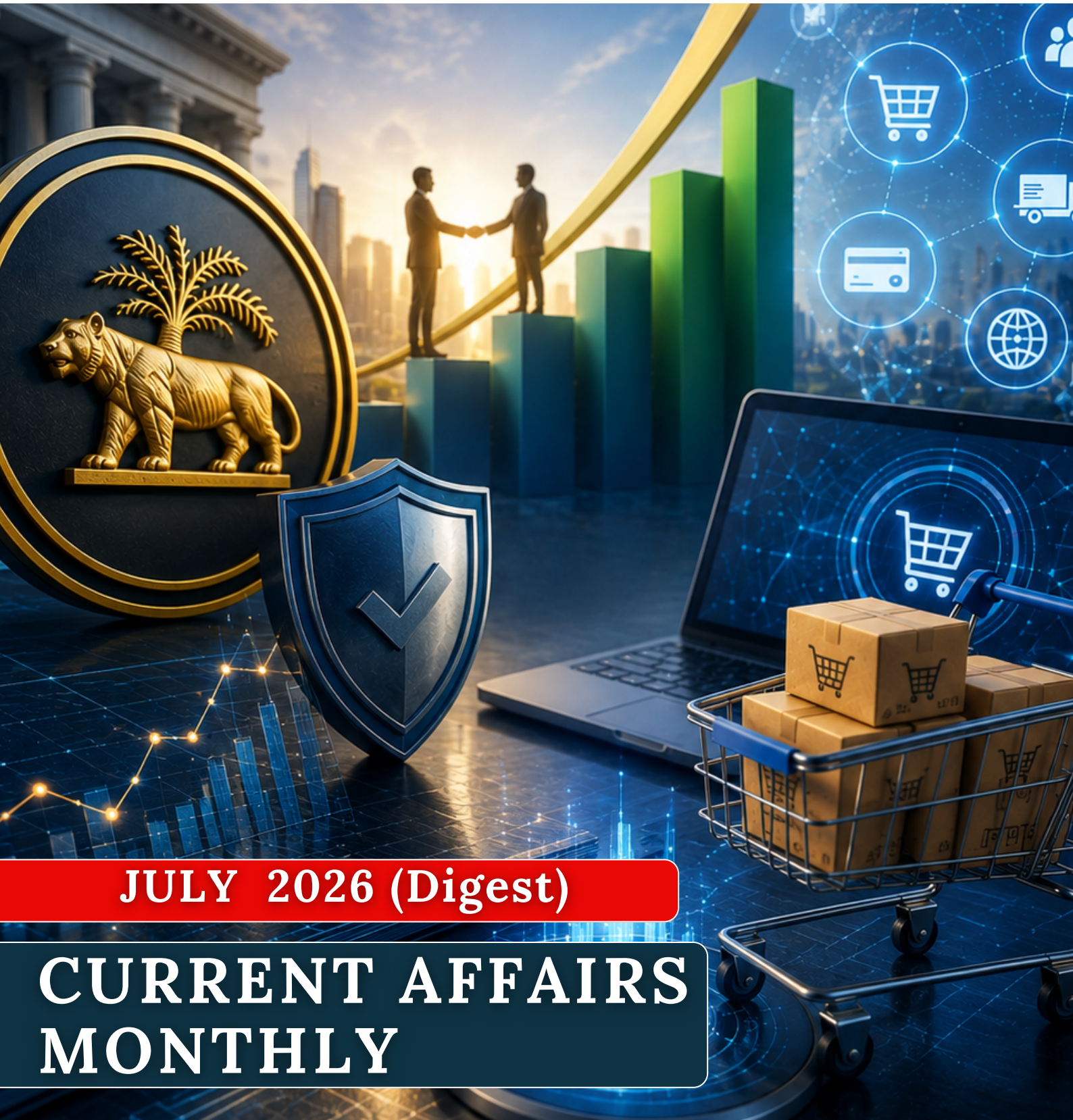


OFFICERS' PULSE



JULY 2026 (Digest)

CURRENT AFFAIRS
MONTHLY

The **PULSE** of UPSC at your fingertips.

Foreword

Officers Pulse Digest is a comprehensive monthly current affairs magazine that serves as a complete resource for UPSC CSE Prelims. It includes significant topics from sources like **The Hindu, Indian Express, Business Standard, Yojana, Kurukshetra, Down to Earth**, and more.

Although “**Officers Pulse- Digest**” is primarily oriented towards Prelims, reading “Officers Pulse- In depth” along with it is crucial for effectively tackling the Prelims examination.

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POLITY

THE PREVENTION OF INSULTS TO NATIONAL HONOUR (AMENDMENT) BILL, 2026

Why in News?

Parliament passed the **Prevention of Insults to National Honour (Amendment) Bill, 2026**, extending statutory protection under the **1971 Act** to the **National Song (*Vande Mataram*)**, similar to the National Anthem.

About

- The **Prevention of Insults to National Honour (Amendment) Bill, 2026** seeks to amend the **Prevention of Insults to National Honour Act, 1971**.
- It extends statutory protection to the **National Song (*Vande Mataram*)**, placing it on par with the **National Anthem** for the purpose of penal provisions.
- The amendment gives legislative effect to **Dr. Rajendra Prasad's statement (24 January 1950)** that the National Song should enjoy the **same respect and honour** as the National Anthem.

Key Provisions of the Bill

- **Amendment to Section 3:** Replaces the existing Section 3 of the **Prevention of Insults to National Honour Act, 1971** to extend its scope to the **National Song (*Vande Mataram*)**.
- **Equal statutory protection:** Grants the **National Song** the **same legal protection** as the **National Anthem (*Jana Gana Mana*)** against intentional acts of insult or obstruction.
- **Punishable offences:** Makes it an offence to:
 - Intentionally **prevent the singing** of the National Song; or
 - **Cause disturbance** to an assembly engaged in singing the National Song.
- **Uniform penalties:** Prescribes the same punishment applicable to offences relating to the National Anthem:

- Imprisonment up to **3 years**, or **Fine**, or **Both**.

- **Enhanced punishment for repeat offenders:** A **second and every subsequent conviction** attracts a **minimum imprisonment of one year**, as under the parent Act.
- **No change to other provisions:** The Bill only extends the existing penal framework to the National Song and **does not alter** the provisions relating to the **National Flag, Constitution of India, or National Anthem** under the 1971 Act.

THE JUDGES (INQUIRY) ACT, 1968

Why in News?

The **Judges (Inquiry) Act, 1968** was in focus after an inquiry committee investigating allegations against **Justice Yashwant Varma** submitted its report to the **Lok Sabha Speaker** in May 2026.

About

- The Act provides the procedure for investigating and establishing **misbehaviour or incapacity of Supreme Court and High Court judges**.
- It operates along with **Articles 124(4) and 218** of the Constitution, which govern removal of judges.
- The Act came into force in **1969** and is supported by the **Judges (Inquiry) Rules, 1969**

Inquiry Procedure

- A removal motion can be initiated in Parliament with the signatures of **100 Lok Sabha members or 50 Rajya Sabha members**.
- Once admitted, the **Speaker of Lok Sabha or Chairman of Rajya Sabha** constitutes a **3-member inquiry committee**.
- The committee consists of:
 - A **Supreme Court Judge**;
 - A **Chief Justice of a High Court**; and
 - A **distinguished jurist**.

- The judge is given an opportunity to **defend himself/herself** before the committee.
- The committee submits its findings to the Speaker/Chairman.

Role of Parliament

- If **misbehaviour or incapacity is proved**, Parliament considers the removal motion.
- The motion must be passed by **each House separately** with:
 - **Majority of total membership**, and
 - **Two-thirds majority of members present and voting.**
- After both Houses pass the address in the **same session**, it is presented to the **President**, who issues the order of removal.



Removal Proceeding Haves Been Initiated for the following Judges

- **Justice V. Ramaswami (1993)** was the **first Supreme Court judge** against whom *impeachment proceedings were initiated; the motion failed to secure the required majority in the Lok Sabha.*
- **Justice P.D. Dinakaran (2011)** also *resigned while removal proceedings were underway.*
- **Justice Soumitra Sen (2011):** *Rajya Sabha passed the removal motion, but he resigned*

CONSTITUTION (130TH AMENDMENT) BILL, 2025

Why in News?

In **July 2026**, the Joint Parliamentary Committee (JPC) finalised its report on the Bill, proposing **temporary removal and possible reinstatement** of Ministers detained for 30 days.

About

- The Bill seeks to amend **Articles 75, 164 and 239AA** concerning Union Ministers, State Ministers and Delhi.
- It aims to prevent Ministers from continuing in office while in custody for serious criminal offences.

Key Provisions

- **Serious offences:** The Bill applies when a Minister is accused of an offence punishable with **5 years or more imprisonment.**
- **30-day detention rule:** If the Minister is **arrested and remains in custody for 30 consecutive days**, the removal provisions are triggered.
- **Prime Minister/Chief Minister:** They must **resign by the 31st day** of detention; otherwise, they automatically cease to hold office.
- **Other Ministers:** The **President or Governor** can remove them on the advice of the Prime Minister or Chief Minister, respectively.
- **Reappointment:** A Minister removed under these provisions **can be reappointed after release from custody.**
- **Coverage:** The provisions extend to the **Union Government, State Governments and Delhi**, with separate Bills proposed for **Jammu & Kashmir and Puducherry.**

- **Article 75 – Union Council of Ministers:** Deals with the **appointment, tenure and responsibility of Union Ministers.** The Council of Ministers is **collectively responsible to the Lok Sabha.**
- **Article 164 – State Council of Ministers:** Deals with the **appointment and tenure of State Ministers.** The Council of Ministers is **collectively responsible to the State Legislative Assembly.**
- **Article 239AA – Delhi:** Provides **special constitutional provisions for the National Capital Territory of Delhi,**

GOVERNOR'S ASSENT TO STATE BILLS

Why in News?

The Supreme Court allowed the Kerala Government to withdraw petitions challenging the **Governor's delay in granting assent to State Bills**.

About

- **Governor's assent** is the final constitutional step required for a Bill passed by the State Legislature to become law.
- It is governed by **Articles 200 and 201** of the Constitution.
- Under **Article 200**, the Governor may **grant assent, withhold assent, return a non-Money Bill for reconsideration, or reserve it for the President's consideration**.
- If a Bill is reserved, the **President decides** on the Bill under **Article 201**.

Constitutional Provisions

• Article 163 – Aid and Advice

Governor acts on the **aid and advice of the Council of Ministers**, except where the Constitution requires discretion.

• Article 200 – Assent to State Bills

After a Bill is presented to the Governor, the Governor may:

- Grant assent.
- Withhold assent.
- Return a **non-Money Bill** for reconsideration.
- Reserve the Bill for the President's consideration.
- **Article 201 – Bills Reserved for the President**

If a Bill is reserved by the Governor, the President may:

- Grant assent.
- Withhold assent.
- Direct the Governor to return the Bill (if it is not a Money Bill).
- **Money Bills** cannot be returned by the Governor for reconsideration under **Article 200**.

- If a **non-Money Bill** is passed again by the State Legislature after reconsideration, the Governor **shall not withhold assent** (except where mandatory reservation applies under the Second Proviso to Article 200).
- The Constitution **does not prescribe any time limit** for the Governor to act on a Bill under **Article 200**.
- The Governor may **reserve a Bill for the President's consideration**; the **President is also not bound by any constitutional time limit** under **Article 201**.
- The Governor **must reserve** for the President any Bill that, in the Governor's opinion, **derogates from the powers of the High Court** (Second Proviso to Article 200).

Landmark Judgments

- **Shamsher Singh v. State of Punjab (1974):** Governor is ordinarily bound by the **aid and advice** of the Council of Ministers.
- **Nabam Rebia v. Deputy Speaker (2016):** Governor's discretionary powers are **not absolute** and are subject to constitutional limitations.
- **State of Tamil Nadu v. Governor of Tamil Nadu (April 2025):** Governor cannot **indefinitely delay** assent to Bills; constitutional powers must be exercised within a **reasonable time**.
- **State of Tamil Nadu v. Governor of Tamil Nadu (November 2025):** Supreme Court held that **courts cannot prescribe fixed timelines** for the Governor or President to decide on Bills; however, **prolonged and unexplained inaction may still be subject to judicial review**.

NATIONAL COMPANY LAW TRIBUNAL (NCLT)

Why in News?

The **Supreme Court set aside NCLT and NCLAT orders** after finding that they relied on **fake, AI-generated judicial precedents** while deciding an insolvency case.

About

- NCLT is a **quasi-judicial body** that deals with corporate disputes and matters arising under the Companies Act, 2013.
- It was constituted on **1 June 2016** under the **Companies Act, 2013**.
- Its establishment was based on the recommendations of the **Balakrishna Eradi Committee** on insolvency and winding up of companies.
- It operates under the **Ministry of Corporate Affairs**.

Composition

- NCLT consists of a **President and Judicial and Technical Members** as required.
- The President and members are appointed by the **Central Government** according to the prescribed selection process.

Key functions and powers

- It adjudicates **corporate disputes and matters under the Companies Act, 2013**.
- It acts as the **adjudicating authority for insolvency resolution and liquidation of companies and Limited Liability Partnerships (LLPs)** under the IBC, 2016.
- It can **enforce its orders in the same manner as a court**, regulate its own procedure and review its own orders, subject to the applicable legal provisions.
- It is guided by the **principles of natural justice** while exercising its functions.

Appeal Mechanism

- An order of the NCLT can be challenged **before the National Company Law Appellate Tribunal (NCLAT)**.
- A decision of NCLAT can further be appealed before the **Supreme Court on a question of law**.

National Company Law Appellate Tribunal (NCLAT)

- **Established:** 1 June 2016 under the **Companies Act, 2013**.
- **Role:** Appellate body hearing appeals against NCLT orders.
- **IBC:** Hears appeals under the **IBC, 2016**.
- **Competition:** Hears appeals against specified CCI orders.
- **Further Appeal:** NCLAT orders can be appealed to the **Supreme Court on a question of law**.

WEST BENGAL OBC RESERVATION CASE

Why in News?

The West Bengal Government has withdrawn its Supreme Court appeal against the Calcutta High Court's order **quashing OBC status for 77 communities stating Religion alone cannot be the basis for granting OBC status**.

About OBC Reservation

Constitutional Provisions

- **Article 15(4):** Enables special provisions for socially and educationally backward classes.
- **Article 16(4):** Permits reservation in public employment for backward classes that are inadequately represented.
- **Article 340:** Empowers the President to appoint a Commission to identify socially and educationally backward classes.
- **Article 338B:** Establishes the **National Commission for Backward Classes (NCBC)** as a constitutional body.
- **27% reservation** for OBCs in Central Government jobs and Central Educational Institutions.

Process of Inclusion of Communities in the OBC List

Central OBC List

- **Proposal** received by the Central Government/NCBC.

- NCBC examines the claim based on **social & educational backwardness**.
- **Recommendation** submitted to the Central Government.
- **President** specifies the Central List under **Article 342A(1)**.
- **Article 342A** empowers the **President** to notify the **Central List of SEBCs** for each State/UT; **Parliament** alone can include or exclude communities from this list. (Position after the **105th Constitutional Amendment Act, 2021**, States can maintain their own State OBC lists.)
- **Parliament** alone can subsequently include or exclude communities under **Article 342A(2)**.

State OBC List

- **Proposal** initiated by the State Government.
- **State Backward Classes Commission** conducts a survey and recommends inclusion.
- **State Government** notifies the community in the **State OBC List**



- *Kaka Kalelkar Commission (1953) was the First Backward Classes Commission.*
- *Mandal Commission (1979), headed by B.P. Mandal, was the Second Backward Classes Commission and recommended 27% reservation for OBCs*
- *National Commission for Backward Classes became a constitutional body through the 102nd Constitutional Amendment Act, 2018.*

NATIONAL COMMISSION FOR MINORITIES

Why in News?

The **Union Government** has nominated a new **Chairperson, Vice-Chairperson and Member** to the **National Commission for Minorities (NCM)**

for a **three-year term** under the **National Commission for Minorities Act, 1992**.

About

- **The National Commission for Minorities** is a Statutory body established under the **National Commission for Minorities Act, 1992**.
- It was constituted by the **Central Government** in **1993**.
- Functions under the **Ministry of Minority Affairs**.

Constitution and Appointment

- Constituted under **Section 3** of the NCM Act, 1992.

Comprises:

- **Chairperson**
- **Vice-Chairperson**
- **Five Members**
- Appointed (nominated) by the **Central Government** from persons of **eminence, ability and integrity**.
- **At least five members (including the Chairperson)** must belong to the **notified minority communities**.
- **Tenure: 3 years** from the date of assuming office.

Functions

- **Takes suo motu cognizance** of cases involving violence against minorities and may visit affected areas.
- **Calls for reports from concerned authorities** on petitions/grievances and makes recommendations for redressal.
- **Makes periodical or special reports** to the Central Government on difficulties faced by minorities.
- **Has civil-court powers** under Section 9(4) for specified functions: **summoning persons, requiring documents, receiving affidavits and requisitioning public records**.

Minorities in India

Minority	Percentage
Muslims	14.2%
Christians	2.3%
Sikhs	1.7%
Budhists	0.7%
Jains	0.4%
Parsis	0.06%

Constitutional Safeguards for Minorities

- **Article 29** – Protection of language, script and culture.
- **Article 30** – Right of minorities to establish and administer educational institutions.
- **Article 350A** – Instruction in mother tongue at the primary stage.
- **Article 350B** – Special Officer for Linguistic Minorities.



- **Jains** became the **6th notified minority community** in 2014.
- The Commission has the **powers of a Civil Court** while investigating complaints.
- The **Central Government** notifies minority communities under the **National Commission of Minorities Act**.

OTT CONTENT REGULATION

Why in News?

The removal of the film ‘Satluj’ from an OTT platform in India has highlighted the **different regulatory frameworks governing theatrical films and OTT content**.

OTT Content Regulation

- OTT platforms are **not subject to prior CBFC (Central Board of Film Certification) certification**, as the Cinematograph Act, 1952 primarily regulates films intended for **public exhibition**.
- OTT content is regulated under **Part III of the Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021**.
- The IT Rules, 2021 provide a **three-tier grievance redressal mechanism**:
 - **Level I:** Self-regulation by the publisher.
 - **Level II:** Self-regulation through a self-regulatory body.
 - **Level III:** Oversight by the **Central Government**.
- **Section 69A of the Information Technology Act, 2000** empowers the Central Government to **block public access to online information** on specified grounds.
- The blocking power is exercised under the **Information Technology (Procedure and Safeguards for Blocking for Access of Information by Public) Rules, 2009**.
- Blocking orders require **reasons to be recorded in writing** and are subject to a **review mechanism**.
- The **Film Certification Appellate Tribunal (FCAT) was abolished in 2021**; hence, there is **no separate appellate tribunal for CBFC decisions**, and challenges to CBFC certification orders now lie before the **High Courts**.

Theatrical Films vs OTT

- **Theatrical films:** Governed by the **Cinematograph Act, 1952** and require **prior certification by CBFC**.

- **OTT platforms:** Governed primarily by IT Rules, 2021 and do **not** require prior CBFC certification.
- The grounds for restricting theatrical films broadly correspond to the **reasonable restrictions under Article 19(2)**, including **security of the State, public order, decency, morality and sovereignty and integrity of India**.

TRIAL IN ABSENTIA

Why in News?

The **trial in absentia** provision under the **Bharatiya Nagarik Suraksha Sanhita (BNSS), 2023** has gained attention in connection with proceedings against absconding accused in major cases.

About

- **Trial in absentia** means conducting a **criminal trial in the absence of the accused**.
- It is provided under **Section 356 of the BNSS, 2023**.
- It applies specifically to a person who has been declared a **proclaimed offender** and has **absconded to evade trial**.
- The court can proceed with the **inquiry, trial and pronounce judgment** despite the accused being absent.
- The provision seeks to balance **speedy justice** with safeguards for the accused.
- It is different from simply conducting a trial when an accused is temporarily absent; **Section 356 specifically targets proclaimed offenders who deliberately evade the judicial process**.

Applicability

- A **proclaimed offender** under **Section 84(4) BNSS** is generally a person accused of an offence punishable with **10 years or more imprisonment, life imprisonment, or death**, who fails to appear pursuant to the proclamation.
- Therefore, **mere absconding is not sufficient**; the person must satisfy the statutory

requirements for being a **proclaimed offender**.

Safeguards under Section 356 of the

Before commencing the trial, the court must ensure:

- **Two consecutive arrest warrants**, with at least **30 days' interval**.
- Publication in a **local or national newspaper**, giving the accused **30 days to appear**.
- Information to a **relative or friend**, if available.
- Notice displayed at the accused's **last known residence** and the concerned **police station**.
- Trial cannot commence until **90 days after framing of charges**.
- If the accused has no lawyer, the court must provide a **defence lawyer at State expense**.

Appeal

- An appeal against the judgment requires the **proclaimed offender to present himself before the appellate court**.
- **No appeal against conviction lies after three years** from the date of judgment.

FOREIGN CONTRIBUTION REGULATION ACT (FCRA) 2.0 PORTAL

Why in News?

The **FCRA 2.0 Portal** was launched on **30 June 2026** to modernise regulation of foreign contributions.

About

- FCRA 2.0 enables **end-to-end digital processing** of FCRA services, including registration, renewal and annual returns.
- The portal aims to **simplify compliance, reduce paperwork and improve processing efficiency** for FCRA-registered organisations.
- It strengthens **monitoring and transparency** in the receipt and utilisation of foreign contributions through greater digital integration.
- The upgraded system is intended to balance **ease of compliance for legitimate**

organisations with stronger oversight against misuse of foreign funding.

- The portal incorporates **technology-based verification and data integration** to facilitate more effective scrutiny of FCRA applications and compliance.
- It is expected to improve **coordination between FCRA-regulated organisations and government authorities** by providing a more streamlined digital interface.

Foreign Contribution Regulation Act (FCRA) - History

- **Origin:** First introduced in **1976** and replaced by the **FCRA, 2010**.
- **2020 Amendment:** Tightened regulation by **prohibiting transfer of foreign contributions**, reducing the administrative expenditure limit from **50% to 20%**, and mandating an **FCRA account at SBI, New Delhi Main Branch**.
- **2026 Amendment:** The **FCRA (Amendment) Bill, 2026** proposes further strengthening of the regulatory framework, including provisions concerning **assets and foreign contributions of organisations whose FCRA registration ceases**.

ARTICLE 371 AND LADAKH

Why in News?

Ladakh announced **Autonomous Hill Development Councils** in all seven districts, alongside a proposed **UT-level body under a customised Article 371 framework**.

Article 371 Framework for Ladakh

- **Article 371-based safeguards:** A special framework is proposed to protect **Ladakh's tribal culture, land and local employment**, instead of Sixth Schedule status.
- **Elected UT-level body:** Ladakh would have an **elected body at the Union Territory level**, reducing dependence on bureaucratic administration.

- **Three types of powers:** The elected body would have **legislative, executive and financial powers** over specified local matters.
- **Control over bureaucracy:** The elected government would have a role in **supervising and assessing the performance of officials** working on its subjects.
- **Coordination with local bodies:** The UT-level legislature would work alongside **Panchayati Raj Institutions (PRIs)**.
- **Statehood later:** Immediate statehood is not part of the proposal, but the Centre has acknowledged **statehood as Ladakh's long-term aspiration**.

ARTICLE 371

- **Purpose:** Article 371 provides special provisions for certain States based on their unique regional, cultural and historical needs.
- **Constitutional Position:** It is part of Part XXI of the Constitution; Articles 371A–371J provide State-specific safeguards.
- **Key Features:** These provisions may protect customary laws, local traditions, land rights and regional interests.
- **Examples:** Article 371A—
Nagaland, 371B—
Mizoram, 371C—
Tripura, 371D—
Assam, 371E—
Meghalaya, 371F—
Goa, 371G—
Manipur, 371H—
Sikkim, 371I—
Jammu and Kashmir, 371J—
Andhra Pradesh.

ECONOMY

INDEX OF CORE INDUSTRIES

Why in News?

The Office of Economic Adviser (OEA), DPIIT, Ministry of Commerce & Industry **released a new ICI series with 2022-23 as the base year**, replacing the earlier 2011-12 base year **and added a new industry** to the ICI series.

About

- The **Index of Core Industries (ICI)** measures the combined and individual performance of nine strategically important industries that have a significant impact on the overall industrial activity of the country.
- NOTE:** Earlier it took **only eight industries** into account, **now it has added one more industry** to the ICI series owing to its growing importance.
- The core industries are **Coal, Crude Oil, Natural Gas, Refinery Products, Fertilizers, Steel, Cement and Electricity and Iron ore (which was recently added)**.
- The ICI is compiled and released by the **Office of Economic Adviser (OEA), Department for Promotion of Industry and Internal Trade (DPIIT), Ministry of Commerce & Industry**.
- It's **base year is 2022-2023**.
- It is released on a **monthly basis** and serves as an important **indicator of the performance of key sectors** such as energy, infrastructure, manufacturing and agriculture.

INDEX OF CORE INDUSTRIES (ICI) – BASE YEAR 2022-23	
Weightage of Nine Core Industries in Index of Industrial Production (IIP)	
Core Industry	Weightage in IIP (2022-23)
1. Coal	10.33%
2. Crude Oil	7.15%
3. Natural Gas	6.88%
4. Refinery Products	28.04%
5. Fertilisers	2.63%
6. Steel	17.92%
7. Cement	5.37%
8. Electricity	5.64%
9. Iron Ore	3.92%
Total Weightage of Nine Core Industries in IIP (2022-23)	32.88%

Index of Industrial Production

- The **Index of Industrial Production (IIP)** is a monthly index that measures the **growth in the volume of industrial production** in India.
 - It is a key indicator of short-term changes in industrial activity and covers three sectors: **Mining, Manufacturing and Electricity**.
 - The IIP is compiled and released by the **National Statistical Office (NSO), Ministry of Statistics and Programme Implementation (MoSPI)**.
- The Core Industries form an important component of the IIP. Together, they account for **32.88 % of the total weight of items included in the IIP**.

MOBILE PHONE MANUFACTURING SCHEME

Why in News?

Mobile Phone Manufacturing Scheme (MPMS) was approved by the Union Cabinet on **15 July 2026** with a budgetary outlay of **₹62,500 crore** for FY 2026-27 to FY 2030-31.

About

- The scheme aims to scale up mobile phone production, increase **domestic value addition**, strengthen supply chains and **enhance India's global competitiveness in electronics manufacturing**.
- It is under the aegis of the **Ministry of Electronics and Information Technology (MeitY)**.
- The scheme's tenure is scheduled to be five years, from **FY 2026-27 to FY 2030-31**.



Key Features

- **Production Incentive:** Provides incentives ranging from **2.25% to 5% of eligible sales** for mobile phones manufactured in India.
- **Domestic Sourcing:** An additional incentive of up to **1.5%** is linked to **domestic sourcing of key components** and sub-assemblies.
- **Indian Brands:** Provides an additional **3% incentive** for eligible sales related to the design and R&D of products to encourage the development of Indian mobile phone brands.
- **Technological Sovereignty:** The scheme aims to encourage domestic design, R&D and patent creation, thereby reducing dependence on imported technologies and components.

The scheme is expected to raise cumulative mobile phone production to around **₹39 lakh crore** during its five-year tenure and generate approximately **60,000 direct jobs**.

GLOBAL GENDER GAP REPORT 2025

Why in News?

The **World Economic Forum's Global Gender Gap Report 2025** ranked **India 131st out of 148 countries**, with **64.4% of its gender gap closed**.

About

- The **Global Gender Gap Report** is published annually by the **World Economic Forum (WEF)** and has tracked gender parity since **2006**.
- The **2025 edition** is the **19th edition** and covers **148 economies**.
- It measures gender gaps across **four dimensions: Economic Participation & Opportunity, Educational Attainment, Health & Survival, and Political Empowerment**.
- The index measures the **gap between women and men**, rather than the overall level of development or women's empowerment.

World Economic Forum (WEF)

- **Established:** 1971 by **Klaus Schwab** as the *European Management Forum*; renamed **WEF** in **1987**.
- **Nature:** *Independent* **not-for-profit organisation** promoting **public-private cooperation**.
- **Headquarters:** **Geneva, Switzerland**.
- **Annual Meeting:** Held at **Davos, Switzerland**, bringing together global leaders from government, business and civil society.
- **Major Reports:** **Global Gender Gap Report, Global Risks Report and Future of Jobs Report**.

Important Highlights

- **Global gender gap: 68.8%** has been closed across **148 economies**; at the current pace, full parity could take **123 years**.
- **No economy** has achieved complete gender parity.
- **Iceland** ranked **1st (92.6%)** for the **16th consecutive year**; Finland and Norway ranked 2nd and 3rd.
- **Global scores:** Health & Survival **96.2%**, Educational Attainment **95.1%**, Economic Participation & Opportunity **61.0%**, and Political Empowerment only **22.9%**.
- **India:** Ranked **131st/148**, with **64.4%** of its gender gap closed; its score improved by **0.3 percentage points**, although its rank fell by 3 places.
- India's **Economic Participation & Opportunity** score rose **0.9 percentage points to 40.7%**. Its **Educational Attainment** score stood at **97.1%**.
- **Southern Asia** ranked **7th** among regions, with **64.6%** gender parity; **Bangladesh (24th)** was the only South Asian economy in the global top 50.
- **99 of 100 continuously tracked economies** improved their overall parity score since 2006.
- The report highlights an **"implementation gap"**: gender-equal laws alone are insufficient

without effective enforcement and supporting infrastructure.

CORPORATE MITRA SCHEME

Why in News?

Indian Institute of Corporate Affairs Shillong organised an awareness webinar in Arunachal Pradesh to sensitise youth and enterprises about the Corporate Mitra Scheme.

About

- The Corporate Mitra Scheme is an initiative aimed at supporting **Micro, Small and Medium Enterprises (MSMEs)** through trained and certified paraprofessionals known as **Corporate Mitras**.
- These professionals will provide affordable and accessible assistance to MSMEs in areas such as **regulatory compliance, GST, accounting, financial guidance, cost accounting and secretarial services**.
- They will **act as an accessible link between MSMEs and professional services**, particularly in areas where smaller enterprises may lack dedicated accounting, compliance or financial expertise.
- The scheme seeks to enable MSMEs to focus on **innovation, productivity and growth** while ensuring that they are able to meet regulatory and financial compliance requirements.
- Extend professional support beyond metropolitan centres, particularly to **Tier-II and Tier-III cities**.

Training structure

- The scheme provides a **12-month training pathway**:
- **6-month Academic Course + 6-month On-the-Job Training**
- The Academic Course consists of **144 hours of structured online learning**, along with **6 hours of webinar/physical learning**.
- The subsequent On-the-Job Training provides practical exposure to real-life business environments.

Institutions involved

The scheme will be implemented in collaboration with three professional institutes:

1. **Institute of Chartered Accountants of India (ICAI)**
2. **Institute of Company Secretaries of India (ICSI)**
3. **Institute of Cost Accountants of India (ICoAI)**

Implementation process

The scheme will be implemented through the **SWAYAM Plus portal**, which will function as the **centralised platform for end-to-end implementation** of the Corporate Mitra Scheme.

SUB-MISSION ON AGRICULTURAL MECHANIZATION (SMAM)

Why in News?

The **Sub-Mission on Agricultural Mechanization (SMAM)** was highlighted in July 2026 for its expanding coverage of farm mechanization. Since its inception, **21.61 lakh agricultural machines** worth **₹9,404.47 crore** have been distributed to farmers across India.

About

- SMAM is a Centrally Sponsored Scheme under the **Rashtriya Krishi Vikas Yojana (RKVY)**.
- **Rashtriya Krishi Vikas Yojana (RKVY)** is a flagship Central scheme launched in **2007** to promote **state-led investment, flexibility and development in agriculture and allied sectors**.
- SMAM is under the aegis of the **Ministry of Agriculture & Farmers' Welfare**.
- Its objective is to promote **inclusive farm mechanization**, particularly among small and marginal farmers, while improving farm productivity, reducing cultivation costs and easing labour-intensive agricultural operations.

Key Features

- **Financial Assistance:** Provides subsidies for the purchase of agricultural machinery and

equipment, with greater support for disadvantaged categories such as **small and marginal farmers, women, SCs and STs**.

- **Custom Hiring Centres (CHCs):** Promotes CHCs where farmers can **hire modern agricultural machinery at affordable rates**, enabling small farmers to access equipment without purchasing it individually.
- **Farm Machinery Banks:** Supports the establishment of machinery banks to make farm equipment accessible, particularly in areas dominated by small and marginal holdings.
- **Kisan Drones:** Provides financial assistance for **drone demonstrations, individual drone ownership and establishment of Custom Hiring Centres for agricultural drones**.

SMAM helps address the **high cost and limited availability of farm machinery**, especially for small landholders.

PRADHAN MANTRI FORMALISATION OF MICRO FOOD PROCESSING ENTERPRISES (PMFME) SCHEME

Why in News?

The **Central Government is considering extending the PMFME Scheme up to 2029**, considering its performance in promoting the growth and formalisation of micro food-processing enterprises.

About

- **PMFME is a Centrally Sponsored Scheme.**
- It is under the aegis of the Ministry of Food Processing Industries.
- It was launched under the **Atmanirbhar Bharat Abhiyaan** to promote the **Vocal for Local** approach in the food-processing sector.
- It aims to support the formalisation, upgradation and expansion of micro food-processing enterprises through financial, technical and business assistance.

Key Features

- **Individual Micro Enterprises:** Provides a **35% credit-linked capital subsidy**, subject to a maximum of **₹10 lakh per unit**.
- **SHGs:** Provides **seed capital of ₹40,000 per SHG member** engaged in food processing for working capital and purchase of small tools.
- **Common Infrastructure:** Provides **35% credit-linked capital subsidy**, up to **₹3 crore**, to FPOs, SHGs, cooperatives and government agencies for creating common infrastructure.
- **Branding & Marketing:** Provides grants of up to **50%** to groups of FPOs, SHGs, cooperatives or SPVs of micro food-processing enterprises.
- **Capacity Building:** Provides entrepreneurship development and product-specific skill training to strengthen the capabilities of food-processing enterprises.

NATIONAL INVESTMENT POLICY FOR UREA-2026

Why in News?

The **Union Cabinet approved the National Investment Policy for Urea-2026 (NIPU-2026) on 15 July 2026** to promote fresh investment in the domestic urea sector and strengthen India's self-sufficiency in fertiliser production.

About

NIPU-2026 is aimed at **reducing India's dependence on imported urea**, increasing domestic production and strengthening **fertiliser security under the Atmanirbhar Bharat initiative**.

- It also seeks to **attract private investment** by improving the financial viability and predictability of urea manufacturing projects.

Urea

- **Urea (NH_2CONH_2)** is a white, crystalline organic compound primarily used as a **nitrogenous fertiliser** in agriculture.
 - Urea contains about **46% nitrogen**, the highest among solid nitrogenous fertilisers, making it important for crops such as **wheat, paddy and sugarcane**.
 - Urea is **heavily subsidised by the Government of India** to keep it affordable for farmers.
 - Unlike non-urea fertilisers covered under the **Nutrient Based Subsidy (NBS) Scheme**, the **Maximum Retail Price (MRP)** of urea is fixed by the Government.
- It comes under the aegis of the **Department of Fertilizers, Ministry of Chemicals and Fertilizers**.
 - The policy aims to create around **10 million tonnes of additional domestic urea production capacity** through **8-9 new gas-based urea manufacturing plants**.
 - **NIPU-2026** is a successor to the New Investment Policy (NIP)-2012, whose investment window ended in **October 2019**.

Key Features

- **Gas-Based Plants:** Encourages investment in new gas-based urea manufacturing units.
- **Cost Transparency:** Separates **fixed and variable costs** in the pricing framework to improve transparency.
- **Return on Equity:** Introduces an assured **RoE band of 12%-16%**, providing investment certainty while maintaining regulatory oversight.
- **Foreign Exchange Risk:** Fixed costs will be converted into **Indian rupees after four years** based on the prevailing exchange rate, reducing foreign exchange risk for investors.

- **Cost Savings:** The revised framework is estimated to generate savings of **more than ₹250 crore per plant** compared with NIP-2012.

INSURANCE REGULATORY AND DEVELOPMENT AUTHORITY OF INDIA (IRDAI) REFORMS

Why in News?

The **IRDAI** recently approved a package of reforms, including the **Policyholders' Education and Protection Fund (PEPF) Regulations, 2026**, to strengthen **policyholder protection, insurance awareness and grievance redressal**.

About

- **IRDAI (Insurance Regulatory and Development Authority of India)** is the statutory regulator of India's insurance and re-insurance sector.
- It was established under the **IRDA Act, 1999** and became a statutory body in **April 2000**, following insurance-sector reforms based on the **Malhotra Committee** recommendations.
- Its primary mandate under **Section 14 of the IRDAI Act, 1999** is to **regulate, promote and ensure the orderly growth** of insurance and re-insurance business while **protecting policyholders' interests**.
- **Headquarters:** Hyderabad.



Key Reforms

- **100% FDI in Insurance:** FDI limit increased from **74% to 100%**, facilitating greater capital, technology and competition.
- **Policyholders' Education & Protection Fund (PEPF):** Promotes **insurance awareness, financial literacy, grievance redressal and recovery of unclaimed amounts.**
- **Reinsurance Reform:** Net Owned Fund requirement for foreign reinsurers reduced from **₹5,000 crore to ₹1,000 crore.**
- **Transparent Penalty Framework:** Maximum penalty for specified violations increased from **₹1 crore to ₹10 crore.**
- **Insurance Intermediary Reform:** Introduces **continuous registration with annual payment** and tagging of authorised salespersons to policies/proposals.
- **Share-transfer flexibility:** IRDAI approval threshold for transfer of paid-up equity capital increased from **1% to 5%**, reducing compliance burden.
- **One-time registration of intermediaries:** Introduces **one-time registration** for insurance intermediaries, improving ease of doing business and continuity of services.

RBI FINANCIAL STABILITY REPORT (FSR)

Why in News?

The **Reserve Bank of India (RBI)** released the **June 2026 edition of the Financial Stability Report (FSR).**

About

- **FSR** is the RBI's **biannual flagship report** on the health and resilience of India's financial system.
- It is released by the **Reserve Bank of India.**
- It assesses **systemic risks, financial-sector vulnerabilities and the ability of financial institutions to withstand economic shocks.**
- It also presents **macro-stress tests** for banks and other financial institutions under different hypothetical scenarios.

Financial Stability and Development Council (FSDC)

- The **Financial Stability and Development Council (FSDC)** was established in **2010** as a **non-statutory apex body** to strengthen financial stability and improve coordination among financial-sector regulators.
- It is **chaired by the Union Finance Minister**, while its secretariat is provided by the **Department of Economic Affairs (DEA), Ministry of Finance.**
- Governor of RBI, Chairpersons of SEBI, IRDAI, PFRDA, IBBI and IFSCA are also members of this council.

FSDC Sub-Committee

- The **FSDC Sub-Committee**, chaired by the **RBI Governor**, serves as the **operational and technical arm of the FSDC.**
- It monitors **systemic risks** across the financial system and facilitates coordination among major financial regulators, including the **RBI, SEBI, IRDAI, PFRDA and IBBI.**
- It also examines risks arising from the **interconnectedness of financial institutions and financial**

- The report reflects the **collective assessment of the Financial Stability and Development Council (FSDC) Sub-Committee.**

Objectives

- **Macro-Financial Environment:** Assesses global/domestic conditions, geopolitical risks, commodity prices, capital flows and sovereign debt.
- **Financial Institutions:** Evaluates banks and NBFCs using **GNPA, NNPA, CRAR.**
- **Stress Tests:** Tests the impact of economic shocks on **capital adequacy and asset quality.**

- **Financial Interconnectedness:** Assesses linkages and exposures among financial entities to identify **contagion risks**.
- **Emerging Risks:** Monitors risks from **cyberattacks, AI, climate change, Big Tech and retail-credit growth**.

INVESTMENT FRIENDLINESS INDEX (IFI)

Why in News?

NITI Aayog released the first-ever Investment Friendliness Index (IFI) in 2026, which was conceptualized following directives from the 9th Governing Council Meeting of NITI Aayog (2024) and formally announced in the **Union Budget 2025-26** as a flagship structural reform tool.

About

- The **Investment Friendliness Index (IFI)** is a NITI Aayog framework designed to assess the **overall investment environment of States and UTs**.



- It goes beyond merely measuring the amount of investment received by a State. Instead, it evaluates whether the State has the **infrastructure, policies, institutions, resources and financial conditions** necessary to attract and retain investments.
- The Index uses a **100-point scale** and combines **publicly available data (under 84 different objective indicators)** with investor perceptions obtained through primary surveys.

- It **replaced** the now-discontinued **World Bank Ease of Doing Business framework** with a robust, homegrown methodology.

Features

- It evaluates the investment ecosystem across **eight core pillars** critical to attracting and sustaining investments.

8 PILLARS OF THE INVESTMENT FRIENDLINESS INDEX 2026	
1	Infrastructure: Physical logistics, power reliability, and digital connectivity.
2	Business Climate: Efficacy of single-window clearances and operational continuity.
3	Resources: Availability of industrial land, skilled labor pools, and raw materials.
4	Government Policy: Policy predictability and stability over time.
5	Regulatory Ease: Minimization of bureaucratic friction and compliance burdens.
6	Institutional Environment: Capacity, transparency, and responsiveness of state institutions.
7	Financial Health: Fiscal prudence and state-level macroeconomic indicators.
8	Environmental Resilience: Sustainability and ecological compliance parameters.

- **Categorisation based on performance:** The Index groups States and UTs into four tiers based on their overall scores for fair comparison.
 - **Top Performers:** Scores above 50.
 - **Frontrunners:** Scores between 45–50.
 - **Emerging Performers:** Scores between 40–45
 - **Aspiring States:** Scores below 40.

Key Findings of the Investment Friendliness Index (IFI) 2026

- **Overall Ranking:** Gujarat secured the **top position** with a score of **56.6**, followed by **Maharashtra (53.7)**, **Tamil Nadu (53.3)**, **Goa (53.1)**, and **Odisha (52.4)**.
- **Performance by Category:**
 - **Large States:** Gujarat, Maharashtra and Tamil Nadu were the leading performers.
 - **Hilly & North-Eastern States:** Uttarakhand topped the category, followed by Assam and Himachal Pradesh.
 - **Union Territories & City States:** Delhi and Chandigarh emerged as the leading performers.

E-COMMERCE COUNCIL OF INDIA (ECCI)

Why in News?

The **Internet and Mobile Association of India (IAMAI)** launched the **E-Commerce Council of India (ECCI)** in **July 2026** as a **national industry platform** to unite key stakeholders and strengthen India's **\$120-billion e-commerce and digital commerce ecosystem**.

About

- The **E-Commerce Council of India (ECCI)** is a **national industry platform** created to represent, unify and advance India's digital commerce ecosystem.
- It aims to provide a common platform for **industry, government, academia and other stakeholders** to collaborate on issues affecting digital commerce.
- It was launched under the aegis of the **Internet and Mobile Association of India (IAMAI)**.

Functions of the Council

- **Policy Advocacy:** Represent industry concerns and provide inputs to policymakers.
- **Research:** Study emerging trends and challenges in e-commerce.
- **Best Practices:** Develop standards for **safe and responsible digital commerce**.
- **Stakeholder Coordination:** Connect platforms, retailers, startups, MSMEs, logistics and other stakeholders.
- **MSME Support:** Help MSMEs access **digital and global markets**.
- **Digital Trade:** Promote **cross-border e-commerce and digital trade**.
- **Innovation:** Encourage adoption of **AI and emerging technologies**.

ECCI can strengthen India's digital economy by bringing diverse stakeholders onto a common platform, promoting industry-government collaboration and better policymaking.

ENVIRONMENT

ZOOLOGICAL SURVEY OF INDIA AND BOTANICAL SURVEY OF INDIA

Why in news?

Union Minister for Environment, Forest and Climate Change Bhupender Yadav released the official reports ***Animal Discoveries-2025*** by the Zoological Survey of India (ZSI) and ***Plant Discoveries-2025*** by the Botanical Survey of India (BSI) during the 111th Foundation Day celebrations of the ZSI in Kolkata.

Notable Discoveries

The report featured significant new wildlife finds, including a **Himalayan bat** (*Myotis himalaicus*), **two green fan-throated lizards** (*Ptyctolaemus mamdaphaensis* and *Ptyctolaemus siangensis*), and **Irwin's wolf snake** (*Lycodon irwini*).

Zoological Survey of India (ZSI)

The **Zoological Survey of India (ZSI)**, established in **1916** and headquartered in **Kolkata**, is the nation's premier institution for **faunal research** under the **Ministry of Environment, Forest and Climate Change**.

Roles & Functions

- Conducts systematic surveys, classification, and **taxonomic research** to document India's animal **biodiversity**.
- Acts as the official custodian of the **National Zoological Collection** under the **National Biodiversity Act, 2002**.
- Provides scientific data for **wildlife management**, **environmental impact assessments**, and the protection of **threatened species**.
- Publishes official reports, including the **Fauna of India** series, **Red Data Books**, and annual **Animal Discoveries** reports.

Botanical Survey of India (BSI)

The **Botanical Survey of India (BSI)**, established in **1890** and headquartered in **Kolkata**, is the nation's apex institution for **plant research** under

the **Ministry of Environment, Forest and Climate Change**.

Roles & Functions

- Conducts systematic **floristic surveys**, **taxonomic research**, and **biodiversity documentation** of India's plant wealth.
- Acts as the national authority for **plant identification**, **herbarium management**, and the maintenance of **botanical repositories**.
- Provides scientific data for **conservation planning**, **threat assessment** (Red List), and the **sustainable use** of plant resources.
- Publishes official reports and reference materials, such as the **Flora of India**, state/district floras, and annual **Plant Discoveries** reports.

NATIONAL GREEN HYDROGEN MISSION

Why in news?

India's ACME Group has secured landmark long-term agreements under the **National Green Hydrogen Mission** to export **green ammonia** and **green methanol** to major Japanese firms, IHI Corporation and Mitsubishi Gas Chemical Company.

About National Green Hydrogen Mission

- Approved in **January 2023** and backed by a budget outlay of **Rs. 19,744 crore**, it is implemented by the **Ministry of New & Renewable Energy**.
- Aims to establish India as a **global hub** for the production, utilization, and export of **green hydrogen** and its derivatives.
- Targets a green hydrogen production capacity of at least **5 MMT (Million Metric Tonnes)** per year by **2030**.
- Seeks to add approximately **125 GW** of renewable energy capacity and attract over **Rs. 8 lakh crore** in total investments.

- Utilizes **Strategic Interventions for Green Hydrogen Transition (SIGHT)** to provide financial incentives for manufacturing **electrolysers** and producing green hydrogen.
- Focuses on developing **Green Hydrogen Hubs** and deployment in sectors like refineries, fertilizers, steel, mobility, and shipping.
- Implemented in two stages: **Phase I (2022-26)** builds demand and electrolyser manufacturing for existing uses, while **Phase II (2026-30)** scales up production for new sectors like steel, shipping, and aviation.
- Expected to create over six lakh jobs, reduce **fossil fuel imports** by over Rs. 1 lakh crore, and avert nearly 50 MMT of annual **greenhouse gas emissions**.

Green Ammonia

- **Green ammonia** (NH_3) is a sustainable alternative to conventional ammonia, offering a near-zero carbon footprint.
- Produced by **combining nitrogen** from the air with **green hydrogen** (generated via renewable-powered water electrolysis) using the **Haber-Bosch** process.
- It functions as a green fertilizer, a **carbon-free fuel** for shipping and power, and an efficient **hydrogen carrier** for easier storage and transport.

Green Methanol

- **Green methanol** is a sustainable, low-carbon liquid fuel produced without polluting emissions.
- Produced by combining **renewable electricity with captured CO_2** or via **biomass gasification**.
- It serves as a sustainable alternative fuel for maritime transport, aviation, and road vehicles, a feedstock for the chemical industry, and a medium for energy storage.

WORLD BANK GROUP CLIMATE CHANGE ACTION PLAN

Why in news?

The World Bank Group is shifting its approach **from inputs to outcomes** to maximize development impact, which includes retiring its climate-centric funding targets (the 45% climate co-benefits target and the 35% target in the Climate Change Action Plan) following U.S. disapproval.

About

The World Bank Group's **Climate Change Action Plan (CCAP)**, launched in **2021 for 2021-2025**, integrates **climate action with development and poverty reduction**, focusing on **mitigation, adaptation, resilience, and Paris Agreement alignment**. Following the end of its initial period, it has been **extended indefinitely** to continue guiding the institution's **climate strategy**.

Objective

- Promote **renewable energy, energy efficiency** and **low-carbon development**.
- Strengthen **resilience** to floods, droughts, heat waves and other climate risks.
- Support **vulnerable communities** and **climate-resilient infrastructure**.
- Ensure World Bank projects support what each government promises to do in its national climate plans.
- Enhance engagement on **adaptation, nature and pollution**.
- Prioritize measurable development impact over strict percentages for climate spending.
- Tracking and reporting two **scorecard indicators: net greenhouse-gas (GHG) emissions** and **beneficiaries with enhanced resilience** to climate risks.
- The **Independent Evaluation Group** will review the CCAP and help shape the World Bank Group's future climate strategy, with greater emphasis on **outcomes, country priorities, resilience and accountability**.

NATIONAL MISSION FOR CLEAN GANGA (NMCG)

Why in news?

The National Mission for Clean Ganga (NMCG) is promoting Nature-based Solutions (NbS) for river rejuvenation, highlighted by two constructed wetland projects at Delhi's Shastri Park and Kailash Nagar Drains to naturally treat about 10 MLD of wastewater.

About

- National Mission for Clean Ganga (NMCG), operating under the **Ministry of Jal Shakti**, was established in **2011** as a registered society. It serves as the implementation arm for rejuvenating the Ganga River basin and its tributaries through the following pillars:
- **Namami Gange Programme** is a flagship 2014 initiative focusing on sewage infrastructure, industrial effluent monitoring, biodiversity conservation, and public awareness.
- Operates across **national, state, and district** levels to ensure intersectoral coordination and integrated basin management.
- Goes beyond pollution mitigation to maintain ecological flows, protect wetlands, execute afforestation, and restore smaller rivers using data-driven research from institutions like the **Ganga Knowledge Centre**.

Nature-based Solutions

Nature-based Solutions (NbS) are actions that protect, restore, or use natural ecosystems to address human and environmental challenges while also benefiting biodiversity and people.

KEWRA PLANT

Why in news?

Scientists have discovered that the **Kewra plant** (*Pandanus*) a species essential for its fragrant essence in sweets, medicine, and traditional rituals has existed in India for at least **24 million years**.

About

- A tropical coastal shrub or small tree belonging to the **Pandanaceae family**, featuring a flexible trunk supported by distinctive **prop roots** and rosettes of spiny, fragrant leaves.
- Thrives in **warm, humid conditions** with direct sunlight and loamy soil, and is found naturally in **southern India**, the **Andaman Islands**, and along the coastal regions of **Odisha**.
- Widely utilized in the **perfume and cosmetic industries**, for **food flavoring**, in **Ayurvedic medicine**, and for weaving mats and baskets from its leaves.
- Acts as a vital **keystone species** that stabilizes sand dunes, prevents **coastal erosion**, and protects coastal ecosystems.

KUTKI (PICRORHIZA KURROA)

Why in News?

Kutki (*Picrorhiza kurroa*) was in news for **sustainable cultivation and harvesting by farmers in Himachal Pradesh**, aimed at conserving this threatened Himalayan medicinal plant.

About



- **Kutki (*Picrorhiza kurroa*)** is a **high-altitude, perennial medicinal herb** native to the Himalayan region.
- It occurs mainly in **alpine and sub-alpine habitats**, generally around **2,700–4,500 m** elevation.
- It is traditionally used in **Ayurveda and Unani medicine**, particularly for **liver and digestive ailments**.
- Its important bioactive compounds include **picroside-I and picroside-II**, belonging to the iridoid glycosides.

*Kutki (*Picrorhiza kurroa*)*

- **IUCN:** Endangered
- **CITES:** Appendix II
- **Habitat:** Himalayan alpine & sub-alpine regions
- **Medicinal uses:** Traditionally used for **liver disorders, digestive ailments and fever**.

HYDROGEN-POWERED FUEL CELL TRAIN

Why in news?

Prime Minister Narendra Modi flagged off India's first-ever **hydrogen-powered fuel cell train** (the **NaMo Green Rail**) from Jind, Haryana, marking a historic leap in sustainable public transport and green mobility.

About

- **Hydrogen fuel cell** technology powers the train using a **Proton Exchange Membrane (PEMFC)** system, generating **onboard electricity** by reacting **hydrogen** and **oxygen** across a **polymer membrane** to yield only **water vapour** and **heat** as byproducts.
- Backed by the country's largest railway **hydrogen storage and refuelling facility** at **Jind**, capable of storing roughly **3,000 kg** of hydrogen.
- Equipped with multiple independent safety systems including **continuous ventilation**, **non-stop air monitoring**, and **automatic**

shut-off mechanisms to detect leaks, heat, flames, or smoke.

- Aligns with the **National Green Hydrogen Mission** and the **Atmanirbhar Bharat** initiative, marking India's entry into a select global group of nations exploring **hydrogen-powered rail transport**.

KOSI-MECHI INTRA-STATE LINK PROJECT

Why in news?

The Ministry of Jal Shakti released updates regarding the progress, funding, and completion targets of the **Kosi-Mechi Intra-State Link Project** in Bihar, alongside bilateral discussions with Nepal on flood management and dam construction.

About

- **Kosi-Mechi Intra-State Link Project** diverts surplus water from the Kosi basin to the Mechi river in the Mahananda basin in Bihar by remodelling and extending the **Eastern Kosi Main Canal (EKMC)**.
- Operates under **Pradhan Mantri Krishi Sinchayee Yojana - Accelerated Irrigation Benefit Programme (PMKSY-AIBP)** with a total estimated cost of ₹6,282.32 crore, backed by central assistance of **₹3,652.56 crore**.
- Benefits **2,10,516 hectares** across the **Araria, Purnea, Kishanganj, and Katihar** districts with reliable Kharif irrigation.
- Scheduled for completion by **March 2029**.

About Kosi River

- A major transboundary river flowing through Tibet (China), Nepal, and India, originating in the high Himalayas.
- Often called the *Saptakoshi* ("Seven Rivers") because it is formed in eastern Nepal by the confluence of seven Himalayan tributaries, with the **Sun Kosi, Arun, and Tamur** being the principal three.

- Enters India near **Bhimnagar (Bihar)** and joins the **Ganga near Kursela**. Known as the “**Sorrow of Bihar**”, it frequently shifts its course westward due to heavy silt accumulation, causing devastating floods across northern Bihar.

About Mechi River

- A transboundary river originating in the Mahabharat Range (inner Himalayas) of Nepal, flowing through eastern Nepal and briefly forming the international boundary between India and Nepal.
- A key right-bank tributary of the **Mahananda River**, eventually draining into the Ganga River system.

MANASBAL LAKE

Why in News?

Manasbal Lake in Jammu and Kashmir has recently witnessed the **return of migratory birds**, indicating signs of ecological recovery following conservation efforts.



About

- Manasbal is considered the **deepest freshwater lake in India**, with a maximum depth of about **13 metres**.
- It is surrounded by **Baladar mountains**, **Karewa plateau** in the north and **Ahtung hills** in the south used for limestone extraction.
- It is primarily fed by **precipitation and more than 1,200 springs**, while its outflow is regulated into the **Jhelum River**.
- Manasbal is a **monomictic lake**, exhibiting thermal stratification roughly from **March to November**, with a thermocline at around **9 metres**.

- The lake supports aquatic biodiversity including **macrophytes, phytoplankton, zooplankton, benthos and fish**, including *Schizothorax* species and *Cyprinus carpio*.



Key migratory and aquatic bird species from Manasbal lake

- White-Headed Duck
- Mallard
- Horned Grebe
- Long-Eared Owl.

Major Lakes of Kashmir

- Wular Lake** – *India's Largest Fresh Water lake and Asia's 2nd-largest freshwater lake; a Ramsar Site.*
- Dal Lake** – *urban freshwater lake; known for houseboats, shikaras and Mughal gardens.*
- Surinsar-Mansar Lakes** – *freshwater Ramsar Sites; ecologically and culturally significant.*

SAMUDRA MANTHAN

Why in news?

The Union Cabinet approved '**Samudra Manthan**' (**National Offshore Exploration Scheme**), a Central Sector Scheme under the Ministry of Petroleum & Natural Gas with an approved outlay of **₹84,084 crore** up to FY 2030–31.

About

- Samudra Manthan** aims to reduce import dependence and enhance India's long-term energy security by accelerating deepwater and ultra-deepwater oil and gas exploration.
- Offshore Exploration Support (₹43,200)** provides a risk-sharing model funding up to 50% of drilling costs for 60 exploratory wells.
- Seismic Data Acquisition** focuses on large-scale data mapping and scientific

drilling in frontier basins to reduce geological uncertainty.

- **Common Offshore Infrastructure** develops shared production and evacuation hubs to commercialize discovered reserves.
- **Manufacturing and Services Zones** promote local equipment manufacturing, localisation, and indigenous capability building.
- **Key Targets & Benefits** include adding over **600 MMTOE** in new reserves, raising annual production from ~62 to **80 MMTOE**, expanding the resource base to **2,200 MTOE**, and cutting crude import bills by nearly **₹1 lakh crore annually**.

CLOUDBURST

Why in news?

Officials and media frequently use 'cloudburst' to describe catastrophic downpours that destroy infrastructure within minutes. Often misused, the term masks human negligence, poor planning, and structural failures as unpredictable acts of nature.

About

- According to the **India Meteorological Department (IMD)**, a cloudburst is a sudden, heavy rainstorm where more than **10 cm of rain** falls in less than an hour over a small area (about 10 sq. km), commonly occurring in mountainous regions like the Himalayas.
- They are triggered by **orographic lifting**, where moisture-laden monsoon winds are forced rapidly upward by steep mountain slopes, cooling and condensing into towering clouds. Strong upward air currents suspend heavy raindrops until they plummet abruptly.
- Rising global temperatures increase atmospheric moisture, destabilize weather patterns, and accelerate glacier retreat, making these intense precipitation events more frequent.

- Cloudbursts frequently result in devastating **flash floods**, destructive **landslides**, and high-density **mudflows** that wash away roads, bridges, and settlements.
- Effective management requires robust **early warning systems**, resilient **urban planning and stormwater drainage**, watershed management, reforestation, and strict avoidance of construction in vulnerable, flood-prone zones.

COMPRESSED BIO-GAS

Why in news?

The Municipal Corporation of Delhi (MCD) and the National Dairy Development Board (NDDB) signed a **Memorandum of Understanding (MoU)** for the establishment of **Compressed Bio-Gas (CBG) plants** in Delhi to ensure the proper utilization of cow dung.

About

- Compressed Biogas (CBG) is a mixture of hydrocarbon gases and vapors consisting of 90% to 98% **methane**, produced through the decomposition of animal and plant waste, then purified and compressed.
- It features a calorific value and characteristics similar to Compressed Natural Gas (**CNG**), allowing it to serve as a green, renewable automotive and industrial fuel.
- Utilizes agricultural residue, cattle dung, and municipal solid waste (MSW) to promote a **waste-to-wealth** circular economy.
- Lowers fossil fuel imports and greenhouse gas emissions, advances waste-to-wealth and Swachh Bharat goals, and generates rural employment and extra income for farmers.

Government Initiatives to promote Biogas in India

- **SATAT Initiative:** Launched in **2018** to establish **5,000 CBG plants** and encourage entrepreneurs to supply compressed biogas to **oil marketing companies**.
- **GOBARDhan Scheme:** Converts **cattle dung, crop residue, and organic waste** into biogas and bio-slurry, offering assistance up to **₹50 lakh per district** for community or cluster-based plants.
- **CBG Blending Obligation:** Mandates phased blending of **CBG** with **CNG** and **domestic PNG**, scaling from **1% in FY26** to **5% by FY29** to ensure market demand.
- **National Bioenergy Programme:** Provides **Central Financial Assistance** via the **Ministry of New and Renewable Energy** for setting up CBG and waste-to-energy plants.
- **Biomass Aggregation Machinery Scheme:** Allocated **₹564.75 crore** to help producers procure equipment for **collection, storage, and transportation** of agricultural residues.
- **Infrastructure Support:** Allocates **₹994.5 crore** for **pipeline networks** connecting CBG plants, alongside **SBM-Urban 2.0** support for municipal waste biomethanation.
- **Market Development Assistance Scheme:** Provides **₹1,500 per MT** to enhance the commercial viability of **Fermented Organic Manure**.

GOBARDhan Scheme

*The GOBARDhan scheme is India's National Circular Bioenergy Scheme (FY 2026-27 to 2035-36) with an outlay of **Rs. 23,731 crore**. Aimed at boosting **Compressed Biogas (CBG)** production by ten-fold, it turns organic waste into clean energy and rural income.*

Core Pillars:

- **Assured Offtake:** Mandates **City Gas Distribution** procurement (3% in FY 2026-27, scaling to 5% by FY 2028-29).
- **Stable Pricing:** Fixes an administered price of **Rs. 2,110 per MMBTU** for at least 10 years for revenue security.
- **Capital Assistance:** Offers financial support up to **Rs. 2 crore per TPD** for eligible CBG projects.
- **Pipeline Infrastructure:** Connects CBG plants directly to distribution networks.
- **Credit Guarantee Support:** Shares lending risks to facilitate institutional credit for MSMEs.
- **Ecosystem Challenge Fund:** To accelerate district-level implementation, technology, and infrastructure mapping.

NATIONAL GREEN TRIBUNAL

Why in News?

The **NGT Southern Bench** allowed **TANGEDCO** to continue construction at the **2×660 MW Ennore SEZ Thermal Power Project** for four weeks, while it seeks renewal of its **Environmental Clearance (EC)** and **CRZ clearance**.



About

- The **National Green Tribunal (NGT)** is a **specialised statutory tribunal** established under the **National Green Tribunal Act, 2010**.
- It became operational on **18 October 2010**.
- It deals with **environmental protection, conservation of forests and natural resources**, and related compensation and restitution.
- **Principal Bench:** New Delhi; **Zonal Benches:** Bhopal, Kolkata, Chennai and Pune.
- It is guided by **Sustainable Development, Precautionary Principle and Polluter Pays Principle** under Section 20.

Composition

- NGT consists of a **Chairperson, Judicial Members and Expert Members**.
- **Chairperson:** A serving/former **Supreme Court Judge or Chief Justice of a High Court**.
- **Judicial Members:** Persons with prescribed judicial experience.
- **Expert Members:** Persons with **specialised knowledge and professional experience in environmental matters**.
- It can have **10–20 Judicial Members and 10–20 Expert Members**.

Objectives & Functions

- **Expeditious disposal** of environmental disputes.
- Provides **specialised adjudication** by combining judicial and technical expertise.

- Grants **relief, compensation and restitution** for environmental damage.
- Helps enforce the **legal right to a healthy environment**, linked by courts to **Article 21**.
- Reduces the burden on ordinary courts in specialised environmental matters.

Schedule I Laws

NGT's original jurisdiction under Section 14 covers substantial environmental questions arising from laws listed in Schedule I:

1. *Water Act, 1974*
2. *Water Cess Act, 1977*
3. *Forest (Conservation) Act, 1980*
4. *Air Act, 1981*
5. *Environment (Protection) Act, 1986*
6. *Public Liability Insurance Act, 1991*
7. *Biological Diversity Act, 2002*

Act not covered by NGT

SCIENCE AND TECHNOLOGY

NUCLEAR ENERGY MISSION (NEM)

Why in News?

The Union Government is advancing the Nuclear Energy Mission (NEM) to significantly expand India's nuclear power capacity

Key Highlights

- The Nuclear Energy Mission was announced in the Union Budget 2025-26 with the objective of expanding nuclear power generation to 100 GWe by 2047.
- At least five indigenous Small Modular Reactors (SMRs) to be developed and operationalized by 2033.
- SHANTI Act, 2025 enacted to facilitate large-scale nuclear power expansion and enable private sector participation.
- BARC is developing indigenous SMRs such as:
 - BSMR-200 – 220 MWe
 - SMR-55 – 55 MWe
 - HTGCR – up to 5 MWth for hydrogen production
- AERB (Atomic Energy Regulatory Board): India's nuclear regulatory authority responsible for ensuring the safety of nuclear facilities and radiation practices.
- With the proposed large-scale expansion of nuclear power and private-sector participation, AERB's role as the statutory independent nuclear regulatory authority becomes important for ensuring nuclear and radiation safety.
- Nuclear waste management continues under the Atomic Energy (Safe Disposal of Radioactive Wastes) Rules, 1987.

- **Small Modular Reactors (SMRs):** Compact, factory-manufactured nuclear reactors with lower power output than conventional reactors, enabling scalable, safer, and flexible deployment.
- SMRs have smaller power capacity and modular/factory-based construction, whereas conventional reactors are larger, higher-capacity and generally built as large, site-specific projects.
- **BSMR-200:** An indigenous 220 MWe Pressurized Water Reactor (PWR)-based Small Modular Reactor being developed by BARC for modular nuclear power generation.
- **SMR-55:** An indigenous 55 MWe Pressurized Water Reactor (PWR)-based Small Modular Reactor designed for smaller-scale and flexible nuclear power deployment.
- **HTGCR (High Temperature Gas Cooled Reactor):** A high-temperature reactor (up to 5 MWth) being developed by BARC as a nuclear heat source for hydrogen production through thermochemical processes.

TRADITIONAL KNOWLEDGE DIGITAL LIBRARY

Why in news?

The Council of Scientific and Industrial Research (CSIR) and IP Australia have entered into an Agreement on access to CSIR's Traditional Knowledge Digital Library (CSIR-TKDL) during the 3rd India-Australia Annual Summit held in Melbourne, Australia, on 9 July 2026.

About

The Traditional Knowledge Digital Library (CSIR-TKDL), established in 2001 by the Government of India through a collaborative initiative of the Council of Scientific and Industrial Research (CSIR) and the Ministry of AYUSH, is the world's first database dedicated to the defensive protection of traditional knowledge.

Key Features

- Developed by **CSIR** with support from the **Ministry of AYUSH**.
- Documents traditional knowledge from **Ayurveda, Siddha, Unani, Sowa Rigpa and Yoga**.
- Converts knowledge from **Sanskrit, Tamil, Arabic, Persian and other classical languages** into **English, German, French, Japanese and Spanish**.
- Uses the **Traditional Knowledge Resource Classification (TKRC)** system for systematic indexing.
- Provides access to **international patent offices** to prevent the grant of patents based on existing traditional knowledge.
- Acts as a defensive mechanism against **biopiracy and misappropriation of indigenous knowledge**.

ASPIRE-SHAKTI

Why in News?

CSIR organised “**ASPIRE-SHAKTI: Celebrating Women in STEM & Initiating Project Review Sessions**” at **Anusandhan Bhawan, New Delhi**, and released the **CSIR-ASPIRE Compendium** highlighting the achievements of women researchers.

About

- **ASPIRE-SHAKTI** is an initiative of the **Council of Scientific and Industrial Research (CSIR)** implemented through **CSIR-Human Resource Development Group (CSIR-HRDG)** to support and recognise women researchers in **STEM**.
- It is linked to the **CSIR-ASPIRE Research Scheme**, a dedicated programme launched on **International Women’s Day 2023**.

Key Features of the ASPIRE-SHAKTI Scheme

- Implemented by **CSIR-HRDG** under the **Council of Scientific and Industrial Research (CSIR)**.
- Provides **competitive research grants exclusively for women scientists and researchers**.
- Supports women researchers as **independent Principal Investigators (PIs)**.
- Covers **Life Sciences, Chemical Sciences, Physical Sciences, Engineering Sciences, and Interdisciplinary / Transdisciplinary Sciences**.
- Encourages **women-led innovative and translational research projects**.
- Includes **project review, mentoring, networking, and professional support mechanisms**.

SEMICON 2.0

Why in News?

The **Union Cabinet** approved **Semicon 2.0** with an outlay of **₹1,27,500 crore** to build an **end-to-end semiconductor ecosystem**, from chip design to advanced packaging, and strengthen India as a global semiconductor manufacturing hub.

About Semicon 2.0

- Builds on the **India Semiconductor Mission (ISM) 1.0**, launched in **2021**, and shifts the focus from **ecosystem creation to ecosystem deepening**.
- Aims to strengthen the **entire semiconductor value chain**, including design, fabrication, equipment, materials, packaging, R&D and skilled manpower.
- Targets advanced semiconductor technologies, including **3-nanometre and 2-nanometre nodes**, and aims for a

domestic semiconductor market of **USD 200 billion by 2035**.

- India's first semiconductor fab is expected by **2028**.
- **12 semiconductor projects** have been approved under ISM 1.0 across six States, involving over **₹1.64 lakh crore**.

Six Pillars of Semicon 2.0

- **Design of Chips:** Supports semiconductor IP and design start-ups to strengthen India's **fabless design ecosystem**.
- **Machines & Materials:** Promotes domestic production and R&D in **semiconductor equipment, specialty chemicals, industrial gases and critical materials**.
- **More Fabs:** Supports **silicon, compound semiconductor, discrete component and display fabs**.
- **ATMP/OSAT:** Expands **Assembly, Testing, Marking and Packaging (ATMP)** and **Outsourced Semiconductor Assembly and Test (OSAT)** capabilities.
- **Research & Development:** Promotes global research collaboration and frontier technologies such as **AI-native chip design**.
- **Talent Development:** Builds industry-ready skills; **315 universities** use advanced **Electronic Design Automation (EDA)** tools to train around **68,000 students**.

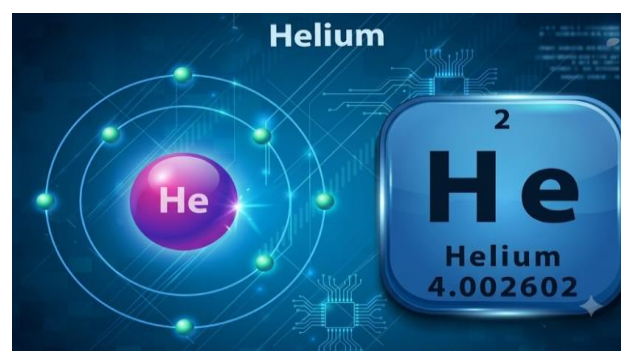
India Semiconductor Mission (ISM) 1.0

- Launched in **2021** under **MeitY** with an outlay of **₹76,000 crore**.
- Aimed to establish a **comprehensive semiconductor and display manufacturing ecosystem** in India.
- Supported **semiconductor fabs, display fabs, compound semiconductors, ATMP/OSAT facilities and chip design**.
- Provided **up to 50% fiscal support** for eligible semiconductor projects.
- Focused on **building India's semiconductor manufacturing base and reducing dependence on imports**.

CHINA'S HELIUM EXPORT BAN

Why in News?

China imposed a **temporary and immediate ban on helium exports**, raising concerns over global supplies of this critical resource, particularly for **semiconductors, healthcare, quantum technology and scientific research**.



Helium (He)

- Helium is the **second-lightest element** after hydrogen and the first element of the **noble gas group**.
- It is **colourless, odourless, non-toxic, non-flammable and chemically inert**.
- It has the **lowest boiling point of any element: -269°C (4.2 K)**, making it highly valuable for cryogenic applications.
- Helium is a **non-renewable resource**, formed on earth mainly through the

radioactive decay of **uranium and thorium** over millions of years.

- It accumulates in **natural gas reservoirs** and is commercially extracted along with natural gas when helium concentration is sufficiently high.

Uses

- **MRI machines:** Cooling superconducting magnets.
- **Semiconductors:** Cooling and providing controlled atmospheres during chip manufacturing.
- **Quantum computing:** Achieving ultra-low temperatures required for quantum processors.
- **Aerospace:** Pressurising rocket fuel tanks and supporting space missions.
- **Optical fibre:** Cooling molten glass during fibre production.
- **Leak detection:** Detecting extremely small leaks because of its small atomic size.
- **Balloons and airships:** Used as a safe lifting gas.

Global Supply Chain

- Global helium production is concentrated in the **USA, Qatar and Russia**, with **Canada and Algeria** also being important suppliers.
- China produces only about **1.6% of global helium** but imports more than **80% of its domestic requirement**.
- India is **100% import-dependent**, with **over 50% of its imports traditionally sourced from Qatar**.
- Helium supply is vulnerable to **geopolitical disruptions, transport bottlenecks and limited production sources**.

India's Domestic Potential

- **Bakreshwar Thermal Springs, West Bengal:** Gases contain about **1.4% helium**, and a pilot plant has been established by the **Variable Energy Cyclotron Centre (VECC)** to capture and purify helium.
- **Monazite sands of Kerala:** Contain helium trapped through the radioactive decay of **thorium and uranium**, though commercial extraction is challenging.
- **Oil and natural gas basins:** ONGC is mapping natural gas fields for possible helium resources.

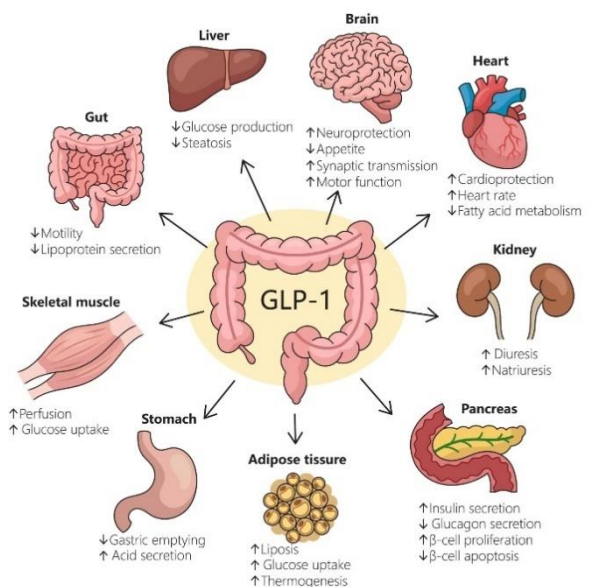
BIOTECHNOLOGY

GLP-1 DRUGS: EFFECTS BEYOND WEIGHT LOSS

Why in News?

Medical experts highlighted the broader physiological effects of GLP-1 drugs, including changes to skin, hair, and nail health.

About



- **GLP-1 (Glucagon-Like Peptide-1)** is an **incretin hormone** naturally released by the intestine after food intake.
- It stimulates **glucose-dependent insulin secretion**, suppresses excess **glucagon**, slows **gastric emptying** and reduces appetite.
- **GLP-1 receptor agonists (GLP-1RAs)** are medicines that mimic GLP-1. Examples include **semaglutide, liraglutide and dulaglutide**.
- They are mainly used for **Type-2 diabetes and chronic weight management**.
- GLP-1 is primarily secreted by **L-cells of the intestine** after food intake and acts on multiple organs, including the **pancreas and brain**.
- Its insulin-stimulating action is **glucose-dependent**, so the risk of hypoglycaemia is relatively low when GLP-1-based medicines are used without insulin or certain other glucose-lowering drugs.
- GLP-1 receptor agonists can provide benefits **beyond glucose control**, including reduction in **major cardiovascular events** in appropriate high-risk patients.

Recent Findings

- **Hair loss:** Recent 2026 reviews found an association between GLP-1 therapies—particularly **semaglutide and tirzepatide**—and hair shedding. **Telogen effluvium** is commonly reported, potentially linked to rapid weight loss and nutritional changes.
- **Skin:** GLP-1 medicines may improve some inflammatory skin conditions such as **psoriasis and hidradenitis suppurativa**, though evidence is still emerging.
- **Skin appearance:** Rapid weight loss can lead to **facial volume loss, loose skin and premature-looking skin changes**.
- **Nails:** Significant weight loss may result in **slower nail growth and brittle nails**, potentially due to nutritional changes.
- **Important caveat:** Current evidence does **not conclusively establish that GLP-1 drugs directly cause these effects**; rapid weight loss and associated metabolic/nutritional changes may be major contributors.

PROTEIN BIOSENSORS

Why in News?

Recent developments in **protein biosensor technology** have highlighted their potential to **rapidly detect disease-related proteins and significantly reduce the response time during medical emergencies such as sepsis, heart attacks, and severe infections**.

About

A **protein biosensor** is a device that combines a **biological recognition element** (such as an **antibody, aptamer, or enzyme**) with a **transducer** that converts the biological interaction into an **electrical, optical, or measurable signal**. It detects **specific proteins (biomarkers)** present in blood, saliva, or other body fluids with **high sensitivity and rapid response**.

Key Highlights

Conventional laboratory investigations for detecting disease biomarkers may require **several hours or even days** to produce results, whereas protein **biosensors** can provide rapid or near **real-time detection**. This is particularly important for conditions where **early diagnosis saves lives**, including:

- **Sepsis**
- **Heart attack (cardiac biomarkers)**
- **Severe bacterial infections**
- **Stroke-related biomarkers**

The use of **aptamers, nanomaterials, and miniaturized point-of-care devices** that could allow **portable bedside testing**, especially useful in **rural and emergency healthcare settings**.

- **Biosensor:** Device that detects a biological molecule and converts it into a measurable signal.
- **Biomarker:** A measurable biological substance indicating a disease or physiological condition.
- **Aptamers:** Short synthetic DNA or RNA molecules that bind specifically to target proteins.
- **Point-of-Care (POC) diagnostics:** Medical testing performed near the patient instead of a central laboratory.

HPV MANDSAUR MODEL

Why in News?

The Government has launched a **nationwide HPV vaccination programme for adolescent girls**, while **Mandsaur district, Madhya Pradesh**, achieved **100% vaccination coverage within 40 days** through data-driven governance and community participation.

Human Papillomavirus (HPV)

- HPV is a common sexually transmitted infection (STI) comprising **100+ types**, most of which do not cause significant health problems.
- Persistent infection with **high-risk HPV types causes over 95% of cervical cancer cases** and can also cause other cancers.
- HPV is primarily transmitted through **direct skin-to-skin and sexual contact**.
- Most infections are **asymptomatic and naturally cleared by the immune system**, while persistent infections can cause precancerous lesions and cancers.

- Certain HPV types cause **genital warts** and are associated with cancers of the **anus, mouth and throat**.
- No specific treatment eradicates HPV infection; therefore, **vaccination is a key preventive measure**.
- HPV vaccination is most effective **before exposure to the virus**, particularly during adolescence.

Types of HPV Vaccines in India

- **Cervavac:** India's first **indigenously developed quadrivalent vaccine**, covering HPV types **6, 11, 16 and 18**.
- **Gardasil 4:** **Quadrivalent vaccine** covering HPV types **6, 11, 16 and 18**.
- **Gardasil 9:** **Nonavalent vaccine** covering nine types — **6, 11, 16, 18, 31, 33, 45, 52 and 58**.
- **Cervarix:** **Bivalent vaccine** covering HPV types **16 and 18**; newer quadrivalent and nonavalent vaccines are more widely used.



India bears nearly **one-fourth of the global cervical cancer burden**.

INFORMATION TECHNOLOGY

WHITE RABBIT TECHNOLOGY

Why in news?

The 'White Rabbit Technology'-based **Indian Standard Time (IST) Distribution Demonstration Network** was inaugurated by Union Minister **Prahalad Joshi** in **Bengaluru**, under the 'One Nation, One Time' initiative.

About the Technology

- **White Rabbit (WR):** A high-precision **Ethernet-based time-synchronization**

technology that provides **sub-nanosecond accuracy** over optical-fibre networks.

- It combines **Precision Time Protocol (PTP - IEEE 1588)** for precise clock synchronisation and **Synchronous Ethernet (SyncE)** for frequency synchronisation.
- It uses **optical-fibre communication and digital phase-detection techniques** for ultra-low-latency and highly accurate time transfer.
- It is designed for applications requiring **ultra-precise, reliable and deterministic network synchronisation**.

About "One Nation, One Time" Initiative

- Establishes a single, accurate, secure, and indigenous source of Indian Standard Time (IST) to ensure uniform timekeeping across all sectors in India.
- Provides uniform and traceable time synchronisation for critical infrastructure, including telecommunications, power grids, banking, defence, and transportation.
- Reduces dependence on foreign Global Navigation Satellite Systems (GNSS) such as GPS by enabling an indigenous and resilient time dissemination network.

WORLD AI CONFERENCE

Why in News?

The **World Artificial Intelligence Conference (WAIC) 2026** was held in **Shanghai, China**, from **17-20 July 2026**, along with the **High-Level Meeting on Global Governance of AI**, bringing together countries and global AI stakeholders.

About the Summit

WAIC is a major global platform for **AI technology, research, industry cooperation**

and **AI governance**. The 2026 edition focused on **global AI cooperation, responsible AI, technological innovation** and **AI's role in economic and social development**.

Key Highlights of WAIC 2026

- Theme: **"Intelligent Partners, Co-create the Future."**
- **WAICO** is an independent **intergovernmental organisation** for AI cooperation, capacity building, and shared governance in the **civilian domain**, headquartered in **Shanghai**.
- It is the **first permanent AI institution dedicated to the Global South**, with **29 founding member countries**, excluding India.
- China will provide **5,000 AI training opportunities**, establish AI cooperation centres with **ASEAN, AU, BRICS, SCO, League of Arab States, and CELAC**, and support **open-source AI, technology sharing, and AI infrastructure** over the next five years.
- Members following the **WAICO framework** will not be required to align their AI regulations with the **EU AI Act, OECD AI Principles, or G7 Hiroshima Process**.
- Combined **AI conference, global AI governance meeting and technology exhibition**.
- Focus on **global AI governance and international cooperation**.
- Exhibition showcased **3,000+ AI-related exhibits**.
- At the **2026 World Artificial Intelligence Conference (WAIC)** held in **Shanghai, China** announced the operational launch of the **World AI Cooperation Organization (WAICO)**.

PINS (POINT-IN-SPACE) INSTRUMENT APPROACH SYSTEM

Why in News?

India launched its first **PinS** procedure at **Kedarnath Helipad** and approved the first

private PinS at Undavalli Heliport, aimed at improving the safety, reliability and operational efficiency of helicopter services.

About PinS

- **PinS (Point-in-Space)** is an instrument flight procedure designed specifically for helicopters, allowing them to operate safely under **Instrument Flight Rules (IFR)** even where conventional airport runways and instrument-landing infrastructure are unavailable.
- It uses **GNSS (Global Navigation Satellite System)** and **Performance-Based Navigation (PBN)** technologies to provide **precise navigation guidance** for helicopter approaches to helipads.
- It is particularly useful in **hilly, remote and disaster-prone regions**, where conventional navigation aids and airport infrastructure may be limited.
- It improves safety during **poor visibility, fog, rain and cloud cover** and helps reduce the risk of **Controlled Flight Into Terrain (CFIT)** by providing accurate approach guidance.

NIDAR 2.0

Why in News?

MeitY, in partnership with the **Drone Federation India (DFI)**, launched **NIDAR 2.0 (2026–27)**, the second edition of the **National Innovation Challenge for Drone Application and Research**, under the **SwaYaan** initiative.

Key Features

- A **national-level innovation challenge for engineering students** focused on

developing **indigenous autonomous drone technologies**.

- Focuses on the **“brain” of drones**, including **avionics, processors, flight controllers and autopilot systems**, rather than merely assembling drones.
- **Drone Innovation Track:** Develops autonomous drones for **disaster response, medical supply delivery and GPS-denied indoor navigation**.
- **Component Innovation Track:** Requires teams to develop an **indigenous flight controller and autopilot system** using the **VEGA processor** and other indigenous electronic components.
- The **top 100 teams** will receive **VEGA processor development kits** to support drone prototype development, testing and validation.
- Promotes indigenous drone technologies for applications such as **disaster management, agriculture, logistics and infrastructure inspection**.

Aspect	NIDAR 1.0 (2025–26)	NIDAR 2.0 (2026–27)
Objective	Autonomous drones for real-world applications	Next-generation autonomous drones + indigenous electronics
Focus	Disaster management & precision agriculture	RescueSwarm, GPS-denied navigation & VEGA-based autopilot
Technology	Focus on drone applications	Focus on indigenous flight controllers, avionics & autopilot systems

Processor	Not a major component	VEGA processor developed by C-DAC
Key Difference	Application-oriented drone innovation	“Brain” of the drone + advanced autonomous capabilities
Prize Pool	₹40 lakh	₹65+ lakh

LONG-DURATION ENERGY STORAGE (LDES)

Why in News?

India recorded its **highest-ever electricity peak demand of 270.8 GW on 21 May 2026**, highlighting the need for energy storage systems capable of supplying electricity during prolonged periods of low renewable generation.

Long-Duration Energy Storage (LDES)

- **LDES** refers to energy-storage technologies capable of storing energy and discharging it as **electricity or thermal energy for 8 hours to several days, weeks or even seasons**.
- It helps **balance electricity supply and demand** and integrate variable renewable energy sources such as solar and wind.
- **Short-duration storage systems like lithium-ion batteries** generally provides discharge for **less than 8 hours** and is mainly used to manage intra-day fluctuations.

Major LDES Technologies

- **Pumped Hydroelectric Energy Storage (PHES):** Stores energy by pumping water to a higher reservoir and generates electricity by releasing it through turbines; efficiency is around **70–80%**.

- **Compressed-Air Energy Storage (CAES):** Stores energy by compressing air and releasing it later to generate electricity; efficiency is around **40–70%**.
- **Thermal Energy Storage:** Stores energy as **heat** and can provide long-duration storage; developed systems can offer discharge durations of around **200 hours**.
- **Hydrogen Storage:** Uses electricity to produce hydrogen, which can later be used as an energy source; it can provide discharge for up to **1,000 hours**, but has **low round-trip efficiency**.
- **Vanadium Flow Batteries:** Use liquid electrolytes and can provide around **10–24 hours** of storage with approximately **80–85% efficiency**.
- **Iron-Air Batteries:** An emerging storage technology that is still under development.

India's Storage Roadmap

- The **Long-Term National Resource Adequacy Plan 2026** envisages:
 - **80 GW of Battery Energy Storage Systems (BESS)** by FY 2035–36.
 - **94 GW of Pumped Hydroelectric Energy Storage (PHES)** by FY 2035–36.
- Planned storage provides about **4 hours for batteries** and **6 hours for PHES**, mainly suited to daily fluctuations.
- India has about **267 GW PHES potential**, with **100.8 GW planned by 2035–36**.

India's LDES Developments

- A **160-MWh carbon dioxide battery storage system** was launched at **NTPC Kudgi, Karnataka**, using the conversion of carbon dioxide between liquid and gaseous phases for energy storage.
- India inaugurated its first **MWh-scale vanadium redox flow battery**, a **3-MWh system** at **NTPC Greater Noida**.
- **PHEs** remains one of the most mature and commercially viable long-duration storage technologies in India.

SPACE

VIKRAM-1: CHARTING INDIA'S COSMIC FUTURE

Why in News?

Skyroot Aerospace's **Vikram-1** became India's **first privately developed orbital-class rocket** to successfully place payloads into **Low Earth Orbit (LEO)** during its maiden orbital mission.

About Vikram-1

- **Vikram-1** is an **orbital launch vehicle** developed by **Skyroot Aerospace**, a Hyderabad-based space-tech start-up and India's first space-sector unicorn.
- Named after **Dr. Vikram Sarabhai**, it is designed to launch **small satellites into LEO** for commercial and scientific missions.
- Its maiden orbital mission, **Mission Aagaman**, followed the **Vikram-S suborbital mission (2022)**.

Key Features

- **Type:** Small Satellite Launch Vehicle (**SSLV-class private launch vehicle**).

- **Developer:** **Skyroot Aerospace**, Hyderabad.
- **Payload Capacity:** Can deploy up to **350 kg to LEO** and **260 kg to Sun-Synchronous Orbit (SSO)**.
- **Configuration:** **Three-stage rocket** with solid-fuel propulsion stages and a **hypergolic liquid upper stage** for precise orbital manoeuvres.
- **Technology:** Uses **carbon-fibre composite structures** and **3D-printed components** to reduce weight, manufacturing time and cost.
- **Engine:** Uses **Raman liquid-fuel engine** for orbital insertion and manoeuvres, along with **Kalam-series solid propulsion engines** in the lower stages.
- **Raman liquid-fuel engine:** A **3D-printed liquid-fuel engine** developed by Skyroot Aerospace for **orbital insertion and precise manoeuvres**.

MISSION DRISHTI (OPTOSAR SATELLITE)

Why in News?

Mission Drishti, India's largest privately developed Earth-observation satellite, recently lost communication after a geomagnetic solar storm during its early orbital phase, drawing attention to India's first OptoSAR satellite mission.

About the Mission

- **Mission Drishti** is an Earth-observation satellite developed by **GalaxEye**, a Bengaluru-based private space startup.
- It is described as the **world's first OptoSAR satellite**, combining **Synthetic Aperture Radar (SAR)** and **multispectral optical imaging** on a single platform.
- This integration enables **all-weather, day-and-night Earth observation**, making the

satellite useful for civilian and strategic applications.

What is Synthetic Aperture Radar (SAR)?

- **SAR is a radar-based remote-sensing technology** that uses microwave signals to create high-resolution images of the Earth's surface.
- Unlike optical sensors, SAR **does not depend on sunlight** and can penetrate **clouds, haze and smoke**, enabling imaging even at night and during adverse weather conditions.

Why integrate SAR with Optical Imaging?

- **SAR + Optical:** SAR provides **all-weather, day-and-night imaging**, while optical sensors provide **colour and multispectral information**.
- Combining both datasets allow **radar-based structural information + optical spectral information**, resulting in more comprehensive and reliable Earth observation.
- This is particularly useful for **disaster management, agriculture, environmental monitoring and defence/border surveillance**.

APPLICATIONS

1. *Disaster management – floods, cyclones, landslides, and forest fires.*
2. *Agriculture – crop health monitoring, irrigation assessment, and yield estimation.*
3. *Defence and border surveillance – persistent monitoring in all weather conditions.*
4. *Urban planning – infrastructure mapping and encroachment detection.*
5. *Environmental monitoring – forests, wetlands, coastal zones, and climate-related changes.*

HLVM 3

Why in News?

ISRO has completed key **ground tests and Crew Module Phase-1 checks** for **Gaganyaan's first uncrewed mission (G1)**. The mission will use **HLVM3**, the human-rated version of **LVM3**, to launch the **Gaganyaan Orbital Module** into **Low Earth Orbit** for testing crew safety, re-entry, and recovery systems.

About HLVM3

- **HLVM3 (Human Rated Launch Vehicle Mark-3)** is the **human-rated version of ISRO's LVM3**, developed specifically for the **Gaganyaan human spaceflight programme**.
- It is designed to place the **Gaganyaan Orbital Module** carrying astronauts into a **400-km Low Earth Orbit (LEO)** and support their safe return to Earth.

Key Features

- **Human-rated version of LVM3** designed for crewed space missions.
- Uses **solid, liquid and cryogenic propulsion stages**.
- Designed to carry the **Gaganyaan Orbital Module (Crew Module + Service Module)** into LEO.
- Equipped with a **Crew Escape System (CES)** to separate the crew module from the launch vehicle during an emergency.
- Incorporates **high reliability, redundancy and enhanced safety standards** required for human spaceflight.
- Before the crewed mission, **uncrewed missions** are being conducted to validate the launch vehicle, Crew Module, Crew Escape System and safe **re-entry and recovery**.

Gaganyaan Mission

Gaganyaan is India's **indigenous human spaceflight programme**, aimed at sending **three astronauts to a 400-km Low Earth Orbit (LEO) for three days** and safely returning them through **sea splashdown**.

PRAXIS MISSION

Why in News?

PRAXIS (Planetary Rings Autonomous EXploration with In-situ Sampling) was selected for NASA Innovative Advanced Concepts (NIAC) 2026 Phase-I funding to explore planetary rings using autonomous in-situ sampling technologies.

About

- **PRAXIS** stands for **Planetary Rings Autonomous EXploration with In-situ Sampling** and is a **NASA-conceptualized mission** designed to collect and study planetary ring particles directly.
- It will transform understanding of ring structure and origins for Saturn (dense), Uranus and Neptune (tenuous), rings of other objects such as Centaurs Chariklo and Chiron.
- It will consist of a bio-inspired robotic explorer driven by an AI model, and will be capable of directly sampling particles from planetary ring systems.
- It combines robotic autonomy for collision avoidance, precision sampling, and on-site analysis.
- It also uses technology inspired by sport casting to capture free-floating particles and miniaturised instruments for real-time scientific analysis.
- It currently plans to just graze the ring plane. Once it has picked a target particle, the spacecraft will perform a touch-and-

go sample of the particle's surface using a long deployable boom, staying at a safe distance from the moving ring particles.

- PRAXIS addresses a key Decadal priority by delivering the first direct observations of mm- to cm-scale ring particles.

Touch-and-go sampling means a spacecraft briefly touches the surface of an asteroid or other celestial body, collects a small sample, and then quickly moves away without landing permanently.

AXIOM-4 MISSION

Why in News?

Indian astronaut Shubhanshu Shukla carried out scientific experiments and outreach activities during the final phase of the Axiom-4 Mission aboard the International Space Station.

About

- Axiom Mission 4 (Ax-4) is the fourth private astronaut mission to the International Space Station (ISS), organized by Axiom Space in collaboration with NASA, SpaceX, and ISRO
- The mission was especially significant for India because it carried **Group Captain Shubhanshu Shukla of the Indian Air Force**, making him the **first Indian astronaut to visit the International Space Station** and the second Indian citizen to travel to space after Rakesh Sharma.
- **Mission Duration:** Crew will stay **14 days** on ISS, conducting 60 scientific experiments across 31 nations.
- **Research domains:** Space biology, material science, microgravity impact, cognition studies crop/seed growth in space.

- Marks India's return to crewed space missions after Rakesh Sharma's 1984 flight.

DEFENCE

INS MALVAN



Why in News?

The Indian Navy commissioned INS Malvan at Karwar on 22 July 2026. It is the second indigenously designed and built Mahe-class Anti-Submarine Warfare Shallow Water Craft (ASW-SWC).

About INS Malvan

- INS Malvan is an ASW-SWC designed for anti-submarine operations in shallow and coastal waters.
- It is the second of eight Mahe-class ASW-SWCs being indigenously built by Cochin Shipyard Limited (CSL).
- Mahe-class is an indigenous class of Anti-Submarine Warfare Shallow Water Craft (ASW-SWC) designed for underwater surveillance and anti-submarine operations in coastal and shallow waters.
- The class comprises eight ASW-SWCs being built by Cochin Shipyard Limited (CSL).
- INS Mahe is the first vessel, while INS Malvan is the second of the class.

- The vessels are equipped for **ASW, underwater surveillance, Low Intensity Maritime Operations (LIMO) and mine warfare**, strengthening coastal defence and maritime domain awareness.
- The class is designed to strengthen the Navy's ability to **detect and counter submarines in littoral waters**, where larger warships may have operational limitations.
- The ship has **over 80% indigenous content**, supporting **Aatmanirbhar Bharat** in naval shipbuilding.

Key Features

- Designed for **anti-submarine warfare and underwater surveillance** in shallow waters.
- Equipped with **sonar systems** for detecting and tracking underwater threats.
- Capable of employing **torpedoes and anti-submarine rockets** against submarines.
- Designed for **high manoeuvrability** and rapid response in coastal waters.
- Built by **Cochin Shipyard Limited (CSL)** with over **80% indigenous content**.

DIVING SUPPORT VESSELS (DSVs)



Diving Support Vessel (DSV)

A DSV is a specialised naval vessel designed to support **deep-sea diving, submarine rescue, underwater search, salvage and recovery operations**.

Why in News?

INS Nistar was commissioned as India's **first indigenously built DSV**, while **INS Nipun** was delivered to the Indian Navy as the **second indigenous DSV**, both built by **Hindustan Shipyard Limited (HSL)**, Visakhapatnam 30 July 2026.

INS Nistar - 1st Indigenous DSV

- **First indigenously built Diving Support Vessel** of the Indian Navy.
- Measures about **120 m** and has a displacement of around **10,000 tonnes**.
- Has **over 60 days of endurance** and can support **helicopter operations**.
- Equipped with a **15-tonne subsea crane** for deep-sea recovery.
- Functions as a **mother ship for Deep Submergence Rescue Vessels (DSRVs)**.
- Equipped with **Dynamic Positioning System (DPS)** for precise station-keeping and **Side-Scan SONAR** for seabed mapping.
- Supports **search, recovery, diving and salvage operations**.

INS Nipun - 2nd Indigenous DSV

- **Second indigenous Diving Support Vessel** of the Indian Navy.
- Built by **Hindustan Shipyard Limited (HSL)**, Visakhapatnam.
- Has **more than 80% indigenous content**.
- Designed for **deep-sea and saturation diving, submarine rescue, underwater salvage and recovery operations**.
- Equipped for **dynamic positioning and precise station-keeping** during underwater missions.
- Can serve as a **mother ship for remotely operated underwater vehicles and diving systems**.

PINAKA LONG RANGE GUIDED ROCKET

Why in news?

DRDO successfully conducted the flight-test of the **Pinaka Long Range Guided Rocket (LRGR)** at the **Integrated Test Range (ITR)**, Chandipur, Odisha, on 8 July 2026. The trial validated the rocket's **minimum operational range of 60 km** and demonstrated **high-precision guided strike capability** from an in-service Pinaka launcher.

About

Pinaka LRGR is the **long-range guided version of India's indigenous Pinaka Multi-Barrel Rocket Launcher (MBRL)** system developed by **DRDO** for the **Indian Army**. It represents a shift from traditional **area-saturation artillery** to **precision-guided long-range rocket artillery**, enabling accurate strikes against enemy artillery, command centres, logistics hubs, radars, and other high-value targets.

Key Features

- Developed by **DRDO**; designed by **ARDE** in collaboration with **HEMRL**, with support from **DRDL** and **Research Centre Imarat (RCI)**.
- Fired from the **existing in-service Pinaka launcher**, ensuring **compatibility with current launch infrastructure**.
- **Operational range:** about **60 km** (minimum validated range).
- **Extended strike capability:** up to **120 km** in the **LRGR-120 variant**.

LRGR-120: The 120 km-range precision-guided variant of the Pinaka Long Range Guided Rocket system, designed for deep-strike attacks on high-value enemy targets such as artillery positions, command centres, and logistics hubs.

- Equipped with **guidance, navigation, and control systems** for **high accuracy**.
- Capable of executing **planned in-flight manoeuvres** and following a **predicted precision trajectory**.
- Supports **shoot-and-scoot operations**, reducing vulnerability to enemy counter-battery fire.

MH-60 R SEAHAWK HELICOPTER



Why in News?

The Indian Navy received another MH-60R Seahawk helicopter from the United States in July 2026, the induction is part of India's procurement of 24 MH-60R helicopters under the India-US defence cooperation framework.

About MH-60R Seahawk

- The **MH-60R Seahawk** is an advanced **multi-role maritime helicopter** developed by **Sikorsky (Lockheed Martin)** for the **US Navy**.
- It is designed primarily for **Anti-Submarine Warfare (ASW)**, **Anti-Surface Warfare (ASuW)**, **surveillance** and **maritime security operations**.
- It can operate from **shore bases, aircraft carriers, destroyers, frigates** and other **major warships**.

- For India, it is intended to replace the ageing **Sea King helicopter fleet** and strengthen naval aviation capabilities.

Key Features

- Equipped with a **digital sensor suite** including **multi-mode maritime radar**, **Electronic Support Measures (ESM)**, **infrared/electro-optical sensors** and **tactical datalinks**.
- Uses **dipping sonar** for **submarine detection**.
- Integrates sensor data to provide a **surface and sub-surface threat picture**.
- Can carry **lightweight torpedoes, air-to-ground missiles, rockets** and **machine guns/onboard guns**.
- Supports **ASW, ASuW, surveillance** and **reconnaissance**, **Search and Rescue (SAR)**, **MEDEVAC** (Transporting injured or ill personnel) and **Vertical Replenishment (VERTREP)** for Transferring supplies and equipment by helicopter.
- Provides **network-centric maritime operations, target tracking** and **enhanced situational awareness**.

Indian Navy Induction

- **INAS 334:** First MH-60R squadron, commissioned at **INS Garuda, Kochi**, in **March 2024**.
- **INAS 335:** Second squadron, completing the Navy's operationalisation of the **MH-60R fleet**.
- The helicopters have been tested under **Indian Reference Atmosphere (IRA) conditions** for Indian operating environments.

Five-Year Sustainment Support

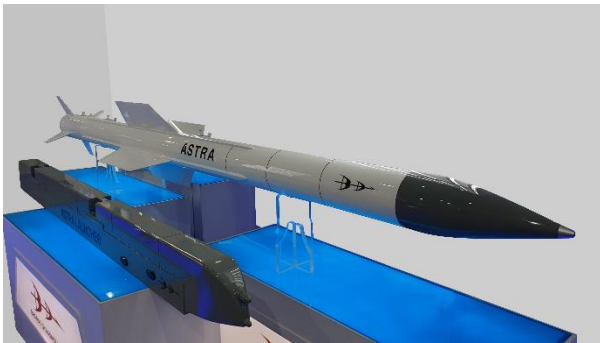
- India and the US have signed a **five-year sustainment support arrangement** to improve the operational readiness of the MH-60R fleet.
- It includes **spare parts, support equipment, training, technical assistance, repairs and component replenishment**.

ASTRA MISSILE

Why in News?

DRDO and the Indian Air Force successfully conducted trials of the indigenous **Astra Beyond Visual Range (BVR) air-to-air missile**.

About



- Astra Missile is an Indigenous, all-weather **Beyond Visual Range Air-to-Air Missile** developed by the **Defence Research and Development Organisation** with **Bharat Dynamics Limited**.
- It engages aerial targets beyond the **pilot's visual range**.
- It has a **range of 80–110 km**, altitude up to **20 km**, and speeds above **Mach 4.5**.
- It uses **inertial navigation**, mid-course guidance updates and an **active radio-frequency seeker** for terminal guidance.
- It is powered by a **smokeless solid-fuel rocket motor**.

- It is operational with the Su-30MKI; integration with Tejas Mk-1A and other fighters is underway.

Variants

- **Astra Mk-2**: 200 km range; dual-pulse solid rocket motor.
- **Astra Mk-3 (Gandiva)**: Under development; **Solid Fuel Ducted Ramjet** technology; range exceeding 350 km.

Indian Missile Systems

- **AKASH** — *Medium-Range Surface-to-Air Missile (SAM)*
- **NAG** — *Anti-Tank Guided Missile (ATGM)*
- **BRAHMOS** — *Supersonic Cruise Missile for anti-ship and land-attack roles*
- **AGNI** — *Ballistic Missile series with strategic strike capability*
- **PRALAY** — *Short-Range Ballistic Missile (SRBM)*
- **HELINA** — *Air-Launched Anti-Tank Guided Missile (ATGM)*
- **RUDRA** — *Air-to-Surface Missile for precision engagement*

INS MAHENDRAGIRI

Why in News?

INS Mahendragiri was commissioned into the Indian Navy's Eastern Fleet at Visakhapatnam on 11 July 2026, becoming the sixth indigenous stealth frigate under Project 17A (Nilgiri-class).

About INS Mahendragiri

INS Mahendragiri (F38) is an **indigenously designed and built stealth guided-missile frigate** of the **Project 17A (Nilgiri-class)** programme. It has been constructed by **Mazagon Dock Shipbuilders Limited (MDL)** and is based on the **Shivalik-class (Project 17)** design with

major improvements in **stealth, automation, sensors, weapons, and platform management systems**. The ship has around **75% indigenous content**, making it an important symbol of **Atmanirbhar Bharat in defence shipbuilding**.

Key Features

- **Class:** Project 17A / Nilgiri-class stealth frigate
- **Type:** Guided-missile stealth warship
- **Builder:** Mazagon Dock Shipbuilders Ltd. (MDL)
- **Length:** about **149 m**
- **Displacement:** about **6,670 tonnes**
- **Propulsion:** CODAG (Combined Diesel and Gas) configuration
- Equipped with **advanced stealth shaping** to reduce radar, acoustic, and infrared signatures.
- Fitted with **state-of-the-art weapons, sensors, and combat management systems**.
- Equipped with:
 - MF-STAR AESA radar
 - HUMSA-NG sonar
 - Barak-8 surface-to-air missile system
 - Anti-ship and land-attack missile capability
 - Electronic warfare and decoy systems
- Designed for **network-centric and multi-threat naval warfare**.

Applications

- **Air defence** against aircraft, drones, and missiles.
- **Anti-submarine warfare** using sonar and torpedoes.
- **Anti-surface warfare** against enemy warships.
- **Escort and protection** of carrier groups and convoys.

- **Long-range maritime surveillance and blue-water operations** in the Indian Ocean Region.

Project 17A (Nilgiri-class)

Project 17A is the Indian Navy's programme for building seven advanced indigenous stealth guided-missile frigates as a follow-on to the Project 17 Shivalik-class frigates. They feature enhanced stealth design, advanced sensors, integrated combat management systems, and improved automation, with about 75% indigenous content.

MISCELLANEOUS

INSULIN ICODEC (AWIQLI)

Why in News?

Insulin Icodec (Awiqli) is the **world's first once-weekly basal insulin**, providing an alternative to daily basal insulin injections.

About Insulin Icodec (Awiqli)

- Insulin Icodec is a **long-acting (basal) insulin analogue** designed for **once-weekly subcutaneous injection**.
- It provides **stable blood glucose control throughout the week**, thereby reducing the need for **daily insulin injections**.
- It is primarily indicated for the treatment of **diabetes mellitus requiring basal insulin therapy**.
- It **mimics the action of natural basal insulin**, facilitating **glucose uptake by cells** and reducing **glucose production by the liver**.
- It has a **prolonged half-life of about one week**, allowing **sustained insulin release and once-weekly dosing**.

- **Diabetes mellitus:** A chronic condition characterized by **high blood glucose levels** due to inadequate insulin production or action.
- **Basal insulin therapy:** Use of **long-acting insulin** to maintain stable blood glucose levels between meals and overnight
- **Subcutaneous injection:** Injection of a medicine into the fatty tissue beneath the skin.

INDIA'S 1ST GEOTHERMAL WELLS AT PUGA VALLEY

Why in News?

India commissioned its **first and deepest geothermal wells at Puga Valley, Ladakh**, to support the country's **clean-energy transition**.

Key facts

- Located at **Puga Valley, Ladakh**, at over **14,000 feet** altitude.
- Two geothermal wells have been drilled up to **1,000 metres** to access underground heat.
- **Hot geothermal fluids/heat from beneath the Earth's surface** can be brought up through wells and used to generate electricity.
- The project targets a **1 MW pilot geothermal power plant**, India's first demonstration-scale project.
- Temperatures of up to **135°C at 400 metres depth** have been recorded.
- The geothermal heat can provide **reliable 24×7 renewable power**, unlike intermittent sources such as solar and wind.
- Executed by **ONGC Energy Centre, Ladakh Administration and LAHDC Leh**.

INDIA'S FIRST 3D-PRINTED ARTIFICIAL REEFS

Why in News?

Tamil Nadu will deploy **India's first 3D-printed artificial reefs** under **Pradhan Mantri Matsya Sampada Yojana (PMMSY) Phase II** for marine habitat restoration.

About

- Pilot deployment is planned **off the Ramanathapuram coast**, where **six newly developed reef designs** will be tested.
- The project is being carried out with the **Visakhapatnam Regional Centre of ICAR-CMFRI**.
- The modules feature **crevices, folds and attachment surfaces**, increasing **porosity and surface area** for marine organisms.
- Scientists will assess their **durability and ecological performance** before wider deployment.
- The project forms part of a wider artificial reef initiative covering **213 sites in Tamil Nadu**.
- It is expected to **improve fish stocks, restore marine ecosystems and benefit traditional fishing communities**.

3D-Printed Artificial Reefs

- **3D-printed artificial reefs** are human-made underwater structures designed to **restore degraded marine habitats and support biodiversity**.
- Their customised structures provide **shelter, attachment and breeding spaces** for corals, sponges, algae, crustaceans, fish and other marine organisms.

PMMSY

- **Pradhan Mantri Matsya Sampada Yojana (PMMSY)** was launched in **September 2020** to bring a **Blue Revolution** by making India's fisheries sector sustainable, productive and inclusive.
- Approved investment: **₹20,050 crore** for **2020–21 to 2024–25**, later extended up to **2025–26**.
- The scheme aims to increase **fish production, fisheries exports, livelihoods and the participation of women** in the fisheries sector.

PARAQUAT DICHLORIDE

Why in News?

The Centre proposed a **nationwide ban on Paraquat Dichloride**, a widely used herbicide, citing serious **human and animal health risks**.

About:

- **Paraquat Dichloride** is a **non-selective herbicide** used to control weeds and grasses.
- It is highly toxic and can cause **severe poisoning, organ damage and fatalities**, with **no specific antidote** available.
- The Registration Committee noted that it is **banned or severely restricted in more than 70 countries** because of documented health effects and poisoning risks.

INTERNATIONAL RELATIONS

BEST EGMONT CASE AWARD (BECA)

Why in News?

FIU-India secured the runner-up position at the 2026 Best Egmont Case Award (BECA) for its exceptional investigation of a massive cross-border cyber fraud network.

About

- **Significance:** The **Best Egmont Case Award (BECA)** is one of the **highest recognitions within the Egmont Group**.
- **Egmont Group:** It is an international network comprising **over 180 Financial Intelligence Units (FIUs)** that provides a secure platform for sharing **financial intelligence, expertise and best practices**.
- **Purpose:** The award recognises outstanding operational cases demonstrating excellence in **financial intelligence, international cooperation, and combating money laundering and terrorist financing**.
- **Establishment:** The annual competition was established in **2011** by the **Training Working Group**, now known as the **Technical Assistance and Training Working Group (TATWG)**.
- **Objective:** It aims to encourage Egmont members to contribute significant cases to the Group's knowledge base on **money laundering and terrorist financing**.
- **Beneficiaries:** The award promotes knowledge-sharing among **FIUs and other stakeholders involved in Anti-Money Laundering/Combating the Financing of Terrorism (AML/CFT)**.

Financial Intelligence Unit – India (FIU-IND)

- **Establishment:** FIU-IND was established in **November 2004** under the **Ministry of Finance**.
- **Institutional Position:** It is an **independent body** that reports directly to the **Economic Intelligence Council (EIC)**, headed by the **Union Finance Minister**.
- **Composition:** FIU-IND is a **multidisciplinary body** with a sanctioned strength of **75 personnel**, drawn from various organisations, including the **CBDT, CBEC, RBI, SEBI, Department of Legal Affairs and intelligence agencies**.
- **Core Function:** It receives, processes and analyses information related to **suspicious financial transactions** and disseminates relevant financial intelligence to concerned agencies.
- **Coordination:** It facilitates coordination among **national and international intelligence, investigation and enforcement agencies** to strengthen efforts against **money laundering and terrorist financing**.

WHO- ICHI FRAMEWORK

Why in News?

The **Ministry of Ayush** organised a workshop on **WHO's International Classification of Health Interventions (ICHI)** to support integration of **Ayurveda, Siddha and Unani** interventions into global health systems.

About WHO

- **World Health Organization (WHO)** is the specialized agency of the **United Nations** responsible for international public health.
- It was established on **7 April 1948**.
- **7 April** is observed annually as **World Health Day**.
- Its Constitution was adopted on **22 July 1946** and came into force on **7 April 1948**.
- **Headquarters:** Geneva, Switzerland.

- **Members:** 194 Member States.
- It works through **6 regional offices** and country/field offices in **150+ locations**.

Objectives

- **Universal Health Coverage:** Promote access to quality healthcare for all without financial hardship.
- **Disease Control:** Prevent, control and eliminate diseases while promoting overall well-being.
- **Global Health Leadership:** Set health standards, guidelines and policies at the international level.
- **Technical Support:** Provide technical assistance and policy support to countries.
- **Global Cooperation:** Coordinate with governments, UN agencies and other stakeholders to address health challenges.

WHO – Working

- **Membership:** 194 Member States.
- **Headquarters:** Geneva, Switzerland.
- **World Health Assembly (WHA):** Supreme decision-making body; all Member States are represented.
- **Secretariat:** Implements policies and programmes approved by the WHA.
- **Director-General:** Heads the WHO Secretariat and oversees its functioning.
- **Regional Offices:** Six offices coordinate WHO activities across **Africa, Americas, South-East Asia, Europe, Eastern Mediterranean and Western Pacific**.
- **WHA Meeting:** Held annually to **set policies, approve the budget and appoint the Director-General**.
- **Funding:**
 - **Assessed Contributions:** Mandatory payments by Member States.
 - **Voluntary Contributions:** Additional funds from countries and other partners such as UN bodies, foundations and the private sector.

WHO – Role in India

- **Disease Control:** Supports India in controlling **TB, malaria, HIV/AIDS** and other communicable diseases.

- **Vaccination:** Supports efforts to address **vaccine hesitancy** and improve immunisation coverage.
- **Maternal & Child Health:** Provides technical support to reduce **maternal and child mortality**.
- **Non-Communicable Diseases:** Assists in prevention and management of **diabetes, cancer and cardiovascular diseases**.
- **Traditional Medicine:** Supports the safe and evidence-based use of traditional medicine through the **WHO Global Centre for Traditional Medicine at Jamnagar, Gujarat**.
- **Health Research:** Promotes **health research, evidence generation and technical cooperation**.
- **Digital Health:** Supports India in using **digital technologies** to strengthen healthcare and develop digital-health strategies.

International Classification of Health Interventions (ICHI)

- *It is developed by the **World Health Organization (WHO)**.*
- *It provides a **standardized system for classifying health interventions** across countries and health systems.*
- *It covers interventions related to **health conditions, prevention, diagnosis, treatment, rehabilitation and public health**.*
- *It supports **consistent recording and comparison of health-intervention data internationally**.*

NON PROLIFERATION OF NUCLEAR WEAPONS TREATY (NPT)

Why in News?

The **NPT** is in focus amid renewed discussions on **regional nuclear diplomacy, Middle Eastern civilian nuclear cooperation, and the unresolved outcomes of its recent review cycle**.

About

- The **NPT was adopted in 1968** and entered into force in **1970**.

- The **USA, UK and Russia** are its three depositary governments.
- It is one of the **most widely adhered-to arms-control treaties**.

Objectives

- Prevent the **spread of nuclear weapons and nuclear technology**.
- Promote **peaceful uses of nuclear energy**.
- Pursue **nuclear disarmament** through good-faith negotiations.

Three Pillars

- **Non-Proliferation:** Prevents the spread of nuclear weapons to additional states.
- **Disarmament:** Commits parties to pursue negotiations towards nuclear disarmament.
- **Peaceful Uses:** Recognises the right to peaceful nuclear energy and international cooperation.

Nuclear-Weapon States

- NPT recognises **five Nuclear-Weapon States (NWS): USA, Russia, UK, France and China**.
- These are states that **manufactured and exploded a nuclear weapon before 1 January 1967**.

Safeguards

- **IAEA safeguards** verify that non-nuclear-weapon states are not diverting nuclear material towards weapons.
- **Article III** provides the basis for safeguards and verification.

India & NPT

- **India is not a signatory** to the NPT.
- India considers the treaty **discriminatory** because it permanently divides countries into NWS and NNWS.
- Other non-signatories include **Pakistan, Israel and South Sudan**.

NON PERMANENT SEAT- UNSC

Why in News?

India has launched its campaign for a **non-permanent UNSC seat for the 2028-29 term**.

About UNSC

Composition

- The UNSC has **15 members: 5 permanent and 10 non-permanent members**.
- The **five permanent members (P5)** are **USA, UK, France, Russia and China**.
- The UNSC has the **primary responsibility for maintaining international peace and security**.
- The **P5 have veto power** on substantive matters.

Non-Permanent Members

- The **10 non-permanent members are elected by the UN General Assembly (UNGA)** for a **two-year term**.
- **Five members are elected every year** to replace those whose terms expire.
- A retiring member is **not immediately eligible for re-election**.
- Seats are allocated according to **equitable geographical representation: 5 African & Asian, 1 Eastern European, 2 Latin American & Caribbean, and 2 Western European & Others**.
- Election requires a **two-thirds majority of members present and voting** in the General Assembly.

India's 2028-29 Bid

- India is campaigning for a **non-permanent UNSC seat for 2028-29**.
- India last served as a **non-permanent member during 2021-22**.
- A non-permanent seat would provide India greater opportunity to contribute to **global peace, security and Global South priorities**.
- A non-permanent member **does not have veto power**; each UNSC member has **one vote**.

31ST CHIEF OF THE ARMY STAFF (COAS)

Why in News?

General Dhiraj Seth assumed charge as the 31st Chief of the Army Staff (COAS), succeeding General Upendra Dwivedi.

About COAS

- The **COAS is one of the three Service Chiefs:** COAS, Chief of Naval Staff (CNS) and Chief of Air Staff (CAS).
- The COAS functions under the **Ministry of Defence**.
- The **Chief of Defence Staff (CDS)** is a separate post and serves as the **Permanent Chairman of the Chiefs of Staff Committee**.

Constitutional & Legal Basis

- The **COAS is the professional head of the Indian Army** and exercises command over the Army.
- The office is governed primarily by the **Army Act, 1950** and related service regulations.
- The **President of India** is the **Supreme Commander of the Armed Forces**.

Appointment & Tenure

- The COAS is appointed by the **Appointments Committee of the Cabinet (ACC)**.
- The normal tenure is **three years or until the age of 62**, whichever is earlier.
- The COAS is a **four-star General**.

Role & Functions

- Advises the **Government on matters relating to the Indian Army**.
- Responsible for **operational preparedness, administration and training** of the Army.
- Oversees **modernisation and capability development** of the Indian Army.
- Plays a key role in **jointness, theatre commands and integration of the Armed Forces**.

OPERATION VAJRA

Why in News?

The Central Bureau of Narcotics (CBN) dismantled an interstate mephedrone manufacturing laboratory in Pune.

About operation vajra

- **Operation Vajra** is an operation led by the **Central Bureau of Narcotics (CBN)** against an

interstate synthetic drug trafficking syndicate.

- **Agency:** The operation was conducted by the **Preventive Branch of CBN, Madhya Pradesh**.
- **Legal Framework:** Arrests and seizures of **machinery, equipment and chemicals** were carried out under the **Narcotic Drugs and Psychotropic Substances Act, 1985**.
- **Objective:** It seeks to **dismantle organised drug trafficking networks** and contribute to the national goal of a **Drug-Free India (Nasha Mukh Bharat)**.

About Mephedrone (MD)

- **Mephedrone (4-methylmethcathinone or 4-MMC)** is a **synthetic psychoactive stimulant** belonging to the **cathinone and amphetamine chemical classes**.
- **Street Names:** It is commonly known as **"Meow Meow", "MD", "M-CAT", "Drone" and "White Magic"**.
- **Effects:** It acts as a **central nervous system stimulant** and may produce **euphoria, heightened alertness and psychological dependence**.
 - **Health Hazards:** Mephedrone can cause significant **physical and psychological health risks**.
 - **Short-term effects** include anxiety, paranoia, nausea and insomnia.
 - **Long-term use** may result in **cardiovascular complications, hallucinations, aggressive behaviour, addiction and psychological harm**.
- **Environmental Concern:** Mephedrone is a **xenobiotic** and can act as an **environmental contaminant**, raising concerns about its persistence and presence in environmental systems.
- **Legal Status in India:** Mephedrone is classified as a **psychotropic substance** and is prohibited under the **Narcotic Drugs and Psychotropic Substances Act, 1985**.
- **Dual-Use Precursors:** Its manufacture may involve **legitimate industrial**

chemicals, creating challenges in monitoring their diversion from **legal pharmaceutical and chemical supply chains** to illicit drug networks.

OPERATION SOUTHERN READINESS 26-2

Why in News?

The Indian Navy is set to host Operation Southern Readiness 26-2 at the Southern Naval Command, Kochi.

About

- **Operation Southern Readiness 26-2** is a **multinational maritime training exercise** hosted by the **Indian Navy** at the **Southern Naval Command, Kochi**.
- **Duration:** It is a **four-day training engagement** conducted in partnership with the **Combined Maritime Forces (CMF)**.
- **Framework:** The exercise is conducted under the aegis of **Combined Task Force 154 (CTF 154)**, the CMF's dedicated training task force, led by the Indian Navy.
- **Participants:** It brings together personnel from **CMF partner nations** for professional maritime-security training, practical exercises and exchange of best practices.
- **Combined Maritime Forces (CMF):** It is a **multinational maritime partnership involving more than 40 countries**, with the Indian Navy actively contributing to collaborative maritime-security initiatives.
- **Objective:** The exercise aims to strengthen **regional capacity building** and enhance **collective maritime security** through greater cooperation and interoperability among participating nations.
- **Training Components:** The programme combines **classroom instruction, simulator-based training and practical exercises**.
- **Key Areas:** Training covers **Maritime Law, Maritime Domain Awareness (MDA), information sharing, counter-narcotics,**

force protection, asymmetric threats and maritime uncrewed systems.

- **Practical Training:** Participants also receive training in **damage control, firefighting, maritime communications, survival at sea, boarding procedures** and hands-on operations aboard **Indian naval ships**.

OPERATION AMISTAD

Why in News?

India's HADR mission to Venezuela after the 2026 earthquakes concluded successfully, highlighting India's role as a **Global First Responder** in overseas disasters.

About Operation Amistad

- Amistad means **"Friendship"** in Spanish, symbolising India's solidarity with the people of Venezuela.
- The mission was launched after **7.2 and 7.5 magnitude earthquakes** caused widespread devastation in Venezuela.
- It was a **purely humanitarian HADR mission** providing emergency relief, advanced medical care, temporary field hospital support and assistance until local systems stabilised.
- The operation also **aimed to strengthen India-Venezuela humanitarian cooperation** and showcase India's overseas disaster-response capability.
- Two **Indian Air Force C-17 Globemaster III aircraft** transported a 41-member medical contingent from the Indian Army's 60 Para Field Hospital Unit.
- India **deployed two BHISHM Cubes (Bharat Health Initiative for Sahyog, Hita & Maitri)**, which are indigenously developed **modular portable field hospitals**.

INDIA'S MAJOR HADR OPERATIONS

Humanitarian Assistance and Disaster Relief at Home and Abroad

India stands as a First Responder in the region and beyond, delivering timely aid, saving lives and building resilience.

	OPERATION MAITRI (2015) Nepal	Rapid rescue and relief after the earthquake. \$2 BILLION commitment for reconstruction.	
	OPERATION DEVI SHAKTI (2021) Afghanistan	Evacuation of people and humanitarian assistance. 669 PEOPLE evacuated.	
	MISSION SAGAR (2020 ONWARDS) 15 Indian Ocean Countries	Indian Navy provided food, medical oxygen and relief materials during the COVID-19 pandemic. 15 COUNTRIES supported.	
	OPERATION SAMUDRA SETU (2020) Global	Repatriation of Indian nationals during the COVID-19 pandemic. 3,992 INDIANS repatriated by sea.	
	OPERATION GANGA (2022) Ukraine	Evacuation of Indian citizens during the conflict. 18,000+ INDIANS evacuated.	
	OPERATION DOST (2023) Türkiye & Syria	Deployed medical teams, field hospitals, rescue teams and relief material after devastating earthquakes. 135+ TONNES of relief material sent.	
	OPERATION KAVERI (2023) Sudan	Ensured safe evacuation of Indian nationals during civil conflict.	
	OPERATION BRAHMA (2025) Myanmar	Provided approximately 750 tonnes of humanitarian assistance and a field hospital for earthquake-hit Myanmar. ~750 TONNES of humanitarian assistance.	

EXERCISE PITCH BLACK

Why in News?

The **Indian Air Force (IAF)** is participating in **Exercise Pitch Black 2026**, a multinational air combat exercise hosted by **Australia** in its Northern Territory.

About

- Hosted by the **Royal Australian Air Force (RAAF)** in Australia's **Northern Territory** from **20 July to 7 August 2026**.
- It is a major **multinational air combat exercise** involving **19+ countries** and **100+ aircraft**.
- Participants include **India, Australia, USA, UK, Japan, France, Indonesia, Singapore, South Korea and Canada**, among other Indo-Pacific partners.
- Focuses on **air combat tactics, mission planning, interoperability** and **high-intensity operations**.

- Aims to enhance **operational interoperability, military cooperation and coordination** in complex air-warfare scenarios.
- Strengthens **India's defence partnerships and strategic engagement** in the **Indo-Pacific**.



Major India-Australia Exercises

- AUSTRA HIND** – Army.
- AUSINDEX** – Navy.
- Pitch Black** – Air Force.
- MALABAR** – Multilateral naval exercise involving **India, USA, Japan and Australia**.

EXERCISE RIMPAC

Why in News?

The **30th RIMPAC Exercise** was held from **24 June–31 July 2026** around the **Hawaiian Islands**.

About

- RIMPAC** is the **world's largest international maritime exercise**, hosted by the **U.S. Navy's Pacific Fleet** and conducted **biennially**.
- The exercise was **first held in 1971** and aims to improve **interoperability, collective maritime capabilities and cooperation** among participating countries.
- RIMPAC 2026** brought together around **30 countries**, along with naval ships, submarines, aircraft and military personnel for complex maritime operations.
- The **theme of RIMPAC 2026** was **"Partners: Integrated and Prepared."**
- Training included **anti-submarine warfare, air defence, missile proficiency, mine clearance, amphibious operations, gunnery and disaster-response activities**.
- India first participated in RIMPAC in 2014**, and its participation supports greater **maritime domain awareness, interoperability and cooperation** in the **Indo-Pacific**.

- In 2026, the Indian Navy's **P-8I** also assumed a significant role in **anti-submarine warfare**, highlighting India's growing operational capabilities in the maritime domain.

INDIA'S MAJOR MILITARY EXERCISES						
STRENGTHENING PARTNERSHIPS ★ ENHANCING INTEROPERABILITY ★ SECURING PEACE						
EXERCISE	YEAR (Latest)	TYPE	PARTICIPANTS	LOCATION	KEY FOCUS	SIGNIFICANCE
RIMPAC 2026	2026	Multilateral Maritime	~30 Countries (Hosted by USA)	Hawaiian Islands, Pacific Ocean	Maritime warfare, ASW, air defence, interoperability	Strengthens cooperation for a free, open and secure Indo-Pacific
MALABAR	2025	Multilateral Maritime	India, USA, Japan, Australia	Indo-Pacific Region	Maritime security, ASW, air defence, advanced operations	Enhances cooperation among like-minded navies in Indo-Pacific
VARUNA	2026	Bilateral Maritime	India - France	Indian Ocean Region	Maritime operations, ASW, interoperability	Strengthens strategic maritime partnership with France
KONKAN	2025	Bilateral Maritime	India - UK	Off the Coast (India/UK)	Maritime warfare, interoperability, seamanship	Boosts maritime cooperation with the United Kingdom
INDRA	2025	Ti-Service Exercise	India - Russia	India/Russia (Alternate)	Joint operations, counter-terrorism, humanitarian tasks	Strengthens long-standing defence partnership
AUSINDEX	2025	Bilateral Maritime	India - Australia	Australia	Maritime operations, ASW, interoperability	Enhances naval interoperability and mutual understanding
JIMEX	2025	Bilateral Maritime	India - Japan	India/Japan (Alternate)	Maritime security, communication, interoperability	Strengthens maritime cooperation with Japan
YUDH ABHYAS	2025	Bilateral Army Exercise	India - USA	India/USA (Alternate)	Joint land operations, interoperability, peacekeeping	Enhances military interoperability with the United States
DHARMA GUARDIAN	2025	Bilateral Army Exercise	India - Japan	India/Japan (Alternate)	Counter-terrorism, jungle warfare, joint operations	Promotes defence cooperation and mutual trust
GARUDA	2025	Bilateral Air Exercise	India - France	India/France (Alternate)	Air combat, missions, interoperability	Enhances cooperation between air forces
TARANG SHAKTI	2024	Multilateral Air Exercise	Multiple Countries (Hosted by India)	India	Multi-domain air operations, interoperability	Strengthens ties among participating air forces
MAITREE	2025	Bilateral Army Exercise	India - Thailand	India/Thailand (Alternate)	Counter-insurgency, jungle warfare, interoperability	Strengthens defence relations with Thailand
MITRA SHAKTI	2025	Bilateral Army Exercise	India - Sri Lanka	India/Sri Lanka (Alternate)	Counter-insurgency, joint operations	Enhances defence cooperation with Sri Lanka
SURYA KIRAN	2025	Bilateral Army Exercise	India - Nepal	India/Nepal (Alternate)	Jungle warfare, humanitarian assistance, disaster relief	Builds strong defence and people-to-people ties
SHINYU MAITRI	2025	Bilateral Air Exercise	India - Japan	India/Japan (Alternate)	Air operations, interoperability	Strengthens air force cooperation with Japan

P-8I Maritime Patrol Aircraft

- P-8I** is a long-range, multi-role maritime reconnaissance and anti-submarine warfare (ASW) aircraft.
- It is based on the Boeing 737-800 platform.
- Key roles:** Maritime surveillance, ASW, electronic warfare, search & rescue and strike missions, carry anti-ship missiles and torpedoes.
- Indian Navy:** Currently operates 12 P-8I aircraft; 6 more are planned.

INDIAN COAST GUARD POLICY REFORMS

Why in News?

The **Defence Minister** announced **gender-neutral induction reforms** and **simplified ex-gratia procedures** for the **Indian Coast Guard**.

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About

- The reforms were announced at **Kartavya Bhavan-2, New Delhi**, in the presence of the **Defence Secretary** and **Director General, ICG**.
- Gender-neutral induction:** Women officers will be eligible for both **Short Service Appointments (SSA)** and **Permanent Appointments (PA)** on par with men.
 - SSA for men:** Short Service Appointments will also be opened to **male candidates**.
 - Career progression:** Equal opportunities for career progression will be provided from the **initial training stage**.
 - Existing women officers:** PA women officers will be eligible for promotion, while eligible SSA women officers can opt for **conversion to Permanent Appointment**.
- Ex-gratia reform:** ICG personnel missing at sea while on duty can be declared '**presumed dead**' for the purpose of processing ex-gratia benefits.
 - Benefits to families:** The revised procedure will facilitate faster payment of **ex-gratia compensation and terminal benefits** to the **Next of Kin (NoK)**.
- The reforms seek to promote **gender equality, personnel welfare and administrative efficiency** in the ICG ahead of its **Golden Jubilee in 2027**.

Indian Coast Guard (ICG)

- Nodal Ministry:** Ministry of Defence.
- Legal Basis:** The ICG is constituted under the **Coast Guard Act, 1978** as an **armed force of the Union**.
- Key Functions:** Maritime law enforcement in India's **Exclusive Economic Zone (EEZ)**, **search and rescue**, marine-environment protection and coastal security.

PLACES IN NEWS

BLACK SEA

Why in News?

India condemned the attack on MV Omorfi in the Black Sea, which killed an Indian seafarer, and called for **safe maritime navigation**.

About

- The **Black Sea** is a large inland sea located between **southeastern Europe and western Asia**.
- It is a **marginal sea of the Atlantic Ocean** with an area of about **436,000 sq. km**.
- It is bordered by **Ukraine, Russia, Georgia, Turkey, Bulgaria and Romania**.
- The **Crimean Peninsula** projects into the Black Sea from the north.
- The **Bosporus Strait, Sea of Marmara and Dardanelles Strait** connect it to the **Mediterranean Sea and Atlantic Ocean**.
- The **Kerch Strait** connects the Black Sea with the **Sea of Azov**.
- Major rivers draining into it include the **Danube, Dnieper, Dniester, Southern Bug and Rioni**.
- The Black Sea has **lower salinity than the oceans** due to its restricted connection with the Mediterranean.
- **Russia has the longest coastline**, followed by **Turkey and Ukraine**.
- It is an important **maritime trade route connecting Eastern Europe with global markets**.



GULF OF ADEN

Why in News?

INS Trikan foiled a **piracy attempt** on the **Golden Arsenal** in the **Gulf of Aden**, while three other ships remain under pirate captivity.

Gulf of Aden

- The **Gulf of Aden** is an inlet of the **Indian Ocean** located between **Yemen and Somalia**.
- It connects the **Arabian Sea to the Red Sea** through the **Bab-el-Mandeb Strait**.
- It is a major **Asia-Europe maritime trade route** through the **Suez Canal**.
- It is strategically important for **global shipping and energy transportation**.

Refer APRIL digest, to know more about INS TRIKAND



SABANG PORT

Why in News?

India and Indonesia agreed to **jointly develop Sabang Port** to strengthen maritime cooperation and connectivity.

About

- **Sabang Port** is a deep-sea port located on **Weh Island in Aceh Province, Indonesia**, near the northern entrance of the **Strait of Malacca**.

- It is strategically located close to **India's Andaman and Nicobar Islands** and the **Great Nicobar Island transshipment terminal**.
- The port provides access to one of the world's busiest maritime routes, connecting the **Indian Ocean with the South China Sea and Pacific Ocean**.
- The **Strait of Malacca** is a major route for global trade and energy shipments, including crude oil and LNG.
- **India and Indonesia agreed to develop Sabang Port in 2018**, strengthening their maritime partnership.



IMPORTANT CHOKEPOINTS

	• Strait of Malacca: Connects the Indian Ocean and Pacific Ocean; one of the world's busiest maritime trade routes.	
	• Suez Canal: Provides the shortest sea route between Europe and Asia.	
	• Panama Canal: Connects the Atlantic Ocean and Pacific Ocean.	
	• Strait of Hormuz: Main maritime outlet for oil exports from the Persian Gulf.	
	• Bab-el-Mandeb: Connects the Red Sea with the Gulf of Aden, linking the Suez Canal to the Indian Ocean.	
	• Bosphorus: Connects the Black Sea with the Sea of Marmara, providing access to the Mediterranean Sea.	
	• Turkish Straits: Comprising the Bosphorus and Dardanelles, they connect the Black Sea to global maritime trade routes.	
	• Danish Straits: Connect the Baltic Sea with the North Sea, serving as a key gateway for Northern European trade.	

FALKLAND ISLANDS

Why in News?

The **Falkland Islands dispute** came into focus after Argentina displayed a banner claiming the islands as Argentine territory following its **2026 FIFA World Cup semi-final victory over England**.

About Falkland Islands

- **Location:** South Atlantic Ocean, off the southern coast of South America.
- Also known as the **Malvinas Islands**.
- It is a **self-governing British Overseas Territory**.
- **Capital:** Stanley, located on East Falkland.
- **Main islands:** East Falkland and West Falkland, along with 776 smaller islands.
- The two main islands are separated by the **Falkland Sound/Strait**.
- Located in both the **Southern and Western Hemispheres**.
- **Sovereignty dispute:** Both the **UK and Argentina claim sovereignty** over the islands.
- **Falklands War (1982):** Argentina and the UK fought a war over the islands; the UK retained control.
- **UN status:** The Falklands are listed by the UN as a **Non-Self-Governing Territory**.



SCHEMES

SMILE SCHEME

Why in News?

Recently, the government reported that **more than 10,200 persons engaged in begging have been rehabilitated across 216 cities**, against a target of 35,000 persons by 2030-31.

About SMILE Scheme

- **SMILE (Support for Marginalised Individuals for Livelihood and Enterprise)** is a **Central Sector Scheme** of the **Ministry of Social Justice and Empowerment**, launched in **2022**.
- It aims to provide **rehabilitation, welfare, skill development and livelihood support** to marginalised and vulnerable persons.
- The scheme has two major components:
 - **SMILE-75 Initiative** – rehabilitation of **persons engaged in begging**.
 - **Support for Transgender Persons** – welfare, rehabilitation and livelihood support for **transgender persons**.
- It provides support through **skill development, counselling, education, healthcare, rehabilitation and livelihood opportunities**.
- The objective is to promote **dignity, self-reliance and social inclusion** of beneficiaries.

SVAMITVA SCHEME

Why in News?

As of **21 July 2026**, drone surveys had been completed in **3.30 lakh villages**, and **3.24 crore Property Cards** had been prepared for **1.97 lakh villages** under the SVAMITVA Scheme.

About

- **SVAMITVA** stands for **Survey of Villages Abadi and Mapping with Improved Technology in Village Areas**.
- It is a **Central Sector Scheme** of the **Ministry of Panchayati Raj**.
- The scheme was **launched on 24 April 2020**, on **National Panchayati Raj Day**.
- It aims to provide **Record of Rights (RoR) / Property Cards** to property owners in **rural inhabited (Abadi) areas**, thereby providing **clear ownership records and strengthening Gram Panchayat-level planning and governance**.
- Under the scheme, **drone technology and CORS (Continuously Operating Reference Stations)** are used to conduct accurate surveys and prepare digital maps of village inhabited areas.
- After **ground verification and settlement of objections/disputes by State authorities**, **Property Cards** are issued to the rightful property owners, helping in **reducing property-related disputes and improving property tax collection by Gram Panchayats**.
- **Property Cards** enable owners to use their property as a **financial asset for obtaining bank loans**.
- The **State/UT governments** are responsible for implementing the scheme, while the **Ministry of Panchayati Raj** provides central coordination and support.
- **Survey of India** is the technology implementation partner for drone surveys and mapping.

NAMASTE SCHEME

Why in News?

The government recently reported that **89,915 Sewer and Septic Tank Workers have been validated** and **87,037 PPE kits have been**

distributed under the **NAMASTE Scheme** to promote safe and mechanised sanitation work.

About

- **NAMASTE (National Action for Mechanised Sanitation Ecosystem)** is a scheme that aims to ensure the **safety, dignity and social security of sanitation workers** and promote mechanised sanitation.
- It is **jointly implemented by the Ministry of Social Justice and Empowerment (MoSJE) and the Ministry of Housing and Urban Affairs (MoHUA)**.
- It seeks to eliminate **hazardous manual cleaning of sewers and septic tanks** through mechanisation, skill development and welfare measures.
- The scheme is implemented by the **National Safai Karmacharis Finance & Development Corporation (NSKFDC)** under the MoSJE.
- It promotes **Personal Protective Equipment (PPE)**, safety devices, skilled workers and **Emergency Response Sanitation Units (ERSUs)**.
- It also promotes **Self-Help Groups (SHGs)**, **entrepreneurship and livelihood opportunities** for sanitation workers.
- Its key goals include **zero fatalities in sanitation work** and eliminating workers' **direct contact with human faecal matter**.

PRIME MINISTER DHAN-DHAANYA KRISHI YOJANA (DDKY)

Why in News?

The government recently **explained the selection methodology for the 100 districts** under the **PM Dhan-Dhaanya Krishi Yojana (PM-DDKY)**.

About

- The **Prime Minister Dhan-Dhaanya Krishi Yojana (PMDDKY)** is implemented by the **Ministry of Agriculture and Farmers Welfare, Government of India**.
- The scheme was launched in **2025-26** to improve agricultural productivity and development in **100 selected districts** across the country.
- It focuses on improving **agricultural productivity, cropping intensity, agricultural credit, irrigation, post-harvest infrastructure and market linkages**.
- The scheme follows a **convergence-based approach**, bringing together relevant existing government schemes and programmes for coordinated implementation.
- The **100 districts have been selected based on three indicators**:
 - **Low agricultural productivity**
 - **Low cropping intensity**
 - **Low agricultural credit disbursement**
- District selection uses **published data available in the public domain** for these three indicators.
- The number of districts allocated to each State is based on **net cropped area and number of operational holdings**.
- **Every State has at least one district** covered under PM-DDKY.
- States may identify **additional districts** using the same selection framework through existing administrative mechanisms and available scheme resources.

PRADHAN MANTRI SURAKSHIT MATRITVA ABHIYAN (PMSMA)

Why in News?

The **Ministry of Health and Family Welfare** released an update on the **Pradhan Mantri Surakshit Matritva Abhiyan (PMSMA)**, highlighting its progress since 2016.

About

- The **Pradhan Mantri Surakshit Matritva Abhiyan (PMSMA)** was launched in **2016** by the **Ministry of Health and Family Welfare** to provide **free, assured and quality antenatal care (ANC)** to pregnant women.
- Under PMSMA, **free antenatal check-ups are provided on the 9th day of every month** at designated public health facilities, along with **medicines, laboratory tests and ultrasound**.
- **Group counselling** is provided on **diet, sleep, regular check-ups, institutional delivery, breastfeeding and supplementary nutrition**.
- The programme focuses on the **early identification and management of High-Risk Pregnancies (HRPs)**.
- Under **Extended PMSMA (e-PMSMA)**, identified **HRPs are tracked by name until 45 days after delivery** and receive **three additional antenatal check-ups** to monitor the mother and baby.
- **SMS alerts** are sent to beneficiaries and **ASHAs for HRP registration, appointments and follow-up**, while **HRPs are linked to First Referral Units (FRUs)** for timely treatment of complications.
- **Transport incentives** are provided to **HRPs for attending follow-up ANC visits**, and **additional PMSMA sessions** are conducted beyond the **9th day** for continuity of care.
- **Private doctors and retired specialists** are encouraged to provide voluntary services. The **'I PledgeFor9' Achievers Awards** recognise voluntary contributions by private doctors, with professional organisations such as **FOGSI and IMA** participating.

- A **Centralised PMSMA Portal** is used for **registering private practitioners and name-based tracking and monitoring of high-risk pregnancies**.
- India's **Maternal Mortality Ratio (MMR)** declined from **130 to 87 per lakh live births** between **SRS 2014-16 and SRS 2022-24**.
- **First-trimester antenatal registration** increased from **58.6% to 76.2%**, women receiving **four or more ANC visits** increased from **51.2% to 65.2%**, and **institutional deliveries** increased from **78.9% to 90.6%** between **NFHS-4 and NFHS-6**.

VIKSIT BHARAT – GUARANTEE FOR ROZGAR AND AJEEVIKA MISSION (GRAMIN) [VB-G RAM G]

Why in News?

On July 1, 2026, the Centre released statutory draft rules under the revamped VB-G RAM G framework, fixing a national floor wage rate of ₹300 per day to enhance rural livelihood security.

About

- VB-G RAM G **replaces the 20-year-old MGNREGA**, shifting from a safety-net model to outcome-oriented asset creation aligned with Viksit Bharat @2047.
- It is under the **aegis of Ministry of Rural Development (MoRD)**, Government of India.
- It aims to **guarantee statutory wage employment** to rural households while simultaneously building durable, climate-resilient, and income-generating community infrastructure.
- It also aims to **curb distress seasonal migration** by strengthening local non-farm and green manufacturing ecosystems.
- It tries to integrate decentralized rural labor demand with macro-level

infrastructure priorities through technology-driven planning.

Key Features

- **Enhanced Workday Guarantee:** Statutory wage employment increased from **100 days to 125 days** per rural household per financial year.
- **National Floor Wage & Direct Benefit Transfer:** Standardized wage floors (e.g., minimum ₹300/day threshold) with 100% direct bank payouts (DBT) via Aadhaar-enabled systems to prevent leakage.
- **Agricultural Pause Provision:** States can declare an aggregated pause of up to 60 days during peak sowing and harvesting seasons to ensure farm labor availability without suppressing agricultural wages.
- **4-Pillar Asset Focus:** Mandates that works must fall strictly under four priority areas:
 - Water security & conservation
 - Core rural infrastructure
 - Livelihood-supporting assets (storage, green units)
 - Climate risk mitigation works
- **Funding Architecture:** Implemented as a **Centrally Sponsored Scheme** with a 60:40 Centre-State cost-sharing ratio (90:10 for North-Eastern and Himalayan States/UTs).
- **Bottom-Up Decentralized Planning:** Projects are **sourced via Viksit Gram Panchayat Plans (VGPPs)**, approved by Gram Sabhas, and mapped dynamically with PM Gati Shakti GIS layers.
- **Enforceable Unemployment Allowance:** Mandates payment of an unemployment allowance **within 15 days if work is not provided** upon demand.



DAANVEER INITIATIVE

Why in News?

The **DAANVEER Initiative** was launched on **29 July 2026** by the Ministry of Panchayati Raj to strengthen the digital infrastructure of Gram Panchayats.

About

- DAANVEER is a **citizen-participation initiative** to **strengthen the digital infrastructure** of Gram Panchayats.
- It **enables citizens** and organisations to **voluntarily donate essential digital equipment** such as computers, printers and UPS systems **to Gram Panchayats**.

Aim

- It aims to **bridge the digital infrastructure gap** in Gram Panchayats.
- It tries to **promote citizen participation and voluntarism** in grassroots development.
- It also tries to **build digitally empowered and self-reliant Panchayats**.
- It is under the **aegis of the Ministry of Panchayati Raj**.
- It has been **developed with the National Informatics Centre (NIC)** and DigiHaat.

Key Features

- **Meri Panchayat App:** Citizens can **register as donors** and select the Panchayat they wish to support.
- **Digital equipment donation:** Packages can include computer + printer + UPS.
- **Direct delivery:** Equipment is delivered to the official address of the Gram Panchayat.
- **End-to-end tracking:** The system facilitates communication between the donor and Panchayat Secretary through notifications, covering payment → delivery → installation → acknowledgement.
- **Diaspora participation:** **Indians living away** from their native villages can to their Panchayats.

DAANVEER converts citizens from passive beneficiaries into active partners in grassroots governance.

CAPACITIES PROGRAM

Why in News?

In **July 2026**, an event titled “**Scaling Urban Climate Resilience: The CapaCITIES Legacy and Way Forward**” was held in New Delhi to mark the progress made through the programme over a decade.

About

- The programme seeks to help cities integrate **climate change mitigation and adaptation** into urban planning and governance.
- It was launched in 2016.
- It is funded by the Swiss **Agency for Development and Cooperation (SDC)** / Embassy of Switzerland to India and Bhutan.
- The implementing partners are **ICLEI South Asia, South Pole and econcept**.
- Its knowledge partner is National Institute of Urban Affairs (NIUA).

Phases of the programme

1. **Phase I (2016–2019):** Focused on building the capacity of selected cities for climate-resilient urban planning.
2. **Phase II (2019–2024):** Expanded support to **8 cities and 2 states — Tamil Nadu and Gujarat**, including climate-resilient planning, infrastructure and access to climate finance.
3. **Phase III (2024–2026):** Focused on consolidating earlier achievements and institutionalising **Net-Zero Climate Resilient City Action Plans** and scaling them nationally.

Key Features

- **Climate-resilient urban planning:** Integrates climate adaptation and mitigation into city planning.
- **Climate finance:** Helps cities develop bankable projects and access climate finance.
- **Climate-resilient infrastructure:** Supports climate-resilient projects in water, wastewater, waste management, mobility, energy and biodiversity.
- **Institutional capacity:** Strengthens the technical and institutional capacity of city and state governments.

- **Knowledge sharing:** Promotes peer learning and sharing of successful urban climate solutions.

Cities Covered

The programme has directly supported cities including **Coimbatore, Tiruchirappalli, Tirunelveli, Ahmedabad, Rajkot, Vadodara, Udaipur and Siliguri**, along with the governments of **Tamil Nadu and Gujarat**.

PM-YASASVI

Why in News?

The **Government of India** reaffirmed its **commitment** to expanding educational opportunities for **OBC, EBC and DNT students** through the **PM-YASASVI** umbrella scheme.

About

- **PM-YASASVI (Prime Minister Young Achievers Scholarship Award Scheme** for Vibrant India) is an **umbrella scheme** implemented by the **Department of Social Justice and Empowerment, Ministry of Social Justice and Empowerment**.
- It aims to **reduce financial and geographical barriers** and promote **inclusive, equitable and quality education** for disadvantaged students.
- The scheme covers **OBC (Other Backward Classes), EBC (Economically Backward Classes), and DNT (Denotified, Nomadic and Semi-Nomadic Tribes)** students.
- **OBC eligibility** requires inclusion in the **Central/State/UT OBC list and exclusion from the creamy layer**, along with prescribed income and other conditions.

- The scheme has **four scholarship components:** **Pre-Matric Scholarship, Post-Matric Scholarship, Top Class Education in Schools, and Top-Class Education in Colleges**.
- **Pre-Matric Scholarship:** Covers eligible students of **Classes IX and X** in government schools and provides **₹4,000 per year**.
- **Post-Matric Scholarship:** Supports eligible students **pursuing post-secondary education**, with assistance of **₹5,000–₹20,000 per year**, depending on the course category.
- **Hostel Component:** Provides **residential hostel facilities** for eligible OBC, EBC and DNT students, with priority to **post-matric and undergraduate students from rural areas** lacking nearby colleges.
- **Reservation in Hostels:** **5% of hostel seats** are reserved for **students with disabilities**.
- **Fund Release:** Central grants for hostels are released in a **50:45:5 ratio**, with the final **5% linked to verified occupation** by eligible students.

PRADHAN MANTRI KRISHI SINCHAYEE YOJANA

Why in News?

The **Pradhan Mantri Krishi Sinchayee Yojana (PMKSY)** completed **10 years of implementation** in July 2026, strengthening irrigation infrastructure and promoting **efficient and sustainable water management** in agriculture.

About

- **Pradhan Mantri Krishi Sinchayee Yojana (PMKSY)** was launched in **2015** to expand irrigation coverage and improve **water-use efficiency in agriculture**.
- It is implemented through the **Ministry of Agriculture and Farmers Welfare** and the **Ministry of Jal Shakti**, with different components handled by the respective ministries.
- It aims to achieve **“Har Khet Ko Pani” (water for every farm)** and **“Per Drop More Crop”** through irrigation expansion, water conservation and efficient water use.
- PMKSY promotes **Jal Sanchay** (water storage) and **Jal Sinchan** (efficient water application), including **rainwater harvesting and farm-level water management**.
- Its major components include **Accelerated Irrigation Benefits Programme (AIBP)**, **Har Khet Ko Pani (HKKP)**, and **Watershed Development**.
- **AIBP** focuses on the **completion of ongoing major and medium irrigation projects**, including national projects.
- **HKKP** focuses on expanding assured irrigation through **minor irrigation, surface water and groundwater sources**.
- **Watershed Development** focuses on the integrated development of **rainfed and degraded lands**.
- PDMC promotes **drip and sprinkler irrigation**; **small and marginal farmers receive 55% financial assistance**, while **other farmers receive 45%**.
- As of **August 2025**, PMKSY had benefited **over 27 million farmers** and covered or developed **24.61 million hectares**.
- Since its inception, PDMC has brought **110.92 lakh hectares under micro-irrigation**.

SOCIAL ISSUES

NATIONAL COMMISSION FOR SAFAI KARAMCHARIS (NCSK)

Why in News?

The **National Commission for Safai Karamcharis (NCSK)** recently reviewed the **sanitation and welfare facilities available to sanitation workers**, with a focus on their safety and working conditions.

About

- The **NCSK** was constituted on **12 August 1994** under the **National Commission for Safai Karamcharis Act, 1993**.
- It was initially established as a **statutory body** to safeguard the interests and welfare of Safai Karamcharis.
- The **NCSK Act lapsed on 29 February 2004**, after which it has functioned as a **non-statutory body** under the **Ministry of Social Justice and Empowerment**.
- Its tenure has been extended periodically through **Government Resolutions**, with the latest extension up to **31 March 2028**.
- It works to improve the **status, working conditions, safety and socio-economic welfare** of Safai Karamcharis and has an **advisory role** in recommending measures to the **Central and State Governments**.
- It studies and evaluates programmes for the **social and economic rehabilitation of Safai Karamcharis and manual scavengers**.
- It can **investigate grievances and take suo motu notice** of non-implementation of welfare measures, schemes, guidelines and relevant laws.
- It monitors the **Prohibition of Employment as Manual Scavengers and their Rehabilitation Act, 2013**, and relevant **Supreme Court directions** concerning sanitation workers.
- It monitors access to **Employees' Provident Fund (EPF), Employees' State Insurance (ESI)** and other **social-security benefits** for Safai Karamcharis.

NATIONAL SCHEDULED CASTES FINANCE AND DEVELOPMENT CORPORATION (NSFDC) CREDIT-BASED SCHEMES

Why in News?

The **Ministry of Social Justice and Empowerment** released an **Impact Evaluation Study of NSFDC Credit-Based Schemes**, highlighting their positive impact on **entrepreneurship, self-employment and socio-economic conditions of eligible SC beneficiaries**.

About

- The **National Scheduled Castes Finance and Development Corporation (NSFDC)** is a **Central Public Sector Enterprise** under the **Ministry of Social Justice and Empowerment**.
- It was established in **1989** to promote the **economic development and socio-economic empowerment of Scheduled Castes (SCs)**.
- It provides **concessional financial assistance** to eligible SC beneficiaries for **self-employment, income-generating activities and entrepreneurship**.
- Financial assistance is provided through **State Channelising Agencies (SCAs), Regional Rural Banks (RRBs), Public Sector Banks** and other eligible institutions.
- It also provides support through **skill development, Entrepreneurship Development Programmes (EDPs)** and **marketing assistance**.

ALL INDIA SURVEY ON HIGHER EDUCATION (AISHE)

Why in News?

AISHE data showed a **decline in undergraduate enrolments for the first time**, raising concerns

about access to higher education, demographic changes, and employability trends.

About

- **Background:** Initiated in 2010-11, AISHE is an annual, comprehensive, and voluntary survey conducted by the Ministry of Education.
- **Mandate:** It acts as the primary source of official statistics on India's higher education sector, aiding in policy formulation and resource allocation.
- **Data Collection:** It tracks indicators like student enrolment, faculty data, infrastructure, and examination outcomes via a web-based **Data Capture Format (DCF)**.
- **Limitations of AISHE Data:** Participation is voluntary, and data is self-reported by **Higher Education Institutions (HEIs)**. Although the Ministry conducts inbuilt validations, data quality relies heavily on the reporting institutions, and large-scale survey limitations may marginally affect the findings.

Key Highlights of AISHE 2022-23 & 2023-24

- **Gross Enrolment Ratio (GER):** GER, calculated as the ratio of student enrolment to total population in the age group of 18-23 years based on 2011 population projection.
 - GER increased from **23.7 in 2014-15 to 30 in 2023-24**. Female GER rose from **22.9 to 31.2**, while GER for **Scheduled Caste (SC) students increased from 18.9 to 27.8** and for **Scheduled Tribe (ST) students from 13.5 to 22.8** during the same period.
- **Gender Parity Index (GPI):** GPI, the ratio of female GER to male GER, stood at **1.08 in 2023-24** and has remained above 1 for **seven consecutive years**, indicating consistently higher female participation in higher education.
- **Higher Education Enrolment:** Total enrolment increased by **31.5%**, from **3.42 crore in 2014-15 to 4.50 crore in 2023-24**.

- Female enrolment grew faster by **42.2%**, reaching **2.24 crore**.

- **Enrolment of Social Groups:** Since 2014-15, enrolment increased by **51.4% among SC students, 75.7% among ST students and 60.2% among OBC students**, reaching **69.72 lakh, 28.83 lakh and 1.80 crore**, respectively, in 2023-24.
- **STEM Enrolment:** STEM enrolment increased from **91.5 lakh in 2014-15 to 1.02 crore in 2023-24**, while the share of female students in STEM rose from **38.4% to 44%**, indicating greater gender inclusion.
- **Faculty Strength:** The total number of faculty members reached **17.32 lakh in 2023-24**, comprising **55.1% males and 44.9% females**. Female faculty strength increased from **5.69 lakh in 2014-15 to 7.78 lakh in 2023-24**.

UNIFIED DISTRICT INFORMATION SYSTEM FOR EDUCATION (UDISE)

Why in News?

The **Unified District Information System for Education (UDISE) 2025-26** report drew attention to trends in school enrolment, dropout rates, infrastructure gaps, teacher availability, and digital access across India's education system.

About

- Developed by the **Ministry of Education**, UDISE+ is one of the largest Management Information Systems on school education globally.
- It serves as **India's integrated national digital database** for collecting and analysing school education statistics from pre-primary to higher secondary levels across both government and private schools.
- It provides robust, real-time data to support the planning, resource allocation, and monitoring of flagship programs like the **NEP 2020** and **Samagra Shiksha**.

Key Indicators and Facts in the 2025-26 Report

- **Gross Enrolment Ratio (GER):** GER, calculated as the ratio of student enrolment to total population in the age group of 18-23 years based on 2011 population projection.
 - GER increased from **23.7 in 2014-15 to 30 in 2023-24**. Female GER rose from **22.9 to 31.2**, while GER for **Scheduled Caste (SC) students increased from 18.9 to 27.8** and for **Scheduled Tribe (ST) students from 13.5 to 22.8** during the same period.
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LOKOS PLATFORM

Why in News?

The LokOS platform has significantly

expanded its reach across India, enabling the large-scale digital transformation of rural community institutions under the DAY-NRLM.

About

- **LokOS (Lok = People, OS = Operating System)** is a web and mobile-based digital platform under the **Deendayal Antyodaya Yojana-National Rural Livelihoods Mission (DAY-NRLM)**.
- It enables the **end-to-end digitisation of Self-Help Groups (SHGs) and Community-Based Organisations (CBOs)** across rural India.
- The platform maintains digital records of **SHG members, savings, loans, repayments, financial transactions, livelihoods and convergence activities**.
- LokOS provides **Aadhaar- and bank-linked digital identities** to CBOs and their members, facilitating better financial management and identification.
- The platform provides **real-time monitoring, dashboards and digital financial records**, thereby improving transparency, accountability and decision-making.
- **SHE-LEAPS (Self-Help Entrepreneur-Livelihoods and Enterprise Application for Prosperity and Sustainability)** was launched in **2026** under LokOS to support enterprise creation and business management among rural women associated with SHGs.
- LokOS currently covers **34 States/UTs, 762 districts, 7,241 blocks, 2.57 lakh Gram Panchayats and 5.92 lakh villages**.

BHUBANESWAR DECLARATION

Why in News?

The Bhubaneswar Declaration was adopted in 2026 at the National Workshop on Strengthening Tribal Research Institutes (TRIs) in Bhubaneswar, Odisha, to transform TRIs into Centres of Excellence for tribal research, cultural preservation, innovation and evidence-based policymaking.

About Bhubaneswar Declaration

- It is a **national roadmap for strengthening Tribal Research Institutes (TRIs)** across India.
- Seeks to transform TRIs into **Centres of Excellence** for tribal research, knowledge generation, cultural preservation, innovation and policy support.
- Proposes the **Model TRI Framework 2030** for governance, staffing, research quality and institutional development.
- Proposes the **National TRI Research Agenda 2027-2032** to identify priority areas of tribal research.

- Proposes a **Result and Ranking Framework** through the NTRP portal for accountability and performance-based development.
- Supports **Nodal TRI systems** for mentorship and capacity building of newer TRIs.

Tribal Research Institutes (TRIs)

- **TRIs are State-level institutions** working on tribal research, documentation, cultural preservation and tribal development.
- They function as **knowledge and policy-support institutions** for tribal affairs.
- Undertake research on **tribal communities, cultures, traditions, languages and development issues**.
- TRIs are under the **administrative control of State Governments/UT Administrations**.
- **Ministry of Tribal Affairs** is the nodal Union Ministry for the TRI ecosystem.

Important TRIs / States

- **Chhattisgarh** – Tribal Research and Training Institute
- **Odisha** – Scheduled Castes and Scheduled Tribes Research and Training Institute
- **Tripura** – Tribal Research and Cultural Institute
- **Maharashtra** – Tribal Research & Training Institute
- **Kerala** – KIRTADS
- **Telangana** – Tribal Cultural Research and Training Institute
- **Jharkhand** – Dr Ramdayal Munda Tribal Welfare Research Institute

ART & CULTURE

BHARAT LIFE SCIENCES AWARD (BLSA)

Why in News?

Applications have been invited for the **Bharat Life Sciences Award (BLSA)** to recognize excellence in **scientific research, innovation, and public health impact** across India's life sciences ecosystem.

About

- **Bharat Life Sciences Award (BLSA)** is a **national platform that recognizes and honors excellence in India's life sciences**, including **scientists, institutions, startups, innovators, and others** contributing to research, healthcare, and public health.
- It is open to scientists, public and private research institutions, universities, and startups working in the life sciences sector, with **no application fee**.
- It is organised by the **Federation of Indian Chambers of Commerce and Industry (FICCI)** and powered by **Eli Lilly and Company (Lilly)**.
- An independent Advisory Council oversees the platform, while **Grant Thornton Bharat** serves as the **Process Advisor**.
- The Award is convened in consultation with key institutions including the **Office of the Principal Scientific Adviser to the Government of India**.

Federation of Indian Chambers of Commerce and Industry (FICCI)

***FICCI**, established in **1927**, is India's **oldest and largest apex business organisation**, functioning as a **non-government, not-for-profit body**. It connects businesses, policymakers, and the international business community, promoting **networking, policy dialogue, and consensus-building**.*

PRAMBANAN TEMPLE

Why in News?

The Prime Minister of India visited the UNESCO World Heritage site of Prambanan Temple in Yogyakarta along with the Indonesian President.

About

- Prambanan is the **largest Hindu temple complex in Indonesia**, located in **Sleman, Yogyakarta, on the island of Java**.
- Built in the **9th century by the Sanjaya dynasty**, it is dedicated to the Hindu Trimurti—**Shiva, Vishnu, and Brahma**.
- It is locally known as the **Temple of the Slender Virgin (Roro Jonggrang)**.
- In **1991**, **UNESCO designated Prambanan Temple as a World Heritage Site**.



Prambanan Temple Architecture

- The **Prambanan Temple complex consists of 240 temples**, with the central compound featuring **eight main and eight minor temples** on a raised platform.
- The three principal temples are dedicated to **Shiva, Brahma, and Vishnu**, with the **Shiva**

Temple being the largest and centrally located, rising to 47 metres.

- Its galleries contain **bas-reliefs depicting scenes from the Ramayana.**
- The architecture combines **indigenous Javanese traditions with South Indian, particularly Pallava, influences.** Interestingly, **Buddhist temples and shrines also surround the Hindu complex.**

BADRINATH TEMPLE

Why in News?

The Badrinath-Kedarnath Temple Committee (BKTC) has announced the immediate installation of high-quality surveillance cameras across the Badrinath temple complex following an alleged theft.

About

- **Badrinath Temple** is located in **Uttarakhand**, on the banks of the **Alaknanda River**, against the backdrop of the **Nar and Narayan ranges.**
- The Badrinath Temple features a **distinctive blend of traditional North Indian Nagara style and a colourful Himalayan facade that strikingly resembles a Buddhist vihara (monastery)**
- The temple is dedicated to **Lord Vishnu** and is one of the **Char Dham** pilgrimage sites.
- The philosopher **Adi Shankaracharya** originally established the Badrinath Temple as a pilgrimage site in the **8th or 9th century**, though the current physical structure was built and later rebuilt centuries later by the **Kings of Garhwal.**
- The temple comprises three structures: the **Garbhagriha** (sanctum), the **Darshan Man dapa** (worship hall), and **Sabha Mandapa** (assembly hall).

- The temple has a **traditional Himalayan architectural style**, with a prominent tower and a **golden canopy** over the deity.

Char Dham Yatra

- **Yamunotri:** Source of the Yamuna River; features hot water springs like Surya Kund; sits at an elevation of 3,291 meters.
- **Gangotri:** Source of the Ganga River; dedicated to Goddess Ganga; situated at 3,100 meters.
- **Kedarnath:** Dedicated to Lord Shiva and houses one of the twelve Jyotirlingas; sits at 3,500 meters.
- **Badrinath:** Dedicated to Lord Vishnu; final stop on the route; sits at an elevation of 3,133 meters

72nd NATIONAL FILM AWARD

Why in News?

The ministry of information & Broadcasting announced the 72nd National Film Awards for **recognising excellence in feature films, non-feature films and writings on cinema.**

About

- The **National Film Awards** are India's highest official awards for excellence in cinema, presented annually by the **Government of India** to recognise outstanding achievements in **feature films, non-feature films, and writing on cinema** across Indian languages. The Directorate of Film Festivals under the **Ministry of Information and Broadcasting** administers the awards.
- The awards include **Swarna Kamal (Golden Lotus)** and **Rajat Kamal (Silver Lotus)** medals.
- Cash prizes are also given, with the principal categories generally receiving **₹3 lakh for Swarna Kamal and ₹2 lakh for Rajat Kamal**, though amounts vary by category.
- Awards are given for films in **Eighth Schedule languages** as well as languages not included in the Schedule, such as **Garhwali and Tulu.**

Films must be **certified by the CBFC during the relevant eligibility year.**

- **Selection:** National juries appointed for feature, non-feature and writing categories.

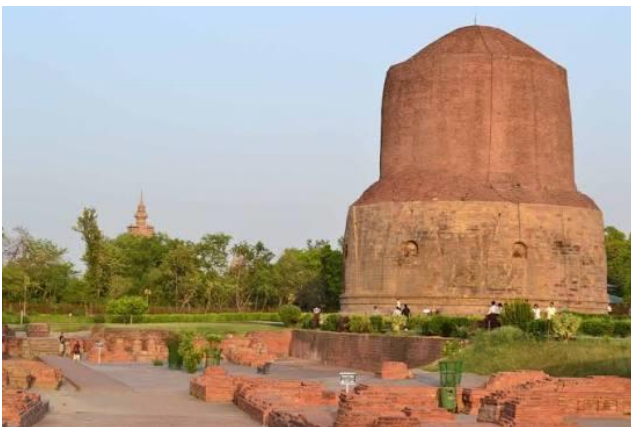
SARNATH BUDDHIST SITE

Why in News?

Sarnath has officially been inscribed as India's 45th UNESCO World Heritage Site, marking a significant milestone in the country's cultural heritage.

About

- **Sarnath** is one of the oldest and most sacred Buddhist sites, located near Varanasi. It was originally known as **Isipatana** or **Rishipattana**, meaning "place of sages."
- Around the **6th century BCE**, Gautama Buddha delivered his **first sermon, the Dhammacakkappavattana Sutta**, here to his five disciples, marking the beginning of the Buddhist Sangha.
- **Emperor Ashoka** visited Sarnath in the **3rd century BCE** and built stupas, monasteries, and the famous **Ashokan Pillar**. During the **Gupta period (4th–6th centuries CE)**, Sarnath developed into an important centre of Buddhist learning, art, and architecture.
- Sarnath declined after invasions in the **12th century CE**, which led to the destruction of many Buddhist structures.



Major Archaeological Remains at Sarnath

- **Dhamek Stupa:** Commemorates Buddha's First Sermon; largest and most prominent

Key Winners

- **Best Feature Film:** *Article 370 (Hindi)* — Swarna Kamal; cash ₹3,00,000.
- **Best Direction:** *Amaran (Tamil)* — Swarna Kamal; cash ₹3,00,000.
- **Best Actor (Leading Role):** Mammooty (*Bramayugam, Malayalam*) and Kartik Aaryan (*Chandu Champion, Hindi*) — Rajat Kamal; cash ₹2,00,000 (shared).
- **Best Actress (Leading Role):** Yami Gautam (*Article 370, Hindi*) — Rajat Kamal; cash ₹2,00,000.
- **Best Popular Film Providing Wholesome Entertainment:** *Kalki 2898 AD (Telugu)* — Swarna Kamal; cash ₹3,00,000.

monument; famous for Gupta-period carvings.

- **Chaukhandi Stupa:** Marks the meeting of Buddha with his first five disciples; topped with a Mughal-era octagonal tower.
- **Ashokan Pillar:** Erected by Emperor Ashoka (3rd century BCE); Lion Capital is India's National Emblem.
- **Sarnath Archaeological Museum:** India's first site museum; preserves the Lion Capital, Buddhist sculptures, inscriptions, and relics.
- **Mulagandha Kuti:** Ancient monastery site associated with Buddha's first rainy season (Varsha Vasa).
- **Ancient Viharas:** Excavated brick monasteries reflecting Sarnath's role as a major Buddhist education and monastic centre.
- **Dharmarajika Stupa:** Ashokan stupa built to enshrine Buddhist relics; largely destroyed but archaeologically important.
- **Temple Ruins:** Remains of Buddhist temples showing architectural development from the Mauryan to the medieval period.

- **Stone Sculptures & Inscriptions:** Renowned Gupta-period Buddha and Bodhisattva sculptures; important historical inscriptions.

UNESCO World Heritage Site

- A World Heritage Site is a landmark or area given legal protection by an international convention administered by the United Nations Educational, Scientific and Cultural Organization (UNESCO).
- The UNESCO World Heritage Committee maintains the list through the World Heritage Programme.
- India ratified the Convention in 1977, served as a member of the UNESCO World Heritage Committee from 2021 to 2025, and hosted the 46th Session of the World Heritage Committee in New Delhi in July 2024.
- The Archaeological Survey of India (ASI) is the nodal agency for all UNESCO World Heritage matters in India.

COMMONWEALTH GAMES 2026

Why in News?

India finished 4th at the 2026 Commonwealth Games in Glasgow, achieving several landmark firsts. During the closing ceremony, India officially took over as the host nation for the landmark centenary 2030 Commonwealth Games in Ahmedabad,

About

- The **Commonwealth** is a voluntary association of **56 independent and equal countries**, most of which have historical links with the British Empire. It promotes cooperation in areas such as **democracy, development, education, and sports**.
- The **Commonwealth Games** are a **quadrennial (held every four years) international multi-sport event** in which athletes from Commonwealth countries and territories participate.
- The **2026 Commonwealth Games** are being held in **Glasgow, Scotland**, with athletes from

72 Commonwealth nations and territories participating.

- The Games aim to strengthen **sporting and cultural ties** among Commonwealth members.
- The Games are organised under the **Commonwealth Games Federation (CGF)**, headquartered in London.
- The official mascot for Glasgow 2026 is **Finnie**, a unicorn inspired by Scotland's national animal and featuring a distinctive traffic-cone horn.
- India finished fourth at the Commonwealth Games 2026 in Glasgow, winning a total of **39 medals (13 gold, 17 silver, and 9 bronze)**.

DR. SYAMA PRASAD MUKHERJEE

Why in News?

Prime Minister Narendra Modi paid tribute to **Dr. Syama Prasad Mookerjee** on his birth anniversary (**6th July**) highlighting his legacy in national unity, industrial policy, and education, and his relevance in India's modern development.

About

- Dr. Shyama Prasad Mukherjee was a nationalist leader, educationist, barrister, and politician who played a crucial role in shaping India's political discourse after independence.
- A strong critic of the Nehruvian policies, Mukherjee emphasized cultural nationalism, national integration, and the importance of self-reliance.

Early Life & Education

- **Born:** 6 July 1901, Calcutta.
- **Father:** Sir Ashutosh Mukherjee — renowned educationist and jurist.
- **Education:** Studied at Calcutta University and qualified as a **Barrister from Lincoln's Inn, London, in 1927**.

Educationist

- Became the **youngest Vice-Chancellor of Calcutta University in 1934**.
- Served as Vice-Chancellor during **1934–1938**.
- Promoted reforms in higher education and encouraged the use of Indian languages in academia. **Political Career**

- Entered the **Bengal Legislative Council in 1929**.
- Became associated with the **Hindu Mahasabha** during the pre-independence period.
- Became a member of the **Constituent Assembly in 1946**.

Union Minister

- Served as **Minister for Industry and Supply** in Jawaharlal Nehru's Cabinet from **1947–1950**.
- Resigned from the Union Cabinet in **1950**, in protest against the **Nehru-Liaquat Pact**.

Bharatiya Jana Sangh

- Founded the **Bharatiya Jana Sangh (BJS)** in **1951**.
- Became its **first President**.
- The BJS later became the political predecessor of the **Bharatiya Janata Party (BJP)**.

Jammu & Kashmir

- Strongly opposed the **special constitutional status of Jammu & Kashmir under Article 370**.
- Opposed the **permit system** for entering Jammu & Kashmir.
- Advocated the principle of **one Constitution, one national leadership and one national symbol**.
- Entered Jammu & Kashmir without a permit in **1953** and was arrested.

SANTHAL REBELLION

Why in news?

Hul Diwas is observed every year on 30 June to commemorate the Santhal Hul (Santhal Rebellion) of 1855, one of the earliest tribal and peasant uprisings against British colonial rule. It was recently celebrated in Jharkhand.

About

- The **Santhal Rebellion (1855-1856)**, also known as the **Santhal Hul**, was one of the most significant tribal uprisings against British rule in India. Led by **Sidhu and Kanhu Murmu**, it originated in the **Santhal Parganas**, an area now part of modern-day Jharkhand.
- The Santhal Rebellion (1855–1856) was caused by the severe **exploitation of the**

Santhals by the British, zamindars, and moneylenders. The British had encouraged Santhal settlement in the **Rajmahal foothills** for agricultural revenue, leading to conflicts with the Paharias.

- To regulate the region, the British created **Damin-i-Koh** in 1832–33. However, revenue demands, debt, and exploitation by zamindars and moneylenders led to land alienation, poverty, and growing resentment among the Santhals.

Santhal Rebellion Causes

- The Santhal Rebellion erupted in 1855 due to widespread exploitation by British officials, zamindars, and moneylenders. Land alienation, oppressive revenue demands, debt, and corruption disrupted the Santhals' traditional livelihood and pushed them into poverty.
- Santhals were often forced into unfair labour and cheated through **high-interest loans** and contracts they could not understand. Their **dependence on barter made cash tax payments difficult**, further increasing their dependence on moneylenders and fueling resentment against colonial rule.

Who are Santhals?

The **Santhals** are one of India's largest tribal communities, mainly found in **Jharkhand, Bihar, West Bengal and Odisha**. Traditionally **agriculturists**, they had a strong connection with land and forests.

They speak **Santhali**, follow **nature-based/animistic beliefs**, and have a well-organised social structure based on **clans (parhas)**.

ABATHSAHAYESWARAR TEMPLE

Why in news?

The 12th-century Abathsahayeswarar Temple at Thukkachi, Tamil Nadu, was restored after decades of neglect. On 6 December 2024, the project received the UNESCO Asia-Pacific Award of Distinction for Cultural Heritage Conservation.

About

- The **Thukkachi Abathsahayeswarar Temple**, dedicated to **Lord Shiva**, is located on the banks of the **Arasalar River in Thukkachi village, Thanjavur district, Tamil Nadu**, and dates back to the **Chola period (10th–11th centuries AD)**.
- During this time, the Chola rulers played a key role in the promotion of Shaivism across southern India.
- The inscriptions portray that Kulothunga Cholan and Vikkrama Cholan maintained the temple in the past.

Architecture:

- The Thukkachi Abathsahayeswar Temple reflects the **typical features of Chola architecture**.
- The **garbhagriha** houses the main deity, **Lord Shiva**.
- The eastern entrance has a **gopuram**, restored through recent conservation efforts.
- The outer walls feature intricate carvings depicting **Hindu mythological scenes**.
- The finely crafted pillars contain **inscriptions** offering insights into the cultural and religious practices of the Chola period.
- These inscriptions are important sources for understanding **Chola history and religious traditions** in South India.
- After years of neglect and deterioration, the temple underwent **comprehensive restoration**.
- It received the **UNESCO Asia-Pacific Award of Distinction for Cultural Heritage Conservation in 2024** for preserving and reviving the living Hindu temple.