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NATIONAL CLEAN AIR PROGRAMME

As per a Centre for Science and Environment (CSE), nearly two third of the funds allocated to NCAP were used for dust management.

About NCAP

- Launched by the Ministry of Environment Forest & Climate Change in 2019.
- **Aim:** Ensure stringent implementation of mitigation measures for prevention, control and abatement of air pollution Augment ambient air quality monitoring network.
- **Targets:** Achieve 20%-30% reduction in concentrations of particulate matter by the year 2024, keeping 2017 as the base year.
- NCAP covers Non-Attainment Cities (NACs) wherein National Ambient Air Quality Standard (NAAQS) has exceeded for 5 consecutive years.

CITES-THE GLOBAL PICTURE REPORT

The report details CITES-listed rosewood species' characteristics, ecosystem roles, regeneration rates, and threats.

- Such information will help CITES parties make informed non-detriment findings (NDFs).
- NDF is a mandatory scientific analysis under CITES to ensure that exporting a specified quantity of specimens of Appendix I and II -listed species will not affect their long-term survival in the wild.

Rosewood

- About: 'Rosewood' also called as "palisander" encompasses a wide range of tropical hardwoods in the Fabaceae (Leguminosae) family.
- Rosewood in Appendix II of CITES include: *Dalbergia latifolia* (Malabar rosewood) and *Dalbergia Sissoo* (Shisham) are found in India and are listed as Vulnerable and Least Concern (respectively) on IUCN red list.
- African rosewood, native to West African countries, is listed as endangered on IUCN red list.
- Utility: Crafting furniture and musical instruments.
- Role in Ecosystem:
 - Soil Improvement: *Dalbergia* species can improve degraded soil through fast decomposing leaf litter, rich in nitrogen, phosphorus, and carbon.
 - Nitrogen Fixation: Some species form symbiotic associations with soil bacteria

CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora)

- About: An international legally binding agreement between governments to ensure that international trade in specimens of wild animals and plants does not threaten the survival of the species.
- Genesis: Drafted in 1963 following an IUCN resolution, it came into force in 1975.

- Parties: 184 (including India)
- CITES Appendices: Contains lists of species afforded different levels or types of protection from over-exploitation

CRITICAL MINERALS

Under Mines and Minerals (Development and Regulation) Act (MMDRA), 1957, Central Government increased the area limit (set for preventing cartelisation) for 24 critical minerals listed in part-D of First Schedule to MMDRA.

- Area limit for Prospecting License (for exploring and proving mineral deposits) increased to 100 sq.km.
- Area limit for Mining Lease (for mineral extraction) increased to 50 sq.km.

Critical Minerals

- Critical Minerals are those minerals which are essential for economic development and national security and whose lack of availability or their concentration in few geographical locations may lead to supply chain vulnerability and disruption.
- MMDRA empowers central government for auction of mining lease and composite license for 24 Critical Minerals including Cobalt, Vanadium, Beryllium, Tungsten etc.
- Government has conducted auctions for critical minerals located in Bihar, Chhattisgarh, Gujarat, Jharkhand, Odisha, Tamil Nadu, Uttar Pradesh, and J&K.

India's Initiatives

- National Institute or "Centre of Excellence on Critical Minerals" (CECM): For periodically updating critical minerals list.
- Khanij Bidesh India Ltd. (KABIL): Joint Venture Company formed to ensure consistent supply of critical minerals.
- Membership in Mineral Security Partnership (MSP) to bolster supply chains.
- Other multilateral/ bilateral partnerships such as agreement between India and Argentina for exploration and mining of 5 lithium blocks in Argentina.

HYDROGEN FUEL CELLS

MV Sea Change, world's first commercial passenger ferry powered by 100% zero-emission hydrogen fuel cells was launched in San Francisco.

- It can travel about 300 nautical miles and operate for 16 hours before needing to refuel.

About Hydrogen Fuel Cells (HFC)

- It produces electricity by combining oxygen and hydrogen in an electrochemical reaction.
- HFC vehicles are completely free from tailpipe pollutant emissions, including particulates, oxides of nitrogen, carbon monoxide, and carbon dioxide

LAST UNIVERSAL COMMON ANCESTOR

Scientists suggest LUCA could have formed just 300 million years after Earth's formation.

About LUCA

- Researchers believe all the three branches of life i.e. bacteria, archaea, and eukarya have originated from a single microbe, called LUCA.
- However, there is no fossil evidence to support the existence of LUCA.
- **Suggested Characteristics:**
 - Anaerobic: Grew in an environment devoid of oxygen.
 - Thermophile: Heat loving microbe.
 - Metabolism: Depended upon hydrogen, carbon dioxide and nitrogen, turning them into compounds such as ammonia

ROOFTOP SOLAR POWER

Asian Development Bank (ADB) approves support for Rooftop Solar Systems in India

- The financing will support Multi-tranche Financing Facility (MFF) Solar Rooftop Investment Programme.
- ADB will provide funds from its Clean Technology Fund and from Ordinary capital resources. Loans will be made available through the State Bank of India and the National Bank for Agriculture and Rural Development (NABARD).

Current Status of Rooftop Solar Power in India

- Rooftop solar installed capacity in India is around 11.08 GW as of December 2023, of which only 2.7 GW is in the residential sector.
- Gujarat tops the list with 2.8 GW, followed by Maharashtra by 1.7 GW.
- Potential: Over 25 crore households across India have potential to deploy 637 GW on rooftops (as per Council on Energy, Environment and Water (CEEW))

• Rooftop-related schemes in India

- PM Surya Ghar Muft Bijlee Yojana: Central Scheme, which aims to provide free electricity to one crore households in India, who opt to install rooftop solar electricity units.
- Pradhan Mantri Suryodaya Yojana: Target of installing rooftop solar on 1 crore houses and providing electricity through it to low and middle-income individuals.
- Grid Connected Rooftop Solar Programme: To achieve a cumulative installed capacity of 40,000 MW from Grid Connected Rooftop Solar (RTS) projects

COAL

Gevra and Kismunda coal mines (Chhattisgarh) have secured 2nd and 4th spot in list of world's 10 largest coal mines released by WorldAtlas.com.

Coal in India:

- Status: World's second largest coal producer and 5th largest country in terms of coal deposits.

- Type of coal: About 80% of coal deposits are bituminous type and are of non-coking grade.
- Characteristics of coal: High in ash content but low in sulphur content with high ash fusion temperature.
- Import: India imports coal particularly coking coal.

NATIONAL LANDSLIDE FORECASTING CENTRE

NLFC is aimed at landslide hazard mitigation in India and will in due course issue early warning bulletins for all landslide-prone states, operationalizing the regional Landslide Early Warning System (LEWS) nationwide by 2030.

Other Initiatives:

- **Bhusanket Web Portal:** Will facilitate dissemination of relevant information on landslide hazards, initiating short-range and medium-range landslide forecasting.
- **Bhooskhalan Mobile App:** Quick dissemination of daily landslide forecasts.

About Landslides

- Landslides, a type of mass wasting, is defined as the rapid movement of a mass of rock, debris, or earth down a slope.
- India's Vulnerability: Approximately 0.42 million sq. km (12.6% of land area), excluding snow covered area, is prone to landslide hazard.
- Himalayas and Western Ghats are particularly susceptible to landslides due to hilly topography and heavy rainfall.
- **Causes of landslides**
 - Natural: Heavy rainfall, undercutting of slopes due to flooding or excavation, earthquakes, snowmelt etc.
 - Anthropogenic: Overgrazing by cattle, soil erosion due to loss of vegetation, terrain cutting and filling, excessive development etc.

CENTRAL INFORMATION COMMISSION

Supreme Court has asserted that the Central Information Commission has powers to constitute benches & frame regulations.

About CIC

- **Genesis:** Statutory body under Right to Information Act, 2005 to ensure greater access to information to Indian citizens.
- **Functions:** To receive and inquire into complaints from any citizen regarding RTI act, etc.
- **Members:** Commission consists of one chief Information commissioner(CIC) and Information Commissioners(IC) (Not exceeding 10)
- **Appointment:** CICs And ICs are appointed by President on recommendation of a committee consisting of PM (Chairperson of committee) Leader of Opposition in Lok Sabha Union Cabinet Minister nominated by PM.
- **Tenure:** CICs and ICs shall hold office for a period of three years.

GRAM NYAYALAYAS

Supreme Court directs States/UTs and their High Courts to file status report on Gram Nyayalayas

- Gram Nyayalayas aims to provide access, affordable and quick justice to the citizens at their door steps and de-clog local courts.

Features of Gram Nyayalayas

- These have statutory backing under the Gram Nyayalayas Act, 2008.
- Act exempts States of Nagaland, Arunachal Pradesh, Sikkim and to the tribal areas specified in the Act.
- Seat of gram nyayalayas is located at the headquarters of the intermediate Panchayat
- **Status:** Gram Nyayalayas are deemed to be a Court of Judicial Magistrate of First Class.
- State government appoints 'Nyayadhikari' for each GramNyayalaya in consultation with the high court.
- **Jurisdiction:** Shall be a mobile court and both civil and criminal jurisdiction to settle petty disputes at the village level.
- **Dispute Process:** Disputes are to be settled with the help of conciliation between the parties.
- These are not bound by the rules of evidence provided in the Indian Evidence Act, 1872 but by Principles of Natural Justice.
 - Indian Evidence Act, 1872 has been recently replaced by the Bharatiya Sakshya Adhinyam.
- Appeals: Appeal in criminal cases lie to the Court of Session and in civil cases lie to the district court, shall be disposed within 6 months from the date of filing an appeal.
- **Initiative to Support Gram Nyayalayas: Under Gram Nyayalayas scheme (Centrally Sponsored Scheme (CSS)), Union Government provides financial assistance to States to set up Gram Nyayalayas.**

NITI AAYOG

Since the term of the Aayog, barring Chief Executive Officer (CEO), is co-terminus with the term of the Union Government, reconstitution was due since the formation of new government in June, earlier this year.

National Institution for Transforming India (NITI) Aayog

- It is a government think-tank formed in 2015 via a resolution of the Union Cabinet, replacing the erstwhile Planning Commission.
- Composition:
 - Chairperson: Prime Minister of India
 - Governing Council: Prime Minister; CMs of all the States and UTs with legislature; Lt. Governors of other UTs, Ex-Officio Members; Vice

Chairperson, NITI Aayog; Full-Time Members, NITI Aayog; and Special Invitees.

- Ex-officio Members include maximum 4 members of Union Council of Ministers nominated by the PM
- Special Invitees include experts, specialists and practitioners with relevant domain knowledge nominated by the PM
- Regional Councils: To address specific issues and contingencies impacting more than one state or a region
- CEO: Appointed by the PM for a fixed tenure, in the rank of Secretary to the Government of India.

Role of NITI Aayog in India's Development Agenda Cooperative federalism:

- 'Team India' involving all states to work towards a national development agenda.
- Competitive federalism: Promotes healthy competition among states through transparent rankings. e.g.,
- Aspirational District Programme, Sustainable Development Goals India Index.
- Regional and sector-wise interventions: e.g., NITI Forum for North East, Project SATH-E (Sustainable Action for Transforming Human Capital-Education), etc

MONEY BILL

Supreme Court has agreed to list petitions challenging the Money Bill route taken by the Union Government to pass certain bill in the Parliament.

About Money Bill

- Defined under Article 110 of the Indian Constitution. A bill shall be deemed to be a Money Bill if it contains only provisions dealing with:
 - the imposition, abolition, remission, alteration or regulation of any tax.
 - the regulation of the borrowing of money or the giving of any guarantee by the Government of India, etc.
- Decision of the Speaker of the Lok Sabha is final on the question whether a Bill is a Money Bill or not.
- As per Article 109, a Money Bill shall be introduced only in Lok Sabha

ARTICLE 341

Supreme Court stated that the State Can't Alter the Schedule Caste (SC) List Published Under Article 341.

- The Court struck down Bihar govt resolution to merge Economically Backward Class Community in SC List.

About Article 341

- President can officially designate certain groups as Scheduled Castes for specific States or Union Territories.
- For States, this is done after consulting the Governor. The designation may include entire castes, races, tribes, or subgroups within these categories.
- Parliament may by law include in or exclude from the list of Scheduled Castes

ARTICLE 361

Supreme Court agrees to examine constitutional provision granting immunity to Governors

About Article 361

- It's an exception to **Article 14** (right to equality) where Presidents or governors are not answerable to any court for the exercise of powers and duties of their office.
- However, Parliament can review the President's conduct through designated investigative bodies. (**Article 61**)
- They have immunity from criminal proceedings while in office and cannot be arrested or imprisoned by court order while in office.
- Civil suits against the President/Governor require two-month notice before filing.

RTE 2009

Bombay HC overturns Maharashtra govt's exemption of private schools from RTE quota admissions to disadvantaged and economically weaker students.

- HC observed that it was ultra vires of RTE Act and **Article 21** of Constitution.
- The Constitution (Eighty-sixth Amendment) Act, 2002 inserted **Article 21-A**.

RTE provisions

- The Act makes education a fundamental right of every child between the ages of 6 and 14.
- It specifies minimum norms in elementary schools.
- It requires all private schools to reserve 25% of seats for children belonging to disadvantaged sections

FORIEGNERS TRIBUNALS

Supreme Court recently overturned the decision of Assam Foreigners' Tribunal and declared a resident of the State as Indian citizen.

Foreigners Tribunals

- Establishment: These are quasi-judicial bodies established under the Foreigners (Tribunals) Order, 1964 by the Central Government, according to Section 3 of The Foreigners Act, 1946.
- Authority: Only Foreigners Tribunals have the power to declare a person as a foreigner.
- Thus, being excluded from the National Register of Citizens (NRC) in Assam does not automatically classify a person as a foreigner.
- Power: Powers of a civil court under the Code of Civil Procedure, 1908.
- Set up by: State government

VIBRANT VILLAGE PROGRAMME

VVP was approved in 2023 to ensure comprehensive development of selected villages along the northern border in the States of Arunachal Pradesh, Himachal Pradesh, Sikkim, Uttarakhand and Ladakh.

Key Features of VVP

- **Type:** Centrally Sponsored Scheme
- **Nodal Ministry:** Ministry of Home Affairs
- **Areas of intervention:** Skill development, livelihood generation, tourism, development of co-operatives, financial inclusion etc.
- **Potential Benefit:** Programme will help in improving the border security of nation as it may promote community participation in the border management.
- **Significance of Community Participation in the Border Management**
 - Familiarity with the local terrain, crossing points, and regular patterns of movement enables them to act as additional eyes and ears for border guarding forces.
 - Enhances situational awareness and aid in intelligence gathering along the border.
 - Provide information about suspicious activities, smuggling attempts, or potential security threats.
 - Tackling workforce shortage due to unavailability of sufficient workers in harsh conditions.
 - E.g. Residents of Chushul village (Ladakh) in 2020 helped Army to secure supplies for harsh winters season.

INTERNATIONAL COVENANT ON CIVIL AND POLITICAL RIGHTS

India successfully concludes 4th periodic review by Human Rights Committee (HRC) under ICCP

- The HRC concluded its consideration on how India implements the provisions of the International Covenant on Civil and Political Rights (ICCPR).
- The HRC, comprising 18 independent experts, monitors implementation of ICCPR.
- HRC is a human rights treaty body of United Nation.
- Committee experts commended India's Women's Reservation Act 2023 (also known as Nari Shakti Vandan Adhiniyam, 2023) seeks to reserve one-third of the total number of seats for women in Lok Sabha, State Legislative Assemblies and Delhi Assembly.

About ICCPR

- A multilateral treaty adopted by the UN General Assembly in 1966 and in force from 1976.
- Deals with freedom of movement; equality before the law; the right to a fair trial; freedom of thought, conscience and religion; freedom of opinion and expression; peaceful assembly; etc.

- Part of the International Bill of Human Rights along with Universal Declaration of Human Rights (UDHR), 1948 and the International Covenant on Economic, Social and Cultural Rights (ICESCR), 1966.
- State Parties: 174
- India became a State Party to the ICCPR in 1979.
- **Other Important Human Rights Covenants**
 - Convention on the Prevention and Punishment of the Crime of Genocide (or Genocide Convention), 1948
 - International Convention on the Elimination of all Forms of Racial Discrimination (ICERD), 1965
 - Convention on the Elimination of All Forms of Discrimination against Women (CEDAW), 1979

PROJECT ASMITA

Ministry of Education launched Asmita Project along with two other initiatives to promote multilingualism in education.

- These initiatives are aligned with New Education Policy, 2020.

About Three Initiatives:

- Asmita (Augmenting Study Materials in Indian languages through Translation and Academic writing) Project: Ensuring that students have access to high-quality study materials in their native languages.
- Under it, 22,000 books will be produced in 22 scheduled languages in 5 years.
- Implementing Agencies: University Grants Commission (UGC) and Bharatiya Bhasha Samiti (BBS)
- Bahubhasha Shabdkosh: A comprehensive multilingual dictionary repository.
- Real-time Translation Architecture: Enhancing translation with cutting edge technology

COMMON SERVICE CENTRE

CSC SPV, which oversees implementation of CSC scheme, celebrated 15 years of its establishment.

About CSC SPV

- Set up by the Ministry of Electronics & IT under the Companies Act, 1956.
- Provides a centralized collaborative framework for delivery of services to citizens through CSCs.
- Vision: To develop CSCs as a reliable and ubiquitous IT-enabled network of citizen service points.

About Common Service Centres (CSCs)

- It is one of the three pillars of the National e-Governance Plan (NeGP) approved in 2006.

- Other two pillars of NeGP include Connectivity and National Data Bank/ State Data Centres.
- CSCs are front-end delivery points for Government, private and social sector services to rural citizens of India, in an integrated manner.
- It is a pan-India network catering to regional, geographic, linguistic, and cultural diversity of the country.
- Services offered by CSCs include G2C (Aadhar Services, ITR filing, etc.), B2C (Bharat Bill Pay System, Mobile and DTH recharge, etc.), Financial services (banking, insurance, pension, etc.), among others CSC 2.0 Scheme
- Launched in: 2015
- Objective: To set up at least 1 CSC in each of the 2.5 lakh Gram Panchayats across the country.
- It aims to consolidate service delivery through a universal technology platform.
- Key features: Standardization of services, encouraging more women as Village-level Entrepreneurs

INVERSE ETF

SEBI proposed to introduce a new asset class for investors which can offer investment strategies including long-short equity funds and inverse ETFs.

About Inverse ETF ('Short ETF' or 'Bear ETF')

- It is an Exchange Traded Fund (ETF) constructed by using various derivatives to profit from a decline in the value of an underlying benchmark.
- ETFs are marketable securities that track an index, a commodity, bonds, or a basket of assets like an Index Fund.
- It gains from a drop in the value of an underlying benchmark.
- Only intended for short holding periods.

INTERNATIONAL CENTRE FOR AUDIT OF LOCAL GOVERNANCE

It is the first in country and aims to set global standards for auditing local governance bodies.

About iCAL

- Collaborative platform for policymakers and auditors and would serve as a centre of excellence for capacity building of auditors.
- Enhance independence of local government auditors to ensure improved financial performance assessment, and service delivery.
- Act as a knowledge centre and think-tank for addressing governance issues at grassroot levels.
- **Need for iCAL in India**
 - To enhance collaboration among 2.5 lakh panchayats and 8,000 Urban Local Bodies (ULBs), and exchange knowledge, promote best practices etc. (CAG)
 - Aligned with Global practices as 40 countries have their respective Supreme Audit Institutions (SAI).

- Inefficiencies in fund utilization, as most municipalities do not use their audited financial statements for cash flow management. (RBI)
- **Current auditing mechanism of Local Bodies**
 - Through Examiner of Local Fund Accounts (ELFA) or Director of Local Fund Accounts (DLFA) in most states.
 - It audits utilization of funds granted by state government to local bodies.
 - Audit is also done by other institutions like Comptroller and Auditor General (CAG).
 - CAG exercises control and supervision over proper maintenance of accounts and auditing for all three levels of PRIs/ULBs.
 - CAG advises and supports ELFA/DLFA

Local Governance in India

- 73rd and 74th Constitutional Amendment Act, 1992, added Parts IX (Eleventh Schedule) and IX-A (Twelfth Schedule) which contains provisions on Local Governance.
- It is a State subject in List II of Seventh Schedule
- Article 243 G enshrines the basic principle for devolution of power to Local Bodies.
- Article 243J states that Legislature of a State may, by law, make provisions with respect to maintenance of accounts by Panchayats and auditing of such accounts

UNIFORM GST ON AIRCRAFT PARTS

The Ministry of Civil Aviation has announced the implementation of a uniform Integrated Goods and Services Tax (IGST) rate of 5% on all aircraft and aircraft engine parts.

Significance

- Boost domestic Maintenance, Repair, and Overhaul (MRO) industry
- Help in making India Global Aviation Hub
- Simplifies tax structure
- Reduce operational costs, resolve tax credit issues and attract Investment

DFCCIL

Centre has exempted the Dedicated Freight Corridor Corporation of India Ltd (DFCCIL) from the 18% GST.

About DFCCIL

- DFCCIL is a special purpose vehicle of Indian Railways.
- It was incorporated in 2006 under Indian Companies Act 1956.
- **Its key role:**
 - To undertake planning & development, mobilization of financial resources and construction, maintenance and operation of the Dedicated Freight Corridors (DFCs).
 - It is also expected to decongest road network & promote shifting of freight transport to more efficient rail transport

INDIA'S G20 TASK FORCE ON DIGITAL PUBLIC INFRASTRUCTURE

Task force was established in 2023 under India's G20 Presidency to facilitate priorities on DPI and Financial Inclusion, and supplement efforts towards adoption of DPI globally.

About DPI

- Refers to building blocks or platforms like digital identity, financial infrastructure, and data exchange solutions that assist governments in empowering individuals, and improving lives through digital inclusion.
- India's DPI, India Stack, comprises three foundational layers i.e. Digital identification (Aadhaar); Real-time fast payment (UPI); and platform to safely share personal data without compromising privacy.
- Achievements
 - 10 billion transactions per month through UPI.
 - Over 6 billion documents stored by 211 Million people in DigiLocker.
 - Rich and Poor divide in bank account ownership reduced from 14 to 1% (2011-2022)

NATIONAL WATERWAYS

Inland Waterways Authority of India and Transport Department of Government of Nagaland to conduct detailed feasibility study for development of Tizu and Zungki River (National Waterways 101).

About Tizu and Zungki River

- Tizu originates near Longkhim, Tuensang district, of Nagaland and falls into Chinwin River (one of the largest Tributary of river Irrawaddy river), also known as Ningthi river in Myanmar.
- Main tributaries of Tizu River are river Zungki, Lanye and Likimro.
- Zungki is biggest tributary of Tizu in Nagaland

WEF RELEASES 'THE FUTURE OF FINANCIAL ADVICE' REPORT

The report emphasises Importance of traditional financial advisors amidst rising popularity for finfluencers.

- Term 'Finfluencers (or financial influencers)' refers to individuals who uses social media to share information, recommendations, or guidance on financial advice, news or other related matters.
- They have potential to shape the financial decisions of individuals.
- **SEBI actions for regulating Finfluencers**
 - Recently, SEBI reportedly approved the proposal to ban the association of regulated entities with unregistered 'Finfluencers'.
 - It was aimed to protect investors as many finfluencers have been linked to often misleading investors with false profit claim.

ASSOCHAM REPORT ON ECOMMERCE

Report recognised that India is one of the fastest-growing e-commerce markets.

- E-commerce (electronic commerce) is the exchange of goods and services and the transmission of funds and data over the Internet.

Key findings

- **Global:**
 - Crossborder e-commerce is driving global business-to-consumer (B2C) market.
 - Global B2C market is valued at US\$6 trillion and is projected to reach over US\$8 trillion by 2026.
- **India:**
 - Domestic e-commerce market: It stands at US\$83 billion as of FY22, which is expected to reach US\$150 billion by FY26.
 - Growing middle class, rising internet penetration, digitization of payments through UPI, etc. are the key drivers.
 - E-commerce exports: For FY2023, export was between US\$4-US\$5 billion (0.9% to 1.1% of India's total merchandise exports).
 - E-commerce exports need 50-60 times increase to reach the \$200-300 billion target by FY 2030

- **India's Initiatives for promoting e-commerce**
 - Foreign Trade Policy 2023: Dak Niryat Kendra, extension of export benefits to e-commerce exports among others
 - GST: E-commerce exports are zero-rated supplies and are eligible for GST refund
 - State level: Telangana, Gujarat, Uttar Pradesh etc., have Signed MOUs with different marketplaces to initiate capacity building of the MSMEs

PM SAVANIDHI SCHEME

Madhya Pradesh has secured the first place under the 'Best Performing State' category in PM SVANidhi scheme.

PM SVANidhi (Street Vendor's AtmaNirbhar Nidhi)

- Central Sector Scheme under Ministry of Housing and Urban Affairs.
- **Objective:** To facilitate street vendors to access affordable working capital loan for resuming their livelihoods activities, after easing of Covid lockdown.
- **Features**
 - Initial working capital loan of up to ₹10,000.
 - Interest subsidy on timely/early repayment @7%.
 - Monthly cashback incentive on digital transactions.
 - Targeted beneficiaries: Street vendors/ hawkers vending in urban areas, as on or before March 24, 2020.

INDIA'S FIRST OVERSEAS JAN AUSHADHI KENDRA IN MAURITIUS

This initiative exemplifies deepening relations between India and Littoral and island nations of the Indian ocean region (IOR).

- The Indian Ocean countries comprise of 36 littoral and 11 hinterland states.

- Importance of IOR's littoral and Island nations for India Strategic Location: Their proximity to sea lines of communications like Malacca strait is crucial for global trade, preventing piracy & ensuring maritime security.
- 80% of India's external trade and 90% of energy trade happens through IOR.
- Vision of regional Leadership: IOR is emerging as new theatre for geo-political competition between global powers e.g. USA, France etc.
- Hence, it is crucial for pursuing India's vision of a net security provider, while also containing the rising footprint of China.
- Blue Economy: Marine fisheries in IOR supplies about 15% of world fish catch (FAO, 2020). IOR is also important for sustainable deep sea mining.
- Climate Security: Indian Ocean has warmed faster than any other ocean since 1950s (IPCC report 2021).
- Rapid population growth & rising climate disasters requires collective action for preventing human vulnerability and regional insecurity

India's Initiatives

- Information Fusion Centre – Indian Ocean Region (IFC- IOR) hosted by Indian navy to further maritime safety and security in IOR.
- Humanitarian Assistance and Disaster Relief (HADR): Vaccine Maintri, Operation Karuna etc.
- Indian Navy's outreach initiative MAHASAGAR (Maritime Heads for Active Security and Growth for All in the Region).
- SAGAR doctrine & Neighbourhood First Policy.

UNITED NATIONS WATER CONVENTION

Ivory Coast joined the United Nations Water Convention (Convention on the Protection and Use of Transboundary Watercourses and International Lakes).

United Nations Water Convention

- Genesis: Adopted in Helsinki (Finland) in 1992 and entered into force in 1996.
- Legally binding: Requires Parties to use transboundary waters reasonably and equitably and ensure their sustainable management.
- Members: India is not a party
- NOTE: UN Watercourses Convention (UN Convention on the Law of the Non-Navigational Uses of International Watercourses) was adopted in 1997. Indus Waters Treaty (1960) aligns with it

WORLD BANK GROUP GUARANTEE PLATFORM

Initiated in 2024, WBG Guarantees consolidates all guarantee products and experts from across the WBG institutions at Multilateral Investment Guarantee Agency (MIGA).

- WB guarantees are provided to private lenders, for infrastructure financing, where the demand for debt funding is large, political and sovereign risks are significant, and long dated financing critical to a project's viability.

- Previous to the launch of the platform, the WBG offered 20 guarantee solutions each with different processes, rules, and standards that impeded clients access.

WBG GP

- Aims to boost WBG annual guarantee issuance to \$20 billion by 2030.
- The WBG issued approximately \$10.3 billion in new guarantees using products from the platform in 2024.
- Provides three types of coverages:
 - Credit guarantees for loans to the public or private sector;
 - Trade finance guarantees;
 - Political risk insurance against non-commercial risks for private sector projects or public-private partnerships.

About WB Group

- Global partnership of five institutions. India is a part of the first four (i.e., not a part of ICSID).
- IBRD (The International Bank for Reconstruction and Development),
- IDA (The International Development Association),
- IFC (The International Finance Corporation),
- MIGA (The Multilateral Investment Guarantee Agency),
- ICSID (The International Centre for Settlement of Investment Disputes),
- IBRD and IDA form the WB.

BROWN DWARF

James Webb Space Telescope (JWST) observations were used to map the weather on a pair of brown dwarf stars.

- JWST is a large infrared telescope, result of an international collaboration among NASA, European Space Agency and Canadian Space Agency.

About Brown Dwarf

- Objects which have a size between that of a giant planet like Jupiter and that of a small star.
- They do not have enough mass to fuse normal hydrogen like a regular star and thus are not able to sustain nuclear fusion. So, they are often called 'Failed Stars'



PHEROMONE TRAPS

A pilot project by Central Institute for Cotton Research (CICR) - Indian Council of Agricultural Research (ICAR) deploys AI powered Pheromone traps, to protect cotton crops from Pink Bollworm pest infestation.

About Pheromone Traps

- They use chemical signals (pheromones) emitted by female moths to attract mates (hence catches only males of that species).
- Traps can be used to monitor target pests in agriculture or in residential areas.
- By constantly monitoring for insects, it may be possible to detect an infestation before it occurs

BIOTECHNOLOGY RESEARCH AND INNOVATION COUNCIL (BRIC)

BRIC- Translational Health Science and Technology Institute hosted an industry meet 'SYNCHN 2024' (Synergy in science built through elements of collaboration for high quality data & expertise in NCR Biotech Cluster).

About BRIC

- BRIC has been created as a registered society by Department of Biotechnology (DBT), Ministry of Science and Technology by subsuming various Autonomous Institutions.
- It integrates multi-disciplinary research, training, and innovation programs.
- BRIC-THSTI acts as a catalyst to translate fundamental discoveries by building rigorous clinical research capacity.
- THSTI is housed within the NCR Biotech Science Cluster in Faridabad.

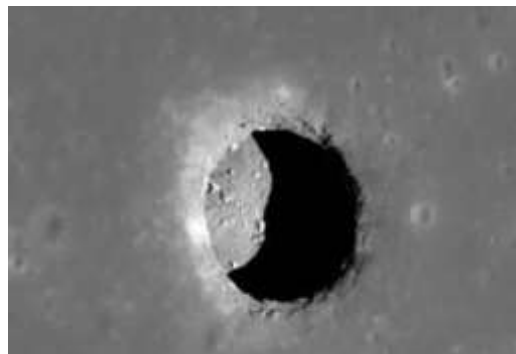
LUNAR CAVES

Researchers have found evidence of an underground cave on the moon that is accessible from the surface.

- The cave was recorded at the Sea of Tranquillity, a large, dark, basaltic plain on the lunar surface.

About Lunar cave

- Lunar caves are believed to be the underground passageways formed through volcanic processes that are connected to the pits covering the moon's surface.
- **Significance of the discovery:**
 - New insight into the evolution of the moon and lunar volcanism.
 - Caves could provide shelter for future astronauts from radiation, micrometeorites, and temperature extremes



NATIONAL CENTRE FOR POLAR AND OCEAN RESEARCH

NCPOR signed a contract with a Defence PSU for constructing Indigenous Ocean Research Vessel to unravel deep oceans.

About NCPOR (HQ: Goa)

- Genesis: Established as an autonomous Research and Development Institution of Ministry of Earth Sciences (formerly Department of Ocean Development) in 1998.
- Composition: Governing Body comprising 13 members.
- Chairman (ex-officio) of governing body is Secretary, Ministry of Earth Sciences.
- Mandate: Facilitatory role in scientific research activities being undertaken in Antarctica, Arctic and in Indian Ocean sector of Southern Ocean.
- Management of Indian Antarctic Research Bases “Maitri” and “Bharati”, and Indian Arctic base “Himadri”

TRANSITING EXOPLANET SURVEY SATELLITE TESS

A new study based on TESS observation has discovered smaller black hole orbiting large black hole at the center of the galaxy OJ 287 (located four billion light years away)

- Scientists from 10 countries including India were involved in the study.
- A black hole is a space region with such strong gravity that not even light can escape.

About TESS

- Launch: Launched in 2018 by NASA
- Objective: To discover exoplanets in orbit around the brightest dwarf stars in the sky.
- Significance: Data from TESS will be used to study formation and evolution of habitable worlds.

MAKHANA

Recently, Bihar government demanded Minimum Support Price for makhana, the popped kernel of foxnut or gorgon nut.

About Makhana:

- Tropical and subtropical aquatic crop: Grown in stagnant perennial water bodies like ponds, land depressions, oxbow lakes, etc. Its seed is also called as Black Diamond.
- Climatic Conditions:
 - Temperature: 20 - 35 degree Celsius,
 - Relative humidity 50% to 90%
 - Annual rainfall 100 cm - 250 cm.
- Region: Native of South-East Asia and China & distributed to almost every part of world.
- India is largest producer in the world (largest producing state is Bihar)
- Nutritional Benefits: Low fat content, high contents of carbohydrates, protein (15 - 20%) and mineral

ICAR FOUNDATION DAY

Recently, 96th Foundation and Technology Day of Indian Council of Agricultural Research (ICAR) was celebrated.

About ICAR

- Genesis: 1929 as a registered society under the Societies Registration Act, 1860.
- Formed based on the report of the Royal Commission on Agriculture
- Objective: Coordinate, guide, and manage research and education in agriculture including horticulture, fisheries, and animal sciences in the entire country.
- It is an autonomous organisation under Department of Agricultural Research and Education, Union Ministry of Agriculture and Farmers Welfare
- Headquarters: New Delhi.
- Union Minister of Agriculture is the ex-officio President of the ICAR Society

BAMBOO

'National Symposium on Bamboo' was held to promote sustainable rural livelihoods, women's empowerment and climate resilience through bamboo farming.

About Bamboo

- Bamboo is the perennial and most diverse plant (more than 1200 species in world) belongs to subfamily Bambusoideae of family Poaceae.
- Found in tropical, sub-tropical, and mild temperate regions.
- Distribution: In India, Bamboo is found naturally throughout the country except Kashmir region.
- North-Eastern states and West Bengal accounts for more than 50% of Bamboo resources.
- Uses: Construction material, Textile fibers, Musical instruments, Furniture etc.
- Environmental benefits: Rapid carbon sequestration, Soil erosion control, water purification etc

CHANDIPURA VIRUS

Recently, there has been outbreak of Chandipura virus in Gujarat.

About Chandipura virus

- Also known as Chandipura vesiculovirus (CHPV), it is an Ribonucleic acid (RNA) virus belonging to the Rhabdoviridae family.
- It also includes the rabies virus.
- It was first identified in 1965 in Chandipura, a village in Maharashtra.
- It primarily affects children (aged 9 months-14 years) and has been associated with outbreaks of acute encephalitis in India.
- Transmission: Spread through the sting of a vector-infected sandfly and is seen more in rural areas.
- Symptoms: Fever, vomiting, loose motion and headache

MONOCLONAL ANTIBODIES

Nipah monoclonal antibody trials may begin in India in 2025.

About Monoclonal Antibodies:

- Monoclonal antibodies (moAbs or mAbs) are lab-made proteins mimicking natural antibodies.
- Antibodies are parts of body's immune system which seeks out antigens (foreign materials) and destroy them.
- Applications:
 - Diagnostics (e.g., ELISA),
 - Treating diseases (cancer, infections, autoimmune disorders, etc.)
 - Analyzing cell types in blood/tissue (with the use of fluorescent tags)

R21/MATRIX-M

West African country Ivory Coast became the first country to roll out the new R21/Matrix-M malaria vaccine to children below 2 years.

Malaria is a life-threatening disease caused by a single-cell parasite of genus Plasmodium spread to humans by some types of mosquitoes.

About R21/Matrix-M vaccine:

- Second malaria vaccine recommended by WHO in 2023, after RTS,S/AS01 vaccine.
- Developed by the University of Oxford, leveraging an adjuvant technology from Novavax.
- Manufactured and scaled by the Serum Institute of India.
- Targets the plasmodium 'sporozoite', which is the first form of the malaria parasite entering the human body.

100 YEARS OF EEG

2024 marks the 100th year of electroencephalography(EEG)

About EEG

- It is a medical test which measures brain electrical activity generated by neurons.
- It uses small, metal discs called electrodes that attach to the scalp.
- Brain cells communicate via electrical impulses, and this activity shows up as wavy lines on an EEG recording.
- Uses: Detecting epilepsy, neurological disorders, or any other brain related tumors, damage, etc

COALITION OF EPIDEMIC PREPAREDNESS INNOVATIONS CEPI

Asia's first health research-related Pre-clinical Network Facility has been inaugurated in Faridabad (Haryana) under the Coalition of Epidemic Preparedness Innovations (CEPI).

- Genetically Defined Human Associated Microbial Culture Collection (Ge-HuMic) Facility has been also inaugurated.

About CEPI

- Genesis: Launched in 2017 by Norway and India, the Bill & Melinda Gates Foundation, World Economic Forum (WEF), etc.
- Aim: To accelerate the development of vaccines against emerging infectious diseases and enable equitable access to these vaccines.
- Headquarters: Oslo, Norway

INDIAN NEWSPAPER SOCIETY (INS)

Prime Minister inaugurates INS Towers in Mumbai.

About INS

- **Genesis:** Its origin can be traced back to 1927. INS is established as Indian & Eastern Newspaper Society (IENS) in 1939.
- Mr. Arthur Moore of the Statesman was the first president of INS.
- **objective:** To act as a central organization of the Press of India and of any other country in Asia, which desires to associate itself with the Society.
- **Members:** Owners, proprietors and publishers of print media
- **role:**
 - An independent body authenticating circulation figures of newspapers and periodicals in India.
 - Protecting and promoting the freedom of press in India

PRADHAN MANTRA COLLEGE OF EXCELLENCE

Union Home Minister inaugurated PM Colleges of Excellence in Madhya Pradesh (MP).

- MP is the first state to implement the National Education Policy (NEP), 2020.

About PM Colleges of Excellence

- These colleges are upgraded according to the parameters fixed in line with NEP.
- Flexibility in subject selection based on one's interests in multiple disciplines without barriers of streams, this approach is referred as No compartmental education.
- Focus on diverse subjects like Biotechnology, Computer Science, Arts and Data Analytics etc.

RATNA BHANDAR OF PURI OPENED AFTER 46 YEARS

Odisha government established high level committee led by retired Justice Biswanath Rath to supervise inventorisation of valuables including jewellery stored in Ratna Bhandar.

- Additionally, Magji Ladoo (Odisha's Dhenkanal district), one of the 'chappan bhog' prasad at Shree Jagannath Temple got Geographical Indication (GI) Tag.

About Ratna Bhandar

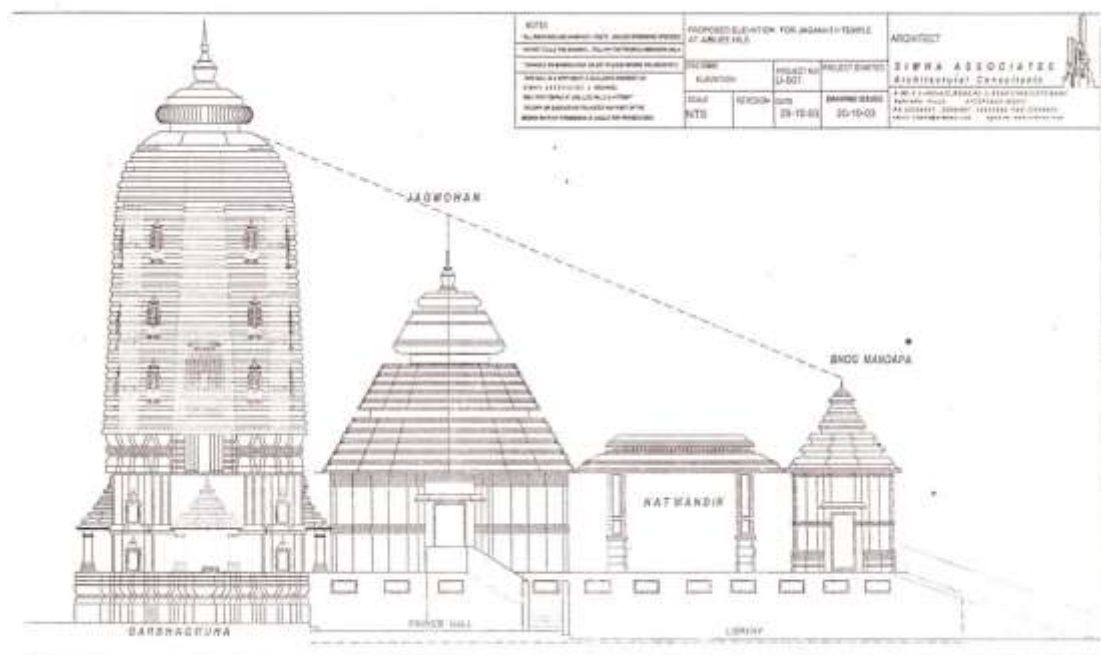
- Located on northern side of Jagamohana (assembly hall of temple).
- Comprises of Bahar Bhandar (outer chamber) and Bhitari Bhandar (inner chamber).
- These chambers contain jewels of three sibling deities — Lord Balabhadra, Lord Jagannath, and Devi Subhadra.
- Shree Jagannath Temple, Puri, Odisha (White Pagoda)
- Dedicated to Lord Jagannath (incarnation of Lord Vishnu), Sister Devi Subhadra and elder brother Lord Balabhadra (holy trinity).

- Built during rule of Anantavarman Chodaganga Deva, the founder of Ganga dynasty in first part of 12th century A.D.

Architectural style of Shree Jagannath Temple

Architecture style: Kalinga Architecture

- Four component parts consisting of
 - Vimana or Deula (Garbhagriha): Built in style of nagara type Rekha deula characterized by curvilinear tower known as sikhara.
 - Jagamohana: It is in form of Pidha deula, in which sikhara has tiers of diminishing pidhas or platforms.
 - Natamandapa: Audience/Dancing Hall
 - Bhogamandapa: Hall for residuary offerings.



- On both sides of outer wall of main temple, figures of Vishnu, four on either side are carved which altogether depict 24 forms of Vishnus, like Keshava, Madhava, Damodara and narayana etc.

KASHMIR WILLOW

Over the last few years, bats made of Kashmiri willow have been attracting global attention.

About Kashmir Willow (*Salix Alba*)

- Tree Type: Deciduous tree which can grow up to 30 meters.
- Distribution: Mainly found in the Kashmir region of India
- In Kashmir, willow trees were planted on a large scale by the British.
- **Features**
 - Willows exhibit higher productivity due to their highest capacity to convert solar radiation into chemical energy

- Willows have extensive fibrous root system
- Formation of symbiotic associations with mycorrhizal fungi
- **Uses:** Cricket bat industry, package case industry, ply board industry, paper and pulp industry, etc.

OPERATION NANHE FARISHTHEY

84,119 children were rescued by the Railway Protection Force under 'Operation Nanhe Farishtey' in the last 7 years.

About 'Operation Nanhe Farishtey'

- It is a mission dedicated to rescuing children in need of care and
- protection across various Indian Railway Zones

KIRTI PROGRAM

Ministry of Youth Affairs and Sports to launch second phase of KIRTI Program in New Delhi.

About KIRTI Program

- Objective: Streamline whole process of grassroots talent identification (age-group between 9 - 18 years) on a single platform.
- Achieve 20 Lakh assessments in 2024-25 by onboarding all state to identify talent through notified Talent Assessment Centre.
- Approach: Based on an athlete-centric approach, process of talent Identification has been made more broad-based, transparent and accessible.
- Significance: Help achieve twin objectives of Khelo India Scheme i.e. excellence in sports, and mass participation in sports.

URBAN NAXALISM

Maharashtra Special Public Security Bill, 2024 proposed to curb 'Urban Naxalism

Urban Naxalism

- Naxalism refers to Left-wing extremism or Maoism which seeks to overthrow the State through violent means.
- In India, it originated from the 1967 uprising in Naxalbari (West Bengal).
- There is no standard definition of urban Naxalism. It generally refers to efforts to enlarge the presence of naxalism in urban areas.
- Unlike rural Naxalism, urban Naxalism is not centred on the use of violence against the State.
 - Urban naxals may also act as recruiters, propagandists, sources of funds for naxals and can provide logistics and safe refuge to armed Naxal cadres.
 - Also, public support for urban Naxalism is insignificant as compared to rural naxalism.
 - This is primarily because urban areas have better education, infrastructure and State's reach

CHAGOS ISLANDS

India assured Mauritius of continued support in Chagos islands territorial dispute with United Kingdom (UK).

About Chagos islands

- Comprises around 58 small, very low-lying islands in the middle of the Indian Ocean.
- Key Islands include Salomon Islands, Diego Garcia, Nelsons Island, etc.
- Diego Garcia is home to a US naval support facility.
- Strategic located at about 1,600 km south of the southern tip of the Indian subcontinent.
- Currently controlled by UK as British Indian Ocean Territory.
- In 2019, International Court of Justice (ICJ) in its advisory opinion directed United Kingdom to unconditionally withdraw from Island

ITANAGAR WILDLIFE SANCTUARY

New plant species 'Phlogacanthus sudhansusekharii' has been discovered in Itanagar Wildlife Sanctuary.

About Itanagar Wildlife Sanctuary

- It is located in the southern-west part of Arunachal Pradesh and state capital Itanagar is located inside the sanctuary.
- Major streams: Poma, Pam, Pachin, Neurochi and Chingke.
- Habitat: Mixed evergreen to semi-evergreen forests.
- The sanctuary has also been recognized as an Important Bird Area by Birdlife International as it lies in Eastern Himalayas Endemic Bird Area.
- Fauna: Asian Elephant, Four species of Hornbills, Tiger, Asiatic Black Bear etc.
- Threats: Hunting, unorganized urbanization/ settlement, encroachment



KADAMBINI GANGULY

Recently, birth anniversary of Dr. Kadambini Ganguly was celebrated.

About Kadambini Ganguly (1861 - 1923)

- She was born in 1861 in Bhagalpur, Bihar.
- She became first Indian-educated female doctor.
- Key Contributions
- She was a member of Brahma Samaj.
- She was one of six representatives in the first female delegation of the 1889 Indian National Congress.

- In 1906, she helped organize the Women's Conference in Calcutta.
- She along with Kamini Roy worked for a government committee to enquire about conditions of women miners in Bihar and Orissa.
- Her efforts resulted in India's first Age of Consent Act in 1891.

SHUSHRUTA

All-India Institute of Ayurveda (AIIA) organized the Second National Seminar SAUSHRUTAM Shalya Sangoshti on the occasion of Sushruta Jayanti-2024 (15th July).

- Ancient physician from Kashi (Varanasi) known as the Father of Indian Medicine and Father of Surgery.
- Author of Sushruta Samhita (written in Sanskrit), one of the Great Trilogy of Ayurvedic Medicine (Others being Charaka Samhita by Maharishi Charak and Astanga Hridaya by Vagabhata).
- Covers extensively about pathology, anatomy, and surgical management, along with treatment of 12 varieties of fracture, 6 types of dislocation, skin grafting, rhinoplasty (technique used to reconstruct nose), etc.

SANT DNYANESHWAR

Annual pilgrimage of Sant Dnyaneshwar Maharaj culminated on the auspicious day of Ashadhi Ekadashi.

- Every year followers of warkari sect (focused on worship of Lord Vitthal) starts the procession (known as wari) from Dehu and Alandi and ends in Pandharpur on Ashadi Ekadashi.

About Sant Dnyaneshwar

- Born in Alandi (Maharashtra), he was a 13th century Marathi saint, poet, philosopher, etc.
- He is one of the most revered figures in the Bhakti movement, particularly in Maharashtra.
- Authored Dnyaneshwari, a commentary on the Bhagavad Gita and Amrutanubhav in Marathi.
- Composed numerous devotional poems called abhangas

WOLBACHIA BACTERIA

Recently, study has highlighted that Wolbachia bacteria had manipulated the wasp *Encarsia formosa* to entirely get rid of its males.

- *E. formosa* wasps helps in controlling population of whiteflies, a major agricultural pest.

About Wolbachia bacteria

- Commonly found in nematodes and arthropods, especially insects
- In insects, these are present in eggs but they are absent in the sperm. Due to this, females can transmit them to their offspring whereas males can't.

- As a result, Wolbachia have evolved ways to manipulate their insect hosts to produce more female than male progeny.
- **Tra gene** of Wolbachia play key role in showing this feature.
- Potential Application:
 - Mosquitoes with Wolbachia can be used to reduce numbers of target mosquito species, for example, *Ae. Aegypti* mosquitoes.

INDIAN LEOPARD

As per IUCN, Indian leopard (*Panthera pardus fusca*) is suspected to have declined by 24.5% over the last three generations.

About Indian Leopard

- Habitat Distribution: India, Nepal, Bhutan, and parts of Pakistan, excluding mangrove forests and deserts.
- Characteristics: Nocturnal animal, Skilled climbers, Solitary predators etc.
- **Status of Leopard in India (2022)**
 - Leopard population is estimated at 13,874.
- Top 3 states having largest population of leopards are Madhya Pradesh, Maharashtra, and Karnataka.
- **Protection Status:**
 - IUCN- Vulnerable
 - Wildlife Protection Act 1972: Schedule 1
- **Threats:** Habitat loss, fragmentation, human-wildlife conflict, poaching, and illegal trade



JERDON COURSER

Jerdon's Courser has not been visually spotted in over a decade.

About Jerdon's Courser

- Nocturnal bird found only in the Eastern Ghats.
- Exclusively endemic to Andhra Pradesh, specifically within the Sri Lankamalleswara Wildlife Sanctuary in Kadapa, Andhra Pradesh.
- **Protection Status:**
 - Under Integrated Development of Wildlife Habitats' (IDWH) scheme.
 - Schedule-I of the Wildlife (Protection) Act, 1972.
 - IUCN Status: Critically Endangered



INDIAN ELEPHANT

Kerala Forest and Wildlife Department released 'Elephant Population Estimation in Kerala – 2024'

- Report is part of a synchronized elephant population estimation in the Southern States (Kerala, Karnataka, and Tamil Nadu).
- Such synchronized exercise is mandated by an Interstate Coordination Committee (ICC) Charter established by the three Southern States in response to rising Human-Elephant Conflict (HEC)

Indian Elephant (*Elephas maximus*)

- It is one of three subspecies of Asian elephants, the other two being the Sumatran and Sri Lankan elephants.
- India is home to over 60% of the world's elephant population with highest population in Karnataka, followed by Assam and Kerala.
- Characteristics
 - Life span: 60-70 years.
 - Gestation period: 20-22 months.
 - Reproduction: A female starts calving at 18-20 years.
 - Leader of an elephant group: Female.
- Threats: Habitat Fragmentation and degradation due to human settlements, expansion of agriculture and industry, human-elephant conflict, poaching, etc.
- **Conservation Status**
 - Wild Life (Protection) Act, 1972: Schedule I
 - IUCN status: Endangered
 - CITES: Appendix I

