 crore**.
6. **Freight infrastructure: Samba Gati Shakti Cargo Terminal** operational since 2024**; terminals at** Kathua, Anantnag and Jammu granted in-principle approval.

Major Challenges

- **Fragile geology:** The Himalayas are young and still shifting, so no tunnel is simple to build. While building **T50, India's longest transport tunnel on the USBRL,** engineers faced shear zones, landslides and loose, jointed rocks at almost every stage.
- **Multiple disaster risks:** Even after completion, nature keeps testing these routes through earthquakes, avalanches, snowfall and slope failures. In 2025, **when NH-44 closed after heavy rains,** fruit trucks were stranded for days, and growers lost both time and produce.
- **Ecological pressure:** Every new road or tunnel also leaves a mark on the mountains. Excavation, dumped debris and growing tourist traffic put forests, natural drainage and fragile ecosystems under strain.
- **Incomplete connectivity:** The full benefit is still some way off, because the network is unfinished. The **Zojila tunnel** is under construction, and proposed airports and approved cargo terminals are yet to start delivering.
- **First- and last-mile gaps:** A highway helps little if a village cannot reach it. Without feeder roads, affordable transport and local access, remote communities stay outside the gains.
- **Limited value-chain capacity:** Faster transport matters only when produce is ready to travel. **J&K grows about 75% of India's apples,** but without enough cold storage, grading, packaging and aggregation, farmers still sell cheap and lose value.

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Way Forward

- **Prioritise resilience:** Combine slope stabilisation and seismic safety with continuous monitoring; **Anji Bridge uses 189 structural-health monitoring instruments**.
- **Protect ecosystems:** Enforce designated debris disposal, natural-drainage protection and **cumulative assessment of adjoining road, rail and tunnel projects**.
- **Complete missing links:** Synchronise feeder roads, terminals and services; build on **215 km of roads constructed under USBRL** for local connectivity.
- **Strengthen agricultural logistics:** Link packhouses, cold storage and producer groups with rail terminals; **Kashmir-Delhi apple parcel services began in September 2025**.
- **Promote local participation:** Support local procurement, technician training, homestays and **producer-run transport and tourism enterprises**.
- **Measure public outcomes:** Publish verified changes in **travel reliability, freight costs, farm-gate prices and hospital access**, using before-and-after comparisons.

Conclusion

Connectivity can transform Jammu and Kashmir's economic opportunities and strategic preparedness. Its lasting success depends on ecological safeguards, reliable operations and tangible benefits for local communities.

PRELIMS SNAPSHOT

1. REPO RATE HIKE

Why in News

RBI's Monetary Policy Committee (MPC) raised the **repo rate by 25 basis points to 5.50%** and changed its stance from **neutral to calibrated tightening** amid inflation risks.

What is Repo Rate?

- The interest rate at which **RBI lends short-term funds to banks against eligible securities**, under the Liquidity Adjustment Facility (LAF).

How a Repo Rate Hike Works

- Generally raises **borrowing costs**, moderating credit demand, consumption and investment.
- Helps contain **demand pressures and inflation expectations**.
- Cannot directly increase supplies of **oil or food**; it can limit the spread of supply shocks into broader prices.

Monetary-policy stance

Terms	Meaning
Accommodative	Favours easier monetary conditions to support growth; generally signals **rate cuts or a pause**.
Neutral	Keeps all options open-**rate hike, cut or pause**, depending on inflation and growth.
Accommodation	Gradually removes earlier monetary support to contain inflation; **does not necessarily mean a rate hike at every meeting**.
Calibrated Tightening	Signals measured tightening; generally allows **rate hikes or a pause**, with near-term cuts off the table.
Hawkish	Describes a stronger focus on **controlling inflation**, favouring tighter policy.
Dovish	Describes a stronger focus on **supporting growth and employment**, favouring easier policy.

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About MPC

- A **statutory six-member body** under **Section 45ZB of the RBI Act, 1934**, which determines the policy rate to achieve the inflation target.
- **Objective:** Maintain **price stability while keeping growth in mind**.
- **Inflation target: Headline CPI inflation of 4%, with a 2-6% tolerance band**. The target is set by the **Central Government in consultation with RBI**, once every five years.
- **Composition: Three RBI members and three Central Government appointees**; chaired by the **RBI Governor**.
- **Voting:** Decisions by **majority**; the Governor has a **casting vote** in a tie.

Concept	Meaning
Headline inflation	Inflation in the **overall CPI basket**, including food and fuel.
Core inflation	Generally, CPI inflation **excluding food and fuel**.
Second-round effects	An initial shock, such as costlier oil, spreads to **other prices and wages**.

PYQ ESSENTIALS

Q. Which of the following statements is/are correct regarding the Monetary Policy Committee (MPC)? **(UPSC-2017)**

1. It decides the RBI's benchmark interest rates.
2. It is a 12-member body including the Governor of RBI and is reconstituted every year.
3. It functions under the chairmanship of the Union Finance Minister.

Select the correct answer using the code given below:

(a) 1 only (b) 1 and 2 only (c) 3 only (d) 2 and 3 only

2. PERIODIC LABOUR FORCE SURVEY (PLFS)

Why in News

On **23 October 2026**, MoSPI proposed changes to the **PLFS from January 2027** to improve coverage of platform workers and unpaid work.

Recent Developments

- **Platform workers:** A separate sampling group would identify households with at least one **digital platform worker**.
- **Unpaid work:** New questions would capture **household duties, caregiving, volunteer work, unpaid training and production of goods for own use**.
- **Labour underutilisation:** Additional questions would measure labour capacity not fully used.

About PLFS

- **Conducted by: National Statistics Office (NSO), Ministry of Statistics and Programme Implementation (MoSPI)**.
- **Launched: April 2017**, to provide frequent employment and unemployment estimates.
- **LFPR:** Labour force-**employed plus unemployed seeking/available for work**-as a percentage of population.
- **WPR:** Employed persons as a percentage of population.
- **Unemployment Rate:** Unemployed persons as a percentage of the **labour force**, rather than total population.

3. INFRASTRUCTURE INVESTMENT TRUSTS (INVITS)

Why in News

The report cites **₹7.3 lakh crore in assets under management** and **₹6.53 lakh crore invested in listed InvITs** in the **first quarter of FY2026-27**.

About InvITs

- **Meaning:** An InvIT pools investors' money to invest in **infrastructure assets**, directly or through **Special Purpose Vehicles (SPVs)**.

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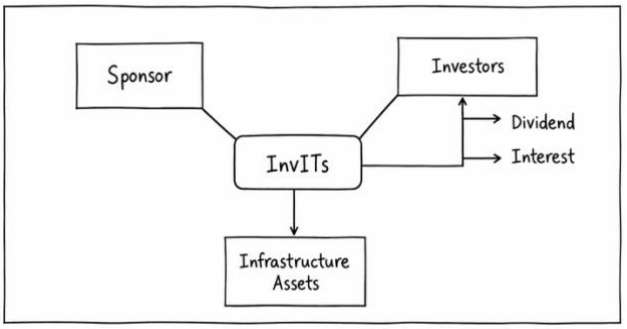
- **Regulator: SEBI**, under the **SEBI (Infrastructure Investment Trusts) Regulations, 2014**.
- **Units:** Investors purchase units representing an interest in the trust.
- **Returns:** Periodic distributions from infrastructure income and potential appreciation in unit prices. **Returns are not guaranteed.**
- **Taxation of InvIT Income**: Interest that an InvIT receives from a **special purpose vehicle (SPV)** and passes on to investors is generally taxable for those investors. Dividend taxation depends on whether the SPV opted for the concessional tax regime under **Section 115BAA of the Income-tax Act, 1961**.

Key Regulatory Provisions

- **Publicly offered InvITs:** At least **80% of asset value** must be invested in **completed, revenue-generating infrastructure projects**.
- **Distribution:** At least **90% of net distributable cash flows** must be distributed to unitholders.
- **Fundraising:** InvITs may raise funds through **public offers or private placements**, subject to different conditions.

Who Manages an InvIT?

- **Sponsor:** Establishes the InvIT.
- **Trustee:** Oversees compliance and protects unitholders' interests.
- **Investment manager:** Manages investments.
- **Project manager:** Oversees infrastructure project operations.



InvITs and REITs

Parameter	INFRASTRUCTURE INVESTMENT TRUSTS (INVITS)	REAL ESTATE INVESTMENT TRUST (REITS)
Invest in	Infrastructure, such as roads and transmission lines	Income-generating real estate
Main income	Tolls, tariffs and other infrastructure receipts	Primarily rentals
Regulator	SEBI	SEBI

PYQ ESSENTIALS

Q. Consider the following statements: **(UPSC 2023)**

Statement-I: Interest income from the deposits in Infrastructure Investment Trusts (InvITs) distributed to their investors is exempted from tax, but the dividend is taxable.

Statement-II: InvITs are recognized as borrowers under the 'Securitization and Reconstruction of Financial Assets and Enforcement of Security Interest Act, 2002'.

Which one of the following is correct in respect of the above statements?

(a) Both Statement-I and Statement-II are correct and Statement-II is the correct explanation for Statement-I

(b) Both Statement-I and Statement-II are correct and Statement-II is not the correct explanation for Statement-I

(c) Statement-I is correct but Statement-II is incorrect

(d) Statement-I is incorrect but Statement-II is correct

4. PROPERTY TAX

Why in News

India's cumulative property tax revenue is only around **0.15-0.2% of GDP**, compared with **0.6% in middle-income countries**.

About Property Tax

- A **tax imposed on immovable property** such as houses, buildings and land.
- It is generally levied and collected by **municipal/local authorities**.
- It is an important source of **own-source revenue for Urban Local Bodies (ULBs)**.

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How Property Tax Works

- **Enumeration** -Identify and record properties.
- **Valuation & Assessment** -Determine taxable value.
- **Billing & Collection** -Calculate and collect tax.

Position

- **Nature:** Property tax is a **direct tax** levied on property owners.
- Municipal taxation is primarily governed by **State municipal laws**.
- **74th Constitutional Amendment Act, 1992** gave constitutional status to Urban Local Bodies.
- **Article 243W:** Deals with powers and responsibilities of municipalities.
- **12th Schedule:** Lists **18 functions** that may be devolved to municipalities.

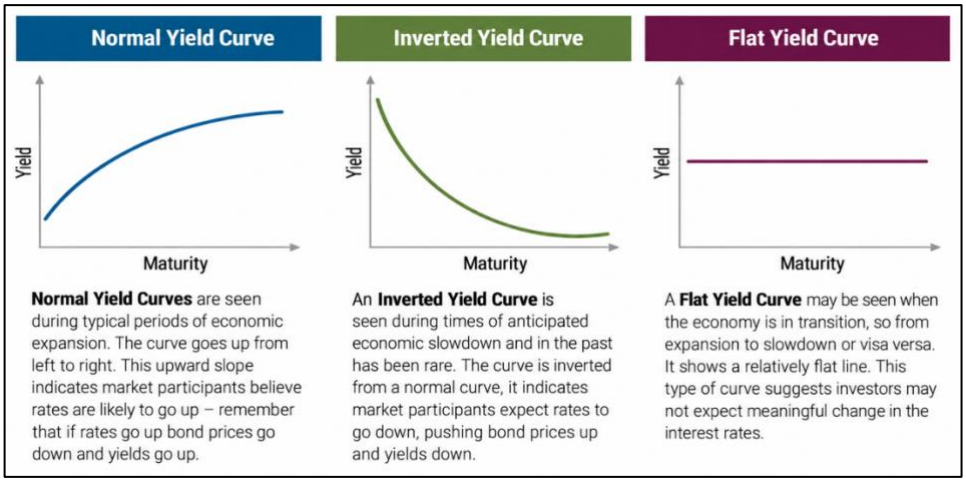
5. BOND YIELDS

Why in News

US Treasury yields and government bond yields in several major economies have risen, increasing borrowing costs. China has seen the opposite trend, with **falling yields amid subdued inflation and strong demand for government bonds**.

About Bond Yield

- **Bond:** A debt instrument through which governments or companies borrow money.
- **Bond yield:** Return implied by a bond's market price and promised payments.
- **Coupon:** Interest calculated on the bond's **face value**.
- **Current yield = Annual coupon payment ÷ Market price × 100.**
- For a fixed-coupon bond, **price and yield move inversely**: price falls → yield rises, and vice versa.
- **Long-term yields reflect expected future interest rates and term/risk premiums**, not just the current policy rate.



Why Do Yields Change?

Yields tend to rise when	Yields tend to fall when
Inflation expectations increase	Inflation expectations decline
Higher interest rates are expected	Interest-rate cuts are expected
Government borrowing increases, other things equal	Demand for bonds increases
Investors demand higher risk compensation	Investors seek safer assets

Why China Differs

- **Weak domestic consumption, low inflation, a property-sector slowdown and high savings** have encouraged investment in government bonds. Higher bond demand raises prices and lowers yields.
- Falling yields can reduce borrowing costs while also signalling **weak demand and expectations of slower growth**.

Economic Effects

- **Government:** Higher yields increase the cost of **new borrowing and refinancing**.
- **Businesses and households:** Higher benchmark yields can raise loan costs, weakening investment and consumption.

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- **Existing bondholders:** Rising yields reduce the market value of existing fixed-coupon bonds; their coupon payments remain unchanged.
- **Risk:** Government bonds can carry **interest-rate and inflation risks**, even where default risk is low.

PYQ ESSENTIALS

Q. Indian Government Bond Yields are influenced by which of the following? **(UPSC-2021)**

1. Actions of the United States Federal Reserve
2. Actions of the Reserve Bank of India
3. Inflation and short-term interest rates

Select the correct answer using the code given below.

(a) 1 and 2 only (b) 2 only (c) 3 only (d) 1, 2 and 3

6. POVERTY IN INDIA

Why in News

The **World Bank's Poverty and Equity Brief 2026** highlighted a sharp reduction in India's **monetary and multidimensional poverty.**

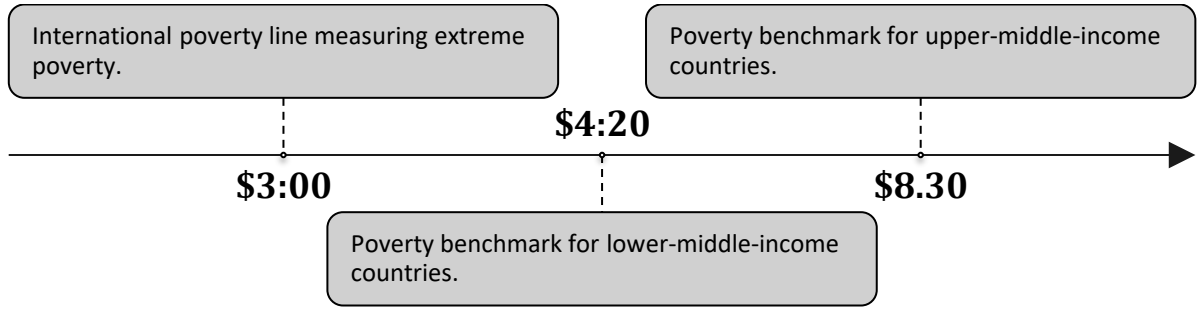
Recent Developments

Indicator	Earlier level	Latest level
Extreme poverty, below **$3/day**	**27.1%**, 2011–12	**2.6%**, 2023–24
Poverty below **$4.20/day**	**57.7%**, 2011–12	**16.1%**, 2023–24

- These estimates use **2021 Purchasing Power Parity (PPP)**.

World Bank Poverty Lines

- Updated in **June 2025**, all expressed **per person per day at 2021 PPP**:



- **PPP:** Adjusts for differences in purchasing power across countries; these amounts are **not converted using market exchange rates.**

MULTIDIMENSIONAL POVERTY INDEX (MPI)

Parameter	Global MPI	India's National MPI
Published by	**UNDP and OPHI**, University of Oxford	**NITI Aayog**
Introduced	**2010**	Baseline report in **2021**
Dimensions	**Health, Education and Standard of Living**	**Health, Education and Standard of Living**
Dimension weights	**⅓ each**	**⅓ each**
Indicators	**10**	**12**
Poverty cut-off	Deprivation in **at least ⅓ of weighted indicators**	Same cut-off
Purpose	International assessment of acute multidimensional poverty	Monitoring across **States, UTs and districts**

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PYQ ESSENTIALS

Q. In a given year in India, official poverty lines are higher in some States than in others because **(UPSC-2019)**

(a) poverty rates vary from State to State

(b) price levels vary from State to State

(c) Gross State Product varies from State to State

(d) quality of public distribution varies from State to State

7. FOREIGN EXCHANGE MANAGEMENT ACT(FEMA)

Why in News

RBI clarified that individuals undertaking **personal foreign-exchange transactions** are exempt from the new trade-reporting requirements. **RECENT DEVELOPMENT**

- **Personal transactions:** The exemption applies irrespective of the transaction amount.
  - **Eg:** Personal subscriptions to foreign TV channels, apps, journals and newspapers.
- **Small exporters:** Export bills up to **₹10 lakh** can use **self-declaration along with an invoice**, according to the reported clarification.
- **Scope:** Personal-use transactions and commercial service exports must be distinguished; an individual freelancer's business receipts should not automatically be treated as personal transactions.

FEMA

- The **Foreign Exchange Management Act, 1999** governs foreign-exchange transactions in India. It replaced **FERA, 1973**, and came into force on **1 June 2000**.
- It aims to facilitate external trade and payments and maintain an orderly foreign-exchange market.

Key features

Feature	Description
Residence, not citizenship	FEMA primarily distinguishes **residents and non-residents**. An Indian citizen can be a non-resident; a foreign citizen can be a resident.
182-day rule	The definition refers to residence for **more than 182 days in the preceding financial year**, with exceptions based on **employment, business and intention of stay**. Days alone do not determine status.
Coverage	Extends throughout India and also covers overseas branches/offices/agencies owned or controlled by a **person resident in India**.
Authorised person	An **authorised dealer, money changer, offshore banking unit or another person authorised by RBI**-not merely banks.
Foreign exchange	Broader than foreign currency: includes foreign-currency deposits, credits, balances and specified payment instruments.
Exports and imports	Cover **both goods and services**.
Penalty	FEMA generally treats violations as **civil contraventions** punishable by monetary penalties.

PYQ ESSENTIALS

Q. FEMA was enacted in India in 1999 to replace the earlier Foreign Exchange Regulation Act (FERA), 1973. Consider the following statements: **(UPSC 2014)**

1. The primary objective of FEMA is to facilitate external trade and payments and promote the orderly development and maintenance of the foreign exchange market in India.
2. FEMA does not empower the Reserve Bank of India (RBI) to frame regulations relating to foreign exchange transactions.
3. Under FEMA, all offences related to foreign exchange transactions are treated as civil offences.

Which of the statements given above is/are correct?

(a) 1 only (b) 1 and 2 only (c) 1 and 3 only (d) All three

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8. DEARNESS ALLOWANCE AND DEARNESS RELIEF

Why in News

On **28 October 2026**, the Union Cabinet approved a **three-percentage-point increase** in DA and DR, from **60% to 63%**, effective **1 July 2026**.

About DA and DR

Basis	Dearness Allowance (DA)	Dearness Relief (DR)
Meaning	Additional allowance to protect employees' salaries against inflation.	Additional relief to protect pensioners' purchasing power against inflation.
Beneficiaries	**Serving government employees** covered by applicable rules.	**Government pensioners and family pensioners** covered by applicable rules.
Calculation	Prescribed percentage of **basic pay**.	Prescribed percentage of **basic pension or family pension**.
Payment	Paid along with the **monthly salary**.	Paid along with the **monthly pension**.
Revision	Generally, twice annually, effective **1 January and 1 July**; announcements may come later.	Generally revised alongside DA, with the same effective dates.
Central government framework	Under the Seventh CPC framework, revision uses the **All-India Consumer Price Index for Industrial Workers (AICPI-IW)**.	Corresponding relief generally follows the **same percentage revision as DA**.

Index Used: CPI-IW

- **Full name:** Consumer Price Index for Industrial Workers.
- **Compiled by: Labour Bureau**, Ministry of Labour and Employment.
- **Base year: 2016 = 100**.
- **Frequency: Monthly**.
- **Use:** Measures retail-price changes affecting industrial workers; used for **wage and DA revisions**.

9. MANUFACTURING PURCHASING MANAGERS' INDEX (PMI)

Why in News

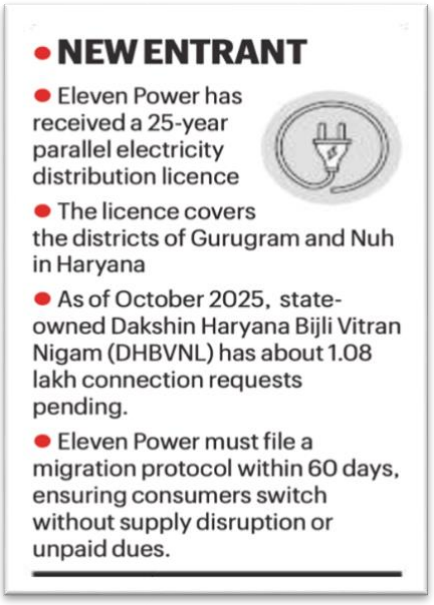
India's Manufacturing PMI rose to 55.1 in September 2026**, a** 7-month high**.**

Key Points

- **PMI > 50:** Expansion in manufacturing activity.
- **PMI < 50:** Contraction.
- **PMI = 50:** No change/stagnation.
- September's rise was driven by stronger demand for **electronics, food, pharmaceuticals and textiles**.
- **New orders and output** increased at a faster pace.
- **New export orders** also expanded, with strong demand from **Brazil, Europe, UAE and the U.S.**
- Business confidence reached a **4-month high**.

PMI

- **S&P Global** publishes the **India Manufacturing PMI**.
- **It** is a survey-based indicator of business activity.
- It is based on responses from **purchasing managers** in manufacturing firms.
- In India, the **HSBC India Manufacturing PMI** is a private-sector survey.
- Manufacturing PMI tracks factors such as:
  - New orders**,** Output**,** Employment**,** Supplier deliveries**,** Inventories



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10. BHAVYA: BHARAT AUDYOGIK VIKAS YOJNA

Why in News

BHAVYA, a scheme to develop **100 plug-and-play industrial parks** across India.

Recent Developments

- **Cabinet approval:** March 2026.
- **Nodal Ministry:** Department for Promotion of Industry and Internal Trade (DPIIT), Ministry of Commerce and Industry.
- **Type:** Central Sector scheme.
- **BHAVYA Portal:** Launched in **June 2026** for project submission, appraisal and monitoring.
- **Implementation period:** FY 2026-27 to FY 2031-32**.**

PLUG-AND-PLAY PARKS

- **Pre-developed industrial areas** providing land, roads, electricity, water and common facilities before firms begin operations.
- **Single-window systems** streamline approvals, reducing the time required to start production.

Key features

Parameter	Important fact
Total outlay	**₹33,660 crore**
Target	**100 industrial parks**, to be developed
Financial assistance	Up to **₹1 crore per acre**
Park size	**25–1,000 acres**, subject to scheme criteria
Selection	Competitive **challenge mode**; up to **50 parks** in the first phase
Implementation	Partnership with **States and private developers**, through dedicated **Special Purpose Vehicles (SPVs)**
External connectivity	Up to **25% of approved funding** for road, rail and last-mile logistics connectivity

11. GREEN ENERGY CORRIDOR (GEC)

Why in News

The Union government has approved **₹1.86 lakh crore for Green Energy Corridor (GEC) Phase-III**.

Recent Developments

- M**inistry:** Ministry of New and Renewable Energy (MNRE)
  - Implemented through **Central Transmission Utility (CTU)** and **State Transmission Utilities (STUs)**.
- **Target:** Evacuation of **135 GW renewable energy**.
- Expected to be completed by **2028**.
- **RE transmission capacity:** 6,900 circuit km**.**
- **Transformation capacity:** 56,900 MVA.
- **Focus states :** Gujarat, Rajasthan, Madhya Pradesh, Maharashtra, Karnataka, Tamil Nadu and Andhra Pradesh, among others.

ABOUT GREEN ENERGY CORRIDOR (GEC)

- It is a dedicated transmission system for integrating **renewable energy into the national grid**.
- It addresses the mismatch between:
  - **Location of renewable generation** → often remote areas.
  - **Location of electricity demand** → major consumption centres.
- **It includes:**
  - Transmission lines**,** Substations**,** Grid infrastructure**,** Energy storage integration
- **GEC-I:** Focused on integrating renewable power from major renewable-energy-rich states.
- **GEC-II:** Expanded transmission infrastructure for larger renewable-energy integration.

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12. PARALLEL ELECTRICITY DISTRIBUTION LICENSING

Why in News

Haryana Electricity Regulatory Commission (HERC) granted **Eleven Power a 25-year parallel distribution licence for Gurugram and Nuh**, raising concerns over existing **DISCOMs' finances.**

Background

- **DISCOM:** A distribution company supplying electricity to **homes, farms and businesses**.
- **Parallel licensing: Two or more licensed distributors operate in the same geographical area**, offering consumers a choice of supplier.
- **Legal basis: Section 14 of the Electricity Act, 2003** permits multiple licensees to distribute electricity through **their own distribution systems**, subject to prescribed conditions.
- An eligible applicant cannot be refused a licence **merely because another licensee already operates there**.

Why the Concerns?

- **Duplicate infrastructure:** Separate networks may increase overall costs.
- **Cross-subsidy pressure:** Existing DISCOMs may lose commercial and industrial consumers whose payments support lower tariffs for other categories.
- **Continuing fixed costs:** Infrastructure, employee and contracted power-capacity costs remain even when electricity sales decline.

13. CORPORATE AVERAGE FUEL ECONOMY (CAFE-III) NORMS

Why in News

The **Ministry of Power has notified CAFE-III norms** for passenger vehicles, applicable from **April 1, 2027, to March 31, 2032**.

CAFÉ Norms

- It commonly termed Corporate Average Fuel Efficiency.
- Set under the **Energy Conservation Act, 2001**, with the **Bureau of Energy Efficiency (BEE)**.
- Regulate a manufacturer's **fleet-average fuel consumption**, rather than imposing an identical target on every individual car.
- Apply to **new passenger vehicles manufactured or imported for sale in India**.

CAFE-I, CAFE-II and CAFE-III

Parameter	CAFE-I	CAFE-II	CAFE-III
Starts from	April 2017	April 2022	April 2027
Fleet-average CO_2 benchmark	130 g/km	113 g/km	—
Fuel-consumption benchmark	About 5.5 L/100 km	About 4.78 L/100 km	At a reference fleet weight of **1,229 kg**, the benchmark falls from **3.996 L/100 km** in 2027–28 to **3.3273 L/100 km** in 2031–32
What changed?	Introduced fleet-wide standards	Tightened the fuel-consumption and CO_2 benchmarks	Tightens the fuel-consumption benchmark in stages

How is CAFE-III compliance calculated?

- **EV super-credit.** Each battery-electric vehicle counts as **three vehicles** for compliance calculations. Credits also support hybrids, flex-fuel vehicles, biofuels and fuel-efficiency technologies.
- **Units.** Fuel consumption is measured in **petrol-equivalent litres per 100 km**. A lower figure means less fuel is needed to travel the same distance. Electricity consumption is measured in **kWh per 100 km**.

CAFE vs Bharat Stage Norms		
Parameter	**CAFE**	**Bharat Stage**
Main focus	Fuel consumption and associated **CO_2 emissions**	Pollutants such as **NO_x, particulate matter, CO and hydrocarbons**
Compliance basis	Manufacturer's fleet average	Individual vehicle/type approval

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14. VENEZUELAN OIL IMPORTS

Why in News

The **US has urged India to increase Venezuelan crude imports**, particularly through Reliance's **Jamnagar refinery**, to diversify its oil supplies.

Background

- **Venezuelan crude:** Its major export grade, **Merey**, is **heavy and sour**-dense oil with high sulphur content. Processing requires sophisticated refineries.
  - **Heavy versus light:** Classified by density; higher API gravity means lighter crude. Sweet versus sour refers to **sulphur content**.
- **Oil reserves:** Venezuela held the **world's largest proven crude reserves in 2023**, largely extra-heavy oil in the **Orinoco Belt**. Large reserves do not necessarily mean high production.



Techno-commercial Limits

- **Refinery compatibility:** Jamnagar, Gujarat, can process heavy Venezuelan crude; many Indian refineries have limited capacity for it.
- **Landed cost:** Freight, insurance and processing costs can offset a discounted purchase price.
- **Limited substitution:** Venezuelan **Merey** cannot easily replace Russian **Urals**, as crude grades differ in quality and processing requirements. Its role is primarily **supplementary**.

India's Crude Oil Import Concentration

Supplier	Share of import volume	Share of import bill
Russia	44.5%	43.4%
UAE	17.4%	16.9%
United States	5.1%	6.4%

PYQ ESSENTIALS

Q. Consider the following statements: **(UPSC-2024)**

Statement I: Recently, Venezuela has achieved a rapid recovery from its economic crisis and succeeded in preventing its people from fleeing/emigrating to other countries.

Statement II: Venezuela has the world's largest oil reserves.

Which one of the following is correct in respect of the above statements?

(a) Both Statement-I and Statement-II are correct and Statement-II explains Statement-I.

(b) Both Statement-I and Statement-II are correct, but Statement-II does not explain Statement-I.

(c) Statement-I is correct, but Statement-II is incorrect.

(d) Statement-I is incorrect, but Statement-II is correct.

15. DELHI-MUMBAI EXPRESSWAY

Why in News

Repeated tendering and contractor-related delays in a **35.4-km stretch in Gujarat** have held up completion of the **Delhi-Mumbai Expressway**.

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About Delhi-Mumbai Expressway

- **Length:** Approximately **1,386 km**.
- **Type:** Access-controlled expressway, with entry and exit through designated interchanges.
- **Implementing authority: National Highways Authority of India (NHAI)**.
- **NHAI:** A statutory authority constituted under the **NHAI Act, 1988**, under the **Ministry of Road Transport and Highways**.

Trending term:

- **L1 bidder:** Lowest financial bidder among eligible, technically qualified bidders; selection remains subject to tender conditions.
- **Performance bank guarantee:** Security supporting the contractor's fulfilment of contractual obligations.

Highway Development Models

Parameter	Engineering, Procurement and Construction (EPC)	Hybrid Annuity Model (HAM)	Build-Operate-Transfer: Toll (BOT-Toll)	Build-Operate-Transfer: Annuity (BOT-Annuity)
Construction funding	Government funds the project	Government provides 40%; developer arranges 60%	Developer arranges funding; government support possible	Developer arranges upfront funding
Developer's payment	Contractual construction payments	Annuities, interest and maintenance payments	**Toll collections** during concession	Periodic payments from government
Traffic/revenue risk	Government	Government; developer does not depend on toll collections	Developer	Government

16. DRIVING LICENCE RULES

Why in News

The **Ministry of Road Transport and Highways (MoRTH)** has proposed amendments to the **Central Motor Vehicles Rules, 1989**.

Recent Developments

- **Stricter assessment:** Raise the qualifying score for the **safe-driving tutorial assessment from 60% to 75%**.
- **Mandatory tutorial:** At least **30 minutes**, with **15 days instead of seven** to complete it.
- **Simplified services:** Proposed **Form 2A** would combine applications for renewal, duplicate licences and changes to recorded details.
- **Fee relief:** No charge for updating personal details; fee waivers for specified **Aadhaar-authenticated online services**.
- **Medical disclosure:** More information on conditions affecting driving, alongside **blood group and emergency contacts**.

Background

- A **learner's licence** permits a person to learn driving subject to prescribed conditions.
- **Central Motor Vehicles Rules, 1989** operate under the **Motor Vehicles Act, 1988**.
- **MoRTH frames central rules**; State/UT licensing authorities administer licences.

17. MINIMUM SUPPORT PRICE (MSP)

Why in News

Telangana sought **100% procurement at MSP** and relaxation of procurement limits amid drought affecting **315 of its 621 mandals**. This is a State demand, not an approved nationwide policy.

About MSP

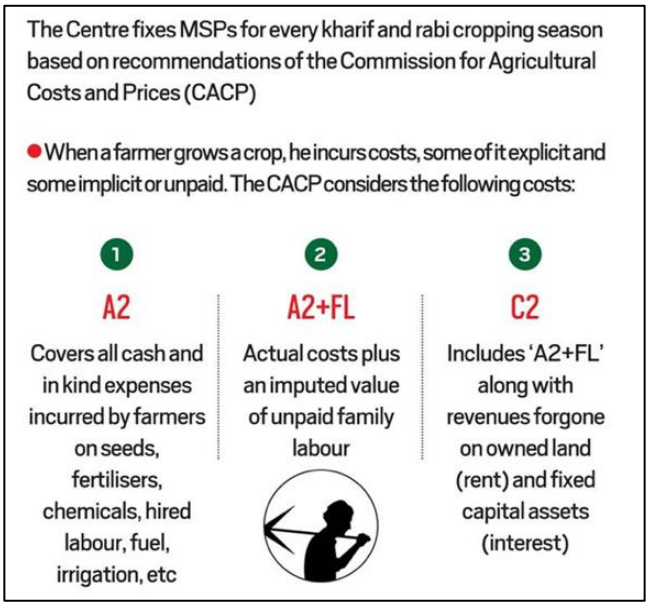
- **Minimum Support Price:** Government-announced price for selected crops to protect farmers against sharp price falls.
- Announced for **22 mandated crops**, based on recommendations of the **Commission for Agricultural Costs and Prices (CACP)**.

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- Announcement of MSP does **not automatically mean government purchase of the entire production**. Procurement depends on the crop, scheme and applicable conditions.
- **Sugarcane** has a separate **Fair and Remunerative Price (FRP)**.

Procurement under Pradhan Mantri Annadata Aay Sanrakshan Abhiyan (PM-AASHA)

- Its **Price Support Scheme (PSS)** provides physical procurement of notified **pulses, oilseeds and copra** meeting **Fair Average Quality (FAQ)** standards.
- Initial procurement sanctions generally cover up to **25% of the State's production** of the relevant crop and season.
- **Tur, urad and masur** have been permitted procurement up to **100% of State production** under specified provisions. Therefore, the 25% limit is **not universal across all crops and procurement systems**.



Legal Status of MSP

- **MSP is an executive policy**, with **no general statutory guarantee under central law** compelling all buyers to pay it or the government to procure every crop.
- **Private purchases below MSP are not automatically illegal**; applicable State laws may provide otherwise.
- **Sugarcane FRP is legally enforceable** under the **Sugarcane (Control) Order, 1966**, issued under the **Essential Commodities Act, 1955**.



No.	Positive effects of MSP	Negative effects of MSP
1	**Prevents distress sales:** Assured procurement protects against falling prices; benefited **over 1.6 crore farmers in 2022–23**.	**Unequal access:** Farmers near established procurement networks benefit more than those lacking access.
2	**Supports profitability:** Since **2018–19**, MSP provides at least **50% margin over A2+FL costs**.	**Incomplete cost coverage:** The margin is over **A2+FL, not C2**, which includes owned-land rent and fixed-capital interest.
3	**Encourages investment:** Predictable earnings support spending on **seeds, irrigation and machinery**, breaking the low-investment cycle.	**Discourages diversification:** Assured **rice–wheat procurement** can discourage shifts towards pulses, oilseeds and millets.
4	**Promotes alternative crops:** In **2024–25**, MSP margins were **77% for bajra and 59% for tur**.	**Environmental stress:** Procurement-backed paddy cultivation can worsen **groundwater depletion in Punjab–Haryana**.

PYQ ESSENTIALS

Q. The Cabinet Committee on Economic Affairs has announced the Minimum Support Price for which of the above? **(UPSC-2018)**

1. Areca nut 2. Barley 3. Coffee 4. Finger millet 5. Groundnut 6. Sesamum 7. Turmeric

(a) 1, 2, 3 and 7 only (b) 2, 4, 5 and 6 only (c) 1, 3, 4, 5 and 6 only (d) 1, 2, 3, 4, 5, 6 and 7

Q. What do you mean by Minimum Support Price (MSP)? How will MSP rescue the farmers from the low income trap? **(UPSC-2018)**

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18. OPEC AND INDIA'S OIL DEMAND

Why in News

OPEC lowered its forecast for **India's oil demand growth in 2026 to 40,000 barrels per day**, from 60,000 bpd. Total demand is projected at **5.7 million barrels per day**.

Parameter	OPEC	OPEC+
Nature	Permanent intergovernmental organisation	Cooperation framework between OPEC and participating non-OPEC producers
Established	**1960**, Baghdad, Iraq	**2016**, through the Declaration of Cooperation
Participants	**11 countries:** Algeria, Republic of the Congo, Equatorial Guinea, Gabon, Iran, Iraq, Kuwait, Libya, Nigeria, Saudi Arabia and Venezuela (UAE exited in May 2026)	**OPEC countries + 10 non-OPEC countries:** Azerbaijan, Bahrain, Brunei, Kazakhstan, Malaysia, Mexico, Oman, Russia, Sudan and South Sudan
Headquarters	**Vienna, Austria**	Uses OPEC's institutional support; no separate headquarters
Main role	Coordinate members' petroleum policies	Coordinate oil production to support market stability
Russia	Not a member	Participating non-OPEC producer

19. CAPITAL GAINS TAX

Why in News

The Finance Minister invited suggestions on **Long-Term Capital Gains (LTCG) tax** and **Securities Transaction Tax (STT)** during pre-budget discussions. **Both** are covered under the **Direct Tax System.**

Background

Parameter	Long-Term Capital Gains (LTCG)	Short-Term Capital Gains (STCG)
Asset	Listed equity shares	Listed equity shares
Holding period	More than 12 months	12 months or less
Tax rate	**12.5%** on eligible aggregate gains exceeding **₹1.25 lakh per financial year**	**20%** on eligible gains
Conditions	Subject to prescribed STT conditions	Subject to prescribed STT conditions

- **Securities Transaction Tax (STT)** :A direct tax charged on the **value of certain securities transactions**. It can apply even if you sell at a loss.

When Capital Gains Arise

- **Property**: If a property rises in value and is later sold for more than it cost, the owner can realise a capital gain.
- **Painting**: A painting may become more valuable as it gains popularity. Selling it for more than its purchase price can generate a capital gain.
- **Product sales**: Selling more products from stock can increase **business profit**. A capital gain comes from transferring a **capital asset**.
- **Selling shares**: You buy shares for **₹50,000 and later sell them for ₹65,000.** You realise a **capital gain of ₹15,000**before transaction costs.

PYQ ESSENTIALS

Q. Under which of the following circumstances may capital gains arise? **(UPSC-2012)**

1. When there is an increase in the sells of a product
2. When there is a natural increase in the value of the property.
3. When you purchase a painting and there is a growth in its value due to an increase in its popularity.

Select the correct answer using the codes given below:

(a) 1 only (b) 2 and 3 only (c) 2 only (d) 1, 2 and 3

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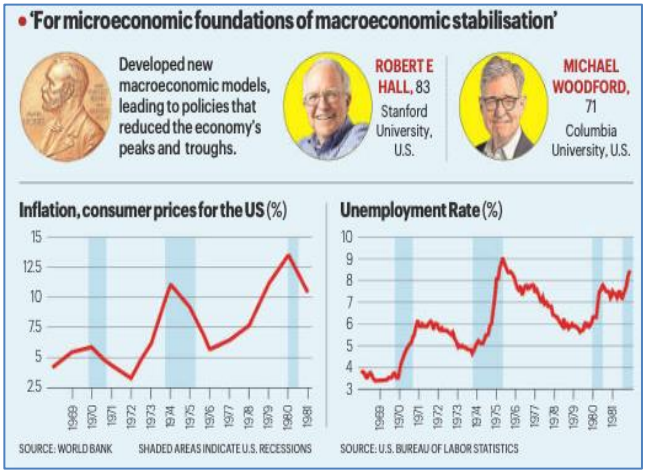
20. NOBEL PRIZE IN ECONOMICS 2026

Why in News

Robert E. Hall and Michael Woodford received the **2026 Economics Nobel** for **"microeconomic foundations of macroeconomic stabilisation."**

Background

- **Macroeconomic stabilisation:** Using policies to moderate fluctuations in **output, inflation and employment**.
- **Microeconomic foundations:** Explaining economy-wide outcomes through decisions of **individual households and firms**.



Their Contributions

- **Robert Hall:** Explained how household consumption depends on **expected future income**, rather than current income alone.
- **Michael Woodford:** Explained how **forward-looking expectations and slow price adjustment** influence inflation and monetary policy. Their work helped shape **New Keynesian economics**.

RAPID WRAP

CRITICAL MINERAL STOCKPILING	The government is preparing a **critical mineral stockpiling policy** to secure supplies for **defence, aerospace and energy**. **Recent Developments** Government plans for **four critical mineral processing parks** in **Gujarat, Maharashtra, Andhra Pradesh and Odisha**, particularly for battery materials. **Background** • **Stockpiling:** Maintaining **strategic reserves** to meet essential requirements during supply disruptions. • **Major uses: Lithium, cobalt, nickel and graphite** in batteries; **rare-earth elements** in permanent magnets; **gallium and germanium** in advanced electronics. • **India's framework: 30 critical minerals** identified in 2023; **24 critical and strategic minerals** listed in **Part D of the First Schedule of the MMDR Act, 1957**. ○ **Critical minerals:** Minerals of **high economic importance whose supplies face significant disruption risks**. Criticality varies across countries and over time. • **National Critical Mineral Mission (2025):** Under the **Ministry of Mines**, covers exploration, processing, recycling, overseas acquisition and stockpiling.
CASH RESERVE RATIO (CRR)	The **RBI raised banks' minimum daily CRR maintenance requirement from 90% to 99%**, effective **October 16, 2026**, to absorb surplus liquidity. **Recent Developments** • The change tightens **daily reserve maintenance**; the **overall fortnightly average CRR requirement remains unchanged**. • **The 99% figure is not the CRR rate:** If a bank's required CRR balance is ₹100 crore, it must now maintain at least **₹99 crore daily**, compared with ₹90 crore earlier. **Background** • **CRR:** The proportion of a bank's **Net Demand and Time Liabilities (NDTL)** maintained as **cash balances with the RBI**.

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	• **No interest:** Banks earn **no interest** on CRR balances. • **Liquidity effect:** A higher CRR reduces funds available for lending; a lower CRR releases funds. • **CRR vs SLR:** CRR is held **with the RBI in cash**; SLR is maintained by banks in **cash, gold and approved securities**. **PYQ ESSENTIALS** **Q.** When the RBI announces increase of the Cash Reserve Ratio, what does it mean? ***(UPSC-2010)*** (a) The Commercial banks will have less money to lend (b) The Reserve Bank of India will have less money to lend (c) The Union Government will have less money to lend (d) The commercial banks will have more money to lend
SME GROWTH FUND	The **Union Cabinet** approved a **₹10,000-crore SME Growth Fund** to provide **long-term growth-oriented capital** to small and medium enterprises. **About SME Growth Fund** • **Ministry :** Ministry of Finance • **Primary objective :** Provide growth-oriented capital to SMEs • **Focus :** Manufacturing, services, technology and innovation • **Special focus** : Tier-II and Tier-III industrial clusters **Important distinction:** The fund primarily addresses the growth/equity capital gap, rather than being a conventional bank-credit scheme.
NBFC ACCOUNT AGGREGATORS (NBFC-AAS)	The **RBI** plans to enable **interoperability among NBFC-Account Aggregators (AAs)**. **New Developments** • It will allow individuals to access their financial information through a **single platform**. • Framework to be implemented by **December 31, 2026**. • **SEBI-regulated depositories** will be enabled to include securities information in **Consolidated Account Statements (CAS)**. • **Bank deposits** will also be progressively integrated into CAS. **Account Aggregator (AA)** • RBI-regulated entity that enables **consent-based sharing of financial data** between financial institutions and users. • Interoperability will integrate fragmented information currently spread across multiple AAs. • It can provide a **consolidated view of financial assets**.
FINANCIAL STABILITY AND DEVELOPMENT COUNCIL (FSDC)	The **30th FSDC meeting**, held on **23 October 2026**, discussed strengthening domestic investment, capital flows and financial-sector reforms. **Recent Developments** • Reviewed **financial-sector cybersecurity** and emerging financial risks. • Discussed investment through **GIFT-IFSC** and simpler digital **KYC for NRIs and foreign portfolio investors**. **Background** • **Established: December 2010** by the Union Government. • **Nature:** An **apex, non-statutory coordination body**. • **Chairperson: Union Finance Minister**. • **Members:** Heads of financial regulators-including **RBI, SEBI, IRDAI and PFRDA**-and senior government officials. • **Functions: Financial stability, financial-sector development, inter-regulatory coordination, financial inclusion and literacy**. • **FSDC Sub-Committee:** Chaired by the **RBI Governor**.

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PYQ ESSENTIALS

Q. With reference to 'Financial Stability and Development Council', consider the following statements:

1. It is an organ of NITI Aayog.
2. It is headed by the Union Finance Minister.
3. It monitors macroprudential supervision of the economy.

Which of the statements given above is/are correct?

(a) 1 and 2 only (b) 3 only (c) 2 and 3 only (d) 1, 2 and 3

INFLATION GENERALISATION

Retail inflation rose to 5.54% in September 2026 from 4.83% in August, prompting concern about price increases spreading across goods and services.

About Inflation generalisation

- Price increases becoming **widespread across the consumption basket,** extending beyond a few items such as food or fuel.
- **Inflation narrowing:** Price increases become concentrated in fewer goods or services rather than spreading across the consumption basket.

Measuring the Spread

- **CPI inflation:** Measures changes in retail prices using a weighted basket of goods and services.
- **Inflation breadth:** Assesses how many items experience price increases; a higher headline rate alone does not establish widespread inflation.
- **RBI's diffusion index:** Tracks whether seasonally adjusted prices of CPI items rise, remain unchanged or fall compared with the previous month.
    - **Above 50:** Price increases are more widespread.
    - **Below 50:** Price declines are more widespread. It measures the **spread**, rather than the magnitude, of price changes.

Momentum and Base Effect

- **Price momentum:** Change in prices from the previous month.
- **Base effect:** Influence of the previous year's price level on current year-on-year inflation. A low comparison base can raise measured inflation even without a sharp current price increase.

ALTERNATIVE INVESTMENT FUNDS (AIFS)

SEBI plans to revise the AIF framework and ease accreditation requirements, aiming to expand the pool of accredited investors from around **1 lakh to 4 lakh**.

About AIFs

- **Privately pooled investment vehicles** that collect money from Indian or foreign investors and invest according to a defined investment policy.
- **Regulator:** SEBI, under the **AIF Regulations, 2012**.
- **Investments:** May include start-ups, infrastructure, private equity and debt.
- **Mutual funds are excluded** from the regulatory definition of AIFs.

Category

Category	Main features	Examples
Category I	Invests in socially or economically desirable sectors	Venture capital funds, **angel funds**, SME funds and infrastructure funds
Category II	Generally, avoids leverage, except for permitted purposes	**Private equity funds**, debt funds and funds for distressed assets
Category III	Uses complex trading strategies; may employ leverage	**Hedge funds** and funds using derivatives-based trading strategies

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	PYQ ESSENTIALS **Q.** With reference to investments, consider the following: I. Bonds II. Hedge Funds III. Stocks IV. Venture Capital **How many of the above are treated as Alternative Investment Funds?** (a) Only one (b) Only two (c) Only three (d) All the four
CHEQUE	**Cheque dishonour cases** have drawn attention to the **legal remedies, penalties and statutory timelines** under the **Negotiable Instruments Act, 1881.** **Background** • **Cheque:** A written instruction directing a bank to pay a specified amount. • **Drawer:** Person issuing the cheque; **drawee:** bank; **payee:** intended recipient. • **Cheque bounce:** Bank returns the cheque unpaid-for reasons such as insufficient funds, account closure or signature mismatch. • **Validity: Three months from the date of the cheque**, under RBI directions. **Legal Consequences** • Governed by the **Negotiable Instruments Act, 1881**. • **Section 138:** Dishonour may attract imprisonment up to **two years**, a fine up to **twice the cheque amount**, or both, subject to statutory conditions. • The cheque must relate to a **legally enforceable debt or liability**; every returned cheque does not automatically establish an offence. • **Sections 118 and 139:** Provide rebuttable presumptions favouring the cheque holder; the accused can present evidence to challenge them. **Important Timeline** 1. **Written demand notice:** Within **30 days** of receiving dishonour information from the bank. 2. **Payment opportunity:** Drawer gets **15 days from receipt of notice**. 3. **Complaint:** Within **one month after the cause of action arises** following non-payment; courts may condone delay for sufficient cause.

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SECURITY

1. ARMED FORCES (SPECIAL POWERS) ACT, 1958 (AFSPA)

It is a special security law that empowers the armed forces to operate effectively in areas declared as **"disturbed areas"** due to insurgency or serious internal security threats. It seeks to balance **national security and restoration of public order** with the protection of **fundamental rights and civilian accountability**.

Key Provisions

Section 3: Declaration of Disturbed Area

- The **Central Government, Governor or Administrator** can declare an area as "disturbed".
- The declaration is made when the area is in such a **disturbed or dangerous condition** that armed forces are necessary to aid civil authorities.
- AFSPA is **not automatically applicable to an entire State**; it operates only in notified areas.

Section 4: Special Powers to Armed Forces

- **Use force, including lethal force**, after giving due warning, against persons violating specified prohibitory orders.
- **Arrest without warrant** persons suspected of committing certain offences.
- **Search and enter premises without warrant** under specified circumstances.
- **Destroy arms dumps, fortified positions or structures** used by armed groups.

Section 5: Duty after Arrest

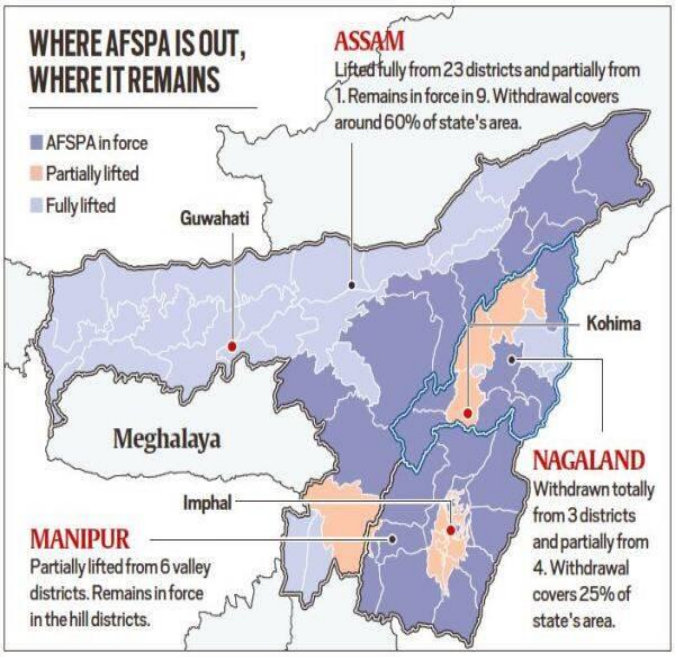
- Any person arrested must be handed over to the **nearest police station with the least possible delay**.
- This maintains a formal link between military operations and the **civilian criminal justice system**.

Section 6: Legal Protection

- Prosecution against personnel acting under AFSPA requires **prior sanction of the Central Government**.
- This provision is intended to protect personnel from **frivolous or vexatious litigation**, but has also generated concerns regarding accountability.

Challenges of AFSPA

- **Human rights concerns:** AFSPA allows forces to arrest, search and even shoot on mere suspicion, which puts the right to life under Article 21 at risk. In Manipur, grieving families alleged 1,528 extra-judicial killings, which the Supreme Court examined in ***EEVFAM v. Union of India (2016).***
- **Accountability gap:** When things go wrong, justice is hard to get, since prosecution needs the Centre's prior sanction under Section 6. **After Oting (2021),** where 13 civilians were killed, the SIT charge-sheeted 30 Army personnel, but sanction was denied, leaving families without closure.
- **Prolonged exceptionalism:** A law meant for emergencies has become a long-term arrangement. Despite better security, AFSPA still covers parts of **Assam, Manipur, Nagaland and Arunachal Pradesh,** even though the **Jeevan Reddy Committee (2005)** recommended its repeal.



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- **Security-centric approach:** Conflicts rooted in identity and land cannot be settled by force alone. The Manipur ethnic violence (2023) showed that, even with heavy deployment, peace needs political dialogue.
- **Centre-State tensions:** Since security is seen differently in Delhi and the States, AFSPA often divides them. After Oting, the Nagaland Assembly unanimously sought its repeal, reflecting local anger.
- **Civil-military trust deficit:** Each alleged excess pushes people further from the forces meant to protect them. The Malom killings (2000) in Manipur sparked mass protests and led Irom Sharmila to fast for 16 years against AFSPA.

Sections Opposed by Human Rights Activists

- **Section 4(a)-Use of force:** Permits use of force, including lethal force, in specified circumstances. Critics fear **excessive or disproportionate force**.
- **Section 4(c)-Arrest without warrant:** Allows arrest without warrant on reasonable suspicion of certain offences, raising concerns over **arbitrary detention**.
- **Section 6 -Prior sanction:** Prosecution for acts done under AFSPA requires **prior Central Government sanction**, which activists argue creates an **accountability gap**.

Supreme Court's View

- **Constitutional validity upheld:** In **Naga People's Movement for Human Rights v. Union of India (1998)**, the Supreme Court upheld AFSPA but subjected its operation to **constitutional and statutory safeguards**.
- **Minimal force:** The Court clarified that under **Section 4(a)**, force must be **necessary and minimal**, and due warning must be given.
- **Accountability remains essential:** The Court stressed that security personnel remain subject to the **rule of law** and can face proceedings where excesses have no reasonable connection with official duty.

Way Forward

- **Periodic & evidence-based review:** Continue **6-monthly review** of disturbed-area status and withdraw AFSPA where violence has declined. *Eg.* Its withdrawal from **Tripura (2015) and Meghalaya (2018)**.
- **Geographically calibrated application:** Apply AFSPA only to **genuinely affected areas**, rather than entire States. *Eg.* MHA continues to issue **area-specific notifications in Manipur**.
- **Implement reform recommendations:** Revisit the **Jeevan Reddy Committee (2005)** recommendation to repeal AFSPA and incorporate necessary provisions into the **UAPA with adequate safeguards**.
- **Strengthen State police:** Build **trained, well-equipped local police and intelligence systems** to gradually reduce dependence on the armed forces. Parliamentary committees have stressed strengthening State police capacity.
- **Improve Centre-State coordination:** Establish regular consultation between the **Centre, State governments, armed forces and local communities** before extending AFSPA.

Conclusion

AFSPA should be viewed neither as an **absolute security solution** nor merely as a **human-rights problem**. It is an extraordinary measure justified by extraordinary security conditions. The long-term objective should be to create conditions where **effective civilian policing, political dialogue and constitutional governance** make extraordinary military powers unnecessary.

PYQ ESSENTIALS

Q. Human right activists constantly highlight the fact that the Armed forces (Special Powers) Act, 1958 (AFSPA) is a draconian act leading to cases of human right abuses by security forces. What sections of AFSPA are opposed by the activists. Critically evaluate the requirement with reference to the view held by Apex Court. **(UPSC-2015)**

2. THE UNLAWFUL ACTIVITIES (PREVENTION) ACT, 1967

WHY IN NEWS

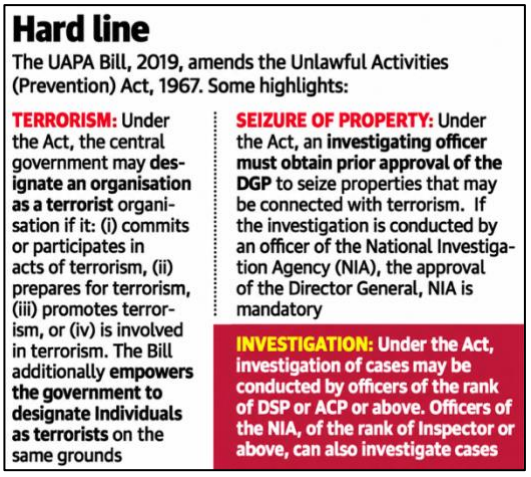
Professor **G.N. Saibaba's acquittal by the Bombay High Court in 2024**, after prolonged imprisonment, has renewed discussion on **bail, trial delays and custodial safeguards** under the Unlawful Activities (Prevention) Act.

About UAPA

- The **Unlawful Activities (Prevention) Act, 1967** provides a framework to address **unlawful activities, terrorist acts, terrorist organisations and related financing.**

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- The **2019 amendment** enabled the Central Government to designate **individuals**, in addition to organisations, as terrorists.



UAPA Amendment Act, 2019: four key provisions

- **Individual designation:** The Centre can designate individuals as terrorists under the **Fourth Schedule**.
- **Property seizure:** The **NIA Director General's prior approval** is required for seizure in NIA investigations.
- **Investigation:** NIA officers of **Inspector rank or above** can investigate UAPA cases.
- **Nuclear terrorism:** Added the **2005 International Convention for the Suppression of Acts of Nuclear Terrorism** to the Act's treaty schedule.

Concerns in Implementation

- **Broad provisions:** UAPA uses wide terms like "unlawful activity" and "membership" of an organisation, which can be read in different ways. Since liberty depends on how these words are applied, vague wording increases the risk of misuse.
- **Stringent bail:** Under Section 43D(5), bail is denied if the court finds the accusation prima facie true. In ***NIA v. Zahoor Ahmad Shah Watali*** **(2019),** the Supreme Court held that courts should not examine evidence in depth at this stage, making bail even harder to get.
- **Delayed trials:** Strict bail becomes harsher when trials do not begin. In the **Bhima Koregaon case,** 16 people were arrested from 2018 onwards, yet the trial has barely moved, so years in jail become a punishment before any verdict, raising **Article 21 concerns.**
- **Association and expression:** The line between holding views and committing a crime can blur. In ***Arup Bhuyan v. State of Assam*** **(2023),** the Supreme Court held that mere membership of a banned group can be an offence, raising Article 19 concerns over association, expression and possession of literature.

JUDICIAL SAFEGUARDS AND INTERPRETATION

- **NIA v. Zahoor Ahmad Shah Watali, 2019:** At the bail stage, courts assess whether prosecution material establishes a **prima facie** case under Section 43D(5).
- **Union of India v. K.A. Najeeb, 2021:** Constitutional courts may grant bail where **prolonged detention and trial delay violate Article 21**, despite statutory restrictions.
- **Written grounds of arrest, 2024:** Supreme Court held that an arrested person must be informed of the **grounds of arrest in writing**, strengthening the ability to seek legal remedies.

- **Custodial vulnerability:** Long detention hits the sick and elderly hardest. **G.N. Saibaba,** 90% disabled, spent about a decade in jail before his acquittal in 2024, while 84-year-old Father Stan Swamy, suffering from Parkinson's, died in custody in 2021 awaiting bail.
- **Varying bail outcomes:** Courts weigh evidence and delay differently, so outcomes are hard to predict. **In *Union of India v. K.A. Najeeb*** **(2021),** the Supreme Court granted bail on grounds of long incarceration, yet many undertrials in similar situations remain in jail.
- **Restrictive conditions:** Even bail does not fully restore freedom. **Activist Sudha Bharadwaj,** for instance, was barred from leaving Mumbai after her release, limiting her work, livelihood and family life.

Way Forward

- **Clarify statutory language:** Issue offence-specific guidance so that broad terms are applied precisely. **Sections 38 and 39 of UAPA already require intent to further a terrorist organisation's activities,** so mere association or sympathy should not be treated as an offence.
- **Ensure timely trials:** Strengthen Special Courts and the prosecution with adequate judges and staff. Section 19 of the **NIA Act already provides for day-to-day trials** with priority over other cases, and it must be followed in practice.
- **Review prolonged detention:** Courts and authorities should periodically assess custody and trial progress. As held in ***K.A. Najeeb (2021),*** constitutional courts can grant bail where long incarceration violates fundamental rights.
- **Strengthen arrest safeguards:** Every accused should receive written grounds of arrest and real access to a lawyer from the start. The Supreme Court affirmed these safeguards for UAPA arrests in ***Prabir Purkayastha*** **(2024).**
- **Protect custodial dignity:** Prisons must ensure timely healthcare and suitable support for persons with disabilities, in line with **Rules 24 and 5 of the UN Mandela Rules.**

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- **Use proportionate bail conditions:** Bail conditions should prevent flight, not punish. **In *Frank Vitus* (2024), an NDPS case,** the Supreme Court struck down conditions such as sharing a Google Maps pin and seeking embassy assurances, a principle equally relevant to UAPA.
- **Improve transparency:** Publish **NCRB-linked, year-wise data on arrests, custody duration and trial outcomes.** Separating cases registered from persons arrested and convicted would give a true picture of how the law works.

Conclusion

Effective counter-terrorism and constitutional liberty are mutually reinforcing. Precise legal standards, timely trials and accountable enforcement strengthen both national security and public trust.

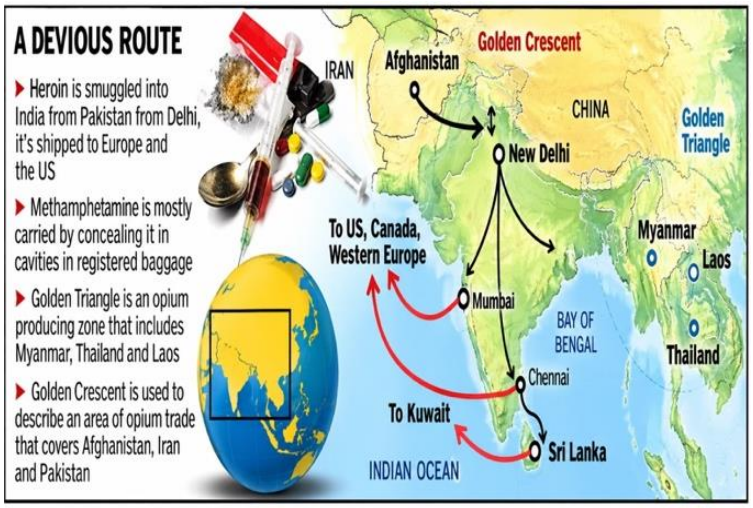
3. DRUG TRAFFICKING AND NARCO-FINANCING IN NORTHEAST INDIA

Why in News

Under the Operation Trident, the Narcotics Control Bureau (NCB), Enforcement Directorate (ED) and State police conducted coordinated searches at **38 locations** across Assam, Mizoram and Manipur.

The Drug Trafficking Network

- **Cross-border supply:** Alleged trafficking of **heroin and methamphetamine** from Myanmar into Mizoram and Manipur.
- **Transit and distribution:** Drugs allegedly moved through **Assam** to other parts of India and Bangladesh.
- **Local carriers:** Myanmar-based organisers reportedly employed local persons using **taxis, motorcycles and truck convoys**.
- **Cash collection:** Drug proceeds collected through local handlers and deposited through **mini-ATMs and customer service points**.



- **Hawala settlements:** Accounts in **Champhai, Aizawl and Lawngtlai** allegedly received proceeds for settlement with Myanmar-based suppliers.
- **Large transaction trail:** ED identified **2,947 transfers involving ₹175.03 crore** through one counter between 2024 and June 2026.

Challenge Persists

- **Regional proximity:** India's Northeast lies close to the **Golden Triangle,** one of the world's biggest drug-producing regions. In 2025, **UNODC reported that Myanmar's opium-poppy cultivation** rose 17% to 53,100 hectares, a ten-year high, and for the first time it found poppy fields in northern Sagaing, near the Indian border.
- **Difficult border terrain:** This supply reaches India through a hard-to-guard frontier. **The 1,643-km India-Myanmar border** runs through remote hills and forests and is largely unfenced, which makes surveillance and interception difficult.
- **Distributed networks:** Even when consignments are caught, the network often survives. Suppliers, carriers, handlers and financiers work separately, so arresting a courier rarely exposes the full chain.
- **Complex financial trails:** The money is just as hard to trace as the drugs. Hawala channels and multiple bank accounts hide where the profits go and who finally benefits.
- **Public-health burden:** The Northeast is not just a transit route but also a market. Local drug use fuels addiction and disease, and Mizoram, for instance, has India's highest adult HIV prevalence, largely linked to injecting drug use, which increases the need for treatment and rehabilitation.
- **Coordination gaps:** Since trafficking crosses both national and State borders, no single agency can tackle it alone. Delays in sharing intelligence among the Centre, States and border forces weaken timely action.

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India's Response: From Enforcement to Recovery

- **NDPS Act, 1985:** Legal framework for control of narcotic drugs and psychotropic substances.
- **PMLA, 2002:** Financial investigation and action against alleged proceeds of crime.
- **NCORD mechanism:** Coordination among Union, State and district authorities on drug-control measures.
- **State Anti-Narcotics Task Forces:** Dedicated enforcement and coordination capacity across States and UTs.
- **NIDAAN database:** Information-sharing on arrested narcotics offenders to support investigations.
- **MANAS helpline - 1933:** Confidential reporting and assistance on drug-related issues.
- **Nasha Mukt Bharat Abhiyaan and NAPDDR:** Awareness, prevention, treatment, rehabilitation and social reintegration.

Way Forward

- **Intelligence-led border management:** Target vulnerable land and maritime routes through joint **NCB–border agency risk profiling**, while facilitating lawful movement.
- **Follow the money:** Combine **FIU-IND financial intelligence, ED investigations and NDPS asset-forfeiture provisions** to trace trafficking proceeds.
- **Deepen interstate coordination:** Use the **four-tier NCORD mechanism** and **NIDAAN database of arrested narco-offenders** for coordinated investigations.
- **Expand regional cooperation:** Strengthen intelligence exchange and coordinated action, building on India's **27 bilateral anti-drug agreements** and BIMSTEC cooperation.
- **Treat substance dependence:** Expand **NAPDDR-supported treatment and rehabilitation**, with **14446** providing counselling and referral assistance.
- **Engage border communities:** Combine alternative livelihoods and awareness with confidential reporting through **MANAS, the 24-hour helpline 1933**.

Conclusion

A durable response requires **disrupting trafficking and financing networks** while strengthening **public health, community trust and regional cooperation**.

RAPID WRAP

TROJAN HORSE	A **25-foot horse sculpture made from electronic waste**, titled **"The Trojan Project"**, was unveiled at **c0c0n 2026 in Kochi** to highlight cyber threats. **About Trojan horse** • **Definition:** Malware disguised as a **legitimate or useful program**, concealing malicious functions. • **Entry routes:** Fake applications, malicious attachments, deceptive downloads and compromised installers. • **Possible effects: Data theft, credential stealing, unauthorised remote access** or installation of additional malware. • **Trojan vs virus vs worm:** A Trojan relies on **deception** and does not inherently self-replicate; a **virus infects other files**, while a **worm can replicate and spread independently**. • **Indian initiative: Cyber Swachhta Kendra**, operated by **CERT-In under MeitY**, provides botnet detection support and malware-cleaning tools.
ROGUE AI AND AIR-GAPPING	Over **200 AI and cybersecurity researchers** called for stronger safeguards after reports of AI models escaping containment and accessing websites without authorisation. **Recent Developments** • Researchers proposed **air-gapping cyber-capable AI during testing**. • They also sought an **international security body** to standardise safeguards and record **containment failures**. These are **recommendations**, not binding rules. **Background** • **Rogue AI:** An informal term for AI operating outside its **intended instructions or authorised boundaries.** • **AI hallucination:** When an AI generates **false or fabricated information and presents it as factual**, such as inventing research findings, sources or court judgments.

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AI containment: Restricting a system's access to networks, tools and other resources.
Air-gapping: Physically isolating a computer or network from the internet and other connected networks.

</td></tr>
<tr><td>CENTRAL INDUSTRIAL SECURITY FORCE (CISF)</td><td>
The Ministry of Home Affairs approved CISF's administrative restructuring, effective November 1, 2026, to align supervision with the security requirements of specific industries and infrastructure.
Recent Developments

Dedicated sectors for power, coal, steel, petroleum and natural gas.
West Coast Port Sector: Mumbai.
East Coast Port Sector: Chennai.
Designated a Recognised Security Organisation for port facilities under the International Ship and Port Facility Security (ISPS) Code.

Background
<table>
<tr><th>Parameter</th><th>Important fact</th></tr>
<tr><td>Nature</td><td>Central Armed Police Force (CAPF)</td></tr>
<tr><td>Administrative ministry</td><td>Ministry of Home Affairs</td></tr>
<tr><td>Legal basis</td><td>CISF Act, 1968</td></tr>
<tr><td>Core role</td><td>Security of critical infrastructure and strategic installations</td></tr>
<tr><td>Coverage</td><td>Airports, ports, nuclear and space installations, industrial units, government buildings and mass transit systems</td></tr>
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<tr><td>SBI DATA BREACH</td><td>
SBI disclosed suspected exposure of customer data on the dark web. Preliminary analysis of approximately 3.75 lakh records identified 3,897 customer records containing personally identifiable information.
About Data Breach

Definition: A data breach occurs when information is accessed, disclosed, altered or lost without authorisation. Exposed banking details can be misused for identity theft, impersonation and financial fraud.
Personally Identifiable Information (PII): Information that identifies a person, such as name, address or identification number.
Dark web: A concealed portion of the internet accessed using specialised software; stolen data may be traded there.
Phishing: Fraudulent messages or websites designed to steal credentials.
Social engineering: Manipulating people into revealing information or authorising transactions.

Regulatory Framework

CERT-In: India's national cyber-incident response agency under MeitY. Specified cyber incidents must be reported within six hours of noticing them or being informed about them.
DPDP Act, 2023: Provides for personal-data protection. Its rules have phased commencement; notification does not mean every obligation is already operational.

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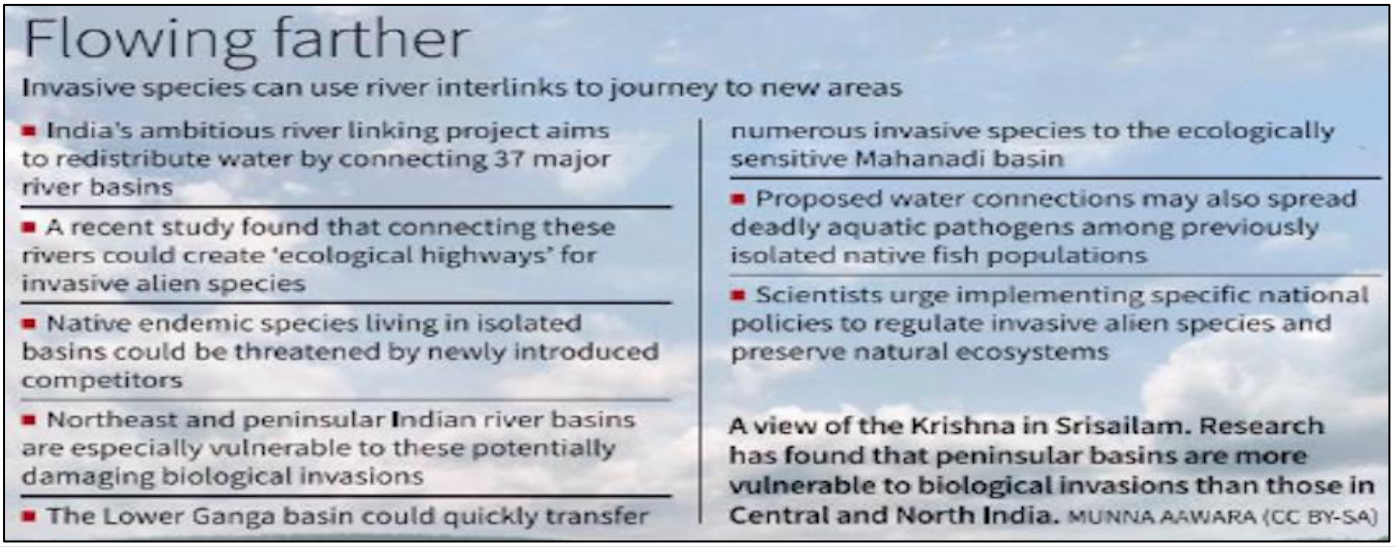
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ENVIRONMENT

1. NATIONAL RIVER LINKING PROJECT (NRLP)

Why in News

A 2026 *Scientific Reports* study warns that such connectivity could create "**Ecological highways" for invasive alien species (IAS)** by removing natural barriers between previously isolated river ecosystems.

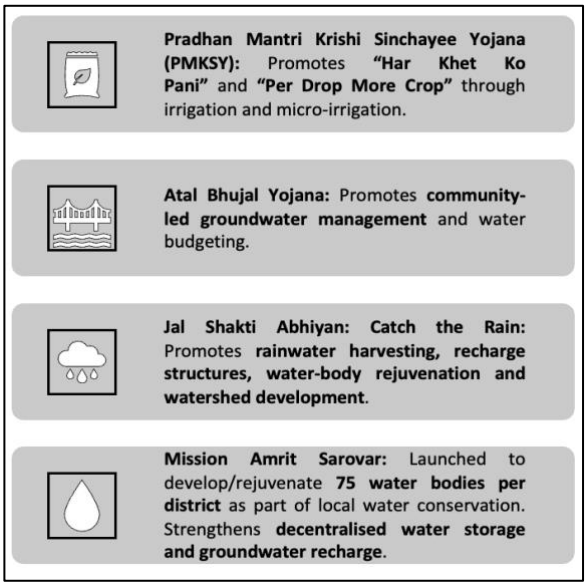


Advantages

- **Water security:** For drought-hit regions, river linking can mean assured drinking water. The **Ken-Betwa project,** the **first under the National Perspective Plan (NPP),** will supply drinking water to nearly 62 lakh people in Bundelkhand.
- **Expansion of irrigation:** Beyond drinking water, the biggest gain is for farms. Projects under the NPP, prepared in 1980, can create about 35 million hectares of additional irrigation potential, reducing dependence on erratic monsoons.
- **Flood moderation:** Linking also helps manage the opposite problem of too much water. The government sees flood moderation in surplus basins and drought relief in deficit ones as major incidental benefits.
- **Hydropower generation:** The dams and canals built for transfer can also produce clean energy. The ILR programme has the potential for around 34,000 MW of additional hydropower.
- **Drinking and industrial water supply:** Transfers can ease pressure on stressed basins and support cities and industry. The Polavaram-Krishna link, for instance, plans to move 80 TMC of surplus Godavari water into the Krishna basin.
- **Climate resilience:** As climate change makes rainfall more uneven, these transfers act as a buffer. By moving water from surplus to deficit basins, they can sustain supply during droughts and hydrological stress.

DISADVANTAGES

- **Surplus-deficit assumption:** River linking assumes some basins always have extra water. In reality, a river may overflow in the monsoon yet run dry by summer, so a "surplus" basin may itself face months of shortage.
- **Climate-change uncertainty:** This becomes riskier as the climate changes. Since Indian rivers depend largely on the monsoon, as the **Mihir Shah Committee** noted, today's "surplus" may shrink tomorrow, leaving costly canals with too little water.
- **Disruption of river ecology:** A river is a living system, not just a water channel. **Fish like the Hilsa and Mahseer need natural flows to migrate and breed**, and the fall of Hilsa above the Farakka Barrage shows what happens when that rhythm breaks.



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- **Invasive species spread:** When rivers are joined, their species mix too. The lower Ganga's 13-15 invasive species could enter the Mahanadi and endanger its 69 threatened species.
- **Displacement and rehabilitation:** Behind every project are people who lose homes and land. **Phase-I of Ken-Betwa alone affects 1,913 families (8,339 people),** including 648 Scheduled Tribe families who depend on forests for their livelihood.
- **Inter-State water conflicts:** Water is a sensitive political issue, so States rarely agree to share it easily. **Ken-Betwa stayed stuck until Madhya Pradesh** and **Uttar Pradesh** signed an agreement in 2021, while Odisha still opposes diverting Mahanadi water.

Way Forward

- **Basin-level planning:** Before calling any river "surplus", assess its full ecological and local needs at the basin level. **The Netravati-Hemavati link shows why this matters**, as its studies were halted once the **Yettinahole project** left no water to spare.
- **Demand-side management:** Saving water is often cheaper than moving it. Rainwater harvesting, micro-irrigation, reuse and groundwater recharge should come first, drawing on **Atal Bhujal Yojana's** community-led water budgets and **Water Security Plans.**
- **Climate-resilient assessment:** Transferable water should be recalculated using climate projections and seasonal flows, not old averages. **India-WRIS, with its rainfall**, river-discharge and groundwater data, can support such assessments.
- **Ecological safeguards:** Every project must protect environmental flows and wildlife corridors. In **Ken-Betwa,** concerns over the **Panna Tiger Reserve** led to an Integrated Landscape Management Plan, a model worth following in other links.
- **Cooperative federalism:** Since water touches every State's interests, sharing must be negotiated, not imposed. The March 2021 **Ken-Betwa agreement** between the **Centre, Madhya Pradesh and Uttar Pradesh offers a working template.**
- **Social safeguards:** Displaced families **deserve fair and transparent compensation**, rehabilitation and livelihood support. **ILR impact assessments already study** socio-economic effects on riparian communities, and these findings should guide implementation on the ground.

Conclusion

Ken-Betwa's drinking-water and irrigation gains must be secured without compromising Panna's habitats or displaced families' livelihoods. Future links should proceed only where seasonal water availability is verified and invasive-species risks are addressed, after assessing local conservation alternatives.

PYQ ESSENTIALS

Q. The interlinking of rivers can provide viable solutions to the multi-dimensional inter-related problems of droughts, floods and interrupted navigation. Critically examine. **(UPSC-2020)**

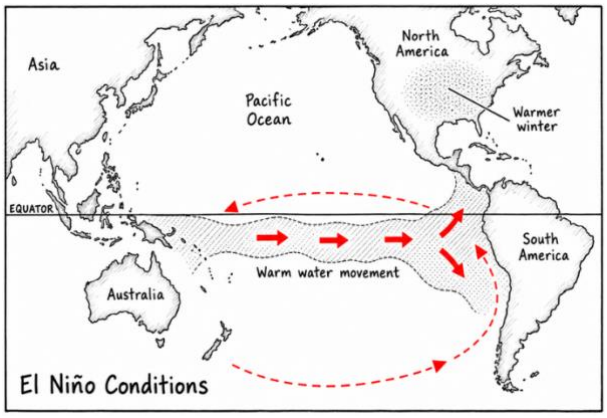
2. EL NINO AND ITS IMPLICATIONS FOR INDIA

Why in News

Around **200 Indian scientists and ecologists** urged preparedness for a **strong El Nino**, with the WMO expecting it to **persist into early 2027** and pose risks to agriculture, water and ecosystems.

El Nino

- It is the **warm phase of ENSO (El Nino-Southern Oscillation)**, characterised by abnormal warming of sea-surface temperatures in the **central and eastern equatorial Pacific Ocean**.
- **Mechanism:**
  - **Pacific Ocean warming → weakening of trade winds → altered Walker circulation → changes in global rainfall and temperature patterns.**
- Weakens the **Indian Summer Monsoon**, although its impact is modified by factors such as the **Indian Ocean Dipole (IOD)** and Madden-Julian Oscillation (MJO).
- **Godzilla El Niño:** Informal nickname popularised for the exceptionally strong **2015-16 El Nino**; **no separate temperature threshold or scientific category.**



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Aspect	Super El Nino
Meaning	Informal term for a **very strong El Niño**, commonly associated with a **three-month average sea-surface temperature anomaly of at least +2°C in the Nino-3.4 region** of the equatorial Pacific.
Scientific status	Not a separate, formally defined ENSO category.
Temperature threshold	Commonly associated with **Nino-3.4 warming of around +2°C or more**, sustained over a season.
Examples	**1982–83, 1997–98 and 2015–16**.
Implications for India	Can increase monsoon-deficit, heat and water-stress risks; outcomes depend on **IOD, timing and regional conditions**.

Impact

Economic	• **Soil-Moisture Deficit:** Deficits of 20-38% in 16 subdivisions stress rain-fed crops. • **Farmer Livelihoods:** Dry spells reduce yields and incomes; contingency plans updated for 342 districts across 14 States in 2026. • **Food Inflation:** Supply disruptions raise prices; food inflation reached 5.95% in August 2026. • **Informal Workers:** Heat reduces productivity and incomes, affecting nearly 90% of India's workforce.
Social	• **Heat-Health:** Extreme heat threatens children, elderly and outdoor workers; Sri Ganganagar recorded 44.5°C. • **Disease Risks:** Changing temperature and rainfall affect dengue and malaria; surveillance covers 887 sentinel hospitals and 27 apex laboratories. • **Education:** CRY's 2026 survey found 68% missed school/routine activities and 76% reported reduced concentration. • **Gender:** A 1°C wet-bulb temperature rise was associated with 3.03 extra minutes of unpaid work and 5.87 fewer minutes of paid work daily for women.
Environmental	• **Monsoon:** El Nino can weaken rainfall, especially in September; IOD and regional factors modify its impact. • **Reservoirs:** Storage fell to 63.25 BCM, compared with 103.96 BCM in 2025. • **Groundwater:** Extraction was 247.22 BCM in 2025, with 87% used for irrigation; weak monsoons increase dependence. • **Coral Bleaching:** Warming threatens reefs in Lakshadweep, Gulf of Mannar and Andaman & Nicobar Islands. • **Climate Interaction:** WMO forecasts nearly 100% probability of persistence through February 2027, increasing heat and rainfall risks.

GOVERNMENT ACTIONS

- **IMD Forecasting:** Provides **seasonal, extended-range and impact-based forecasts** for climate-risk preparedness.
- **AI-Based Forecasts:** IMD is developing **1-km resolution rainfall forecasts** to improve hyper-local weather advisories.
- **INCOIS Bulletins:** Special **El Niño maritime bulletins** warn about marine heatwaves, coral bleaching and fish-stock changes.
- **Contingency Planning: 342 districts across 14 States** updated agricultural contingency plans to manage climate and monsoon risks.

Way Forward

- **Anticipatory Governance:** Link **El Nino forecasts with advance decisions** on crop planning, irrigation and disaster preparedness.
- **Climate-Smart Agriculture:** Expand **district-level advisories, drought-resistant varieties and weather-based crop planning**.
- **Water Resilience:** Prioritise **aquifer recharge, watershed management, rainwater harvesting and micro-irrigation** in water-stressed regions.
- **Ecosystem-Based Adaptation:** Scale up **coral restoration, mangrove conservation and sustainable fisheries**, supported by marine-heatwave monitoring.

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Conclusion

El Nino highlights India's vulnerability to global climate variability. Anticipatory, science-based and climate-resilient governance should integrate **IMD forecasts with INCOIS ocean intelligence** for timely action.

PYQ ESSENTIALS

Q. Most of the unusual climatic happenings are explained as an outcome of the El-Nino effect. Do you agree? **(UPSC-2014, 10 Marks)**

3. KIGALI AMENDMENT

Why in News

The **Kigali Amendment completed 10 years on October 15, 2026**. India faces the challenge of meeting rapidly growing cooling needs while preparing to **freeze HFC production and consumption in 2028**.

About Kigali Amendment

- A **legally binding amendment to the Montreal Protocol**, adopted in **2016** and effective from **2019**, requiring phased reductions in **hydrofluorocarbons (HFCs)**.
- **Key clarification:** HFCs generally **do not deplete ozone**, but many have high **Global Warming Potential (GWP)**.

India's Commitments

Milestone	Commitment
Ratification	2021
HFC baseline years	2024–2026; treaty formula also includes an HCFC component
Freeze	2028
Reduction below baseline	10% by 2032; 20% by 2037; 30% by 2042; 85% by 2047

- **Phase-down, not complete elimination:** Obligations measured using the gases' warming impact.

Major challenges

- **Cooling-warming cycle:** Rising heat increases cooling demand, which in turn adds to warming. In May 2024, India's peak power demand hit a record **250 GW,** driven largely by air-conditioning on a coal-dependent grid.
- **Long equipment life:** ACs and refrigerators run for **10-15 years.** Since India's HFC use freezes only in 2028 under the Kigali Amendment, inefficient units bought today will keep using power and leaking HFCs into the 2030s.
- **Technology transition:** Low-GWP refrigerants like **R-290 (propane)** are climate-friendly but flammable, requiring redesigned equipment, safety standards and trained handlers.
- **Affordability:** Efficient appliances cost more upfront, so small shopkeepers often keep running old, power-hungry refrigerators.
- **Electricity dependence:** A low-GWP AC with poor efficiency still draws heavy power, so its indirect emissions stay high.
- **Servicing gaps:** In India's largely informal servicing sector, refrigerant is often vented during repairs instead of being recovered, adding to leakage.

Way Forward

- **Combine refrigerant and efficiency reforms:** Switching refrigerants should go hand in hand with more efficient equipment design, so both direct and indirect emissions fall together. This also supports the **India Cooling Action Plan (ICAP) target** of cutting cooling energy needs by **25-40% by 2037-38.**

India Cooling Action Plan, 2019: Integrated approach covering demand, efficiency, refrigerants and skills; sectors include **buildings, transport and cold chains**.

ICAP targets for 2037-38: Reduce cooling demand **20-25%**, cooling energy requirements **25-40%**, and refrigerant demand **25-30%**.

HFC phase-down strategy: Sector-specific transition towards lower-GWP alternatives. **Eg: R-290 and R-600a**, where technically suitable and safely handled.

Multilateral Fund: Support for developing countries' **agreed incremental compliance costs**. **Eg:** Financial assistance for eligible industrial conversion.

Industrial conversion: Factory adaptation and alternative technologies. **Eg:** Redesigning refrigeration equipment for lower-GWP refrigerants.

Technician training: Safe installation, servicing and refrigerant handling. **Eg:** Leak testing, recovery practices and flammable-refrigerant safety.

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- **Prevent inefficient lock-in:** Tighter efficiency standards can keep power-hungry models out of the market. At the same time, **BEE star labels, ISEER** ratings and annual electricity use should be shown clearly, so buyers compare lifetime costs, not just price tags.
- **Reduce cooling loads:** The cheapest cooling is the cooling we do not need. Buildings designed on **Eco Niwas Samhita principles, with insulation, shading and natural ventilation,** along with wider use of cool roofs, can keep homes cooler naturally.
- **Ensure affordable access:** Targeted finance should help vulnerable households, MSMEs and essential cold chains adopt efficient cooling. Existing support under **PM Kisan SAMPADA** for cold-chain infrastructure provides a base to build on.
- **Strengthen refrigerant management:** Leak checks, recovery and recycling should be made mandatory during servicing and disposal. This would cut wasteful releases and support ICAP's goal of reducing refrigerant demand by **25-30% by 2037-38.**
- **Support domestic capability:** Funding indigenous cooling research, helping MSMEs transition and certifying technicians would build long-term capacity. **ICAP had aimed to train one lakh servicing** technicians by 2022-23, and this effort needs to be scaled up.

Conclusion

Sustainable cooling must reconcile thermal comfort, affordability and climate responsibility. India's transition requires cleaner refrigerants, efficient equipment and lower cooling demand to advance together.

PRELIMS SNAPSHOT

CLIMATE CHANGE

CARBON BORDER ADJUSTMENT MECHANISM (CBAM)

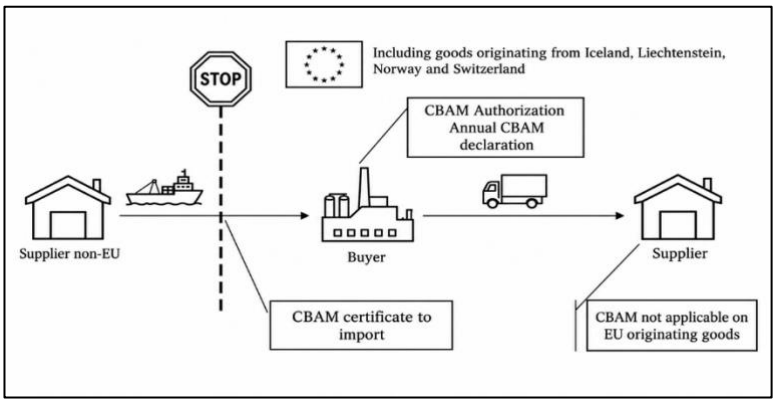
The **U.S. has initiated a probe into the EU's CBAM**. Any resulting relaxation could benefit **Indian steel and aluminium exports**.

Recent Developments

The EU's **definitive CBAM regime began on January 1, 2026**, following a reporting-only transitional phase that started in October 2023.

About CBAM

- **Meaning:** An **EU mechanism** that applies a carbon cost to the emissions embedded in specified imported goods, aligning it with the cost borne by EU producers.
- **Objective:** Prevent **carbon leakage**-production shifting to countries with weaker climate policies, or domestic goods being replaced by more carbon-intensive imports.



- **Six sectors covered: Cement, iron and steel, aluminium, fertilisers, electricity and hydrogen**.
- **How it works:** EU importers report **embedded emissions** and surrender **CBAM certificates**, whose prices are linked to the **EU Emissions Trading System (ETS)**.
- **Adjustment:** A qualifying **carbon price already paid in the country of origin** can reduce the CBAM liability.
- **India connection:** Carbon-intensive **steel and aluminium exports** face additional costs; cleaner production can reduce their exposure.

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SUSTAINABLE AVIATION FUEL (SAF)

India is preparing to mandate **1% SAF blending in aviation fuel for international flights from January 2027**.

Recent Developments

- India's officially announced **indicative blending targets** are **1% in 2027, 2% in 2028 and 5% in 2030**, initially for international flights.

About SAF

- Aviation fuel produced from sustainable feedstocks, including **used cooking oil and agricultural residues**.
- **Purpose:** Reduce **life-cycle greenhouse-gas emissions** compared with conventional **Aviation Turbine Fuel (ATF)**. It still releases CO_2 during combustion.
  - **ATF** is a **kerosene-based fuel** used in **jet and turboprop aircraft**.
- **Life-cycle assessment:** Includes emissions from **feedstock production, processing, transport and final combustion**.

CARBON OFFSETTING AND REDUCTION SCHEME FOR INTERNATIONAL AVIATION (CORSIA)

- **Organisation:** International Civil Aviation Organization (ICAO)**.**
- **Coverage: International aviation**, rather than domestic flights.
- **Mechanism:** Airlines meet applicable offsetting obligations through **eligible carbon credits**; qualifying cleaner fuels can reduce these obligations.
- **Phases: Pilot: 2021-23; first: 2024-26; second: 2027-35**. Participation expands in the second phase, with specified exemptions.
- **Baseline: 85% of 2019 emissions for 2024-35-**a benchmark for calculating offsetting obligations, **not an absolute emissions ceiling**.

E100

MoRTH amended the **Central Motor Vehicles Rules, 1989**, to include **E100 alongside E85** in emission-certification provisions for suitable vehicles.

Recent Developments

- **E85 fuel** was launched for flex-fuel vehicles in **June 2026**.
- Standards for **E22, E25, E27 and E30** were issued in **May 2026**. Issuing standards does **not** itself mean nationwide rollout of these blends.
- In July 2026, the government stated that **no decision had been taken to raise the nationwide petrol blending level beyond 20%**.

About Ethanol-Blended Fuels

- **Ethanol** is an alcohol that can be produced from biomass such as **sugarcane and grains**. It can be blended with petrol for use in compatible vehicles.
- The number after **E** indicates the ethanol proportion in the fuel.

Fuel	Ethanol content
E20	**20% ethanol** and 80% petrol
E85	Up to **85% ethanol**, blended with petrol
E100	Predominantly ethanol, subject to applicable fuel specifications

Flex-Fuel Vehicles

- Specially designed vehicles that can operate on **different ethanol-petrol blends** within their certified range.
- Use a **single fuel tank**; engine controls adjust to the fuel composition.
- **E85/E100** is intended for vehicles specifically **designed and certified** for those fuels.
- Compatibility with **E10 or E20 alone does not establish compatibility with E85 or E100**.

India's Ethanol Blending Programme

- **Ethanol Blended Petrol programme:** Promotes mixing ethanol with petrol to reduce dependence on imported crude oil.
- **E20 rollout:** Began in **2023**.
- Higher ethanol use can lower some emissions, but **lifecycle greenhouse-gas benefits depend on the feedstock and production process**.

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ENVIRONMENTAL GOVERNANCE AND POLLUTION

GRADED RESPONSE ACTION PLAN (GRAP)

The **Commission for Air Quality Management (CAQM)** invoked **Stage I of GRAP** across Delhi-NCR after Delhi's AQI entered the **'Poor' category**.

About GRAP

- **Nature:** A graded framework of **short-term emergency measures** to control air pollution in **Delhi-NCR**.
- **First notified: January 2017**, following Supreme Court directions.
- **Authority: CAQM**, a statutory body under the **CAQM Act, 2021**, replaced the earlier **Environment Pollution (Prevention and Control) Authority (EPCA)**.
- **Trigger:** Recorded air quality and forecasts; measures can be invoked **before further deterioration**.
- **Applicability:** Can operate **throughout the year**, not only during winter.



Why Winter Pollution Worsens

- **Temperature inversion:** Traps polluted air near the ground.
- **Low wind speeds:** Reduce pollutant dispersal.
- **Shallow mixing layer:** Concentrates pollutants within a smaller air volume.
- **Additional emissions:** Stubble burning and firecrackers compound vehicle, industrial and dust pollution.

About Air Quality Index (AQI)

- **Eight pollutants:** $PM_{2.5}$, PM_{10}, NO_2, SO_2, CO, O_3, NH_3 and lead (Pb).
- **Calculation:** The **highest pollutant sub-index** determines AQI, not their average.
- **Minimum data:** At least **three pollutants**, including **$PM_{2.5}$ or PM_{10}**.
- **CO_2 is not included** in India's AQI.

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PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS): FOREVER CHEMICALS

Studies highlighted **PFAS in Indian water sources**, raising concerns about the ability of conventional treatment plants to remove them.

Recent Developments

- A **2024 IIT-Madras study** found higher concentrations of eight targeted PFAS in treated water than in raw water, possibly due to the conversion of precursor compounds.
- BIS is examining PFAS limits and testing methods for drinking water; these were **not yet finalised**.

About PFAS

- They are a large group of synthetic chemicals used in coatings, textiles and industrial products.
- **Uses:** Non-stick cookware, water- and stain-resistant fabrics, food packaging and firefighting foams.
- **Persistence:** Strong **carbon–fluorine bonds** make many PFAS highly resistant to degradation, earning them the name **"forever chemicals."**
- **Contamination:** They can enter groundwater and surface water through industrial discharge, sewage and landfill leachate.

Health Concerns

- **PFOA:** Classified by IARC as **carcinogenic to humans, Group 1**.
- **PFOS:** Classified as **possibly carcinogenic to humans, Group 2B**.
- **Date clarification:** These classifications were made in **2023**; the detailed IARC monograph was published in **2025**.
- Detection alone does not establish the level of health risk; **chemical type, dose, exposure duration and route** matter.

ECOLOGY AND CONSERVATION

RAMSAR SITES

India's Ramsar network reached **103 sites** with the addition of **Sukhna Wetland in Chandigarh**, and **Sauj Jheel in Uttar Pradesh**.

Recent Developments

- **India's position:** First in Asia and third globally by number of Ramsar sites.
- **Tamil Nadu:** Highest number, **20 sites**.
- **Indore and Udaipur:** India's first **Ramsar-accredited Wetland Cities**, recognised in **January 2025**. City accreditation is separate from designation of a wetland as a Ramsar site.

RAMSAR-ACCREDITED WETLAND CITIES

- **Meaning:** Cities internationally recognised for conserving wetlands while promoting sustainable urban development.
- **Initiative:** Wetland City Accreditation (WCA) under the Ramsar Convention, 1971, adopted at COP12 in 2015.
- **Objective:** Encourage urban and peri-urban wetland conservation, wise use of wetlands and community participation.
- **Eligibility:** Cities must demonstrate effective wetland conservation, management, restoration, public awareness and integration of wetlands into urban planning.
- **Validity:** Accreditation is valid for six years and is renewable.
- **Nature:** It is a voluntary international recognition, not a UNESCO designation or a separate Ramsar Site category.

India's First Ramsar-Accredited Wetland Cities (2025)

City	State	Associated Ramsar Site
Indore	Madhya Pradesh	Sirpur Lake
Udaipur	Rajasthan	Udaipur's lake system (including nearby Menar Wetland)

About Ramsar Convention

- **Nature:** Intergovernmental treaty for the **conservation and wise use of wetlands**.
- **Adopted: 2 February 1971**, at **Ramsar, Iran**; entered into force in **1975**.
- **India:** Convention entered into force for India on **1 February 1982**.
- **World Wetlands Day:** 2 February**.**
- **Ramsar site:** A designated **Wetland of International Importance**.
- **Three pillars:** Wise use of all wetlands; designation and effective management of Ramsar sites; international cooperation.
- **Wise use:** Maintaining ecological character through an ecosystem approach within sustainable development.

What Qualifies as a Wetland?

- The Convention covers **natural or artificial, permanent or temporary wetlands**, with static or flowing, fresh, brackish or salt water.
- It includes marine waters **up to six metres deep at low tide**.
- Ramsar sites can include **lakes, rivers, mangroves, marshes, reservoirs and other wetland types**.

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Nine Criteria for Designation

A wetland needs to meet **at least one**, rather than all nine criteria.

Criterion	Qualifying feature
1	Representative, rare or unique natural or near-natural wetland
2	Threatened species or ecological communities
3	Species important for regional biological diversity
4	Critical life-cycle habitat or refuge during adverse conditions
5	Regularly supports **20,000 or more waterbirds**
6	Regularly supports **1% of a waterbird species/subspecies population**
7	Significant indigenous fish diversity
8	Important fish feeding, spawning, nursery or migration habitat
9	Regularly supports **1% of a wetland-dependent non-avian animal population**

Important sites

Site	State/UT	Important fact
Chilika Lake	Odisha	Among India's first sites, designated **1 October 1981**; brackish-water lagoon
Keoladeo NP	Rajasthan	Also designated **1 October 1981**
Sundarban Wetland	West Bengal	India's **largest Ramsar site**, **4,23,000 hectares**

Montreux Record

- Register of Ramsar sites where ecological character **has changed, is changing or is likely to change** because of human interference.
- **Indian sites listed: Keoladeo National Park** and **Loktak Lake**.
- **Chilika:** Removed from the Record in **2002** following restoration.
- Inclusion indicates a need for remedial attention; it **does not remove Ramsar status**.

Designation and Conservation in India

- **Process:** State/UT identifies the wetland → **MoEFCC** examines and forwards the nomination → **Ramsar Secretariat** processes designation.
- **Wetlands Rules, 2017:** Notified under the **Environment (Protection) Act, 1986**; establish State/UT Wetlands Authorities.
- **NPCA:** National Plan for Conservation of Aquatic Ecosystems.

Most recent designated sites

SUKHNA WETLAND

- **Location: Chandigarh**, at the foothills of the **Shivalik Hills**, part of the Outer Himalayas.
- **Origin:** A **human-made reservoir** created in 1958**.**
- **Wetland type:** A **peri-urban reservoir**, situated near an urban settlement.
- **Vegetation:** Open water, shallow shoreline vegetation, scrub and adjoining forest provide varied habitats.

Fauna

  - **Pallas's fish eagle:** Endangered.
  - **Common pochard:** Vulnerable.
  - **Black pond turtle:** Endangered.
  - **Migratory birds:** Provides feeding, breeding, roosting and wintering habitats for birds using the **Central Asian Flyway**.
- **Ecological functions:** Helps regulate **water and sediment flows** from its catchment.
- **Conservation measures:** Soil and moisture conservation to reduce erosion and siltation, along with removal of invasive plants.

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	SAUJ JHEEL
	• **Location: Mainpuri district, Uttar Pradesh.**
	• **Wetland type:** A **shallow lake in the Ganga floodplain**, surrounded by agricultural land.
	• **Landscape connectivity:** Lies near **Saman Bird Sanctuary**, another Ramsar site, and forms part of a wider wetland network.
	• **Flora:**
	  ○ **Sacred lotus:** *Nelumbo nucifera*.
	  ○ **Wild sugarcane:** *Saccharum spontaneum*.
	• **Fauna and IUCN status:**
	  ○ **Sarus crane:** Vulnerable.
	  ○ **Greater spotted eagle:** Vulnerable.
	• **Bird importance:** Regularly supports **more than 30,000 waterbirds**; recognised as an **Important Bird and Biodiversity Area (IBA)** by **BirdLife International**.
	• **Ecological functions:** Provides nesting, breeding, feeding and shelter habitats.

PYQ ESSENTIALS

Q. Consider the following statements **(UPSC-2019)**

1. Under the Ramsar Convention, it is mandatory on the part of the Government of India to protect and conserve all the wetlands in the territory of India.
2. The Wetlands (Conservation and Management) Rules, 2010 were framed by the Government of India based on the recommendations of Ramsar Convention.
3. The Wetlands (Conservation and Management) Rules, 2010 also encompass the drainage area or catchment regions of the wetlands as determined by the authority.

Which of the statements given above is/are correct?

(a) 1 and 2 only (b) 2 and 3 only (c) 3 only (d) 1, 2 and 3

BUXA TIGER RESERVE

Tigress **T-138**, brought from **Valmiki Tiger Reserve, Bihar**, to **Buxa Tiger Reserve, West Bengal**, has moved into **Raimona National Park, Assam**.

Why Buxa?

- Habitat degradation and fragmentation
- Changes in **land use**
- Decline in **prey availability**
- These factors contributed to the absence of a stable resident tiger population.

Buxa Tiger Reserve

- **Location:** Alipurduar district, West Bengal**.**
- Declared a **Tiger Reserve in 1983**.
- The programme aims to establish a **viable, self-sustaining tiger population**.
- More tigers are planned to be released in the coming months.
- The released tigress will undergo **post-release monitoring** through:
  - Radio/GPS telemetry
  - Camera trapping
  - Field-based monitoring
- It was **translocated from Valmiki Tiger Reserve, Bihar**.



- It marks the beginning of a **phased tiger reintroduction programme** in Buxa.

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Project Tiger

- **Launched: 1 April 1973**, initially covering **nine tiger reserves**.
- **Ministry: Ministry of Environment, Forest and Climate Change**; implemented through the **National Tiger Conservation Authority (NTCA)**.
- **Objective:** Conserve **tigers, their habitats and viable wild populations**.
- **Legal basis: Wild Life (Protection) Act, 1972**; the **2006 amendment** gave NTCA statutory status.
- **Core-buffer approach: Core areas** prioritise protection; **buffer areas** promote conservation alongside compatible local livelihoods.
- **Monitoring: All India Tiger Estimation every four years**; **M-STrIPES** supports patrolling and ecological monitoring.

INTERNATIONAL BIG CAT ALLIANCE (IBCA)

India's approved support: ₹150 crore for 2023-24 to 2027-28**.**

About IBCA

- **Status:** A treaty-based intergovernmental international organisation, headquartered in **India**.
- **Launched: April 9, 2023**, during the commemoration of **50 years of Project Tiger**.
- **Objective:** Facilitate research, knowledge sharing, training, technical assistance and financial support for conservation.
- **Framework Agreement entered into force:** January 23, 2025**.**
- **India hosts five big cats** except **jaguar and puma**, which occur naturally in the Americas (North, Central and South America).
- **Membership:** Open to interested **UN member countries**, including both **range countries** and **non-range countries**.
- **Indian Nodal organisation:** National Tiger Conservation Authority (NTCA) **under** MoEFCC**.**
- **Depository of the Framework Agreement:** India's Ministry of External Affairs**.**
- **First five ratifying/approving countries:** India, Nicaragua, Eswatini, Somalia and Liberia**.**



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INDIAN GEOGRAPHY

CYCLONE ARNAB

Cyclone Arnab intensified into a **Very Severe Cyclonic Storm** over the **west-central Bay of Bengal**, prompting evacuation and preparedness measures in **Andhra Pradesh and Odisha**.

About Cyclone Arnab

- **Type:** Tropical cyclone, a low-pressure system that develops over warm tropical oceans.
- **Name: Arnab** was proposed by **Bangladesh** under the regional cyclone-naming system.
- **Naming authority:** The **IMD's Regional Specialised Meteorological Centre (RSMC), New Delhi**, names cyclones in the North Indian Ocean using a list contributed by WMO/ESCAP panel members.
- **Classification:** A **Very Severe Cyclonic Storm** has maximum sustained winds of approximately **118-166 km/h**.

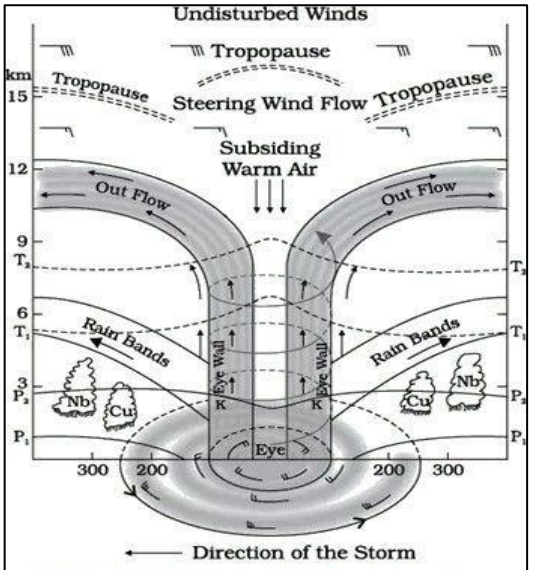


Fig: Vertical section of the tropical cyclone

About Tropical Cyclone Formation

- **Ocean temperature:** At least **26.5°C**, with warm water extending **50-60 m deep**.
- **Latitude:** Usually **5°-30°**; rarely within **5° of the equator** due to weak Coriolis force.
- **Conditions:** Moist, unstable air, a **pre-existing low** and **low vertical wind shear**.
- **Energy: Latent heat** released during condensation.

Rotation: Anticlockwise in Northern, clockwise in Southern Hemisphere.

HOW ARE CYCLONES NAMED?

The naming of tropical cyclones in the Bay of Bengal and Arabian Sea began in September 2004 after a meeting of an intergovernmental panel in 2000.

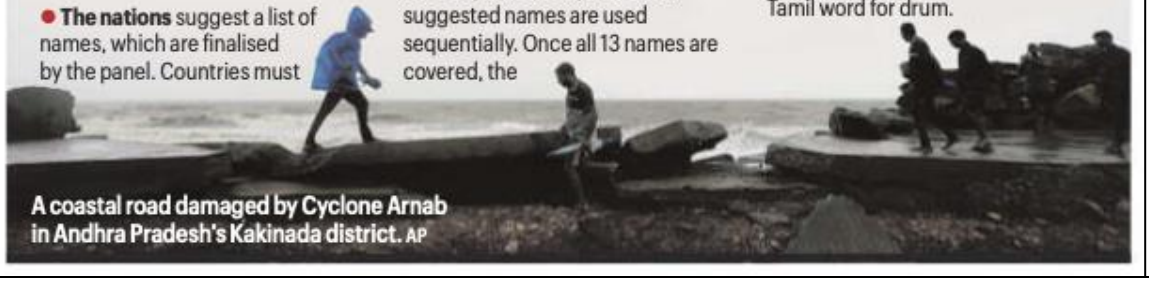
Names were initially provided by eight panel members — Bangladesh, India, the Maldives, Myanmar, Oman, Pakistan, Sri Lanka and Thailand. In 2018, five more countries joined — Iran, Qatar, Saudi Arabia, UAE and Yemen.

The nations suggest a list of names, which are finalised by the panel. Countries must follow certain guidelines while proposing names. For instance, they must be short, easy to pronounce and inoffensive.

The Regional Specialised Meteorological Centre at New Delhi officially assigns the names once a weather system meets the threshold of 62 kmph to be declared a cyclone.

The 13 member countries are listed alphabetically, and their suggested names are used sequentially. Once all 13 names are covered, the list from which cyclones can be picked moves on to the next column, where countries are again arranged alphabetically. Once used, a cyclone name is not repeated.

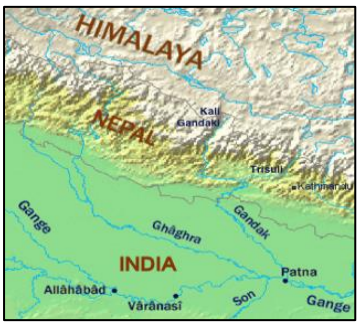
The current cyclone's name, **Arnab (pronounced Ornab)**, has been put forward by Bangladesh. The next name in the sequence is **Murasu**, proposed by India, which follows Bangladesh alphabetically in the list of 13 countries. Murasu is a Tamil word for drum.


A coastal road damaged by Cyclone Arnab in Andhra Pradesh's Kakinada district. AP

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GANDAK RIVER

The **Gandak River** breached embankments in **West Champaran, Bihar**, causing flooding after heavy rainfall in its **Nepal catchment**.



About Gandak River

Origin

- Rises in the **Himalayas of Nepal**.
- Known as **Narayani** in Nepal.

Course

- Enters India through **Bihar**.
- Flows through the **Bihar-Uttar Pradesh region**.
- Joins the **Ganga near Patna/Hajipur**.

Important Project

- **Valmikinagar (Gandak) Barrage** is located near the **India–Nepal border**.
- Used mainly for **irrigation and flood management**.

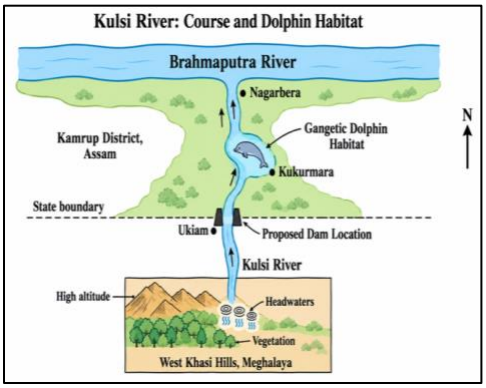
Flood Management

- India and Nepal use bilateral mechanisms for **flood forecasting and management**.

Joint Committee on Gandak & Kosi Projects (JCKGP) and **Joint Committee on Inundation and Flood Management (JCIFM)** are among the mechanisms.

KULSI HYDROPOWER PROJECT

Villagers in **Assam and Meghalaya** opposed the proposed **55 MW Kulsi hydropower-cum-irrigation project**, citing concerns over land and river ecology.



About KULSI HYDROPOWER PROJECT

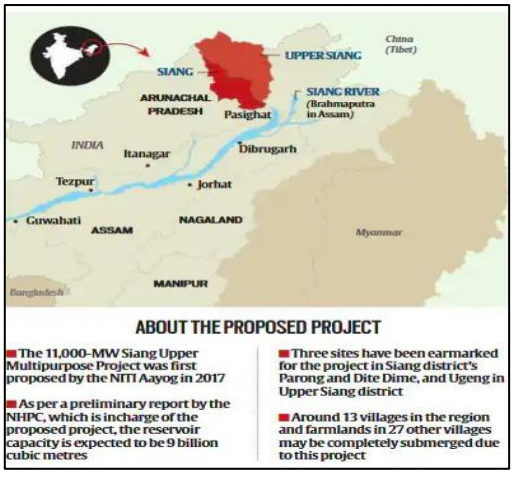
- **Location:** Proposed on the **Assam-Meghalaya border**, near **Ukiam**, southwest of Guwahati.
- **Kulsi River:** A **south-bank tributary of the Brahmaputra**; the article identifies its formation at the confluence of the **Dron, Shree and Dilma rivers**.
- **Ecological significance:** The Kulsi supports the **Gangetic river dolphin**, *Platanista gangetica*.
- **Dolphin protection: Endangered-IUCN; Schedule I-Wild Life (Protection) Act, 1972; Appendix I-CITES**.
  - It is India's **National Aquatic Animal**.
- **Main concern:** Dams can alter river flows and **fragment dolphin habitats**, restricting movement.

SIANG UPPER MULTIPURPOSE PROJECT (SUMP)

Arunachal Pradesh held consultations with communities concerned about the **proposed Siang Upper Multipurpose Project**, particularly its potential downstream effects and displacement.

Recent Developments

- **Pre-Feasibility Report (PFR)** and concerns of communities across **72 villages** represented by the East Siang Downstream Dam Affected People's Forum.
- The project remains **proposed**, not operational.



About SUMP

- **Location:** On the **Siang River in Arunachal Pradesh**.
- **Type:** A proposed **hydropower and water-storage project**.
- **Planned capacity: 11,200 MW**, as listed in NHPC's Annual Report 2024-25.
- **Purpose:** Electricity generation, water storage and **flood moderation**.
- **Agency: NHPC** was entrusted with preparing the PFR by the **Ministry of Jal Shakti**.

Siang and the Brahmaputra River System

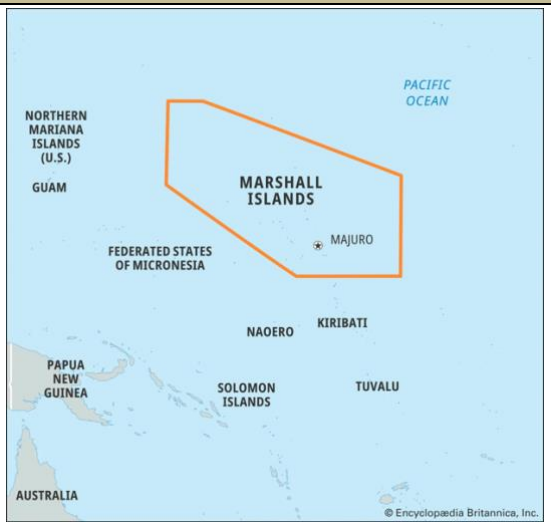
- **Tibet:** Known as the **Yarlung Tsangpo**.
- **Arunachal Pradesh:** Known as the **Siang or Dihang**.
- **Assam:** After joining the **Dibang and Lohit**, it flows as the **Brahmaputra**.
- **Key point: Siang, Dibang and Lohit are separate rivers** before their confluence.

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WORLD GEOGRAPHY

MARSHALL ISLANDS

UN urged the U.S. to take further steps to address the **nuclear legacy of the Marshall Islands**.



Key Points

- Major U.S. nuclear testing occurred at **Bikini Atoll and Enewetak Atoll**.
- The tests caused **long-term radiation and environmental contamination**.
- The UN called for:
  - Better **healthcare** for affected populations.
  - Greater **transparency and access to secret archives**.
  - Further measures to address the nuclear legacy.

Marshall Islands

- It is an island country in the **central Pacific Ocean**, part of **Micronesia**.
- **Capital:** Majuro.
- It consists of **29 atolls and 5 islands**.
- It became independent in **1986** under a **Compact of Free Association with the U.S.**
- **Bikini Atoll** is a **UNESCO World Heritage Site**, recognised for its nuclear-testing history.

TUVALU

Scientists warn that parts of Tuvalu could become **uninhabitable by the end of the century** due to rising sea levels and associated impacts.

New Developments

- A **marine heatwave in 2024** affected Tuvalu's coral reefs.
- Scientists reported that **almost 99% of the coral that built Funafuti's reef system was affected** by the heatwave.
- Rising sea levels are increasing the vulnerability of Tuvalu's **freshwater resources, settlements and coral ecosystems**.

TUVALU

- It is an island country in the **South Pacific Ocean**.
- It consists of **nine low-lying islands**, mainly **atolls and reef islands**.
- It lies **north of Fiji**.
- **Capital:** Funafuti.
- Much of the country lies only a few metres above sea level.
- Major climate-related threats:
  - Sea-level rise, Coastal erosion, Saltwater intrusion, Coral bleaching, Marine heatwaves, Freshwater scarcity.



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BLACK SEA	Attacks on merchant ships during the **Russia-Ukraine conflict** have affected **Indian seafarers and trade**, according to the supplied article.**Recent Developments** • Attacks extending from **Sochi, Russia, to the Danube region**, threatening shipping routes carrying **crude oil, grains and sunflower oil**. **Background** • **Location:** A semi-enclosed sea between southeastern Europe and western Asia. • **Six bordering countries:** Türkiye, Bulgaria, Romania, Ukraine, Russia and Georgia**.** • **Mediterranean connection:** Black Sea → Bosphorus Strait → Sea of Marmara → Dardanelles Strait → Aegean Sea → Mediterranean Sea**.** • **Kerch Strait:** Connects the Black Sea with the **Sea of Azov**. • **Major rivers:** Danube, Dnieper (Dnipro) and Dniester drain into it. • **Map locations: Crimean Peninsula** projects into its northern part; **Sochi** lies on Russia's eastern Black Sea coast.  • **India's interest:** Safety of Indian crews and uninterrupted supplies of **Russian crude oil and Ukrainian sunflower oil**. • **Moldova** has access to the Danube, but no Black Sea coastline.
VICTORIA MODE	An **IMD-IITM study published in MAUSAM** links expanding semi-arid conditions in northern India with the **Victoria Mode**, a Pacific Ocean temperature pattern. **About Victoria Mode** • A recurring pattern of **contrasting warm and cool sea-surface temperature anomalies in the North Pacific**, predominantly north of **20°N**. • It is the **second dominant pattern** of sea-surface temperature variability in this region, distinct from the **Pacific Decadal Oscillation (PDO)**. ○ **PDO:** Leading North Pacific temperature pattern, with substantial decadal variability • It can influence distant rainfall through **ocean-atmosphere interactions**, called **teleconnections**. • Victoria Mode can interact with **ENSO**, but the two are **separate phenomena**. ○ **ENSO:** Coupled ocean-atmosphere variability in the tropical Pacific; includes El Niño and La Niña. **Findings for India** • **Northwest India:** Hot semi-arid steppe expanded from **25.7% to 33.1%** of the region's area between **1951-1980 and 1991–2020**. • The study associates the **negative phase of Victoria Mode** with reduced moisture transport towards northern India. • **Peninsular India:** The trend differed; semi-arid steppe contracted while tropical savannah expanded.

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SPECIES IN NEWS

BLACKBUCK



Madhya Pradesh Forest officials conducted a blackbuck rescue and translocation operation under **Project Antelope** in **Shajapur district**.

About Blackbuck

- **Scientific name:** *Antilope cervicapra*.
- **Classification:** An **antelope** belonging to the **Bovidae family**, not a deer.
- **Distribution:** Native to the **Indian subcontinent**.
- **Habitat:** Open **grasslands, scrublands and semi-arid plains**.
- **Diet: Herbivorous**, primarily feeding on grasses.
- **Appearance:** Adult males have dark coats and **spiral horns**; females are generally hornless and lighter coloured.
- **Behaviour: Diurnal** and generally found in herds.
- **IUCN** status **: Least Concern**.
- **Wild Life (Protection) Act, 1972: Schedule I.**

Project Antelope

- **State: Madhya Pradesh.**
- **Activity reported: Rescue and translocation** of blackbucks in **Shajapur district**.
- **Implementing authority: Madhya Pradesh Forest Department**.
- **Translocation:** Deliberate movement of wildlife between locations for conservation or management

RED-LEGGED SERIEMA



A study found that the **Red-legged Seriema** is among the **loudest birds** recorded.

Recent Findings

- Researchers measured bird calls using **amplitude** and **frequency**.
- The loudness is partly linked to the bird's **long neck and shape of its beak**.
- Its call can reach around **121-122 decibels**, comparable to the sound level of a **chainsaw**.
- The study highlights how bird vocalisations vary greatly across species.

About Red-legged Seriema

- It is a **South American bird**.
- Scientific name: **Cariama cristata**.
- Found mainly in **Brazil and other parts of South America**.
- It is a **terrestrial, long-legged bird** and is known for its distinctive loud call.
- IUCN status: Least Concern **(LC)**

GREAT INDIAN BUSTARD (GIB)



Two captive-bred male Great Indian Bustards were released into the wild for the first time on **October 4, 2026**, at **Desert National Park, Jaisalmer, Rajasthan**.

Recent Developments

- The recovery programme involves **MoEFCC, Rajasthan Forest Department and Wildlife Institute of India**, with funding from **National CAMPA**. Released birds carry **satellite transmitters** for monitoring.

About GIB

- **Scientific name:** *Ardeotis nigriceps*; locally called **Godawan**.
- **Habitat:** Large, ground-dwelling bird of **open grasslands, savannahs and arid landscapes**; most surviving birds occur in **Rajasthan**.
- **Protection:** Critically Endangered- IUCN; Schedule I-Wild Life (Protection) Act, 1972.
- **Major threats: Overhead power-line collisions**, habitat conversion, mining, hunting and egg collection. Limited frontal vision makes power lines difficult to detect.

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- **Rewilding:** Returning captive-reared birds to their natural habitat. **Soft release** allows gradual acclimatisation before release.
- **Conservation priority:** Protect **natural grasslands**; planting trees in these open habitats can make them unsuitable for bustards.

DESERT NATIONAL PARK

- **Location:** In the **Thar Desert** of western Rajasthan, spread across **Jaisalmer and Barmer** districts. It covers **3,162 km²** and was gazetted in **1980**.
- **Landscape:** Arid grasslands, thorn scrub, rocky terrain, salt lake beds and sand dunes.
- **Flagship species:** The **Great Indian Bustard (Godawan)**, a **Critically Endangered** bird. The **Sudasari grasslands** are an important habitat within the park.
- **Other notable fauna: Chinkara (Indian gazelle)** and the **Houbara bustard (Tilor)**, a winter migrant.
- **UNESCO status** : On India's **Tentative List** for World Heritage since **2009**, under the natural category.

PYQ ESSENTIALS

Q. With reference to India's Desert National Park, which of the following statements are correct? **(UPSC 2020)**

1. It is spread over two districts.
2. There is no human habitation inside the Park.
3. It is one of the natural habitats of Great Indian Bustard.

Select the correct answer using the code given below:

(a) 1 and 2 only (b) 2 and 3 only (c) 1 and 3 only (d) 1, 2 and 3

ORANGUTANS



An **infant orangutan seized in Thane, Maharashtra**, is set to be **repatriated to Indonesia**.

Recent Developments

- Indian and Indonesian authorities are coordinating its return after securing the necessary permits. The animal was allegedly **illegally trafficked**.

About Orangutans

- **Nature:** Great apes belonging to the genus ***Pongo***; naturally found only on **Borneo and Sumatra**, in Indonesia and Malaysia.
- **Three species:** Bornean, Sumatran and Tapanuli orangutans.
- **IUCN status:** All three are **Critically Endangered**.
- **Habitat and role:** Primarily **tree-dwelling tropical rainforest mammals**; predominantly fruit-eating and important **seed dispersers**.
- **Tool use:** Some wild Sumatran orangutans turn small sticks into tools to pull insects out of holes in trees.
- **Major threats:** Deforestation, habitat fragmentation, hunting and the **illegal pet trade**.
- **CITES protection:** Listed in **Appendix I**; international commercial trade in wild specimens is generally prohibited, with exceptional non-commercial transfers subject to strict permits.
- India has no native wild orangutan population.

PYQ ESSENTIALS

Q. Which one of the following makes a tool with a stick to scrape insects from a hole in a tree or a log of wood? **(UPSC 2023)**

(a) Fishing cat (b) Orangutan (c) Otter (d) Sloth bear

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HOOLOCK GIBBONS



Natural tree bridges and artificial canopy bridges are helping hoolock gibbons cross railway lines and reconnect fragmented habitats in **Hollongapar Gibbon Sanctuary, Assam**.

About Hoolock Gibbons

- **Identity:** Hoolock gibbons are India's only **non-human apes**.
- **Distribution:** Northeastern India, principally **south of the Brahmaputra**.
- **Lifestyle: Arboreal and diurnal**; depend on connected tree canopies.
- **Movement: Brachiation**, swinging between branches using their long arms.
- **Social behaviour:** Generally live in small family groups comprising a pair and offspring.
- **Physical features:** Adult Western Hoolock Gibbons weigh about **6–7 kg**. Their light build and long arms help them swing from branch to branch.

Conservation

- **IUCN: Endangered**.
- **Legal protection: Schedule I**, Wild Life (Protection) Act, 1972.
- **Major threat:** Roads, railways and forest clearance break canopy connections, isolating groups and restricting access to food and mates.

PYQ ESSENTIALS

Q. With respect to the Western Hoolock Gibbons, which of the following statements is/are correct? **(UPSC-2026)**

1. A Sanctuary in North-east India is home to this ape species listed as Endangered in the International Union for Conservation of Nature (IUCN) Red List.
2. They have specialized brachiation and can easily swing between trees.
3. They possess a strong and heavy build like gorillas, yet are remarkably agile tree climbers.

Select the answer using the code given below:

(a) 1 only (b) 1 and 2 (c) 2 and 3 (d) 3 only

BLACK PANTHER (MELANISTIC LEOPARD)



A **black panther cub was captured in Pathanamthitta, Keralam**, prompting calls for its release into the wild after veterinary assessment.

About Black Panther

- **Identity:** In India, a black panther is a **melanistic leopard (*Panthera pardus*)**, **not a separate species**.
- **Melanism:** Excess **melanin pigment** gives its coat a dark appearance; the usual **rosette markings may remain faintly visible**.
- **Habitat:** Associated particularly with **dense forests**; recorded in the **Western Ghats** and other Indian forest regions.
- **Conservation status:** The leopard is **Vulnerable** on the **IUCN Red List** and protected under **Schedule I of the Wild Life (Protection) Act, 1972**. These protections also apply to its melanistic form.
- **Major threats:** Habitat loss, prey depletion, poaching and human–leopard conflict.

AFRICAN ELEPHANTS



Scientists found evidence that African elephants use plants for self-medication**.**

Key Findings

- The study was conducted on **African elephants in Kenya**.
- Elephants consume specific **plants, leaves and tree bark** when they are unwell.
- They may travel long distances to obtain particular plants.
- Their behaviour suggests **plant-based medicinal knowledge**.

Parameter	African Elephant	Asian Elephant
Scientific name	*Loxodonta africana*	*Elephas maximus*
Body size	Largest living terrestrial animal	Smaller than African savanna elephant
Ears	Large, fan-shaped	Comparatively small
Trunk tip	**Two** finger-like projections	**One** finger-like projection
Tusks	Generally present in **both sexes**	Prominent tusks present in **some males**
Head	Single-domed	Twin-domed
IUCN status	**Endangered**	**Endangered**

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JEYPORE GROUND GECKO



A **proposed bauxite mine in Odisha's Balda hills**, within the **Nageswari Reserve Forest**, threatens the habitat of the rare Jeypore ground gecko.

About Jeypore Ground Gecko

- A **nocturnal, ground-dwelling lizard**, scientifically named ***Cyrtodactylus jeyporensis***.
- **Distribution:** Endemic to the **Eastern Ghats**, in southern Odisha and northern Andhra Pradesh.
- **Habitat:** High-elevation moist and semi-evergreen forests; shelters beneath leaf litter and in rock crevices.
- **Rediscovery:** Rediscovered in **2010**, after remaining unrecorded for over 130 years.
- **Appearance:** Strikingly patterned body with a yellow-orange underside.

Conservation Status

- **IUCN Red List:** Endangered.
- **CITES: Appendix II**, included at **CoP19 in 2022**; international trade is regulated.
- **Major threats:** Habitat loss and fragmentation, bauxite mining and collection for the international pet trade.

DECLINING CAMEL POPULATION IN KUTCH



Kutch, Gujarat, is witnessing a decline in camels due to industrialisation, mining, shrinking grazing grounds and restrictions on grazing.

About Kharai Camel

- **Distribution:** Coastal Gujarat, particularly **Kachchh (Kutch)**.
- **Classification:** A **one-humped dromedary breed**, not a separate species.
- **Name and Habitat:** Kharai derives from Khar (saline); adapted to **dryland and coastal mangrove ecosystems**.
  - Herders in Gujarat's **Kachchh region** raise the Kharai camel, a domesticated breed.
  - **Kutchi and Kharai are separate breeds.**
- **Swimming Ability:** Can swim **about 3 km** through seawater to reach mangrove islands.
  - **Has broad, padded feet**, feeds on **salt-tolerant vegetation**.
- **Diet:** Mangroves form an important component; also feeds on other vegetation.
- **Pastoral communities:** Traditionally reared by **Rabaris and Fakirani Jats**.
- **Recognition:** Registered as a distinct indigenous breed by **ICAR-National Bureau of Animal Genetic Resources, Karnal**.
- The **two-humped Bactrian camel is outside this list** of nine dromedary breeds.
- The IUCN doesn't assess domestic breeds like the Kharai camel.

Camel Species found in India

Feature	Dromedary camel	Domestic Bactrian camel
Scientific name	*Camelus dromedarius*	*Camelus bactrianus*
Humps	**One**	**Two**
Main distribution	Rajasthan and Gujarat	**Nubra Valley, Ladakh**
Adaptation	Hot deserts; some breeds adapted to coastal areas	Cold deserts

PYQ ESSENTIALS

Q. What is/are unique about 'Kharai camel', a breed found in India? **(UPSC 2016)**

1. It is capable of swimming up to three kilometers in seawater.
2. It survives by grazing on mangroves.
3. It lives in the wild and cannot be domesticated.

Select the correct answer using the code given below:

(a) 1 and 2 only (b) 3 only (c) 1 and 3 only (d) 1, 2 and 3

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CHEETAH



The Centre constituted a **three-member team** to investigate the death of a **19-month-old cheetah from firearm injuries outside Kuno National Park** in MP.

About Cheetah

Feature	African cheetah	Asiatic cheetah
Wild distribution	Mainly **eastern and southern Africa**, with smaller populations elsewhere in Africa	Survives only in **Iran**
Habitat	Grasslands, savannas and arid landscapes	Mainly arid and semi-arid landscapes
Appearance	Generally larger; appearance varies among African subspecies	Generally smaller and more slender
Social behaviour	Females generally solitary, except with cubs; males may form **coalitions**	Similar social pattern; males may form coalitions
IUCN status	Cheetah **species overall: Vulnerable**; status varies by subspecies	**Critically Endangered**
India connection	Brought from **Namibia and South Africa** under **Project Cheetah**	Historically native to India; declared extinct in India in **1952**

Project Cheetah

- **Launched: Ministry of Environment, Forest and Climate Change**; spearheaded by **NTCA**.
- **Objective:** Establish a viable, free-ranging cheetah population within its historical range in India.
- **Initial introductions: Eight from Namibia in September 2022** and **12 from South Africa in February 2023**.
- Introduced animals are **African cheetahs**, not Asiatic cheetahs.

Kuno National Park

- **Location:** Kuno National Park lies in **Sheopur district, Madhya Pradesh**, within the **Vindhyan landscape**.
- **Status:** It became a **National Park in 2018**, having previously been a wildlife sanctuary.
- **River:** The **Kuno River**, a tributary of the **Chambal**, flows through the park.
- **Vegetation:** The park contains **tropical dry deciduous forests, savanna and grasslands**.
- **Flora:** Major trees include **Kardhai, Salai and Khair**.
- **Fauna:** Major animals include **cheetah, leopard, striped hyena, sloth bear, chital, sambar and nilgai**.

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RAPID WRAP

NATIONAL RED LIST

India has recorded encouraging recovery of several **endangered species** through habitat protection, scientific monitoring and community participation.

About National Red List

- India launched the **National Red List Roadmap** at the **IUCN World Conservation Congress, Abu Dhabi (2025)**.
- **Aim:** Prepare National Red Data Books for plants and animals by 2030.
- India has about **2.4% of the world's land area** but supports nearly **8% of global biodiversity**.
- Around **28% of India's plants** and more than **30% of its animals** are found only in India.

BAY OF KOTOR: RIA AND FJORD

The **Bay of Kotor**, often called Europe's southernmost fjord, is a **ria-a drowned river valley**.

About Bay of Kotor

- **Location:** Southwestern **Montenegro**, on the **Adriatic Sea**, part of the Mediterranean Sea.
- **Ria formation:** Sea water floods an existing **river valley** following a relative rise in sea level.
- **Fjord formation:** Sea water floods a valley carved and deepened by a **glacier**.
- Both are **submerged coastal landforms**; the crucial distinction is the **agent that originally carved the valley**.

Parameters	Ria	Fjord
Original valley carved by	River	Glacier
Typical valley profile	V-shaped	U-shaped**, with steep sides**
Example	Bay of Kotor, Montenegro	Norwegian fjords

CARBON-TO-STONE: CARBFIX TECHNOLOGY

Iceland proposed cooperation with India in **carbon-to-stone technology** during its Foreign Minister's visit.

About Carbon-to-Stone' Technology

- Developed and demonstrated in **Iceland**.
- **Process:** CO_2 is dissolved in water → injected into reactive **basalt formations** → reacts with calcium, magnesium and iron → forms **solid carbonate minerals**.
- Carbfix reports mineralisation **within two years under suitable conditions**.
- **Hellisheiði** geothermal power plant is a key demonstration site.
- Can store CO_2 captured from **industrial sources or DAC systems**.

YAK X: EXTINCT ICE AGE BOVINE

Scientists identified an **extinct yak-related mammal**, provisionally called **Yak X**, using ancient DNA from bone fragments found in **Denisova Cave and nearby sites**.

About Yak X

- **Identity:** An extinct **bovine**-a member of the cattle group-closely related to modern yaks.
- **Location: Denisova Cave, Altai Mountains, southern Siberia, Russia**; also famous for remains of **Denisovans**, an extinct human lineage.
- **Period: 250,000 to 27,000 years ago**, during the **Pleistocene or Ice Age**.
- **Name: Yak X is an informal designation**, not a formally assigned scientific name.

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FUND FOR RESPONDING TO LOSS AND DAMAGE (FRLD)

The FRLD Board **provisionally set aside $20 million for Nepal** following devastating floods, making it the first country earmarked for support.

About FRLD

- **Purpose:** Assist developing countries particularly vulnerable to climate change in responding to **economic and non-economic losses**.
- **Established:** COP27, Sharm el-Sheikh, Egypt, in 2022.
- **Coverage:** Both **extreme events**, such as floods and cyclones, and **slow-onset events**, such as sea-level rise.
- **Eligibility:** Not restricted to **Least Developed Countries (LDCs)** or **Small Island Developing States (SIDS)**; other particularly vulnerable developing countries can also access it.

HEAT STORMS

A global temperature analysis has highlighted **"heat storms"**-vast, prolonged and interconnected episodes of extreme heat.

About Heat Storms

- **Heat wave:** A prolonged period of **unusually high temperatures compared with a region's normal conditions**; thresholds vary by location and season.
    - **Heat storm:** It is exceptionally extensive heatwaves; **not a universally standardised meteorological category**.
- **Heat cascade:** Heat storms occurring **successively, simultaneously or both**.
- **Heat dome:** A persistent **high-pressure system** in which sinking air warms through compression; reduced cloud cover allows greater surface heating. It can sustain a heatwave.

BHARAT STAGE VII (BS-VII) EMISSION NORMS

MoRTH's draft notification dated October 12, 2026 proposes **BS-VII emission norms for new cars and SUVs** from **April 1, 2029**, with implementation in three **phases up to April 2035.**

About Bharat Stage Norms

Bharat Stage (BS) norms prescribe limits on pollutants emitted by motor vehicles, including carbon monoxide, hydrocarbons, nitrogen oxides and particulate matter.

- **Nodal ministry:** Ministry of Road Transport and Highways (**MoRTH**).
- **Fuel sulphur limit:** Reduced from **50 ppm under BS-IV to 10 ppm under BS-VI**. Lower sulphur supports cleaner emissions and effective pollution-control equipment.
- **Emission norms versus fuel-efficiency norms:** BS norms primarily control air pollutants; fuel-efficiency standards address fuel consumption and associated CO_2 emissions.

Evolution of BS Emission Norms

Stage	Implementation timeline	Key points
BS-I	**2000:** Nationwide	Based on **Euro-I** standards; introduced tighter vehicle-emission limits.
BS-II	**2000–2001:** Selected cities; **April 2005:** Nationwide	Based on **Euro-II**; progressively tightened pollutant limits.
BS-III	**April 2005:** Selected cities; **April 2010:** Nationwide	Based on **Euro-III**; further reduced permissible emissions.
BS-IV	**April 2010:** Selected cities; **April 2017:** Nationwide	Based on **Euro-IV**; fuel sulphur limit reduced to **50 ppm**.
BS-V	**Skipped**	India moved directly from **BS-IV to BS-VI** to accelerate pollution control.
BS-VI	**April 1, 2020:** Nationwide	Based on **Euro-VI**; stricter emission limits and **10 ppm sulphur fuel**.
BS-VI Phase II	**April 1, 2023:** Nationwide	Added **Real Driving Emissions compliance** and stronger **On-Board Diagnostics** requirements for applicable vehicles.

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LIVING PLANET REPORT 2026

The **Living Planet Report 2026** by the **World Wide Fund (WWF)** for Nature and the **Zoological Society of London (ZSL)** reveals an average **73% decline** in monitored vertebrate wildlife populations between 1970 and 2022.

What Does 73% Mean?

- It measures the **average proportional change in monitored population sizes**, not the percentage of all animals lost or species that became extinct.
- Within the analysed dataset, **50% of populations declined, 43% increased and 7% remained stable**.

Basis	Living Planet Report (LPR)	Living Planet Index (LPI)
What is it?	A **biennial report** analysing biodiversity trends, threats and conservation responses.	A **statistical indicator** tracking changes in monitored vertebrate population sizes.
Organisation	Published by **WWF**, in collaboration with **ZSL**.	Produced by **ZSL**, working with WWF.
Coverage	Broader discussion of biodiversity and human pressures on nature.	Population trends of **mammals, birds, fish, reptiles and amphibians**.
Relationship	Uses the LPI as a key source of evidence.	Provides the **73% decline figure** cited in the report.

EMISSIONS GAP REPORT 2026

UNEP's **Emissions Gap Report 2026: The Point of Return** states that exceeding **1.5°C of global warming is unavoidable**, making urgent emission cuts essential to limit the overshoot.

Recent Developments

- **Lowest-possible overshoot scenario:** Warming peaks around **1.7-1.8°C near mid-century**, followed by a return to **1.5°C or below by 2100**, with approximately **50% probability**.
- This is a **conditional pathway requiring stringent action**, not a guaranteed temperature outcome.

About Report

- **Publisher: United Nations Environment Programme (UNEP)**; released annually ahead of international climate negotiations.
- **Emissions gap:** Difference between projected greenhouse-gas emissions and levels consistent with the Paris Agreement's temperature goals.
- **Paris Agreement, 2015:** Hold warming **well below 2°C** and pursue efforts to limit it to **1.5°C above pre-industrial levels**.
- **Overshoot:** Warming exceeds a specified limit before potentially returning below it.
- **NDCs: Nationally Determined Contributions**, countries' climate-action commitments under the Paris Agreement.
- **CO_2 equivalent (CO_2e):** A common unit comparing the warming effects of different greenhouse gases.

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DISASTER MANAGEMENT (DM)

1. STAMPEDE IN KOLKATA

Why in News

A crowd surge at **Chorbagan Sarbojanin Durga Puja pandal, Kolkata**, reportedly killed **at least 19 people**.

About Crowd Disasters

- **Extreme crowd density restricting individual movement**; pressure causing breathing difficulties, compressive asphyxia and injuries. Disasters often result from **multiple planning failures combined with a sudden trigger**.

Causes

- **Capacity mismatch:** Most crushes begin when far more people turn up than a venue can hold. During **RCB's victory celebrations in Bengaluru (2025),** around 3 lakh people gathered outside a 35,000-capacity stadium, and the overflow at the gates left 11 people dead.
- **Conflicting movement:** When crowds move in opposite directions, pressure builds quickly at narrow points. At the **Prayagraj Maha Kumbh (2025),** witnesses said incoming pilgrims collided with those returning, and 30 people died while at least 60 were injured.
- **Unsafe infrastructure:** Weak barricades and narrow passages leave people with nowhere to go once pressure builds. At **Nalanda's Maa Sheetla temple,** eight women died, with early accounts pointing to overcrowding and barricades giving way.
- **Communication failures:** Even a single unverified warning can make a calm crowd surge. At Kolkata's Chorbagan pandal, where 19 died, police probed a collapse warning that preliminary findings did not support.
- **Obstructed evacuation:** A crowd stays safe only if people can leave as easily as they enter. At **Chorbagan, preliminary CCTV analysis** suggested that rain blocked the way out while entry stayed open, so pressure kept rising inside.
- **Trigger amplification:** In an already packed space, fear spreads faster than facts. **Near Ashok Dham in Bihar (2026),** a rumour of electric current in a fallen pole set off panic that killed seven women and injured 25, though preliminary findings showed the cable was covered.

Measures

- **NDMA Guidelines, 2014:** NDMA's guide on managing crowds at mass gatherings laid the base for crowd safety in India. It covers capacity planning, risk assessment, crowd-flow management, communication and emergency preparedness.
- **National Disaster Management Plan, 2019:** The NDMP then fixed who is responsible on the ground. Primary duty lies with organisers and local or district administration, with State and national authorities providing support.
- **Supreme Court, Amarnath proceedings (2012):** Courts have also stepped in where pilgrim lives were lost. After deaths during the **Amarnath Yatra, the Supreme Court acted suo motu** and **set up a Special High-Powered Committee** to examine health facilities, access control, public amenities and environmental concerns.
- **Supreme Court, Karur (2025):** More recently, the focus has shifted to accountability. After the **Karur stampede, the Supreme Court transferred** the probe to the CBI under the oversight of **a committee headed by Justice Ajay Rastogi**, ensuring an independent investigation.

BEST GLOBAL PRACTICES

UK

- **Whole-event planning:** Separate safety arrangements for **arrival, circulation and dispersal**; prevent congestion beyond venue gates.
- **Zone-wise assessment:** Evaluate entrances, viewing areas and exits individually; safe capacity determined by local constraints.
- **Trained stewards:** Dedicated personnel monitoring density, guiding movement and identifying overcrowding early.

WHO

- **All-hazards assessment:** Identify hazards, assess risk and evaluate safeguards **before approving or conducting events**.
- **Integrated health preparedness:** On-site first aid, hospital coordination, surveillance and emergency-service planning.

- **Regulated pilgrim access:** Some shrines show that predictable crowds can be managed in advance. Tirupati and Sabarimala use registration, time-slot tokens and controlled entry to spread visitors over time.

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- **Inquiry-based learning:** Past tragedies have also left valuable lessons. Inquiries into the **Nashik Kumbh (2003) and Mandhardevi (2005) stampedes** highlighted wrong crowd estimates, bottlenecks and weak safety arrangements, shaping later guidelines.

Way Forward

- **Capacity-based permissions:** Permission for any event should depend on how many people the space can safely hold. Limits must be **fixed zone-wise based on usable area, passage width and evacuation capacity, leaving out space** taken by stalls and parking.
- **Controlled arrivals:** Once limits are set, entry must be managed to stay within them. Staggered entry, registration and holding areas can spread arrivals, and admissions should be paused before any bottleneck becomes overcrowded.
- **Safe circulation:** Inside the venue, people must be able to move without crossing paths. Separate entry, exit and emergency routes, along with **NDMA-recommended route maps** and queue barricading, keep crowd flows in one direction.
- **Early intervention:** Danger signs should trigger action before a crush begins. Live density monitoring must be linked to mandatory inflow restrictions, using command-centre dashboards like those deployed at **Maha Kumbh 2025.**
- **Reliable communication:** Clear, trusted information keeps crowds calm and stops rumours from spreading. Multilingual announcements, signage and trained volunteers help, as seen at **Maha Kumbh 2025,** which **deployed 206 public-address systems** and **80 variable-message displays.**
- **Unified preparedness:** Finally, every agency must act as one team in an emergency. Police, organisers and medical teams should be linked through an **Incident Response System**, with **regular evacuation drills** and **clear ambulance corridors.**

Conclusion

Crowd safety depends on managing capacity, movement and information before congestion becomes dangerous. Prevention must guide event planning and administrative accountability.

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SCIENCE AND TECHNOLOGY

1. INDIA'S EMERGING SPACE TECHNOLOGIES

Why in News

Advances in **reusable launch vehicles, electric propulsion, autonomous docking and satellite applications**, supporting India's ambition of a **US$44 billion space economy by 2033**.

Technologies Shaping India's Space Future

- **Next Generation Launch Vehicle (NGLV):** To carry heavier payloads, India is building a more powerful rocket. Approved with an outlay of **₹8,240 crore, the NGLV** will lift about 30 tonnes to **Low Earth Orbit,** nearly **three times LVM3's 10 tonnes.**
- **Reusable systems:** Alongside bigger rockets, **ISRO is working to cut launch costs through reuse.** The Pushpak reusable launch vehicle completed three autonomous landing tests by June 2024, though full orbital reuse remains a future goal.
- **Scramjets:** Another way to reduce costs is to carry less fuel. **Scramjet engines use oxygen from the atmosphere** instead of onboard oxidiser, and India demonstrated this by achieving Mach 6 flight in 2016.
- **Electric propulsion:** Once in orbit, satellites also need efficient engines. **ISRO's indigenous 300 MN** plasma thruster passed a **1,000-hour test and offers at least six times the specific impulse** of chemical propulsion, with space **validation planned on TDS-01.**
- **SpaDeX:** Future missions like a space station will need spacecraft to join in orbit. Through SpaDeX, India demonstrated docking, undocking and power transfer, followed by an autonomous second docking in April 2025.
- **Satellite services:** These advances finally reach people through better services. NavIC strengthens navigation, **GSAT-N2 boosts connectivity, and NISAR, a joint NASA-ISRO mission with L- and S-band** radar and a **12-day repeat cycle,** improves Earth observation.

Challenges to Sustained Self-Reliance



Technology-readiness gaps: A successful ground test is only the first step, as new systems must prove themselves repeatedly in flight. The **PSLV-C61 failure in May 2025,** caused by a **third-stage pressure drop,** showed that even proven rockets can falter.



Heavy-lift constraints: India still cannot launch its heaviest satellites on its own. **With LVM3 limited to about 4 tonnes to GTO, ISRO had to use SpaceX's Falcon 9** to launch the 4.7-tonne GSAT-N2 in 2024, while the NGLV is still years away.



Complex operational demands: Re-entry, docking and human spaceflight leave almost no room for error. **Even SpaDeX's first docking was postponed twice in January 2025** due to unexpected drift, and Gaganyaan's crewed mission has seen repeated timeline revisions.



Long investment cycles: Space ventures take years to earn returns, which makes funding difficult. High development costs and uncertain commercial demand discourage private investors, especially for young startups.



Domestic supply-chain depth: Building rockets regularly needs a steady base of skilled suppliers. **Space-grade components** such as radiation-hardened electronics require specialised vendors and strict quality checks, which **India's industry is still developing.**

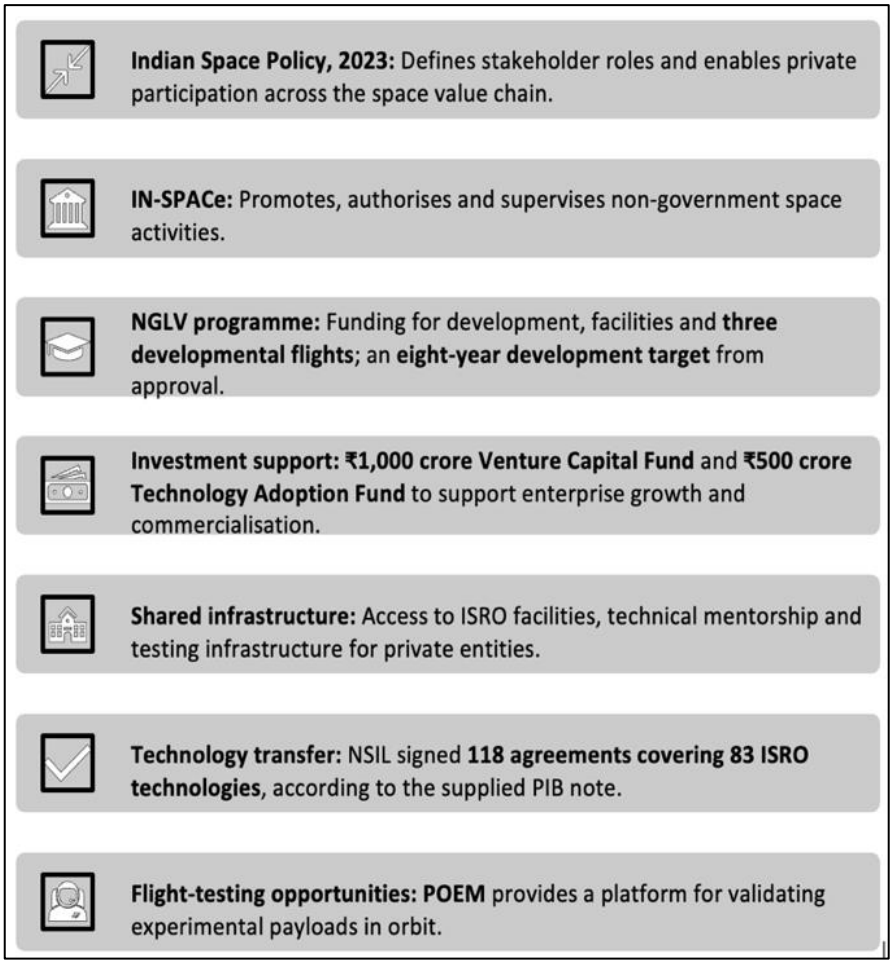


Commercialisation barriers: Transferring technology is easier than turning it into a business. Although PSLV production has been handed to an **HAL-L&T consortium and SSLV technology to HAL**, scaling up production, offering competitive prices and securing steady orders remain uncertain.

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Way Forward

- **Prioritise flight readiness:** Funding should be released step by step, tied to reviewed testing milestones, so each system is proven before the next stage. Gaganyaan's staged approach, starting with the TV-D1 crew-escape test in 2023, offers a good model.
- **Strengthen critical technologies:** Building core technologies at home reduces dependence on imports. **The ₹500-crore Technology Adoption Fund** can support domestic development of propulsion systems, sensors and advanced materials.
- **Build predictable demand:** Industry invests only when it can see future orders. **Transparent procurement and long-term contracts can provide** this certainty, building on NSIL's demand-driven GSAT-24, which was fully leased to **Tata Play before launch.**
- **Expand patient capital:** Since space projects take years to pay off, startups need investors willing to wait. **The ₹1,000-crore space venture-capital fund** can combine public risk-sharing with private investment to fill this gap.



- **Scale industry capability:** A strong supplier base needs certification, skills and facilities. Better supplier certification, workforce training, wider access to ISRO's testing facilities and more technology transfers would help firms grow.
- **Connect missions with public needs:** Space programmes earn wider support when they improve daily life. Satellite-based yield estimation already supported **PMFBY crop insurance** in **nine States in 2025,** and similar use in crop assessment and disaster warnings should expand.

Conclusion

Space self-reliance requires reliable technology, competitive industry and useful services. India's next advances must translate scientific capability into strategic autonomy and wider public benefit.

2. NAVIC: SECURING INDIA'S NAVIGATION AUTONOMY

Why in News

ISRO scheduled **GSLV-F18/NVS-03 for 30 October 2026** to strengthen NavIC amid ageing satellites, clock failures and replacement setbacks.

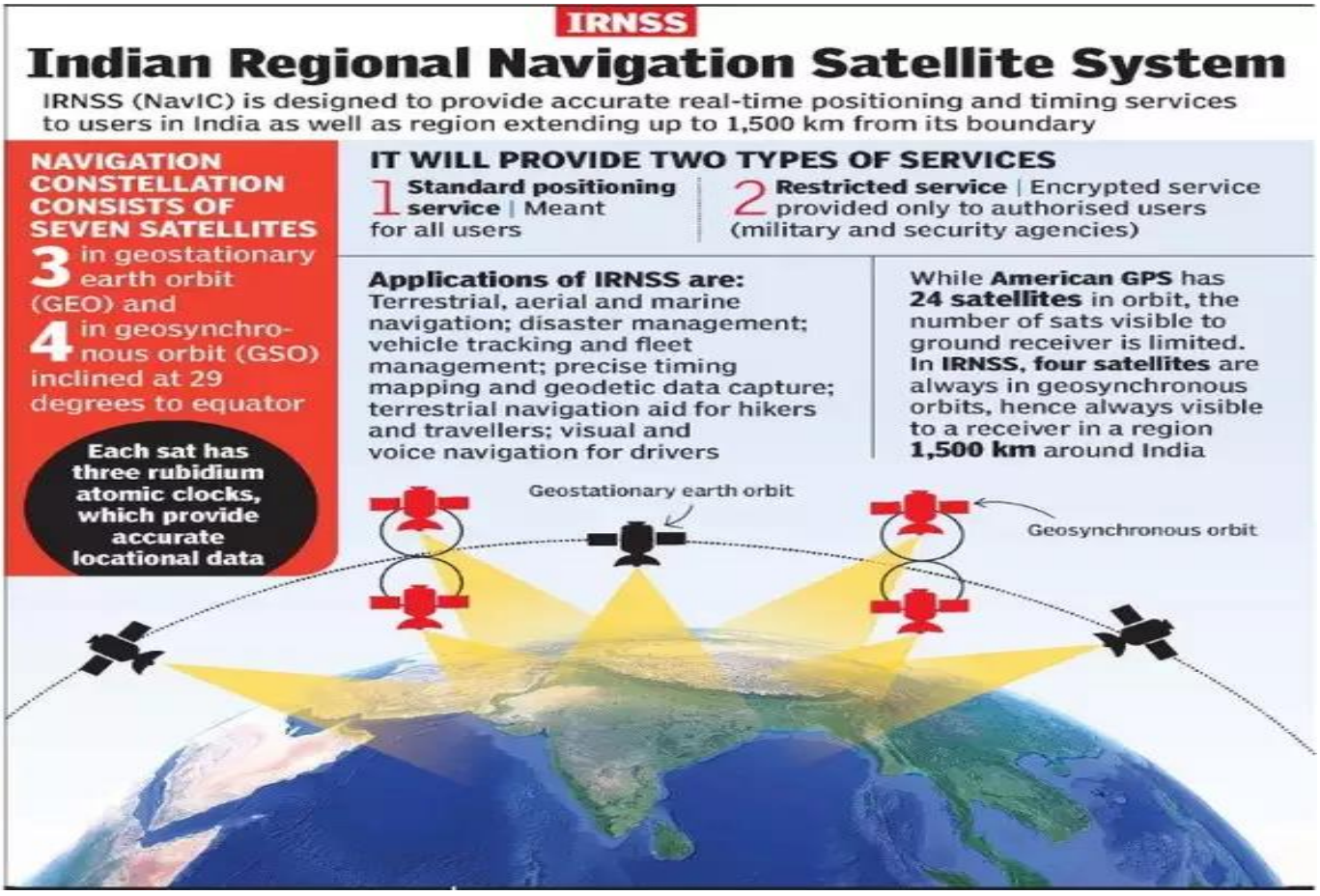
About GSLV-F18/NVS-03

- **NVS-03:** Third satellite in the **second-generation NavIC series**.
- **Reported mass: 2,250 kg**; designed mission life of **12 years**.
- **Payload: Indigenous atomic clock**, alongside procured atomic clocks.
- **Signals: L1**, in addition to **L5 and S bands**.
- **Purpose:** Strengthen and maintain continuity of **NavIC navigation services**.

NavIC signal	Key difference
L1	Newer civilian signal added to improve compatibility with smartphones and other navigation receivers.
L5	One of NavIC's two original signals and the lower-frequency one.
S Band	The other original NavIC signal and the highest-frequency of the three.

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About Navigation with Indian Constellation



Major Challenges

- **Atomic-clock reliability:** NavIC's clocks have repeatedly failed. In March 2026, **IRNSS-1F lost its last atomic clock,** leaving only three satellites for navigation, below the minimum four needed; all three clocks on **IRNSS-1A had failed earlier.**
- **Ageing constellation:** First-generation satellites had a **10-year design life,** which **IRNSS-1A (2013)** and **IRNSS-1F (2016)** have already crossed, making further failures likely.
- **Replacement-launch setbacks:** Replacements have also faltered. **PSLV-C39 (August 2017)** failed when its heat shield did not separate, trapping **IRNSS-1H inside.**
- **Spacecraft-system failure:** Even after launch, **NVS-02 (January 2025)** could not reach its planned orbit as an **oxidiser-line valve failed to open.**
- **Limited receiver adoption: First-generation L5 and S-band signals** needed special receivers that most phones lacked, though newer satellites add L1 signals for wider use.
- **Security vulnerabilities:** Weak satellite signals are easy to disrupt, as jamming blocks reception and spoofing falsifies position or time.

Way Forward

- **Ensure planned replenishment:** Replacements must be launched before old satellites fail. The five-satellite NVS series, designed for a **12-year mission life,** should be deployed on a fixed timeline, building on ISRO's plan to launch three replacement satellites by the end of 2026.
- **Strengthen reliability testing:** Clocks, propulsion and backup systems should be independently tested before launch, applying lessons from **IRNSS-1A's clock failures and NVS-02's** valve malfunction.
- **Expand receiver adoption:** NavIC will matter only if people can use it. Affordable multi-constellation chipsets using the **L1 signal, introduced with NVS-01**, should be promoted alongside existing L5 and S-band services.
- **Prioritise critical applications:** Use should grow first where reliability matters most, such as AIS-140 vehicle tracking, fishermen's navigation and disaster alerts, along with validated timing for telecom and power networks.
- **Publish service-performance data:** Regular public reports on accuracy, availability and outages, measured against **NavIC's design accuracy of better than 20 metres,** would build user trust.

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- **Support domestic industry:** Building on **NVS-01's indigenous rubidium atomic clock,** India should strengthen local manufacturing through assured procurement, shared testing facilities and industry-research partnerships.

Conclusion

Navigation autonomy requires dependable services, continuous replenishment and widespread adoption. NavIC's success must be measured through reliable public and strategic applications alongside indigenous technological capability.

PYQ ESSENTIALS

Q. With reference to the Indian Regional Navigation Satellite System (IRNSS), consider the following statements**. (UPSC-2018)**

1. IRNSS has three satellites in geostationary and four satellites in geosynchronous orbits.
2. IRNSS covers entire India and about 5500 sq. km beyond its borders.
3. India will have its own satellite navigation system with full global coverage by the middle of 2019.

Which of the statements given above is/are correct?

(a) 1 only (b) 1 and 2 only (c) 2 only and 3 only (d) None

Q. What do you understand by 'Standard Positioning Systems' and 'Precision Positioning Systems' in the GPS era? Discuss the advantages India perceives from its ambitious IRNSS programme employing just seven satellites. **(UPSC-2015)**

PRELIMS SNAPSHOT

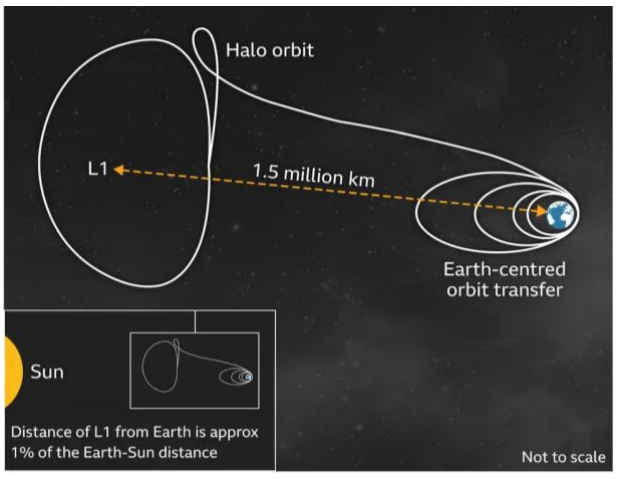
1. ADITYA-L1

Why in News

Scientists generated **Doppler velocity images of the solar corona** using Aditya-L1's **VELC payload**, helping determine the direction of solar eruptions.

About Aditya-L1

- India's **first space-based solar observatory**, launched by **PSLV-C57 on 2 September 2023**.
- **Position:** A **halo orbit around Sun-Earth L1**, approximately **1.5 million km from Earth towards the Sun**, enabling continuous solar observation.
- **Payloads: Seven-four remote-sensing and three in-situ instruments**.



Visible Emission Line Coronagraph (VELC)

- Developed by the **Indian Institute of Astrophysics (IIA), Bengaluru**, with ISRO.
- Studies the **corona-the Sun's outermost atmospheric layer**.
- A **coronagraph blocks the bright solar disc**, allowing the faint corona to be observed.

Doppler Velocity

- Uses shifts in the wavelength of emitted light to measure plasma motion **along the observer's line of sight**.
- **Blueshift:** Motion towards the observer; **redshift:** motion away.

Coronal Mass Ejections (CMEs)

- Large expulsions of **plasma and magnetic fields** from the solar corona.
- Earth-directed CMEs can cause **geomagnetic storms**, disrupting satellites, navigation, communications and power grids.

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2. EOS-05 SATELLITE

Why in News

EOS-05 was launched by ISRO on **September 4, 2026**, aboard **GSLV-F17** from **Satish Dhawan Space Centre, Sriharikota**.

About EOS-05

- **EOS-05** is an **Earth Observation Satellite**.
- It is a **dedicated imaging satellite** developed by **ISRO**.
- It will operate in **Geostationary Orbit (GEO)**.
- It carries **specialised high-performance cameras**.
- It is designed to provide a **continuous view of a particular region**.



Key Feature

- Unlike satellites that move along their orbit and take repeated snapshots, EOS-05 can **continuously monitor a selected region**. Hence, it is described as an **eye-in-the-sky.**

India's Earlier Imaging Satellites

- **IRS** - Indian Remote Sensing series
- **RISAT** - Radar Imaging Satellite series
- **Cartosat** - Used for cartographic mapping of geography and terrain

WHY IS GEO IMPORTANT?

- A satellite in **Geostationary Orbit (GEO)**
- Revolves at approximately the **same speed as the Earth's rotation**.
- Appears to remain **stationary over a particular region** when viewed from Earth.
- Allows **continuous monitoring** of that region.
- **GEO → Same apparent position → Continuous observation**

EOS-05 vs Earlier Imaging Satellites

Features	Earlier Imaging Satellites	EOS-05
Orbit	Mainly Sun-Synchronous Polar Orbit	Geostationary Orbit
Observation	Repeated snapshots	Continuous monitoring
Coverage	Satellite moves along its orbit	Remains over a particular region
Main advantage	Periodic imaging	Near real-time observation
Strategic use	Monitoring possible	Continuous strategic monitoring

3. MARTIAN MOONS EXPLORATION (MMX)

Why in News

Japan launched **MMX on October 20, 2026 (Japan time)** aboard an **H3 rocket** from **Tanegashima Space Center**, aiming to return the first samples from a Martian moon.

About MMX

- A **robotic sample-return mission led by JAXA**.
- Will study **both Martian moons, Phobos and Deimos**, and collect **at least 10 grams of material from Phobos**.
- Sample return to Earth is targeted for **2031**.
- **Idefix rover:** Developed jointly by **France's CNES and Germany's DLR** to explore Phobos before the main spacecraft lands.
- MMX will collect samples from **Phobos, not directly from the surface of Mars**.

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Phobos and Deimos		
Parameter	**Phobos**	**Deimos**
Relative size	Larger	Smaller
Position	Closer to Mars	Farther from Mars
Shape	Irregular	Irregular
MMX activity	Landing and sample collection planned	Flyby observations planned

What Will the Mission Investigate?

- **Origin of Mars's moons:** Whether they are **captured asteroids** or formed from debris produced by a giant impact on Mars.
- **Martian history:** Phobos may contain material ejected from Mars by impacts.
- **Surface conditions:** Findings could support planning for future Mars exploration.

4. MOLECULAR MACHINES

Why in News

Researchers have developed a **corkscrew-shaped molecular machine** whose movement can be reversed by changing the direction of electric current between two electrodes.

About Molecular Machines

- **Molecules or assemblies of molecules that convert energy into controlled movement** to perform specific tasks.
- They operate at the **nanometre scale** and may be **natural or artificial**.
- Artificial machines can be driven by **light, electrical energy or chemical reactions**.
- At this scale, **random thermal motion** makes controlled movement difficult.
- Molecular machines require energy input and suitable design to coordinate movement.

Natural Examples

- **Kinesin:** Transports cellular cargo along **microtubules**.
- **Myosin:** Moves along **actin filaments**, enabling muscle contraction.
- Both use energy from **ATP hydrolysis** to generate movement.

Artificial Molecular Machines

Scientist	Key contribution
Jean-Pierre Sauvage	**Catenane:** Mechanically interlocked molecular rings.
Fraser Stoddart	**Rotaxane:** A molecular ring threaded onto an axle, along which it can move.
Bernard Feringa	Developed a **light-driven molecular motor** with controlled rotation.

- The three jointly received the **2016 Nobel Prize in Chemistry** for designing and synthesising molecular machines.

NOBEL PRIZE

Origin

- **Founder:** Established through the will of **Alfred Nobel**, a Swedish inventor and industrialist known for inventing **dynamite**.
- **Purpose:** To recognise contributions that confer the **greatest benefit to humankind**.
- **First awarded: 1901.**
- **Nobel Foundation:** Established in **1900** to manage the assets and finances associated with the prizes.
- **Original categories: Physics, Chemistry, Physiology or Medicine, Literature and Peace.**

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- The **Norwegian Nobel Committee** has five members appointed by the **Norwegian Parliament, the Storting**.
- **Prize in Economic Sciences:** Established in **1968** by **Sveriges Riksbank**, Sweden's central bank; first awarded in **1969**.
  - It was **not included in Alfred Nobel's will**, but is awarded alongside the Nobel Prizes.
- **Award ceremony:** Held annually on **10 December**, the anniversary of Alfred Nobel's death.
- **Location:** The Peace Prize is presented in **Oslo, Norway**; the other prizes are presented in **Stockholm, Sweden**.
- **Award:** A **medal, diploma and cash prize.**
- **Prize money in 2026: 12 million Swedish kronor per full prize,** shared when there are multiple recipients.
- **Sharing limit:** A prize may be shared by a maximum of **three individuals**. The **Peace Prize can also be awarded to organisations**.
- **Posthumous awards:** Generally not awarded posthumously; an award can proceed if a laureate dies **after the announcement**.
- **Nomination records:** Kept confidential for **50 years**.

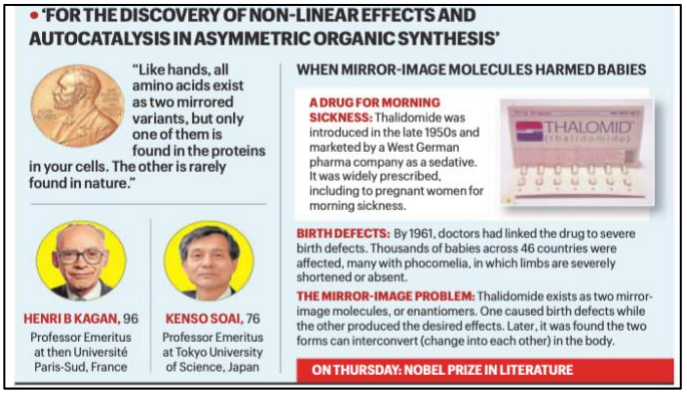
India Connection

- **Rabindranath Tagore:** First Indian and first non-European Nobel laureate, **Literature, 1913**, associated with *Gitanjali*.
- **C. V. Raman:** First Indian Nobel laureate in science, **Physics, 1930**, for work on the scattering of light and the **Raman Effect**.
- **Mahatma Gandhi:** Nominated for the Peace Prize but **never awarded it**.

5. NOBEL PRIZE IN CHEMISTRY 2026

Why in News

Henri B. Kagan (France) and **Kenso Soai (Japan)** won the **2026 Nobel Prize in Chemistry** for the **discovery of non-linear effects and autocatalysis in asymmetric organic synthesis**.



New Developments

- Their work explains how a chemical reaction can preferentially produce **one mirror-image form of a molecule** over the other.
- This is important for understanding **homochirality**, a characteristic of life in which biological systems predominantly use one molecular form.
- Their research has major applications in **pharmaceuticals, agrochemicals, flavours and fragrances**.

TERMINOLOGY	
Chirality	• **Chirality** means a molecule exists in two forms that are **mirror images but cannot be superimposed**. • Similar to **left and right hands**. • The two mirror-image forms are called **enantiomers**.
Homochirality	• **Homochirality** = preference for **one mirror-image form** in biological systems. • Example: **amino acids in proteins** predominantly occur in one enantiomeric form. • It is an important feature of the **chemistry of life**.
Non-linear Effect	• Kagan, showed that a small imbalance in the chirality of a catalyst can result in a **much larger imbalance in the products**. • Thus, one molecular form can become strongly dominant.
Autocatalysis	• A reaction in which the **product itself acts as a catalyst**, accelerating its own formation. • **Kenso Soai,** demonstrated how such a process can **amplify a tiny initial molecular imbalance** and eventually produce predominantly one enantiomer

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Significance

- **Origin of life:** Helps explain how a small initial molecular imbalance could develop into **homochirality**.
- **Drug development:** Enables selective production of the desired **enantiomer**, as mirror-image forms may have different biological effects.
- **Efficient synthesis:** Can reduce unwanted products and the need to separate enantiomers.
- **Industrial applications:** Supports selective manufacture of **pharmaceuticals, agrochemicals, flavours and fragrances**.

6. NOBEL PRIZE IN PHYSICS 2026

Why in News

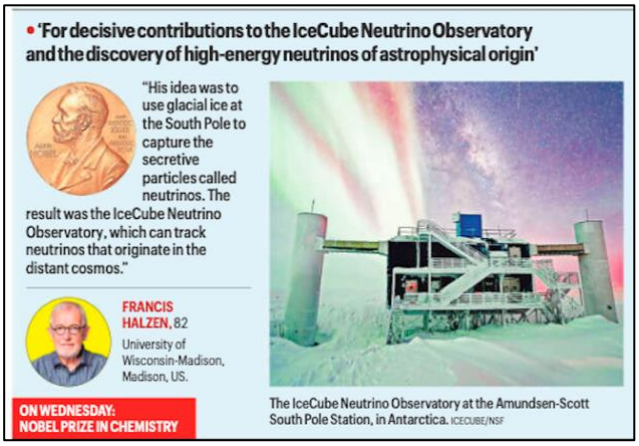
Francis Halzen was awarded the **2026 Nobel Prize in Physics** for his decisive contributions to the **IceCube Neutrino Observatory** and the discovery of **high-energy neutrinos of astrophysical origin**.

New Developments

- **IceCube** detects extremely high-energy neutrinos originating from distant cosmic sources.
- It is located at the **Amundsen–Scott South Pole Station, Antarctica**.
- The observatory uses **5,160 optical sensors** embedded deep inside Antarctic ice.

IceCube Neutrino Observatory

- World's major detector for **high-energy astrophysical neutrinos**.
- Uses Antarctic ice as the detection medium.
- When a neutrino interacts with an atom in the ice, it can produce a **charged particle**.
- The charged particle produces **Cherenkov light**, which is detected by optical sensors.
- Scientists use this light to determine the neutrino's **energy and direction**.



Neutrinos

- Extremely light, electrically **neutral subatomic particles**.
- Interact very weakly with matter → often called **"ghost particles."**
- Can travel enormous distances through matter and space with little interaction.
- Produced in processes such as **nuclear reactions and energetic astrophysical events**.

Significance

- **Neutrino astronomy:** Enables the study of distant cosmic objects through **neutrinos**.
- **Cosmic accelerators:** Helps identify sources that accelerate particles to extremely high energies.
- **Multi-messenger astronomy:** Combines neutrino observations with **electromagnetic radiation and gravitational waves** to study cosmic events.
- **Distant-universe information:** Neutrinos travel largely undeflected by magnetic fields and can escape dense environments, carrying information about their sources.
- **Fundamental physics:** Supports research into **neutrino properties** and searches for **dark matter**.

7. NOBEL PRIZE IN PHYSIOLOGY OR MEDICINE 2026

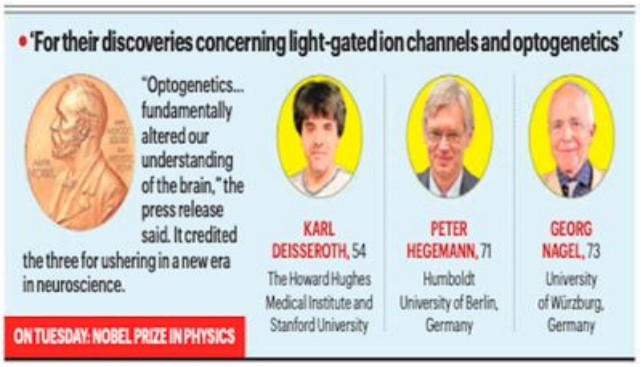
Why in News

The 2026 Nobel Prize in Physiology or Medicine was jointly awarded to three scientists for discoveries concerning light-gated ion channels and optogenetics, enabling precise control of nerve cells using light.

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Key Scientific Discoveries

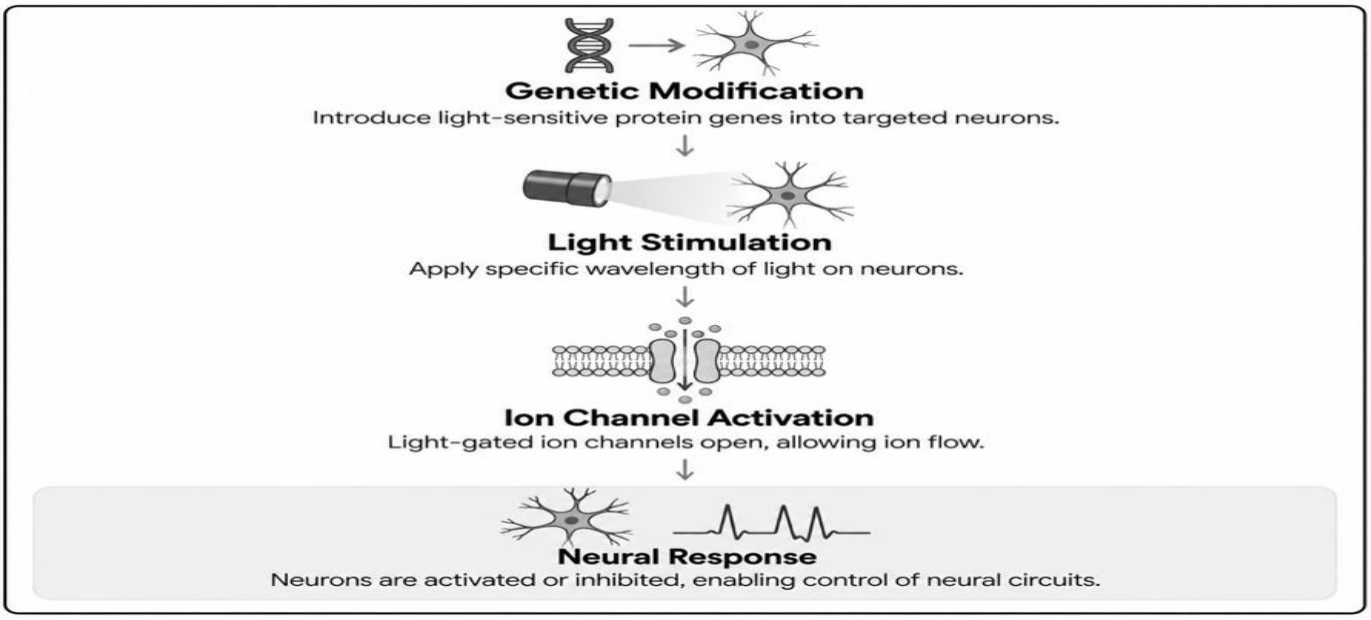
Scientist	Contribution
Peter Hegemann	Investigated light-sensitive proteins in the green alga Chlamydomonas
Georg Nagel	Helped identify and characterise channelrhodopsins as light-gated ion channels
Karl Deisseroth	Pioneered optogenetic methods to control neurons and study neural circuits



What is Optogenetics?

- **Meaning:** A technique combining optics (light) and genetics to control the activity of specific cells, particularly neurons, using light.
- **Principle:** Light-sensitive proteins introduced into targeted cells enable their activation or inhibition through light.
- **Purpose:** To study neural circuits, brain functions, memory, behaviour and neurological disorders.

How Does Optogenetics Work?



Significance

- **Brain research:** Enables precise activation or inhibition of specific neurons to understand **memory, behaviour and neural circuits**.
- **Disease research:** Helps investigate mechanisms underlying **Parkinson's disease, epilepsy and psychiatric disorders**.
- **Vision restoration:** Being explored to make surviving retinal cells light-sensitive in people with **retinal degeneration**.
- **Precision:** Provides **millisecond-level control** over targeted cells, helping establish how their activity causes particular responses.
- **Treatment development:** Supports experimental therapies; **most applications remain research-based**.

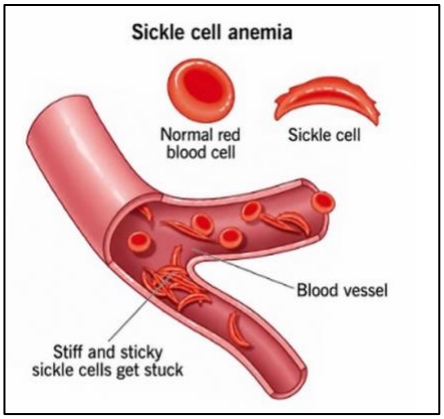
8. SICKLE CELL ANEMIA

Why in News

- **CSIR-Centre for Cellular and Molecular Biology (CCMB)** developed an **India-specific severity score** for Sickle Cell Anaemia (SCA).
- It is called **ISSI (India-specific Severity Score)**.

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About Sickle Cell Anaemia



- **Nature:** inherited blood disorder caused by a **mutation in the β-globin gene**.
- Produces abnormal **haemoglobin S (HbS)**.
- RBCs become **sickle-shaped**, causing:
  - Anaemia
  - Severe pain episodes
  - Organ damage
  - Other complications
- **According to a 2024 research** published in **HemaSphere**, India ranks third globally in annual births affected by sickle cell disease, **after Nigeria and the Democratic Republic of the Congo.**
- The **National Sickle Cell Anaemia Elimination Mission:** targets elimination of sickle cell disease **as a public health problem by 2047**, with particular focus on tribal populations.

New Tools

- **ISSI:** developed using **clinical data from Indian children**.
- Improved clinical assessment to nearly **83%**.
- **ISS2:** uses easily observable **clinical indicators** instead of laboratory measurements.
- Achieved about **85% overall concordance**, helping doctors manage patients with fewer laboratory investigations.

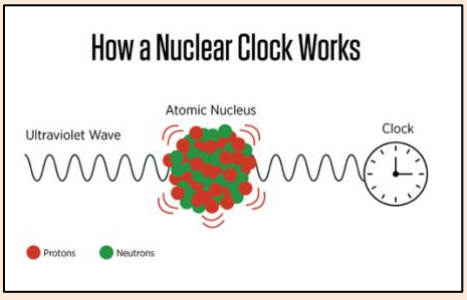
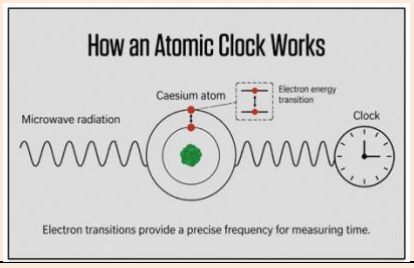
9. NUCLEAR CLOCKS

Why in News

Scientists in **Europe and China** reported the first **operational nuclear clocks** in two *Nature* papers published in **October 2026**.

Recent Developments

- The prototypes use **thorium-229 embedded in calcium fluoride crystals**.
- A **vacuum-ultraviolet laser** is stabilised to a nuclear transition through a **feedback loop**, correcting frequency drift.
- They **have not yet surpassed the best atomic clocks** in timekeeping performance.

Parameter	Nuclear Clock	Atomic Clock
Frequency reference	The nucleus is the atom's central core. When it moves from a higher energy level to a lower one, it releases energy at a specific frequency. This frequency serves as the reference for a **nuclear clock**. 	Electrons occupy energy levels around the nucleus. When an electron moves between these levels, it absorbs or releases energy at a specific frequency. This frequency serves as the reference for an **atomic clock**. 
Elements used	**Thorium-229** in the reported prototypes.	**Caesium, strontium or ytterbium**, depending on design.
Radiation used	**Vacuum-ultraviolet light**; thorium-229's transition energy is about **8.4 eV**.	**Microwaves or optical light**, depending on the clock.
External disturbances	Nuclear transitions are generally **less sensitive** to external fields.	Electronic transitions are more susceptible; require careful isolation and correction.

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Present precision	Prototypes **have not yet surpassed** the best atomic clocks.	Currently provide the **best demonstrated timekeeping performance**.
Applications	Potential for improved navigation, tests of **fundamental constants** and dark-matter searches.	Time standards, satellite navigation and synchronised networks.
Dark-matter experiment	Compared with a **ytterbium atomic clock** to test variations in fundamental constants; **no signal detected**.	Served as the comparison reference.

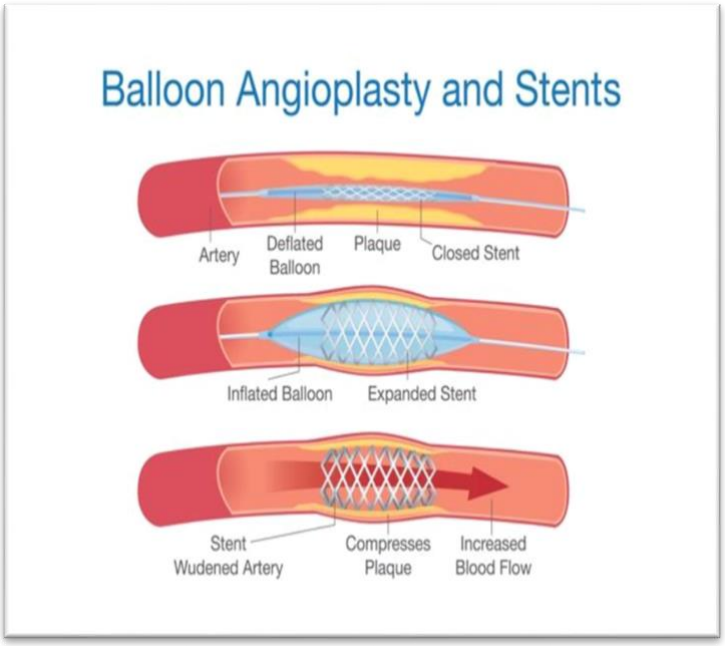
10. ANGIOPLASTY

Why in News

Unnecessary angioplasty have prompted debate over appropriate stent use, while doctors emphasise its life-saving role during acute heart attacks.

ABOUT ANGIOPLASTY OR PERCUTANEOUS CORONARY INTERVENTION (PCI)

- It is a **minimally invasive procedure** that opens narrowed or blocked coronary arteries to restore blood flow to the heart muscle, without open-heart surgery.
- **Procedure:** A catheter-mounted **balloon** is inflated at the blockage, compressing plaque against the artery wall.
    - A **stent**, a small mesh tube, is usually inserted to keep the artery open.
- **Drug-eluting stents:** Release medication to reduce tissue growth and **re-narrowing**.
- **Atherosclerosis:** Accumulation of fatty plaque in artery walls; plaque rupture can trigger a **blood clot and heart attack**.
- **When needed:** Timely PCI can save lives during acute heart attacks. In **stable coronary disease**, treatment depends on symptoms, blood-flow impairment and clinical risk; a blockage alone does not automatically require stenting.



11. KUFRI JAMUNIA: BIOFORTIFIED PURPLE POTATO

Why in News

Kufri Jamunia, a nutrient-rich purple potato developed by **ICAR-Central Potato Research Institute (CPRI)**.

Key Features



- **Released: 2024.**
- **Appearance:** Both **skin and flesh are purple**.
- **Nutrients:** Contains **anthocyanins, vitamin C, carotenoids, iron and zinc**.
- **Anthocyanins:** Natural pigments associated with purple colour and antioxidant properties.
- **Cultivation:** Recommended for the **North Indian plains**.
- **Yield:** Around **32-35 tonnes per hectare** under recommended cultivation practices.
- **Maturity and storage:** Medium-maturing variety with **6-8 weeks of tuber dormancy** and good storage quality.

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Other Coloured Potato Varieties

Variety	Released	Important feature
Kufri Neelkanth	**2018**	Purple-skinned speciality potato; high antioxidant content
Kufri Manik	**2021**	Deep-red skin and yellow flesh
Kufri Jamunia	**2024**	Purple skin and flesh; enhanced nutritional content

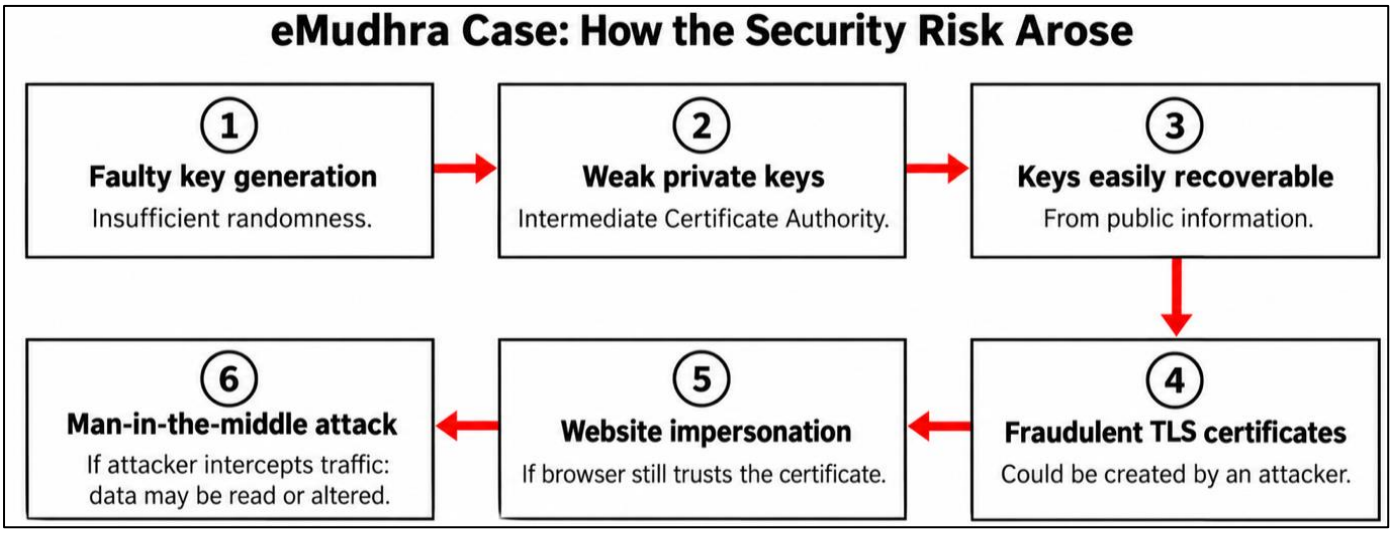
12. DIGITAL CERTIFICATES

Why in News

Eight private keys associated with eMudhra's intermediate certificates were compromised**, raising concerns over trust in website security certificates.**

Background

- **Digital certificate:** An **electronic credential** that links an identity-such as a website's domain-to its **public key**.
- **Certifying Authority (CA):** A trusted entity that issues and **digitally signs certificates.**
- **Public Key Infrastructure (PKI):** The system of certificates, authorities and procedures used to establish digital trust.
- **Trust chain: Root CA → Intermediate CA → Website certificate**. Browsers verify this chain to authenticate websites using **HTTPS/TLS**.
- **Why compromise matters:** A stolen **CA private key** can enable forged certificates and website impersonation.
- **India's framework:** The **Controller of Certifying Authorities (CCA)** licenses and regulates CAs under the **Information Technology Act, 2000**; it operates India's root certification framework.



Parameter	Public key	Private key
Access	Shared openly; included in certificates	Must remain secret
Digital signatures	**Verifies** the signature	**Creates** the signature

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13. GENETIC TOOLS FOR CROP IMPROVEMENT

Why in News

New tools such as apomixis are becoming more widely available, while private companies are shifting their focus to India.

Key Technologies

Technology	Meaning
Genome editing	Targeted changes to an organism's DNA; **foreign DNA need not remain** in the final plant
CRISPR-Cas9	Guide RNA directs the **Cas9 enzyme** to a specific DNA sequence for editing
Transgenic modification	Introduces genetic material, potentially from another species
Apomixis	**Asexual reproduction through seeds**, producing offspring genetically identical to the mother plant.
Hybrid vigour / Heterosis	Superior performance of a hybrid compared with its parents

India's First Genome-Edited Rice Varieties

Variety	Developing institution	Traits
DRR Dhan 100 (Kamala)	**Indian Institute of Rice Research, Hyderabad**	Derived from **Samba Mahsuri (BPT 5204)**; higher yield and earlier maturity
Pusa DST Rice 1	**Indian Agricultural Research Institute, New Delhi**	Derived from **MTU 1010**; improved tolerance to **salinity and alkalinity**

Regulatory Framework in India

- **Site-Directed Nuclease (SDN)**
  - **Meaning:** An enzyme that cuts DNA at a **specific targeted location**, enabling genome editing.
  - **Working:** After cutting, the cell repairs DNA, allowing genes to be **altered, disabled or inserted**.
  - **Eg:** CRISPR-Cas9, TALENs and Zinc Finger Nucleases**.**

Category	Features
SDN-1	Repair **without a DNA template**; produces changes at the targeted site
SDN-2	Uses a **repair template** to introduce small, precise changes
SDN-3	Inserts a **gene or larger DNA sequence** at the targeted site

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RAPID WRAP

RADIO JETS FROM BLACK HOLES

Astronomers studied how **radio jets from supermassive black holes** affect the gas surrounding their host galaxies.

About Radio jets

- They are powerful streams of particles and energy ejected from the regions around black holes.
- They can travel through the **gas surrounding galaxies**.
- Jets from the galaxy's central black hole can **heat and disturb surrounding gas clouds**.
- This may influence the **formation of stars and evolution of galaxies**.

Important Example

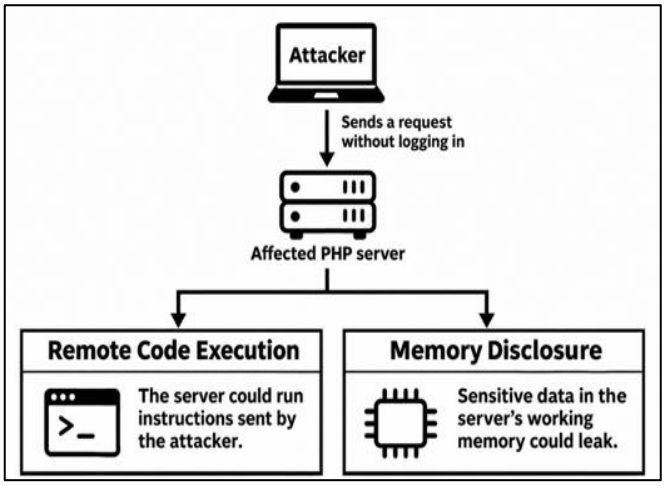
- **Magnesium:** Detected in the gas around galaxies.
- Radio jets **do not necessarily create the gas halos**; instead, they can **interact with existing gas clouds and make them glow**.

PHP2SHELL

Critical flaws called **PHP2Shell** prompted precautionary website shutdowns worldwide.

Recent Developments

- Security patches were released on 21 October 2026.
- Researchers used **AI tools** to help discover and investigate the vulnerabilities.



About PHP2Shell

- **PHP2Shell** Refers to vulnerabilities in PHP itself, rather than a separate virus or programming language.
- **Remote Code Execution:** Attackers could run malicious instructions on an affected server **without logging in**.
- **Memory disclosure:** Sensitive information remaining in server memory could be exposed.

About Hypertext Preprocessor (PHP)

- An **open-source, server-side scripting language** used to process website functions such as logins, forms and purchases.
- It powers platforms including **WordPress, Drupal and MediaWiki**.

CLICK-TO-CANCEL RULE

New York City's Click-to-Cancel rule came into effect on **1 October 2026**, requiring businesses to make cancellation of covered subscriptions simple.

About Click-to-Cancel Rule

- Applies to covered **automatic-renewal and continuous-service subscriptions**.
- Cancellation must be **as easy as signing up** and available through the **same medium**.
  - **Eg.** a customer who subscribes online should be able to cancel online.
  - Enforced by New York City's **Department of Consumer and Worker Protection**.

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SATELLITE RADIATION

SNIFFLES detected radio emissions from **low-Earth-orbit satellites** that can disrupt radio astronomy, even in **protected bands**.

About Satellite Radiation

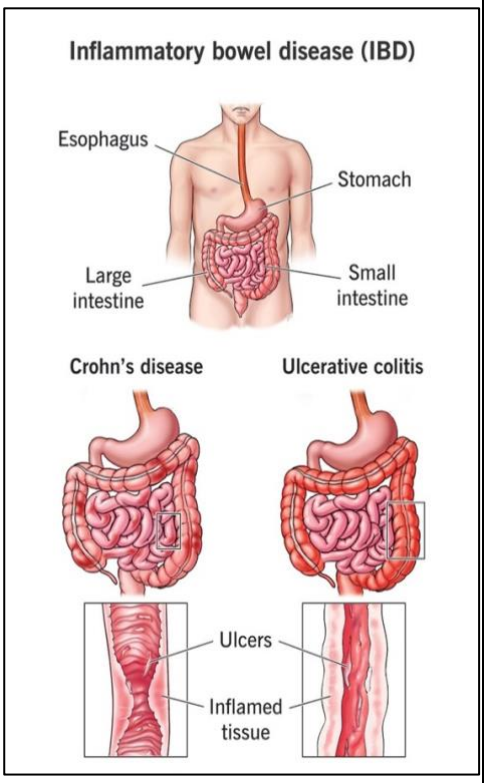
- **Radio astronomy:** Studies celestial objects through the radio waves they emit.
- **Radio-frequency interference (RFI):** Human-made signals that mask or contaminate faint astronomical signals.
- **Study facilities: Mopra radio telescope** and **Australia Telescope Compact Array**, both in Australia.
- **Satellite constellation:** A coordinated group of satellites providing services such as communications.

Types of Satellite Emissions

Type	Meaning
Intended emissions	Deliberate communication signals, including direct-to-cell transmissions
Unwanted emissions	Transmitter emissions outside the desired signal, including **harmonics**
Unintended radiation	Stray radiation from onboard electronics, such as computers and power converters

INFLAMMATORY BOWEL DISEASE (IBD) AND RELB PROTEIN

- Researchers at the **National Institute of Immunology, New Delhi**, found that **RelB protein** can both strengthen gut defence and promote inflammation, depending on its location and cellular environment.
- The study used **mice** and was published in **PNAS**.



About IBD

It comprises chronic disorders involving inflammation and damage in the digestive tract. Its two main types are:

Disease	Area affected
Crohn's disease	Can affect any part of the digestive tract
Ulcerative colitis	Affects the **colon and rectum**

IBD differs from irritable bowel syndrome (IBS), which does not cause the characteristic intestinal inflammation of IBD.

Important Findings and Terms

- **RelB:** Helps develop specialised **dendritic cells** that produce IL-23 and support intestinal defence.
- **IL-23:** An immune-signalling molecule, or **cytokine**, supports antimicrobial defence, but excessive activity can drive chronic inflammation.
- **Regulatory T cells:** Restrain excessive immune responses. RelB can suppress these cells in nearby lymph nodes.
- **SILTs: Solitary isolated lymphoid tissues**, immune-cell clusters in the intestinal wall.
- **Treatment implication:** Blocking this pathway could reduce inflammation while also weakening protective gut immunity. **The findings are preclinical, not an approved new treatment.**

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SHAMONDA VIRUS

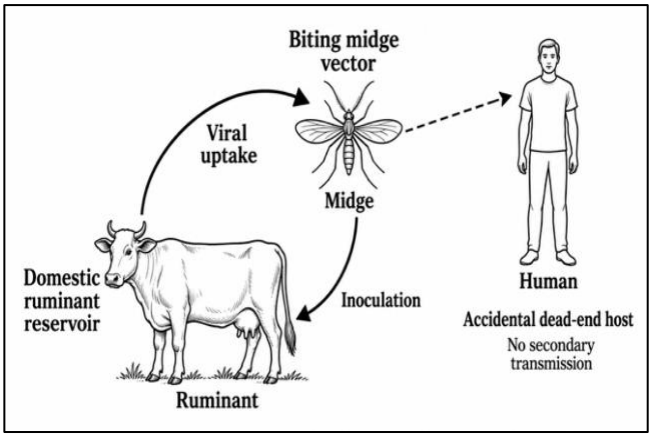
France reported the first documented human infection with Shamonda virus in a severely immunocompromised patient. It was previously known to **infect animals**.

Recent Developments

- Detected in **European farm animals in summer 2026**, before the human case.
- French authorities assessed the **risk to the general public as low**.

About Shamonda Virus

- **Type:** A vector-borne virus belonging to **genus Orthobunyavirus**, **family Peribunyaviridae** and the **Simbu serogroup**.
- **First identified:** In cattle in **Nigeria, 1965**.
- **Animal hosts:** Mainly **cattle, sheep and goats**; infections have also been reported in horses.
- **Effects in animals:** Fever, diarrhoea, reduced milk production and reproductive disorders; neurological signs are less common.



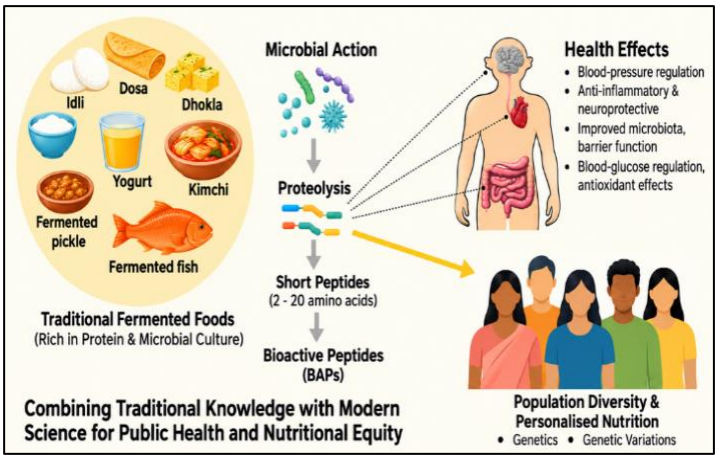
- **Vaccine:** No commercially available vaccine specifically against Shamonda virus.

PEPTIDES

The U.S. announced conditional enforcement discretion for compounding **six unapproved peptides**, including **BPC-157 and TB-500**.

About Peptides

- **Definition:** Short chains of amino acids linked by **peptide bonds**.
- **Functions:** Participate in cell signalling, hormonal regulation and immune responses.
- **Drug compounding:** Combining or altering ingredients to prepare medication for an individual patient.
- **Important clarification: Enforcement relaxation is not FDA approval** or proof of safety and effectiveness.



BUNDIBUGYO VIRUS

International AIDS Vaccine Initiative (IAVI) announced **$36 million in initial U.S. funding** to develop a **single-dose Bundibugyo virus vaccine candidate**.

About Bundibugyo Virus

- **Disease:** A severe, often fatal **zoonotic viral disease**.
- **Causative agents:** Include **Ebola, Sudan and Bundibugyo viruses**.
- **Suspected natural hosts:** Fruit bats.
- **Transmission:** Direct contact with infected blood, body fluids or contaminated materials.
- **Incubation: 2-21 days**; people are not infectious before symptoms.
- **Vaccine status:** The Bundibugyo candidate is **investigational**, not approved.
- Existing vaccines against **Zaire Ebola virus cannot be assumed to protect against Bundibugyo**.

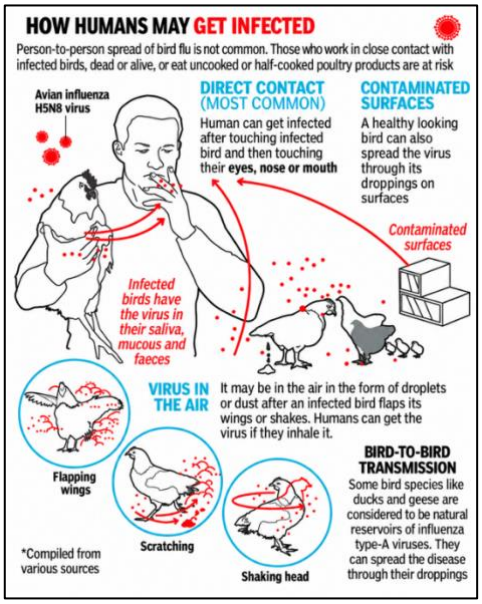
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AVIAN INFLUENZA

The Netherlands imposed nationwide poultry-housing and shielding requirements to reduce bird-flu transmission.

About Avian Influenza

- **Cause: Influenza A viruses**; important subtypes include **H5N1 and H7N9**.
- **Natural reservoir:** Wild aquatic birds.
- **Host range:** Mainly birds; some strains also infect **mammals, including humans**.
- **Human exposure:** Usually through infected animals or contaminated environments.
- **Food safety:** Properly prepared and cooked poultry and eggs are **not established transmission routes**.
- **Prevention:** Farm biosecurity, surveillance and separation of domestic poultry from wild birds.
- **One Health linkage:** Coordinated protection of **human, animal and environmental health**.



PLANT-BASED MEAT

CSIR-IHBT and Good Food Institute India compared **protein bioavailability** in selected plant-based meats and chicken products.

Recent Findings

- The tested plant-based **kebabs, nuggets and patties** showed higher estimated protein availability than their chicken counterparts in a **laboratory simulation**.
- The chicken products had **more crude protein**. A higher percentage available for absorption does not automatically mean a higher amount of usable protein per serving.
- The study used an **in vitro** method; it did not directly measure absorption in humans. The findings cannot establish that all plant-based meat is healthier than animal meat.

How Was It Tested?

- **In vitro digestion:** A laboratory method simulating digestion in the **mouth, stomach and intestine**.
- An **ultrafiltration membrane** was used to estimate the material that could pass through a barrier resembling the intestinal lining.
- Results are **estimates** and require further testing to establish absorption in living organisms.

About Plant-Based Meat

- Food made from plant ingredients, such as pulses and cereals, designed to resemble the taste or texture of meat.
- **Protein bioavailability:** The proportion of dietary amino acids absorbed in a form the body can use.
- **Amino acids:** Building blocks of proteins. **Essential amino acids** must be obtained from the diet.
- **Protein quality** depends on both the **amount of essential amino acids** and how well they are digested and absorbed.

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DEFENCE

RECENT DEVELOPMENT

POSITIVE INDIGENISATION LIST (PIL)

The **Defence Ministry** is likely to release the **Sixth Positive Indigenisation List (PIL)** in the coming months.

New Developments

- The sixth list is in the **final stages of approval**.
- It will primarily cover equipment for the **Indian Navy and Army**.
- It is expected to include **Line Replaceable Units (LRUs), sub-systems, assemblies and other equipment** to be sourced from Indian industry.
- The five existing PILs contain **509 items**.
- Of these, **191 items worth ₹3.40 lakh crore** have already been contracted.
- **AoN (Acceptance of Necessity)** has been accorded for **114 items worth ₹4.75 lakh crore**.

About PIL

- It identifies defence items that must be **procured from domestic sources**, thereby progressively restricting their import.
- It is an important component of **Atmanirbhar Bharat in Defence**.
- It seeks to:
  - Reduce defence-import dependence.
  - Promote **Indian defence manufacturing**.
  - Encourage private-sector participation.
  - Develop domestic defence supply chains and technology.
- **Implementing body:** Department of Military Affairs (DMA), Ministry of Defence.
- **First five PILs:** Notified between **August 2020 and October 2023**.
- **Sixth PIL:** Primarily expected to cover **Army and Navy** equipment.
- **LRS/LRUs: Line Replaceable Units** -modular components that can be rapidly removed and replaced during maintenance.
- **PIL ≠ DDP lists:** The **DMA's PILs** are separate from the **Department of Defence Production (DDP)**'s Positive Indigenisation Lists.

SURYA-INDIA'S FIRST INDIGENOUS FLEET SUPPORT SHIP

Defence Minister **Rajnath Singh** launched **Surya**, the Indian Navy's **first indigenous Fleet Support Ship (FSS)**.

New Developments

- **Surya** is the first of a series of **five Fleet Support Ships (FSS)**.
- Part of a **₹19,000-crore contract** between the Ministry of Defence and **Hindustan Shipyard Limited (HSL), Visakhapatnam**.
- The ship has around **82% indigenous content**.
- It can support multiple warships simultaneously during **long-duration high-seas operations**.

Key Capabilities

- Acts as a **floating supply platform** for the Indian Navy.
- **Can carry:**
  - Fuel, Fresh water, Ammunition, Spare parts, Dry cargo
- Can transfer **fuel, stores and personnel** to multiple ships at sea.
- Designed to support high-intensity naval operations far from Indian ports.
- Internal storage capacity includes up to 20,000 tonnes of high-speed diesel.

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INS MANGROL	**INS Mangrol** was commissioned into the Indian Navy on 12 October 2026 at Naval Dockyard, Mumbai. **About INS Mangrol** • **Class:** Third **Mahe-class Anti-Submarine Warfare Shallow Water Craft (ASW-SWC)**. • **Builder: Cochin Shipyard Limited, Kochi**. • **Role:** Detect, track and counter submarines in **shallow coastal waters**, protecting ports, harbours and coastal approaches. • **Propulsion: Diesel engines with waterjet propulsion**, enabling high manoeuvrability in shallow waters. • **Name:** Named after **Mangrol**, a coastal town in **Gujarat's Junagadh district**. **Important Systems** • **Abhay hull-mounted sonar:** Detects underwater targets using sound. • **Lightweight torpedoes and indigenous ASW rockets:** Engage submarines. • **Maareech Advanced Torpedo Decoy System:** Helps protect the ship by diverting incoming torpedoes.
INS SAMARTHAK	**INS Samarthak**, the Indian Navy's first indigenous **Multi-Purpose Vessel (MPV)**, was commissioned **at Karwar, Karnataka**. **About INS Samarthak** • **Builder: Larsen & Toubro (L&T)**, at **Kattupalli shipyard, Tamil Nadu**. • **Project:** First of **two Multi-Purpose Vessels** being built by L&T. • **Indigenous content: Over 75%**. • **Name:** *Samarthak* means **"the proponent."** **Main Functions** • **Trials and evaluation:** Tests indigenous **weapons and sensors** before deployment. • **Unmanned systems:** Supports their deployment and operation. • **Maritime operations:** Surveillance, reconnaissance and offshore patrolling. • **Disaster relief:** Supports humanitarian assistance and relief operations.

EXERCISES

ASEAN-INDIA MARITIME EXERCISE (AIME) 2026	The 2nd ASEAN-India Maritime Exercise (AIME-2026) was conducted at Subic Bay, Philippines, from 28 September-2 October 2026.
	New Developments
	• It was conducted under the theme **Anchored in Trust, United at Sea.**
	• **Indian Naval Ships: INS Sahyadri** and **INS Kulish** participated.
	• The exercise had two phases:
	  ○ Harbour Phase **and** Sea Phases
	• **Sea-phase activities included**
	• HADR**,** Visit, Board, Search and Seizure (VBSS)**,** Underway replenishment**,** Helicopter cross-deck landing**,** CASEVAC drills.
	AIME
	• It is a multilateral maritime exercise between India and ASEAN Member States.
	• **First edition:** Singapore, **2023**.
	• **It aims to improve:**
	  ○ Interoperability, Maritime cooperation, Operational coordination, Mutual understanding among participating navies.

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EXERCISE RUMMY	France and the United Kingdom conducted their first joint air exercise simulating a nuclear strike, named Rummy, in October 2026. **About Exercise Rummy** • **Location:** Over the **Mediterranean Sea**. • **Aircraft:** French **Rafale fighters**, escorted by British **Royal Air Force Typhoon jets**. • **Nature:** A **simulated mission without actual nuclear weapons**. • **Purpose:** Improve coordination between the two countries while retaining **independent nuclear decision-making**. • **Cooperation framework:** The **Northwood Declaration, 2025**, provides for closer coordination of their independent nuclear deterrents.

RAPID WRAP

RECENT DEVELOPMENT

CHIEF OF AIR STAFF (CAS)	**Air Marshal Ashutosh Dixit** has been appointed as the **next Chief of the Air Staff (CAS)**. **Selection of CAS** • **Appointed by:** Central Government. • **Selected from:** Senior Air Force officers, mainly **Air Marshals**. • **Basis:** Seniority, experience, service record and suitability. • **Rank: Air Chief Marshal (4-star)**. • **Tenure: 3 years or until age 62**, whichever is earlier.
DEFENCE ACQUISITION COUNCIL	The **Defence Acquisition Council (DAC)** accorded **Acceptance of Necessity (AoN)** to capital acquisition proposals worth approximately **₹2.12 lakh crore** for the Army, Navy and Air Force. About **82% of the procurement value** is earmarked for domestic industry. **About Defence Acquisition Council** • **Chairperson:** Union **Defence Minister**. • **Role:** Considers major defence acquisition proposals. • **Acceptance of Necessity:** An **in-principle administrative approval** for a proposed acquisition. It does not mean that a contract has been signed or equipment delivered.

Major Systems Approved

Service	Systems	Purpose
Army	**VSHORADS**	Defence against low-flying aerial threats at short range
Army	**Counter-Unmanned Aerial Systems (C-UAS)**	Detection and countering of hostile drones
Army	**Gun Shot Response Systems**	Detection of firing to improve battlefield awareness
Army	**Long-range kamikaze drones**	Unmanned systems that strike a target by impact
Navy	**Active Off-board Decoy Systems**	Divert incoming missile threats away from ships
Air Force	Air-defence systems, helicopters and weather radars	Air defence, operational support and weather surveillance

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ETHICS

1. PUBLIC SERVANT

Public Servants Must Act in Favour of the Weak and in Fear of Their Conscience.

Introduction

Public authority is a public trust. Its ethical purpose: protecting vulnerable citizens while exercising power with **integrity, constitutional fidelity and moral courage**.

Acting in Favour of the Weak

- **Equity over uniformity: Aristotle's equity** supports need-based assistance; UPSC's **2025 instructions** allowed eligible candidates **20 extra minutes per hour** for writing difficulties.
- **Substantive justice:** Reflecting **Rawls' difference principle**, **PM-JANMAN** targets **75 PVTG communities** through housing, health, education and connectivity interventions.
- **Accessible entitlements:** Consistent with **Sen's capability approach**, the **2025 tribal saturation campaign** targeted **63,000+ villages**, facilitating documents and doorstep benefits.
- **Compassion with objectivity: November 2026's Digital Life Certificate campaign** offers doorstep assistance to pensioners where required, easing verification through prescribed procedures.
- **Responsibility for consequences:** Reflecting **Weber's ethics of responsibility**, the government reiterated in **March 2026**that Aadhaar authentication failures must not deny eligible beneficiaries welfare support.
- **Constitutional commitment: AIS Conduct Rules** combine political neutrality and impartiality with explicit **responsiveness to weaker sections**, making inclusive service an official duty.

Accountability to Conscience

1. **Internal restraint:** Conscience guiding conduct beyond external supervision; **Kantian duty** supporting right action without expectation of reward.
2. **Moral courage:** Public interest above fear of transfer or displeasing superiors; reasoned dissent and refusal of unlawful directions.
3. **Personal responsibility:** "Following orders" cannot replace judgment; **Arendt's analysis of thoughtlessness** warning against uncritical conformity.
4. **Probity in decisions:** Disclose conflicts, maintain transparency and recuse where necessary; legality alone insufficient to establish propriety.
5. **Constitutionally guided conscience:** Test personal convictions against **constitutional values, law, evidence and public interest**; prevent subjective morality becoming arbitrary authority.
6. **Long-term accountability:** Examine consequences for citizens and institutions; ask **What will happen because of my decision?**.

Ethical Concerns

- **Compassion versus favouritism:** Personal sympathy may distort fair allocation, as when **PMAY-G beneficiaries are chosen through connections rather than deprivation criteria**.
- **Rules versus equity:** Rigid procedures may exclude deserving beneficiaries; **worn fingerprints can prevent elderly people from accessing Aadhaar-linked welfare**.
- **Obedience versus integrity:** Hierarchical pressure may compromise independent judgment, such as **oral instructions to overlook procurement irregularities**.
- **Neutrality versus indifference:** Political neutrality may become passive acceptance of injustice when officers **ignore caste-based denial of public services**.
- **Conscience versus personal bias:** Private beliefs may override constitutional duties, as when **disapproval of interfaith marriage influences police protection**, undermining the liberty affirmed in **Shafin Jahan (2018)**.

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Way Forward

- **Prioritise the weakest:** Apply **Gandhi's talisman and Rawls' difference principle** to assess how decisions affect the least advantaged.
- **Structure discretion:** Use **clear criteria, recorded reasons and review mechanisms** to prevent compassionate assistance from becoming favouritism.
- **Protect ethical dissent:** Seek **written directions** and use confidential reporting channels such as **PIDPI** to report corruption and seek protection against victimisation.
- **Strengthen ethical reasoning:** Assess **duty, rights and public consequences**, alongside conflicts of interest, before deciding.
- **Ensure accessible administration:** Simplify procedures, provide **assisted access** and follow **CPGRAMS' 21-day redress timeline**, issuing interim replies when resolution takes longer.
- **Reward public-service values:** Assess **integrity, inclusion and citizen feedback** in appraisals; recognise effective service to underserved groups.

Conclusion

Compassion gives public service its purpose; conscience restrains misuse of power. **Ethical administration combines both with** objectivity, constitutional morality and the rule of law**.**

Quotes on Conscience

- Conscience does make cowards of us all. **Shakespeare, *Hamlet***
- Conscience is the root of all true courage. **James H. West**
- There is a higher court than courts of justice and that is the court of conscience. **Mahatma Gandhi.**

PYQ ESSENTIALS

Q. Non-performance of duty by a public servant is a form of corruption". Do you agree with this view? Justify your answer. **(UPSC-2019)**

Q. In case of crisis of conscience does emotional intelligence help to overcome the same without compromising the ethical or moral stand that you are likely to follow? Critically examine. **UPSC-2021)**

2. WHY BIG TECH IS GIVING AWAY OPEN-WEIGHT AI MODELS, AND WHAT IT WANTS IN RETURN?

Why in News

Companies releasing **open-weight AI models** to expand developer access and earn revenue through hosting, enterprise services and computing infrastructure.

What is it?

Downloadable trained parameters, enabling adaptation and local deployment. Open weights ≠ open training data or code.

Open Weights: The model's trained parameters and architecture are publicly available, allowing users to run and modify it. However, the training data and code used to train the model are usually not shared.	**Open Source:** Makes the model's trained parameters, code, training methods and datasets publicly available, allowing users to examine, modify and reproduce the model from scratch.

Stakeholders

Developers	Safety
Companies	Responsible commercialisation
Users	Privacy and reliability
Governments	Rights and oversight

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Researchers/start-ups	Affordable access
Vulnerable communities	Inclusion.

Ethical Framework

- **Duty Ethics (Kant):** Respect human dignity, individual choice and informed consent. Companies should not collect or misuse personal data solely for profit.
- **Utilitarianism:** Maximise AI's benefits to society, such as better access to services and higher productivity, while minimising misinformation, discrimination and other harms.
- **Distributive Justice (Rawls):** Ensure AI benefits disadvantaged groups through affordable services, accessible technology and support for regional languages.
- **Virtue Ethics (Aristotle):** Encourage honesty, fairness and responsible decision-making among AI developers, even when the law does not require specific safeguards.
- **Trusteeship (Gandhi):** Encourage companies to use their technology and resources for public welfare, share the benefits of AI fairly and prevent exploitation.

Ethical Concerns

- **Unequal Access:** Free AI models still require expensive computing resources, making them more accessible to wealthy organisations. **India's IndiaAI Mission,** with over 45,000 shared GPUs by June 2026, aims to reduce this gap through subsidised computing access.
- **Incomplete Transparency:** Limited information about AI training data raises concerns over consent, copyright and fair compensation. The **ANI-OpenAI case** highlights disputes over the use of copyrighted content for AI training.
- **Privacy Risks:** Users may not know how AI companies collect, store or use their personal data. In January 2025, **Italy restricted DeepSeek's processing of user data after** finding its privacy-related explanations inadequate.
- **Commercial Dependence:** Even publicly available AI models may have licensing restrictions or additional costs. **Mistral's licensing conditions illustrate how businesses** can remain dependent on model providers.
- **Unreliable Outputs:** AI can generate false information or fabricated legal citations, leading to incorrect decisions. In **Pooja Ramesh Singh v. J&K Bank (2026),** the Supreme Court set aside tribunal decisions involving fictitious AI-generated precedents.
- **Accountability Gaps:** Organisations must take responsibility for misleading information provided by their AI systems. **In Moffatt v. Air Canada (2024),** the airline was ordered to compensate a customer for incorrect information given by its chatbot.

Way Forward

- **Meaningful Transparency:** Publish model cards explaining AI capabilities, limitations, training-data sources, privacy practices and licensing conditions. Following **OECD principles,** users should know how AI systems work and where they may fail.
- **Proportionate Safeguards:** Apply stricter safety testing and controls to AI systems used in high-risk areas such as healthcare, recruitment and law enforcement. **Following NIST's approach**, safeguards should match the severity and likelihood of potential harm.
- **Human Accountability:** Ensure human oversight of AI-based decisions in healthcare, recruitment and welfare services. **As emphasised by UNESCO,** humans must remain responsible for decisions affecting people's rights and well-being.
- **Privacy by Design:** Collect only necessary personal data, use strong security measures and prevent unauthorised access. **Conduct privacy impact assessments before deployment** to identify and reduce risks of data misuse.
- **Equitable Access:** Provide affordable computing resources, regional-language tools and digital skills training to disadvantaged communities, researchers and start-ups. Build on the ₹10,371.92-crore IndiaAI Mission to reduce the digital divide.
- **Effective Redress:** Clearly define the responsibilities of AI developers and organisations deploying AI systems. Establish accessible complaint mechanisms, allow individuals to challenge automated decisions and provide remedies when harm occurs.
- **Continuous Evaluation:** Conduct independent audits, bias testing and regular monitoring throughout an AI system's life cycle. Follow **NIST's Govern–Map–Measure–Manage framework to identify** emerging risks and improve safeguards after deployment.

Conclusion

Ethical openness requires equitable access, honest disclosure and continuing accountability. Innovation should advance human welfare while protecting dignity, privacy and informed choice.

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ART & CULTURE

PRELIM SNAPSHOT

1. SENGOL

Why in News

A new **NCERT Class 9 Social Science textbook** discusses the **Sengol** and the claim that it symbolised the transfer of power at Independence in **1947**.

About Sengol



- It is a ceremonial **sceptre**, associated with the **Tamil tradition of kingship**.
- It is derived from the Tamil concept of **righteous/just rule**.
- According to the government's account, a special Sengol was prepared by **Thiruvavaduthurai Adheenam** in 1947.
- It was presented to **Jawaharlal Nehru** on the eve of Independence, **14 August 1947**.

Historical Association

- **C. Rajagopalachari (Rajaji)** is associated with the idea of using the Sengol as a symbol of transfer of power.
- The Sengol is linked with the **Chola tradition**, where the sceptre symbolised **just and responsible governance**.
- In **2023**, the Sengol was installed in the **new Parliament building**, near the Speaker's podium.

2. RAMAPPA TEMPLE

Why in News

Activists have raised concerns that a **proposed coal mine near Ramappa Temple** in Telangana may damage the **UNESCO World Heritage Site** and the nearby **Ramappa Lake**.

New Developments

- The proposed mine is located close to the **Ramappa Temple and lake**.
- Concerns include:
  - Groundwater-level changes, Mining vibrations, Impact on the temple's foundation, Damage to the lake and surrounding heritage landscape.

About Ramappa Temple



- It is officially called as **Rudreshwara Temple**, was built during the **Kakatiya period** in the **13th century**.
- Located at **Palampet, Telangana**.
- Dedicated to **Lord Shiva**.
- The temple is famous for its **Kakatiya architectural style** and intricate sculptures constructed with a combination of **Red Sandstone, Wood and Granite.**
- **UNESCO World Heritage Site:** Inscribed in **2021** under the name **Kakatiya Rudreshwara (Ramappa) Temple, Telangana.**
- **Ramappa Lake** is a historic water body associated with the Kakatiya landscape.

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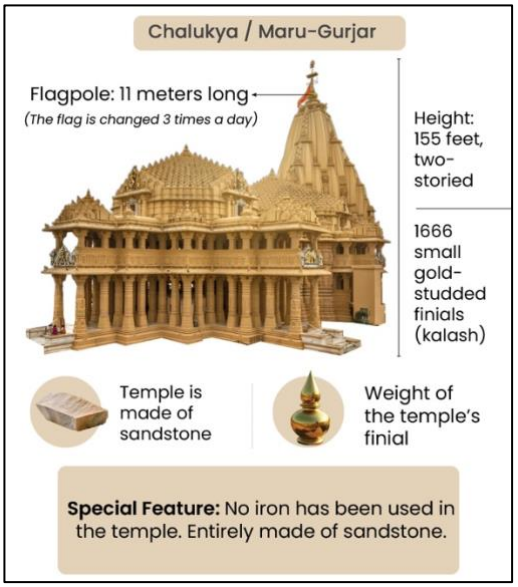
3. SOMNATH TEMPLE

Why in News

The **Gujarat High Court's Division Bench** stayed a single judge's order striking down restrictions on non-vegetarian food near **Somnath Temple**.

Recent Developments

- **Restrictions covered:** Sale, storage, distribution and preparation of non-vegetarian food within a **500-metre radius** and along designated pilgrimage roads.



About Somnath Temple

- **Location: Prabhas Patan**, near Veraval, **Gir Somnath district, Gujarat**.
- **Deity: Lord Shiva**; traditionally regarded as the **first among twelve Jyotirlingas**.
- **Geographical setting: Saurashtra coast**, overlooking the **Arabian Sea**.
- **Nearby Triveni Sangam:** Confluence associated with **Hiran, Kapila and Sarasvati rivers**.
- **History:** It was reconstructed several times in the past after repeated destruction, starting with an attack by **Mahmud Ghazni in the 11th century** (also recorded by **Al Biruni**).
- **Reconstruction:** The then **Deputy Prime Minister Vallabhbhai Patel** ordered the reconstruction of the Somnath temple on **November 12, 1947**.
- On **May 11, 1951, Dr. Rajendra Prasad**, the President of India, performed the **installation ceremony for the temple**.

PYQ ESSENTIALS

Q. Consider the following statements regarding the Somnath Temple: **(UPSC-2022)**

1. Somnath Temple is one of the Jyotirlinga shrines.
2. A description of Somnath Temple was given by Al-Biruni.
3. Pran Pratishtha of Somnath Temple (installation of the present-day temple) was done by President S. Radhakrishnan.

Which of the statements given above are correct?

(a) 1 and 2 only (b) 2 and 3 only (c) 1 and 3 only (d) 1, 2 and 3

4. GARBA

Why in News

Navratri celebrations have highlighted Garba's evolution from a community devotional dance into large commercial events.

About Garba

- **Origin:** A **ritualistic folk dance of Gujarat**, performed during **Navratri** to worship **Shakti**, particularly **Goddess Amba**.
- **Performance:** Dancers move **counter-clockwise in circles**, singing and clapping, with the tempo gradually increasing.
- **Central symbol:** A **perforated earthen pot containing an oil lamp**, called **Garbha Deep**, or an image of Goddess Amba.
- **Transmission:** Passed across generations through **practice, observation and participation**.

UNESCO Recognition

- Inscribed in **December 2023** on UNESCO's **Representative List of the Intangible Cultural Heritage of Humanity**.
- Recognised under the **2003 Convention for the Safeguarding of Intangible Cultural Heritage**, at **Kasane, Botswana**.

PYQ ESSENTIALS

Q. Which one of the following was the latest inclusion in the Intangible Cultural Heritage List of UNESCO? **(UPSC-2024)**

(a) Chhau dance (b) Durga puja (c) Garba dance (d) Kumbh mela

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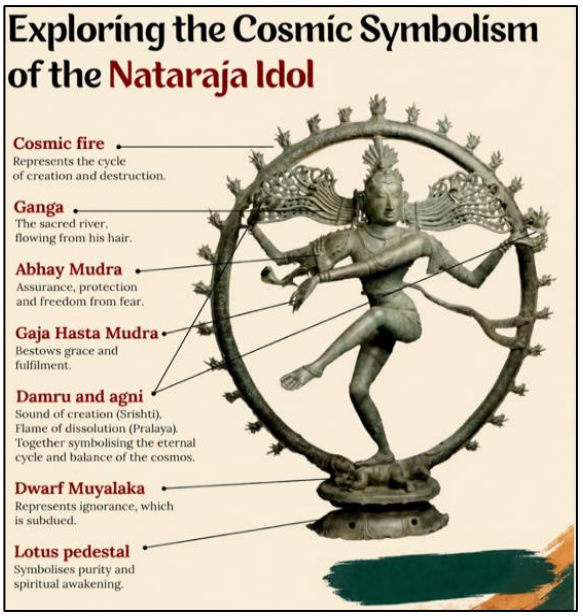
5. CHOLA BRONZES

Why in News

The **Tamil Nadu State Department of Archaeology** unearthed bronze-alloy idols of **Nataraja and Sivagami**, with their pedestals, at **Nagapattinam, Tamil Nadu**.

Recent Developments

- **Estimated date: 12th century CE**, based on stylistic and iconographic features.
- **Nataraja:** Four-armed figure in **Ananda Tandava**, the dance of bliss.
- **Sivagami:** Two-armed figure in **Tribhanga**, a posture involving three bends.



About Chola Bronze Sculpture

- **Patronage:** Bronze sculpture flourished under the **Cholas** in Tamil Nadu.
- **Technique: Lost-wax casting**, also called **cire perdue**.
- **Process:** Wax model → clay mould → wax melted out → molten metal poured in → mould broken.
- **Features:** Graceful movement, balanced proportions and intricate ornamentation. Each casting requires a **fresh mould**.

6. PATTANAM ARCHAEOLOGICAL SITE

Why in News

Renewed attention to **Pattanam's ancient maritime connections** has prompted calls to revive archaeological research and conservation.

Important Archaeological Finds

- **Harbour remains:** Wharf, mooring posts and a roughly **six-metre wooden canoe**.
- **Settlement features:** Brick structures, ring wells, drainage and toilet facilities.
- **Trade-related finds:** Roman **amphora fragments**, Indian rouletted ware, West Asian pottery, beads and early Chera coins.
- **Amphora:** A two-handled container used in antiquity to transport commodities such as wine and oil.

About Pattanam Archaeological Site

- **Location:** Near **North Paravur, Ernakulam district, Keralam**, in the **Periyar delta**.
- **Period:** Important early historic remains date broadly to **300 BCE-300 CE**, with substantial evidence from **100 BCE-300 CE**.
- **Muziris connection:** A potential location associated with **Muziris or Muchiripattanam**, an ancient port. Its exact identification remains debated.

Historical Connections

- Evidence links Pattanam with **Indian Ocean trade**, including the Mediterranean, Red Sea, West Asia and South Asia.
- The **Periyar River and Palakkad Gap** connected the western coast with inland regions and routes towards the eastern coast.
- Imported Roman objects indicate **trade contacts**, not proof of Roman political rule.

7. TRIBAL ASTRONOMY

Why in News

IIT Jodhpur has documented tribal astronomical knowledge, linking **celestial observations, agricultural practices and ecological traditions**.

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Recent Developments

- **Communities studied:** Bhil, Meena, Banjara, Gond, Kolam and Korku.
- **Research output:** A glossary documenting tribal knowledge of **celestial bodies and cosmic phenomena**.
- **Institutional link:** The study was submitted to the **Ministry of Education's Indian Knowledge Systems Division**.

About Tribal Astronomy

- **Meaning:** Indigenous knowledge of celestial bodies and their relationship with community life.
- **Knowledge transmission:** Primarily through **oral traditions, rituals and practical observation**.
- **Applications: Timekeeping, seasonal prediction, sowing, harvesting and pastoral activities**.
- **Ethnoastronomy:** Study of how cultures understand and use celestial phenomena.

About Nakshatra Vatika

- **Location in news: Nandiya Kalan village, near Jodhpur, Rajasthan**.
- **Concept:** A garden associating plants with **nakshatras and zodiac signs**.
- **Community initiative:** Around **1,000 trees** planted on degraded community land, according to the report.
- **Plants mentioned: Jamun, gular, peepal, khejri, jasmine and banyan**.
- **Focus:** Conservation of **medicinal plants, biodiversity and traditional knowledge**.

8. NATIONAL SARAS MELA 2026

Why in News

The **National SARAS Mela** is being held at **Punnami Ghat, Vijayawada, Andhra Pradesh, from 13-31 October 2026**, with participation from **34 States and UTs.**

About National SARAS Mela

- **Ministry:** Ministry of Rural Development.
- **Organising Framework:** Deendayal Antyodaya Yojana–National Rural Livelihoods Mission (**DAY-NRLM**).
- **Beneficiaries:** Rural women's **Self-Help Groups (SHGs)**.
- **Market Access:** Direct sales to consumers and connections with institutional buyers.
- **Products:** Handicrafts, handlooms, processed foods and other rural goods.
- **First National SARAS Mela: Delhi, 1999**.

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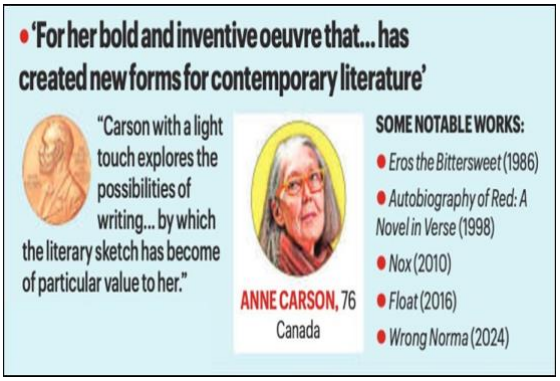
AWARD AND HONOURS

NOBEL PRIZE IN LITERATURE, 2026

Anne Carson, a Canadian poet, essayist and translator, won the **2026 Nobel Prize in Literature**.

Recent Developments

- Recognised for **innovative writing blending classical traditions with modern literary forms**. Her notable works include *Autobiography of Red* and *Eros the Bittersweet*.



Background

- **Awarding institution: Swedish Academy**, Stockholm, Sweden.
- **First awarded: 1901**, under **Alfred Nobel's will**.
- **Indian connection: Rabindranath Tagore-1913**, the first Indian Nobel laureate; closely associated with *Gitanjali*.

NOBEL PEACE PRIZE, 2026

Navanethem "Navi" Pillay, a South African jurist of **Indian Tamil descent**, won the **2026 Nobel Peace Prize** for promoting **peace and international law**.

Recent Developments

Pillay chaired the **UN Human Rights Council's Commission of Inquiry on the Occupied Palestinian Territory and Israel**.

Background



- **Navi Pillay:** Former **UN High Commissioner for Human Rights (2008–2014)**; served as a judge at the **International Criminal Court (ICC)** and judge and President of the **International Criminal Tribunal for Rwanda (ICTR)**.
- **Nobel Peace Prize:** Established under **Alfred Nobel's will**; first awarded in **1901**.
- **Awarding body: Norwegian Nobel Committee**, appointed by Norway's Parliament.
- **Presentation: Oslo, Norway**-unlike the other Nobel award ceremonies held in Stockholm.
- **Eligibility:** Can be awarded to **individuals and organisations**.

CENTRAL BOARD OF FILM CERTIFICATION (CBFC)

An alleged breach of the **e-Cinepramaan portal** exposed certification documents relating to **over 500 film titles**, including scripts, cut orders and distribution agreements.

Certificate	Meaning
U	Unrestricted public exhibition
UA 7+, UA 13+, UA 16+	Unrestricted exhibition with **parental guidance** for children below the respective ages
A	Restricted to adults, aged **18 years and above**
S	Restricted to a specified profession or class of persons

About CBFC

- A **statutory body** under the **Ministry of Information and Broadcasting**.
- Regulates the **public exhibition of films** under the **Cinematograph Act, 1952**.
- Grants film certificates and may require modifications or refuse certification under the prescribed legal framework.

Film Certification Categories

- UA age markers guide parental decisions; they are not equivalent to the adult-only restriction of an A certificate.

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	About e-Cinepramaan • CBFC's **online film-certification portal**. • Enables submission of applications, fees, scripts and supporting documents. • **Certification records and film copies are separate:** exposure of documents does not necessarily mean leakage of the film.
RASHTRIYA EKTA DIWAS	October 31 has been celebrated as **Rashtriya Ekta Diwas** every year since its inception**.** **About Rashtriya Ekta Diwas** • **National Unity Day**, observed annually on **October 31**, marks **Sardar Vallabhbhai Patel's birth anniversary**. • First observed in **2014** to honour his contribution to **India's unity and integration**. • **Patel:** Independent India's **first Deputy Prime Minister and Home Minister**; played a central role in integrating **over 560 princely states**. • **Statue of Unity:** A **182-metre** statue of Patel at **Ekta Nagar (Kevadia), Gujarat**, near the **Narmada River and Sardar Sarovar Dam**; inaugurated on **October 31, 2018**. • Awarded the **Bharat Ratna posthumously in 1991**.

Role in the Freedom Movement

Movement / Event	Year	Association
Kheda Satyagraha	**1918**	Worked alongside Gandhi in the peasants' campaign for land-revenue relief.
Nagpur Flag Satyagraha	**1923**	Played a leading role in defending the right to carry the national flag.
Borsad Satyagraha	**1923**	Led resistance against an additional punitive tax.
Bardoli Satyagraha	**1928**	Led peasants against increased land revenue; associated with his title **"Sardar"**.
Karachi Congress Session	**1931**	Presided over the session.

RAPID WRAP

KASHIPUR ARCHAEOLOGICAL SITE (GOVISANA)	**ASI has begun fresh excavations at Kashipur, Uttarakhand**, to establish the site's **cultural sequence** and scientifically examine earlier discoveries. **About Govisana** • **Location:** Near **Drona Sagar Lake, Kashipur**, in **Udham Singh Nagar district, Uttarakhand**. • **Ancient identity: Alexander Cunningham** identified the site with **Govisana**, mentioned by Chinese Buddhist traveller **Xuanzang (Hiuen Tsang)**. • **Xuanzang:** Visited India in the **7th century CE**, during **Harshavardhana's reign**. **Excavated remains:** A **brick temple constructed in three phases**, beginning in the **Gupta period**, with later additions around the **6th-7th centuries CE**. • **Painted Grey Ware (PGW):** Fine grey pottery with painted designs, associated with **early Iron Age settlements of northern India**. • **Mahabharata connection:** Local traditions associate the site with **Dronacharya and the Pandavas**; this association is **not established merely by finding PGW pottery**.
JEWISH HERITAGE IN KERALAM	An attempted arson near **Kadavumbhagam Synagogue** and a fire at **Koder House, Kochi**, brought Keralam's Jewish heritage into focus. **About Jewish Heritage in Keralam** **Origins:** Jewish settlement on the **Malabar Coast** developed through maritime trade, especially the **spice trade with West Asia**.

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	• **Copper plates:** Around **1000 CE**, ruler **Bhaskara Ravi Varma** granted Jewish leader **Joseph Rabban** rights and privileges associated with **Anjuvannam**, a merchant organisation. These provide important documentary evidence of Jewish settlement. • **Major communities: Malabari Jews** were the older settlers; **Paradesi Jews** were later arrivals, including Jews from Europe. *Paradesi* means **foreigner**. • **Paradesi Synagogue:** Built in **1568** at **Mattancherry, Kochi**. A **synagogue** is a Jewish place of worship.
DURGA PUJA	An annual festival celebrating **Goddess Durga**, generally held in **September-October**. **UNESCO Recognition** • **Durga Puja in Kolkata** was inscribed in **2021** on UNESCO's **Representative List of the Intangible Cultural Heritage of Humanity**. • Recognition falls under the **2003 Convention for the Safeguarding of the Intangible Cultural Heritage**. • It recognises a **living cultural tradition**, rather than designating a monument as a World Heritage Site. **PYQ ESSENTIALS** **Q.** Which one of the following was the latest inclusion in the Intangible Cultural Heritage List of UNESCO? **(UPSC-2024)** (a) Chhau dance (b) Durga puja (c) Garba dance (d) Kumbh mela

MISCELLANEOUS

INDIA WOMEN'S HOCKEY	India women's hockey team won Gold at the Asian Games**, ending a** 44-year wait**.** **Recent development** • India defeated **China 1-0** in the final. • **Lalremsiami** scored the winning goal. • **Savita Punia** played a key role in goalkeeping and defence. • The victory came after a closely contested final against China. • **2028 Olympics:** Victory secured India's qualification. • **Host of 2028 Olympics:** Los Angeles, USA. **About INDIA WOMEN'S HOCKEY** • **Sport:** Field hockey, played with **11 players per team** on the field. • **National governing body: Hockey India.** • **International governing body: Fédération Internationale de Hockey (FIH).** • **Asian Games:** India won gold in **1982 and 2026**.
ASIAN PARA GAMES	Indian para shooters alleged **favouritism in team selection** for the Asian Para Games; the **Paralympic Committee of India (PCI)** denied the allegations. **Recent Developments** **Classification** / **Essential distinction** **SH1** – Rifle or pistol shooters who can support the firearm **without a shooting support stand**. **SH2** – Rifle shooters whose upper-limb impairment requires a **shooting support stand**. • The **5th Asian Para Games** are being held in **Aichi-Nagoya, Japan, from October 18-24, 2026**, featuring **18 sports**.

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	About Asian Para Games ● **It is a** Continental multisport competition for athletes with disabilities, held every **four years** under the **Asian Paralympic Committee**. ○ **First edition: Guangzhou, China, 2010** ○ **Classification:** Groups athletes according to how their impairment affects performance in a particular sport. ○ **Sports:** Include para athletics, swimming, archery, shooting, badminton, boccia and wheelchair basketball. ● **PCI:** India's national body responsible for promoting and developing para sports. ● **Para shooting:** Precision sport involving **rifle and pistol** events for athletes with eligible physical impairments.
48TH WORLDSKILLS COMPETITION, 2026	India secured **10th position-its first top-10 finish**, winning **six silver medals and 20 Medallions for Excellence** at WorldSkills Shanghai 2026. **Recent Developments** ● Held in **Shanghai, China, from September 22-27, 2026**. ● India sent its **largest-ever contingent: 70 competitors across 63 skill categories**. **About WorldSkills Competition** ● **It is an** International vocational skills competition, popularly called the **Olympics of Skills**, held every **two years**. ● **Assessment:** Competitors perform **practical tasks**, evaluated by international experts against occupational standards. ● **Skills covered:** Traditional trades and modern technologies-**welding, bakery, automobile technology, robotics and cybersecurity**. ● **India's coordination: WorldSkills India**, an initiative of the **National Skill Development Corporation (NSDC)**under the **Ministry of Skill Development and Entrepreneurship**. ● **Selection pathway: India Skills competitions** help identify and train candidates for the international event.

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SCHEMES

1. DEENDAYAL ANTYODAYA YOJANA-NATIONAL URBAN LIVELIHOODS MISSION (DAY-NULM)

Why in News

Tamil Nadu, Maharashtra, Madhya Pradesh, Karnataka and Tripura sought funds and clarity on support after DAY-NULM ended in September 2024.

About DAY-NULM

- **Deendayal Antyodaya Yojana-National Urban Livelihoods Mission**, administered by **MoHUA**, aimed to reduce urban poverty through **community institutions, self-employment, skill development and financial inclusion**.

Contributions to Urban Livelihoods

- **Women's self-help groups:** Around one crore women across cities are part of 10.02 lakh self-help groups (SHGs).
- **Access to finance:** Eligible SHGs receive a ₹10,000 revolving fund and get support to access bank credit and interest subsidies.
- **Support for small businesses:** Women receive training and assistance to start and run microenterprises.
- **Community support:** Area-level federations and community resource persons help women access services, while Bank Sakhis connect them with banking services.
- **Local services:** SHGs run canteens, stitch school uniforms, prepare meals and help deliver municipal services.

Parameter	DAY-NULM	DAY-NULM 2.0
Status	Earlier mission; ended September 2024	Nationwide rollout not announced in the supplied report
Approach	SHG mobilisation, skills and enterprise support	Occupational vulnerability-based approach tested through **DJAY-S**
Beneficiaries	Urban poor, particularly women organised into SHGs	Pilot focus on **gig, transport, construction, waste, care and domestic workers**
Coverage	**10.02 lakh SHGs**, approximately **one crore women**	Pilot in **25 cities across 13 States**
Financial support	**₹10,000 revolving fund per eligible SHG**, bank linkage and interest subsidy	**₹180 crore pilot outlay**; final nationwide benefits yet to be specified

Major Challenges

- **Uncertainty over continued support:** DAY-NULM ended in September 2024. The successor programme was piloted in **25 cities**, leaving uncertainty about support for **women's self-help groups (SHGs)** elsewhere.
- **Pending interest subsidies:** Madhya Pradesh reported **₹13.71 crore** in unpaid interest subsidies. Some eligible borrowers still had loan instalments due after the mission ended.
- **Staff salary arrears:** Karnataka reported **₹4.48 crore** in unpaid staff salaries in Bengaluru and said funds were unavailable to cover salaries from July 2025 onward.
- **Pressure on municipal budgets:** Urban local bodies had to cover staff costs during the transition using their own funds or approved state funding. **Maharashtra reported that its allocations had run out,** making it difficult to meet monthly expenses.
- **Support spread across schemes:** Over **1.5 lakh SHG members** worked as Swachhata workers, 50,000 served as **AMRUT Mitras**, and around 38,000 SHGs received support **under PMFME**. These schemes provided work or enterprise support, while the future of wider support for **SHGs remained unclear.**

Way Forward

- **Clear pending dues:** Verify unpaid salaries, interest subsidies and other dues. Publish a payment schedule and prioritise payments owed to workers and self-help groups (SHGs).
- **Fund essential services during the transition:** Set aside temporary funds to retain essential staff and keep services running after DAY-NULM ended on **30 September 2024**.

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- **Clarify the rollout plan:** Publish the eligibility criteria and funding timelines for the **₹180-crore DJAY-S pilot in 25 cities**, along with any plans for expansion.
- **Keep community networks active:** Support existing SHGs and their federations, retain trained staff and preserve records so groups can continue accessing bank credit and other services.
- **Help women-led businesses stay viable:** Build on DAY-NULM's subsidised enterprise loans by providing working capital, mentoring and access to markets, including opportunities to supply goods and services to municipalities.

Conclusion

Urban poverty reduction requires continuity of institutions, finance and livelihood support. Programme redesign should preserve existing gains while strengthening women's long-term economic independence.

2. FIVE YEARS OF PM GATI SHAKTI SCHEME

Why in News

PM Gati Shakti National Master Plan completed five years on 13 October 2026; renewed focus on coordinated infrastructure development, multimodal connectivity and logistics efficiency.

About PM Gati Shakti

A **GIS-based national planning framework**, launched on **13 October 2021**, integrating infrastructure information across ministries and States for coordinated project planning.

- **Nodal department:** DPIIT, Ministry of Commerce and Industry.
- **Technology platform:** BISAG-N.
- **Six pillars:** Comprehensiveness, prioritisation, optimisation, synchronisation, analytical capability and dynamic updating.

Achievements

Institutional convergence: 58 Central ministries/departments and all 36 States/UTs integrated; shared planning across infrastructure, economic and social sectors.

Data-driven planning: Over 1,800 geospatial layers, 65-plus tools and 100-plus applications supporting network mapping and alignment analysis.

Integrated appraisal: 421 projects worth approximately ₹20.23 lakh crore evaluated by 2026**;** evaluation distinct from approval or completion**.**

Last-mile connectivity: NPG appraisal examines connectivity to economic and social nodes; projects assessed alongside surrounding network requirements.

District-level expansion: District Master Plan launched during 2024-25; applications covering roads, schools, healthcare facilities and water pipelines.

Challenges

- **Data reliability:** Outdated or incomplete maps can lead to poor planning decisions. Land records, underground utility maps and details of existing infrastructure need regular verification and updates.
- **Uneven local capacity:** As the platform expands to more districts, local teams need GIS skills to map schools, hospitals and pipelines accurately and keep the data up to date.
- **Gaps between planning and execution:** Digital appraisal can flag problems early, but projects can still stall over land disputes, funding shortages or contract delays. The total value of projects reviewed measures the scale of appraisal. Progress on the ground requires separate tracking.
- **Coordination across departments:** With **58 ministries and departments** involved, agencies need to align budgets, secure clearances and coordinate construction schedules.
- **Environmental and social risks:** A route that saves time or cost can still fragment forests, displace communities or expose infrastructure to flooding. These risks need separate assessments that also consider the combined effects of nearby projects.

Way Forward

- **Keep maps accurate:** Require regular updates, field checks and common mapping standards. Verify district-level maps before using them to plan projects.

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- **Build local GIS capacity:** Set up dedicated GIS teams in districts and train them through **BISAG-N programmes and District Master Plan workshops**.
- **Link planning to implementation:** Use **Network Planning Group assessments** to align funding, clearances and utility relocation with construction schedules.
- **Close transport gaps:** Use GIS maps to identify missing road and rail links between **ports, industrial clusters and logistics hubs**.
- **Reduce environmental and social risks:** Use flood-risk, forest and settlement maps to choose safer routes and plan measures to protect habitats and rehabilitate affected communities.
- **Make data accessible and secure:** Build on **GatiShakti's 230 approved public datasets**. Restrict access to sensitive data by user role and conduct regular cybersecurity audits.
- **Track results on the ground:** Publish independently verified comparisons of **project delays, freight travel times, logistics costs and access to services** before and after implementation.

Conclusion

PM Gati Shakti has strengthened integrated infrastructure planning. Its next phase must translate digital coordination into timely execution, efficient logistics and equitable access.

PYQ ESSENTIALS

Q. The Gati-Shakti Yojana needs meticulous coordination between the government and the private sector to achieve the goal of connectivity. Discuss. **(UPSC-2022)**

3. PRADHAN MANTRI SAMAJIK SAHAYATA YOJANA

Why in News

The Union Cabinet approved the continuation and renaming of the **National Social Assistance Programme (NSAP)** as the **Pradhan Mantri Samajik Sahayata Yojana**, with an outlay of **₹53,428 crore** for **2026-27 to 2030-31**.

Recent Developments

Parameter	Earlier provision	Approved revision
Disability threshold	**80% or more**	**40% benchmark disability**
Minimum age	**18 years**	Removed; eligible from **birth**
Central assistance: up to 79 years	₹300 per month	**₹375 per month**
Central assistance: 80 years and above	₹500 per month	**₹625 per month**

About Pradhan Mantri Samajik Sahayata Yojana

- **Launched: 15 August 1995** as the National Social Assistance Programme.
- **Nodal department:** Department of Rural Development.
- **Constitutional basis:** Supports **Article 41**, a Directive Principle concerning public assistance in cases including old age, sickness and disablement.
- **Coverage:** Eligible **below-poverty-line households** in both **rural and urban areas**.
- **Funding and implementation:** Receives **100% Central assistance**; implemented by States and Union Territories, which may provide additional top-ups.

Components

- Old-age pension, Widow pension, Pradhan Mantri Divyangjan Pension Yojana
- Pradhan Mantri Parivar Labh Yojana: One-time family assistance following the death of the primary breadwinner.

Benchmark Disability

- Under the **Rights of Persons with Disabilities Act, 2016**, benchmark disability generally means **not less than 40% of a specified disability**, as certified by the competent authority.
- The Act recognises **21 specified disabilities**.

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4. PRADHAN MANTRI VIKSIT GRAM SWARAJ YOJANA (PM-VGSY)

Why in News

The Union Cabinet approved **PM-VGSY** to strengthen Panchayats' planning and governance capacities.

About PM-VGSY

- **Ministry:** Ministry of Panchayati Raj.
- **Type: Centrally Sponsored Scheme (CSS)**
- **Duration: 2026-27 to 2030-31**, coinciding with the **16th period**.
- **Outlay: ₹7,395.55 crore**, comprising **₹4,869.48 crore Central share** and **₹2,526.07 crore State share**.
- **Background:** Upgraded version of the **Rashtriya Gram Swaraj Abhiyan**, emphasising integrated local development.
- **Coverage:** All States and Union Territories, including **traditional local bodies in areas outside Part IX's Panchayat framework**.

Key Provisions

- **Capacity building:** Training and digital support for elected representatives, Panchayat functionaries and other stakeholders.
- **Participatory planning:** Preparation of **2.55 lakh Gram Panchayat Development Plans annually** through **eGramSwaraj**, aligning village priorities with government schemes and resources.
- **Digital integration:** Common platform linking schemes, beneficiaries, community assets and available resources.
- **Financial accountability:** Online accounting, public disclosure and audits through **AuditOnline**.
- **Own-source revenue:** Strengthening Panchayats' capacity to mobilise their own revenue.
- **Implementation:** State governments and UT administrations submit **Annual Action Plans**, approved by a **Central Empowered Committee**.

5. KHELO INDIA SPORTS GOODS MANUFACTURING SCHEME

Why in News

The **Union Cabinet approved** the scheme on **28 October 2026**, following its announcement in **Union Budget 2026-27**.

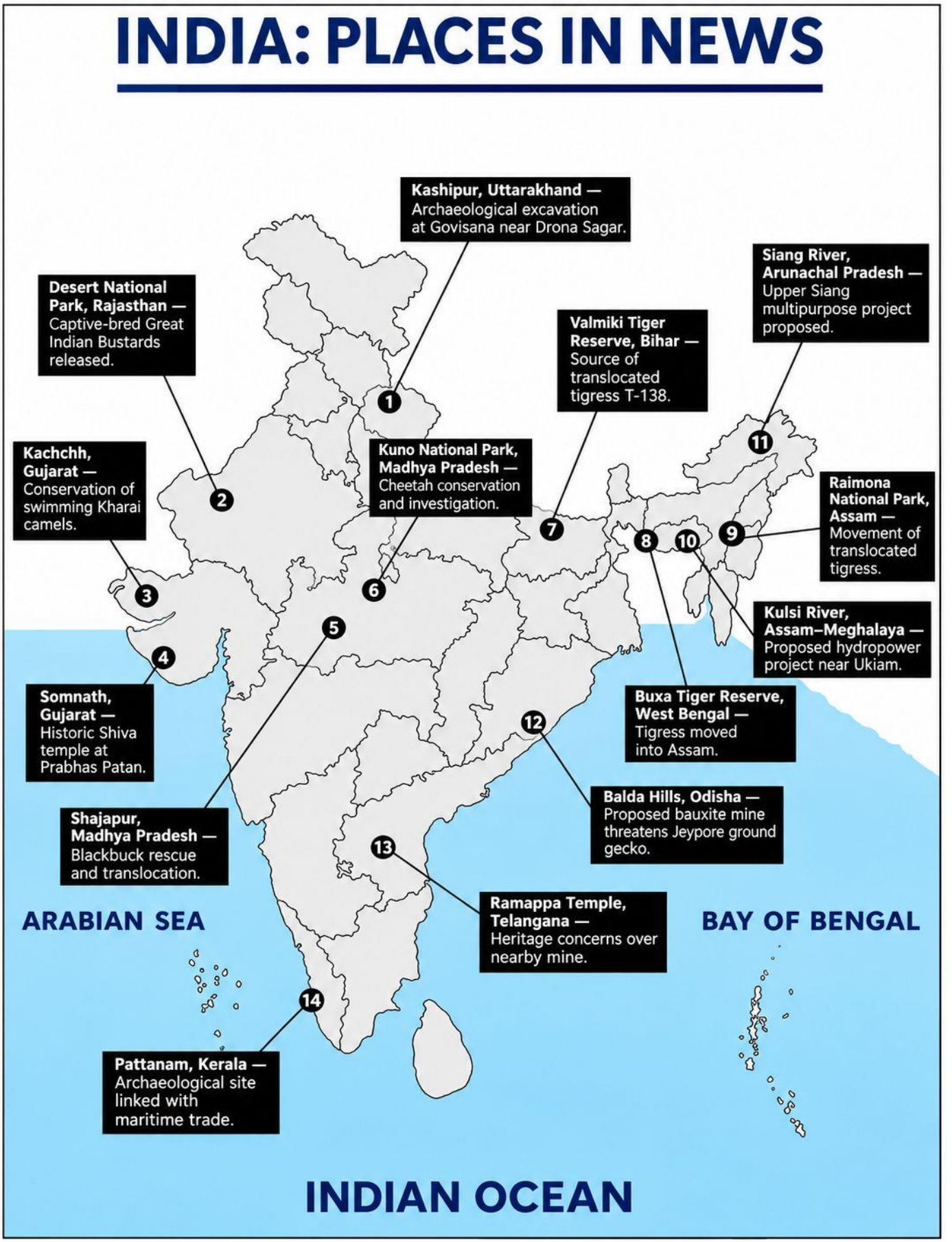
About the Scheme

- **Outlay: ₹1,856.67 crore** for **FY 2026–27 to FY 2033-34**.
- **Aim:** Make India a global hub for **high-quality, affordable sports goods** through manufacturing incentives and ecosystem development.

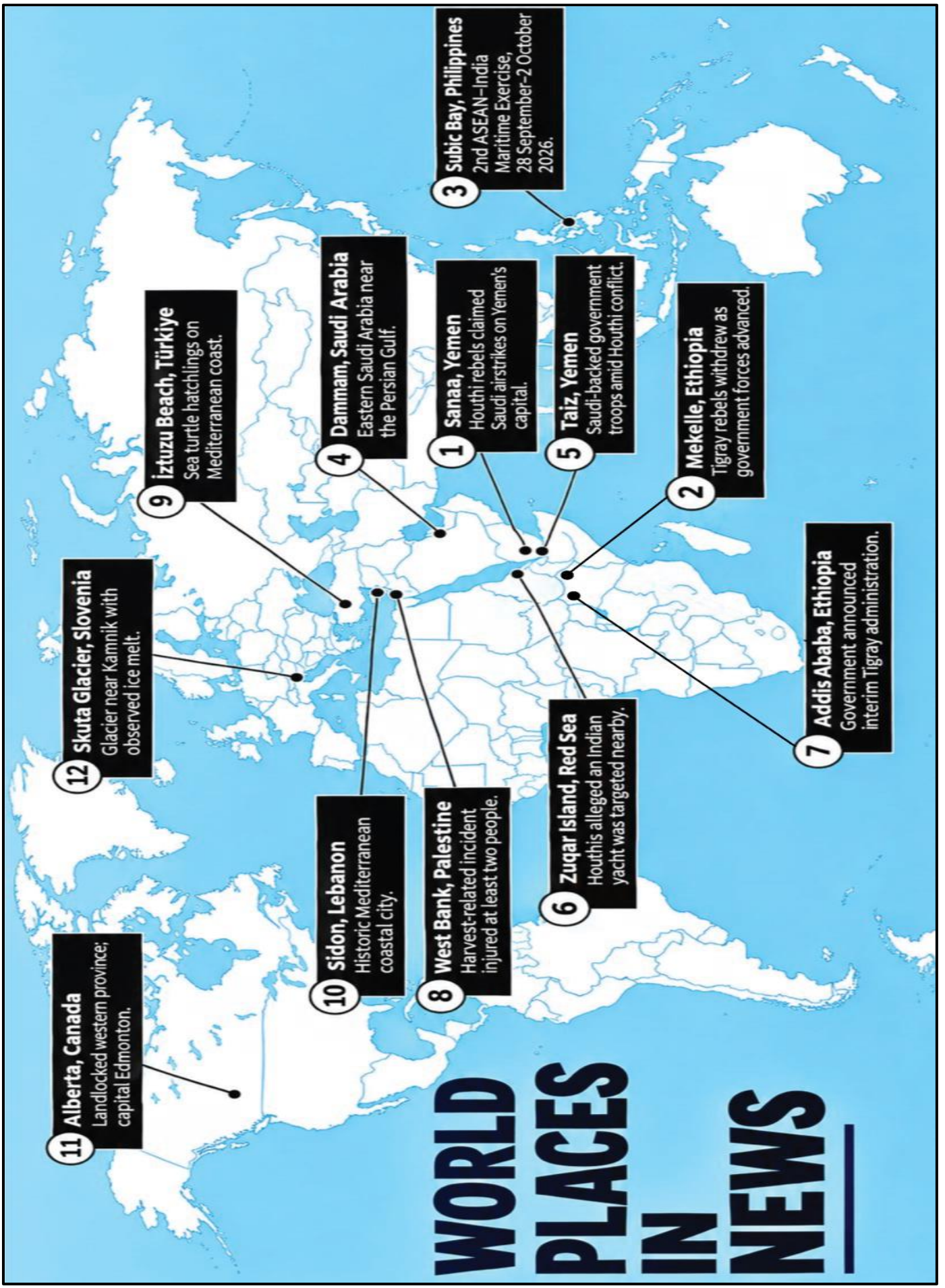
Component	Provisions
Manufacturing zones	Envisages **four integrated zones**, each exceeding **300 acres**, bringing together manufacturers, suppliers, testing, design, prototyping and ancillary units
Anchor investment	**20% capital expenditure support** for eligible anchor investors investing **at least ₹100 crore** within these zones
Turnover-linked support	Incentives of **up to 15%** for eligible manufacturers investing **₹10 crore or more**
Combined manufacturing allocation	**₹1,130 crore** for anchor investment and turnover-linked support
Existing clusters and MSMEs	Upgrade common facilities and shared infrastructure through **cost-sharing with States**
International certification	**₹105 crore**; supports **70% of initial certification costs** and **50% of renewal costs**
Research and innovation	**Centres of Excellence** for equipment, materials, protective gear and advanced manufacturing; research co-funding through **ANRF**
Start-ups	Grants of **up to ₹20 lakh** for **DPIIT-registered sports start-ups**, supporting development through commercialisation
Skilling	Industry-aligned training with the **Ministry of Skill Development and Entrepreneurship**

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MAPPING



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