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1. Polity

1.1 Appointment of Permanent and Additional Judges of High Courts

Context:

The President of India, after consultation with the Chief Justice of India (CJI), appointed an Additional Judge as a permanent Judge of the Calcutta High Court and extended the tenure of six Additional Judges for six months from August 31, 2026.



Explanation:

- **Article 217** provides for the appointment of High Court judges by the President of India after consultation with the CJI, Governor of the State and Chief Justice of the concerned High Court.
- A High Court judge holds office until the age of **62 years**.
- **Article 224** empowers the President to appoint **Additional Judges** when there is a temporary increase in business or accumulation of arrears.
- An Additional Judge can be appointed for a period **not exceeding two years** and cannot continue after attaining **62 years**.
- The Constitution also permits appointment of Acting Judges under Article 224 when a permanent judge is unable to perform duties.
- Under **Article 224A**, a retired High Court judge may sit and act as a judge of a High Court with the **President's previous consent**.
- In practice, judicial appointments operate through the **Collegium system**, evolved through the **Three Judges Cases**.

1.2 PRAGATI: ICT-Based Platform for Pro-Active Governance and Project Monitoring

Context:

Recently, the Prime Minister chaired the 53rd PRAGATI meeting, reviewing major infrastructure projects, AgriStack under the Digital Agriculture Mission and cyber-fraud issues. Six Railway, Road and Power projects across nine States, involving over ₹30,000 crore, were reviewed.



Explanation:

- **PRAGATI** stands for **Pro-Active Governance and Timely Implementation** and was launched in **2015**.
- It is an **ICT-enabled, multi-modal platform** for monitoring important programmes, projects and public grievances.
- PRAGATI enables direct interaction among the Prime Minister, Union Government Secretaries and State Chief Secretaries.
- It combines digital data management, video conferencing and geospatial technology for real-time review.
- It promotes cooperative federalism by bringing Union and State authorities onto a common platform.
- The platform focuses on removing inter-departmental and inter-governmental bottlenecks affecting project implementation.
- Projects are monitored for timelines, inter-agency coordination, pending issues and completion.
- The latest meeting stressed end-to-end infrastructure planning, common utility corridors, quality assurance and technology adoption.
- **AgriStack** was reviewed for using agricultural data and **Artificial Intelligence (AI)** to improve farmer-oriented decision-making.

1.3 e-Shram Portal: Five Years of Social Security for Unorganised Workers

Context:

Recently, the e-Shram Portal completed five years since its launch on August 26, 2021. With over 31.89 crore registrations, it has evolved from a national database of unorganised workers into a one-stop platform connecting workers with social security, employment, skilling and pension services.

Explanation:



- **e-Shram** was launched by the **Ministry of Labour and Employment** and developed by the **National Informatics Centre (NIC)**.
- It created India's first Aadhaar-authenticated National Database of Unorganised Workers (NDUW).
- Registered workers receive a unique **12-digit Universal Account Number (UAN)**.
- It covers migrant, construction, agricultural, domestic, gig and platform workers, among other unorganised workers.
- The **e-Shram One-Stop Solution**, launched in 2024, integrates multiple social-security and welfare schemes.
- It connects workers with **National Career Service (NCS)** for jobs and **Skill India Digital Hub** for skilling and apprenticeship.
- Bhashini enables multilingual access in 22 languages.
- Data portability facilitates welfare access for migrant workers and linkage with Building and Other Construction Workers (BOCW) Boards.
- Registration is free, Aadhaar-based and available through self-registration, **Common Service Centres (CSCs)** and State Seva Kendras.
- e-Shram supports portability, targeted benefit delivery and evidence-based policymaking.

1.4 India to Host 5th Coast Guard Global Summit (CGGS) in 2027

Context:

India will host the 5th Coast Guard Global Summit (CGGS) in New Delhi in February 2027, coinciding with the Golden Jubilee of the Indian Coast Guard. The summit will promote information sharing, capacity building and cooperation among maritime law-enforcement agencies.

Explanation:

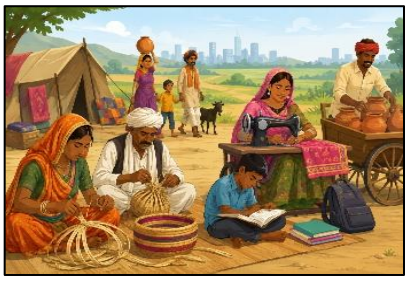


- **Coast Guard Global Summit (CGGS)** is a platform for coast guards and maritime law-enforcement agencies to strengthen international cooperation and **exchange operational expertise and best practices**.
- The **Indian Coast Guard (ICG)** was raised on **1 February 1977** and formally inaugurated on **19 August 1978**, and operates under the Ministry of Defence.
- It is governed by the **Coast Guard Act, 1978** and protects India's maritime interests, including its **Exclusive Economic Zone (EEZ)**.
- Key functions include maritime surveillance, search and rescue (SAR), anti-smuggling operations, marine-environment protection and assistance to fishermen.
- The summit reflects India's **MAHASAGAR – Mutual and Holistic Advancement for Security and Growth Across Regions** vision.
- MAHASAGAR builds upon India's earlier **SAGAR** vision and promotes cooperative maritime security and development.
- **Global maritime commons** include ocean spaces requiring international cooperation for safe and secure navigation.

1.5 SEED Scheme for De-notified, Nomadic and Semi-Nomadic Communities

Context:

The Ministry of Social Justice and Empowerment recently highlighted its welfare measures for De-notified, Nomadic and Semi-Nomadic communities. These are implemented mainly through the Scheme for Economic Empowerment of DNTs (SEED) and a dedicated welfare board.



Explanation:

- **De-notified Tribes (DNTs)** are communities once notified as "criminal tribes" under the colonial **Criminal Tribes Act, 1871**, and de-notified after its repeal in 1952.
- Nomadic Tribes move regularly for livelihood, while Semi-Nomadic Tribes remain settled for part of the year.
- DNT, NT and SNT are **not separate constitutional categories**; individual communities may be listed as SC, ST, OBC or none of these.
- Colonial stigma, absence of identity documents, permanent address, land and housing restrict their access to education, healthcare and welfare schemes.
- The **Idate Commission**, constituted in 2015, submitted its report in 2017.
- The **Development and Welfare Board for De-notified, Nomadic and Semi-Nomadic Communities (DWBDNC)** was set up in 2019 to coordinate implementation.
- **SEED** has four components: coaching for competitive examinations, health cover through Ayushman Bharat–PM-JAY, livelihood and skill support, and housing assistance.

1.6 PM-AJAY: Smart Classrooms in SC-Dominated Villages

Context:

Under Pradhan Mantri Anusuchit Jaati Abhyuday Yojana (PM-AJAY), Kathua district of Jammu and Kashmir has established Smart Classrooms in government schools of SC-dominated villages, including remote and border areas, to promote digital and inclusive education.



Explanation:

- **PM-AJAY** is a **Centrally Sponsored Scheme** of the Ministry of Social Justice and Empowerment aimed at reducing poverty and improving socio-economic indicators among Scheduled Caste (SC) communities.
- It was formulated by merging three existing schemes: Pradhan Mantri Adarsh Gram Yojana (PMAGY), Special Central Assistance to SC Sub Plan (SCA to SCSP) and Babu Jagjivan Ram Chhatrawas Yojana (BJRCY).
- Its major components include development of **SC-dominated villages into Adarsh Grams**, Grants-in-Aid for socio-economic development projects, and construction/repair of hostels.
- Village development focuses on reducing infrastructure and service gaps in areas such as education, sanitation, drinking water, roads and livelihoods.
- Kathua's Smart Classrooms illustrate its role in promoting **digital inclusion and educational infrastructure** in disadvantaged areas.

1.7 GIS-Based Urban Planning and Digital Master Plans under AMRUT

Context:

The Ministry of Housing and Urban Affairs (MoHUA) is promoting GIS-based digital Master Plans under AMRUT and AMRUT 2.0. Geospatial databases are also being integrated with the PM Gati Shakti National Master Plan to facilitate coordinated, evidence-based urban infrastructure planning.

Explanation:



- **Urban planning**, including preparation of Master Plans, is a function of Urban Local Bodies (ULBs) under the **12th Schedule of the 74th Constitutional Amendment Act, 1992**.
- GIS (Geographic Information System) captures, stores, analyses and visualises spatial/geospatial data for planning and decision-making.
- **AMRUT**, launched in **2015**, supports urban infrastructure and planning; **AMRUT 2.0**, launched in **2021**, focuses particularly on **water security and universal water supply coverage**.
- GIS-based Master Plans integrate land use, transport, water supply, sewerage, drainage, public amenities and environmentally sensitive areas.
- Under AMRUT, GIS Master Planning is a **100% centrally funded sub-scheme**.
- AMRUT 2.0 extends GIS Master Plans to Class-II towns (population 50,000–99,999).
- Very High-Resolution Satellite (VHRS) imagery and Drone/UAV mapping facilitate preparation of high-resolution digital base maps.
- Urban and Regional Development Plans Formulation and Implementation (URDPFI) Guidelines promote GIS and geospatial technologies for evidence-based urban planning.
- Integration with PM Gati Shakti NMP facilitates multimodal and coordinated infrastructure planning.

1.8 Nationwide Survey Reports No Manual Scavengers

Context:

Recently, the Government informed Parliament that the 2024–25 nationwide survey identified no manual scavengers. However, **498 sanitation workers** died in hazardous sewer and septic-tank cleaning between January 2019 and June 2026, indicating that the two legally distinct problems must not be conflated.



Explanation:

- **Article 17** abolishes untouchability; manual scavenging is also prohibited by the Prohibition of Employment as Manual Scavengers and their Rehabilitation Act, 2013.
- A manual scavenger manually handles human excreta in an insanitary latrine, open drain, pit or railway track before its complete decomposition.
- **Section 7 of the Act separately prohibits** hazardous manual cleaning of sewers and septic tanks without prescribed protective equipment and safety precautions.
- **NAMASTE scheme** (National Action for Mechanised Sanitation Ecosystem), launched in 2023, is jointly implemented by the Ministries of Social Justice and Empowerment and Housing and Urban Affairs.
- It promotes mechanisation, training, health insurance, rehabilitation and sanitation-worker entrepreneurship.

2. Economy

2.1 Pradhan Mantri Jan Dhan Yojana Completes 12 Years of Financial Inclusion

Context:

The Pradhan Mantri Jan Dhan Yojana (PMJDY), launched on 28 August 2014, has completed 12 years. As of August 2026, it has over 59 crore accounts, with about 56% held by women and nearly 78% located in rural and semi-urban areas.



Explanation:

- **PMJDY** is a **National Mission for Financial Inclusion** aimed at providing unbanked adults access to formal financial services.
- It provides a Basic Savings Bank Deposit Account (BSBDA) with **no minimum balance requirement**.
- Account holders receive a RuPay debit card carrying accident insurance cover of ₹2 lakh, subject to prescribed conditions.
- Eligible account holders can access an overdraft facility up to ₹10,000.
- PMJDY provides a gateway to savings, credit, insurance, pension and digital payments.
- It forms the banking pillar of the **JAM Trinity – Jan Dhan, Aadhaar and Mobile**.
- JAM enables Direct Benefit Transfer (DBT) of government benefits into beneficiaries' accounts, reducing intermediaries and leakages.
- PMJDY also facilitates access to **Jan Suraksha schemes**, including **PMJJBY** and **PMSBY**.
- **Business Correspondents (Bank Mitras)** extend last-mile banking services, particularly in underserved areas.

2.2 Unified Payments Interface (UPI): Ten Years of India's Digital Payments Revolution

Context:

Recently, the Unified Payments Interface (UPI) completed ten years, emerging as the world's largest real-time payment system by transaction volume. In FY 2025–26, UPI processed over 24,162 crore transactions worth about ₹314 lakh crore and accounted for 84% of India's digital payments.



Explanation:

- **UPI**, launched in **2016**, is an **instant, interoperable payment system** developed by the **National Payments Corporation of India (NPCI)** under **Reserve Bank of India (RBI)** oversight.
- It enables **24×7 real-time bank-to-bank transfers** using identifiers such as a **UPI ID**, without requiring users to repeatedly enter bank-account details.
- UPI supports **Person-to-Person (P2P)** and **Person-to-Merchant (P2M)** payments through multiple participating apps.
- Its **interoperability** allows customers of different banks and payment apps to transact on a common network.
- UPI forms a key pillar of India's **Digital Public Infrastructure (DPI)** and promotes **financial inclusion** and low-value digital payments.
- In FY 2025–26, **P2M transactions formed 63% of volume**, while **P2P transactions contributed 71% of value**.
- UPI accounted for nearly **49% of global real-time payment transaction volume in 2025**.
- It is currently operational in **11 countries**, supporting the internationalisation of India's digital-payment infrastructure.

2.3 RBI's USD–INR Swap Facility and Foreign Exchange Inflows

Context:

Recently, the Reserve Bank of India (RBI) reported that its special USD–INR forex swap facility, launched in June 2026, mobilised about **$136.37 billion** in foreign exchange inflows by August 31, 2026, when the FCNR(B) window closed. Foreign Currency Non-Resident (Bank) [FCNR(B)] deposits contributed about **$127.22 billion**, nearly 90% of the total.



Explanation:

- A **forex swap** involves exchanging one currency for another with an agreement to reverse the transaction later at a predetermined rate.
- Under the special facility, RBI provides swap support for funds mobilised through **FCNR(B)** deposits, Overseas Foreign Currency Borrowings (OFCB) and External Commercial Borrowings (ECB).
- **FCNR(B)** accounts allow **Non-Resident Indians (NRIs)** to maintain term deposits in permitted foreign currencies with Indian banks.
- Since deposits are maintained in foreign currency, the depositor does not bear INR exchange-rate risk.
- **ECBs** are commercial borrowings raised by eligible Indian entities from recognised **non-resident lenders**, subject to RBI regulations.
- Such foreign-currency inflows increase the availability of dollars, support foreign exchange reserves and strengthen India's external-sector liquidity buffers.
- The 2026 FCNR(B) window **closed on August 31, 2026**, earlier than initially planned; ECB and OFCB funds remain eligible until **December 31, 2026**.

2.4 Government Measures to Control Sugar Prices and Ensure Domestic Availability

Context:

Recently, the Government announced measures to contain rising sugar prices, including stock limits, checks against hoarding and duty-free import of raw sugar. The price rise has been attributed mainly to lower domestic production, festive demand, crop damage and tightening global supplies.

Explanation:



- India is among the world's major producers and consumers of sugar, with sugarcane also serving as a feedstock for ethanol production.
- Sugar production is estimated at **306 LMT** in the current season, against an initial estimate of about **343 LMT**, partly due to **Red Rot, Top Borer and waterlogging**.
- The government stated that sugar diversion to ethanol declined from about **12% in 2022-23 to 9% in 2025-26**; most ethanol now comes from grains, particularly maize.
- Ethanol production from surplus sugar can improve sugar-mill liquidity and facilitate timely payment of cane dues to farmers.
- To curb **hoarding**, the dealer stock limit was cut to **2,000 quintals (200 tonnes)** from 4,000 quintals, effective **September 15 to November 30, 2026**; Kolkata and its extended metropolitan area retain the 4,000-quintal limit as a distribution hub.
- The government has also permitted **duty-free import of 10 LMT of raw sugar** until **October 31, 2026** and encouraged early crushing to augment supply; mills plan to lift only about half the quota, as prices have since eased.
- Such supply-side interventions seek to balance consumer price stability and farmers' interests.

2.5 Index of Core Industries: New Base Year and Expanded Core-Sector Basket

Context:

Recently, India's Index of Core Industries (ICI) recorded 5.4% year-on-year growth in July 2026, compared with the final 6% growth in June. The new ICI series uses 2022–23 as its base year and includes nine core industries.



Explanation:

- The **Index of Core Industries (ICI)** is a **monthly measure of production** in industries supplying essential energy and materials to the economy.
- It is compiled by the **Office of the Economic Adviser** under the **Department for Promotion of Industry and Internal Trade (DPIIT)**, Ministry of Commerce and Industry.
- The **base year is now 2022–23 = 100**, replacing 2011–12 – the reference point against which later production changes are measured.
- The basket now has **nine industries**: coal, crude oil, natural gas, refinery products, fertilisers, steel, cement, electricity and **iron ore**.
- **Iron ore is the new addition**, for its wide industrial use in steel; the series also shifts to **gross steel production** and keeps only **raw coal** to avoid double counting.
- **Sectoral weights** come from the **Index of Industrial Production (IIP)**, adjusted to total 100; **electricity has the highest weight**, then refinery products and steel. The IIP is compiled by the **National Statistical Office (MoSPI)**.
- July's **5.4% growth** means weighted output was higher than in July 2025 – not inflation or a GDP contribution; **iron ore, cement and electricity led**, while natural gas, crude oil and fertilisers contracted.
- A **provisional estimate** may later be revised; the ICI is a key **leading indicator** of industrial activity.

2.6 CCI Approves Tata Steel's Acquisition of Additional Stake in TMILL

Context:

The Competition Commission of India (CCI) approved Tata Steel's acquisition of an additional 23% equity stake in TM International Logistics Ltd. (TMILL). Following the transaction, Tata Steel will hold 74% and NYK Europe 26% in TMILL.



Explanation:

- **Competition Commission of India (CCI)** is a statutory body established under the **Competition Act, 2002** and functions under the **Ministry of Corporate Affairs**.
- It aims to eliminate practices having **Appreciable Adverse Effect on Competition (AAEC)**, promote competition and protect consumer interests.
- The Act regulates anti-competitive agreements, abuse of dominant position and combinations.
- A combination broadly covers acquisitions, mergers or amalgamations satisfying prescribed legal criteria.
- Certain combinations require prior CCI approval to ensure that market concentration does not substantially harm competition.
- CCI may approve, modify or prohibit a proposed combination based on its likely competitive impact.
- The **Competition (Amendment) Act, 2023** introduced a **deal-value threshold** alongside asset/turnover-based criteria for specified transactions.
- CCI also examines factors such as market concentration, entry barriers and potential benefits to consumers.

2.7 ECMS Deepens India's Electronics Manufacturing Value Chain

Context:

The Ministry of Electronics and Information Technology (MeitY) recently approved 31 additional proposals under the Electronics Components Manufacturing Scheme (ECMS). In all, 106 approved projects envisage ₹69,548 crore of investment and about 74,628 direct jobs.



Explanation:

- An electronic product is built from **raw materials, components, sub-assemblies and final assemblies,** for example, a camera module fitted into a finished smartphone.
- India has expanded electronics assembly, especially mobile phones, but still depends heavily on imported components and manufacturing equipment.
- **Domestic value addition** means a larger share of a product's value is created within India rather than through imported inputs.
- **ECMS**, notified in April 2025, is administered by MeitY.
- It supports four segments: sub-assemblies, bare components, supply-chain materials and capital goods for electronics manufacturing.
- Incentives are linked to additional turnover, capital expenditure or a combination, depending on the product category.
- Covered products include camera and display modules, **printed circuit boards**, connectors, capacitors, relays, optical transceivers and **rare-earth magnets**.
- Deeper component manufacturing reduces import dependence, strengthens supply-chain resilience and boosts exports, complementing the semiconductor mission and production-linked incentive schemes.

2.8 MSME Development (Amendment) Bill, 2026

Context:

Parliament passed the **MSME Development (Amendment) Bill, 2026**, amending the **MSMED Act, 2006**. It seeks to address delayed payments, accelerate dispute resolution, simplify compliance and improve the ease of doing business for MSMEs.



Explanation:

- **MSMED Act, 2006** provides the statutory framework for promotion, development and competitiveness of **Micro, Small and Medium Enterprises (MSMEs)**.
- MSME classification uses the **composite criteria of investment in plant/machinery or equipment and annual turnover**.
- **Udyam Registration** provides free, paperless, self-declaration-based formal recognition; **Udyam Assist Platform** helps formalise informal micro enterprises.
- **TReDS (Trade Receivables Discounting System)** is an **RBI-regulated electronic platform** for financing/discounting MSME trade receivables; the Bill mandates its use by **CPSEs** for settling MSME invoices.
- **MSE Facilitation Councils (MSEFCs)** resolve delayed-payment disputes involving Micro and Small Enterprises.
- The Bill introduces **time-bound mediation/arbitration, Online Dispute Resolution (ODR), recovery as arrears of land revenue** and **decriminalisation of specified offences**.

2.9 Cabinet Extends PM-KISAN Scheme till 2030–31

Context:

The Union Cabinet has approved the continuation of the Pradhan Mantri Kisan Samman Nidhi **(PM-KISAN)** Scheme from 2026–27 to 2030–31 with a financial outlay of ₹3.15 lakh crore.

Explanation:



- **PM-KISAN**, launched in February 2019, is a **Central Sector Scheme** implemented by the **Ministry of Agriculture & Farmers Welfare**.
- The scheme uses Aadhaar authentication, digital beneficiary verification and the Public Financial **Management System (PFMS)** for transparent fund transfers.
- It aims to support expenditure on seeds, fertilisers, irrigation, farm machinery and other agricultural inputs while reducing dependence on informal credit.
- PM-KISAN complements initiatives such as PM **Fasal Bima Yojana (PMFBY), Kisan Credit Card (KCC), e-NAM and the Digital India** programme.
- It is a key instrument for income support, financial inclusion, rural welfare and strengthening agricultural productivity.

3. Environment

3.1 India Showcases Community-Led Water Security at World Water Week 2026

Context:

The Ministry of Rural Development participated in World Water Week 2026 in Stockholm, presenting India's community-led, technology-enabled approach to rural water security. It highlighted Water Vision @2047, groundwater conservation and decentralised planning.



Explanation:

- **World Water Week** is an annual Stockholm forum organised by the **Stockholm International Water Institute (SIWI)** for cooperation on global water challenges.
- India's **Water Vision @2047** seeks resilient, inclusive and sustainable water security through integrated planning, technology and community participation.
- **Jal Jeevan Mission (JJM)** expands safe rural drinking water, while the **National Initiative on Water Security (NIWS)** prioritises conservation, recharge and harvesting according to groundwater stress.
- **Yuktdhara** uses **Geographic Information System (GIS)** and remote sensing for planning; **E-Jal** enables Gram Panchayat-level water budgeting.
- **Gram Panchayats** and **Village Water and Sanitation Committees (VWSCs)** plan and maintain assets, advancing **Sustainable Development Goal (SDG) 6**.

3.2 Raichur Converts Legacy Dumpsite into Miyawaki Forest

Context:

Under Swachh Bharat Mission-Urban 2.0, Raichur, Karnataka, has scientifically remediated about 62,252 MT of legacy waste at the Yakalaspura dumpsite, reclaiming nearly 22 acres. Part of the reclaimed land is being transformed into a Miyawaki forest using native species.



Explanation:

- **Legacy waste** refers to old municipal solid waste accumulated over years at dumpsites, causing leachate, methane emissions, soil-water contamination and air pollution.
- **Biomining/bioremediation** involves excavating, segregating and processing legacy waste to recover recyclables, refuse-derived fuel and reclaim land.
- **SBM-U 2.0**, launched in **2021**, aims to make cities **Garbage Free** through scientific solid-waste management and remediation of legacy dumpsites.
- The **Miyawaki method**, developed by Japanese botanist **Akira Miyawaki**, creates dense, multilayered forests using **native plant species**.
- Species are planted closely to encourage rapid growth and ecological competition.
- Such urban forests can improve biodiversity, carbon sequestration, microclimate, soil quality and air quality.
- However, Miyawaki plantations are human-created forests and should not substitute conservation of natural forests and native ecosystems.

3.3 EU Carbon Border Adjustment Mechanism (CBAM) and India's Export Preparedness

Context:

The Department of Commerce organised an awareness session to prepare Indian exporters for the EU's Carbon Border Adjustment Mechanism (CBAM). Meanwhile, BRICS Environment Ministers opposed CBAM as a unilateral and discriminatory trade measure and reiterated the principles of climate equity and Common but Differentiated Responsibilities and Respective Capabilities (CBDR-RC).



Explanation:

- **CBAM** is the EU mechanism that imposes a carbon price on specified carbon-intensive imports, linking trade with the embedded emissions generated during production.
- It aims to prevent **carbon leakage**, where production shifts to countries with less stringent climate policies.
- Key covered sectors include iron & steel, aluminium, cement, fertilisers, electricity and hydrogen.
- The transitional phase began in October 2023, requiring emissions reporting; the definitive regime started in 2026, involving CBAM certificates.
- Indian exporters therefore require reliable **emissions accounting, accreditation, verification and reporting** systems.
- Developing countries have raised concerns over protectionism, WTO compatibility and climate equity.
- BRICS invokes **CBDR-RC**, a principle under the **UNFCCC and Paris Agreement**, recognising differences in countries' historical responsibilities and capabilities.
- **The National Accreditation Board for Certification Bodies (NABCB) provides accreditation, while the Engineering Export Promotion Council (EEPC India) promotes engineering exports.**

3.4 India's First Guide to Grasslands and Other Open Natural Ecosystems

Context:

India recently launched its first-ever Guide to Grasslands and Other Open Natural Ecosystems at UNCCD COP17 in Ulaanbaatar, Mongolia. The Guide seeks to improve recognition, conservation and sustainable management of these long-neglected landscapes.

Explanation:

- **Open Natural Ecosystems (ONEs)** are naturally open landscapes dominated by grasses, shrubs or sparse trees, where low tree cover is the normal condition.
- They include **grasslands, savannas, scrublands, rangelands, deserts, rocky plateaus and ravines.**
- Unlike degraded forests, ONEs are naturally open, so classifying them as wastelands and raising dense plantations destroys their specialised biodiversity.
- They sustain the Great Indian Bustard, lesser florican, blackbuck and Indian wolf, besides pastoral and tribal livelihoods.
- Deep roots conserve soil, regulate water and store **below-ground carbon**, improving resilience to drought and climate change.
- The Guide maps major Indian ONEs such as **Banni**, the **Thar Desert**, **Terai grasslands** and **Deccan savannas**, covering pastoralism, grazing and fire ecology.
- The **UNCCD**, adopted in 1994, is a legally binding **Rio Convention** with its secretariat at **Bonn, Germany**; the **Conference of the Parties** is its decision-making body.
- India hosted **UNCCD COP14** in New Delhi in 2019; COP17 focuses on rangelands, pastoralists and **Land Degradation Neutrality.**

3.5 India's Progress on Nationally Determined Contributions (NDCs)

Context:

India has made significant progress towards its climate commitments under the Paris Agreement, including achieving the target of 50% installed electricity capacity from non-fossil fuel sources five years ahead of schedule. India has also announced enhanced NDC targets for 2035.



Explanation:

- **Nationally Determined Contributions (NDCs)** are country-specific climate commitments communicated under the **Paris Agreement (2015)** of the **UNFCCC**, aimed at limiting global warming.
- India's existing quantitative NDCs for **2030** include reducing the emissions intensity of GDP by 45% from 2005 levels, achieving **about 50% cumulative installed electric power capacity from non-fossil fuel sources,** and creating an additional carbon sink of 2.5–3 billion tonnes CO_2 equivalent through forest and tree cover.
- By 2020, India had reduced GDP emissions intensity by **36%** from 2005 levels, and by 2021 had created an additional carbon sink of **2.29 billion tonnes CO_2 equivalent**.
- Non-fossil sources crossed 50% of installed electricity capacity in June 2025 and reached 54.18% by June 2026.
- India's enhanced 2035 NDCs target 47% emissions-intensity reduction, 60% non-fossil installed electricity capacity, and an additional 3.5–4.0 billion tonnes CO_2 equivalent carbon sink.
- **Biennial Transparency Reports (BTRs)** are submitted under the Paris Agreement's **Enhanced Transparency Framework** to report climate action and progress.

3.6 Asiatic Lion Conservation and Project Lion

Context:

On World Lion Day 2026, the government highlighted that India's Asiatic Lion population increased from 523 in 2015 to 891 in 2025. Project Lion is being implemented for their long-term conservation through habitat protection, disease management, scientific monitoring and community participation.

Explanation:



- **Asiatic Lion (*Panthera leo persica*)** is a subspecies of lion whose only wild population occurs in **Gujarat, India**.
- Its principal habitat is **Gir National Park and Wildlife Sanctuary,** with its range extending across the Saurashtra landscape.
- IUCN Red List: *Vulnerable*; CITES: Appendix I; Wildlife (Protection) Act, 1972: Schedule I.
- World Lion Day is observed annually on August 10.
- **Project Lion**, announced in **2020**, follows a landscape-level conservation approach rather than focusing solely on Gir.
- It emphasises habitat improvement, prey-base management, disease surveillance, veterinary care, scientific population monitoring and community participation.
- Technologies such as GIS, radio-collaring and surveillance systems aid lion monitoring and conflict management.
- Concentration of lions within one geographical region creates vulnerability to epidemics, natural disasters, habitat pressures and human-wildlife conflict.
- Lion range expanded from about 30,000 sq. km in 2020 to nearly 35,000 sq. km in 2025.

3.7 Glaw Lake Becomes Arunachal Pradesh's First Ramsar Site

Context:

India has designated Glaw Lake in Arunachal Pradesh as its 101st Ramsar Site, making it the State's first wetland of international importance under the Ramsar Convention.



Explanation:

- **Wetlands** are areas where water covers the land permanently or seasonally and include lakes, marshes, mangroves, floodplains and peatlands.
- The **Ramsar Convention** is an international treaty adopted in 1971 at Ramsar, Iran, for the conservation and wise use of wetlands; World Wetlands Day is observed on 2 February.
- A **Ramsar Site** is a wetland designated as being of **international importance** based on ecological, hydrological and biodiversity criteria.
- **Glaw Lake** is a pristine freshwater lake in the Eastern Himalayas, fed by perennial mountain streams and located within **Kamlang Tiger Reserve**, supporting rich biodiversity including over 150 tree species and 49 orchid species.
- Wetlands provide ecosystem services such as water security, flood moderation, groundwater recharge, carbon sequestration and habitat for migratory birds.

4. Science and Technology

4.1 Samarthak: Indian Navy's First Indigenous Multi-Purpose Vessel

Context:
Samarthak, the Indian Navy's first Multi-Purpose Vessel (MPV), was delivered on 27 August 2026. Built by Larsen & Toubro (L&T) at Kattupalli, the vessel has over 75% indigenous content and is designed for multiple naval roles.

Explanation:



- **Samarthak**, meaning **"The Proponent"**, is designed as a versatile platform rather than for a single specialised naval role.
- It will primarily serve as a trial and evaluation platform, supporting the testing and assessment of naval systems and equipment.
- It can undertake maritime surveillance and reconnaissance, strengthening **Maritime Domain Awareness (MDA)**.
- Its capabilities also include offshore patrolling and support for **Humanitarian Assistance and Disaster Relief (HADR)** operations.
- The vessel was constructed by L&T at Kattupalli, Tamil Nadu, demonstrating the growing participation of the private sector in defence shipbuilding.
- With **over 75% indigenous content**, it supports **Aatmanirbhar Bharat** and the indigenisation of defence production.
- Indigenous warship construction helps develop a self-reliant defence-industrial ecosystem and reduces dependence on foreign suppliers.

4.2 Indian Navy Commissions Second Indigenous Diving Support Vessel 'Nipun'

Context:
The Indian Navy commissioned INS Nipun, the second indigenous Nistar-class Diving Support Vessel (DSV), on August 31, 2026, at Mumbai. It was delivered to the Navy on July 30, 2026.

Explanation:



- A **Diving Support Vessel (DSV)** supports deep-sea diving, underwater inspection, repair, salvage and submarine rescue.
- **Nipun** was designed and built by **Hindustan Shipyard Limited (HSL), Visakhapatnam**, with nearly **75% indigenous content**.
- **Saturation diving** allows divers to work at great depths for prolonged periods while reducing repeated decompression.
- **Remotely Operated Vehicles (ROVs)** enable diver monitoring, underwater intervention and salvage.
- **Dynamic positioning** enables precise station-keeping during such operations.
- It serves as the mother ship for a **Deep Submergence Rescue Vessel (DSRV)** used to evacuate personnel from disabled submarines.
- Its induction strengthens submarine safety, maritime salvage and indigenous defence shipbuilding.

4.3 Adi Vaani and Digital Preservation of Tribal Languages

Context:
Recently, the Ministry of Tribal Affairs (MoTA) inaugurated the National Conclave on Tribal Languages & Museums in Mysuru, Karnataka. It launched the upgraded Adi Vaani platform and the Jago AI assistant, and signed an MoU with the Central Institute of Indian Languages (CIIL) for tribal-language documentation and corpus development.

Explanation:



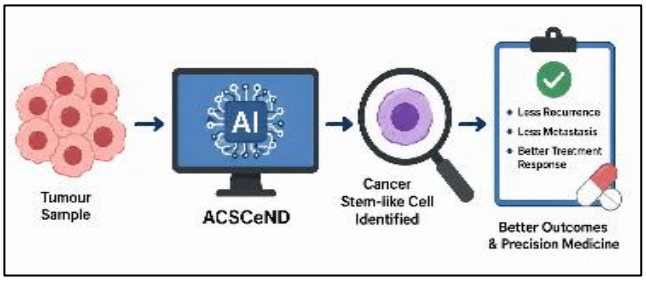
- India has numerous **tribal languages and dialects**, many of which depend largely on **oral traditions**; inadequate documentation can threaten their intergenerational transmission.
- **Adi Vaani** is a technology-based initiative of the **Ministry of Tribal Affairs** for preserving, documenting and improving access to tribal languages. Its upgraded version includes an iOS application and five additional languages.
- **Jago** is MoTA's **AI conversational assistant** that provides accessible information on tribal welfare schemes, programmes, initiatives and repositories.
- MoTA and CIIL, Mysuru, signed an MoU for language documentation and corpus development. A *language corpus* is a structured collection of spoken or written language data used for research and digital tools.
- Technologies discussed include Automatic Speech Recognition (ASR), Text-to-Speech (TTS), machine translation, digital keyboards and fonts.
- **Multilingual education** using tribal languages can improve classroom comprehension while supporting preservation of indigenous knowledge and culture.
- **Tribal Research Institutes (TRIs)** undertake research, documentation and preservation of tribal culture and heritage.
- The Conclave also focused on **Tribal Freedom Fighter Museums (TFFMs)** and community-led preservation of tribal history.

4.4 ACSCeND: AI-Based Detection of Cancer Stem-Like Cells

Context:

Researchers from S.N. Bose National Centre for Basic Sciences and Ashoka University have developed ACSCeND, an AI framework to identify hidden cancer stem-like cells from tumour gene-expression data. It may help predict tumour recurrence, metastasis and treatment response, supporting precision medicine.

Explanation:

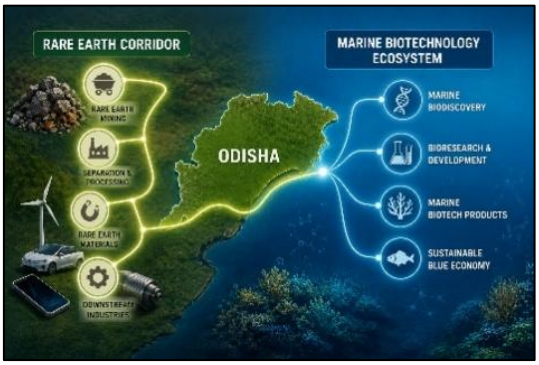


- **Cancer stem-like cells (CSCs)** are rare tumour cells capable of self-renewal and differentiation, contributing to recurrence, metastasis and therapy resistance.
- **ACSCeND** stands for **AI-based Cancer Stem-like Cell Profiler and Neoplasm Deconvoluter**.
- It identifies three developmental states: pluripotent-like, multipotent-like and unipotent-like cancer stem cells.
- It integrates single-cell sequencing knowledge with deep learning to analyse conventional bulk tumour **RNA sequencing (RNA-seq)** data.
- Unlike a single **"stemness" score**, it helps reveal **tumour heterogeneity** and hidden cell populations.
- Analysis of over 25,000 tumour samples linked pluripotent-like CSC enrichment with poorer survival, recurrence and reduced immunotherapy response.
- Such **AI-genomics** approaches can identify biomarkers, potential drug targets and high-risk patients, advancing precision medicine.

4.5 Odisha's Rare Earth Corridor and Marine Biotechnology Ecosystem

Context:

The Centre and Odisha have discussed an integrated science-led development roadmap combining the **Rare Earth Corridor, marine biotechnology, critical minerals, space technology and life sciences**. The initiative seeks to leverage Odisha's coastline, mineral resources and scientific institutions for strategic and sustainable growth.



Explanation:

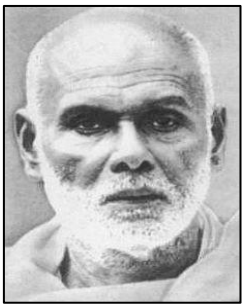
- **Rare Earth Elements (REEs)** comprise **17 metallic elements** - **15 lanthanides** plus **scandium and yttrium** - critical for electronics, permanent magnets, clean energy, defence and space technologies.
- **Rare Earth Corridors** announced for **Odisha, Kerala, Andhra Pradesh and Tamil Nadu** aim to integrate mining, processing, research and manufacturing.
- India's coastal **monazite sands** are important sources of **rare earths and thorium**, an **atomic mineral**.
- **OMBRIC (Odisha Marine Biotechnology Research & Innovation Corridor)** links research institutions for biotechnology-based sustainable utilisation of marine bio-resources.
- **BioE3 Policy** promotes **Biotechnology for Economy, Environment and Employment**.
- **Deep Ocean Mission**, under the **Ministry of Earth Sciences**, focuses on deep-sea resources, technologies, biodiversity and ocean research.

5. History

5.1 Sree Narayana Guru and the Social Reform Movement in Kerala

Context:

The Prime Minister paid tributes to Sree Narayana Guru on his birth anniversary, highlighting his contribution as a social reformer, spiritual leader and thinker. The Guru worked against caste discrimination and emphasised social equality, dignity, education and spiritual upliftment.



Explanation:

- **Sree Narayana Guru (1856–1928)** was a major social and spiritual reformer from Kerala, associated particularly with the upliftment of the **Ezhava community**.
- He challenged caste hierarchy, untouchability and restrictions on lower castes through social and religious reform.
- In **1888**, he consecrated a **Shiva idol at Aruvippuram**, challenging the traditional monopoly of upper-caste priests over temple consecration.
- His philosophy is popularly expressed through **"One Caste, One Religion, One God for Man."**
- In **1903**, his followers established the **Sree Narayana Dharma Paripalana (SNDP) Yogam**, with Dr. Palpu and Kumaran Asan playing important roles.
- He promoted education, organisation and economic advancement as instruments of social emancipation.
- He also supported inter-caste equality and religious harmony, contributing significantly to Kerala's broader **social reform movement**.

5.2 Malhar Ragas and India's Classical Music Tradition

Context:

Recently, the Vice President inaugurated MALHAR 2026 in New Delhi, a youth-centric celebration of Indian classical music. The event highlighted the Malhar family of ragas, traditionally associated with the monsoon, and the role of music in preserving India's cultural heritage.



Explanation:

- Indian classical music has two major traditions: Hindustani music of northern India and Carnatic music of southern India.
- A raga is a melodic framework based on a particular arrangement and treatment of musical notes, while tala provides the rhythmic framework.
- **Malhar** refers to a family of ragas traditionally associated with the **monsoon and rains**, particularly in the Hindustani tradition.
- Important variants include Miyan ki Malhar, Megh Malhar, Gaud Malhar and Sur Malhar.
- Miyan ki Malhar is traditionally associated with **Miyan Tansen**, the celebrated musician at Mughal Emperor **Akbar's court**.
- Hindustani music developed important vocal forms such as **Dhrupad, Khayal, Thumri and Tarana**.
- Indian classical music is largely transmitted through the **Guru-Shishya tradition** and represents India's intangible cultural heritage and cultural soft power.

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