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History & Culture

Gorsam Kora Festival

- Gorsam Kora Festival was celebrated for 4 days in Arunachal Pradesh at the **Gorsam Chorten, a 93 feet tall Stupa**, built during the **13th century AD** by a local monk- Lama Pradhar.

- Many devotees celebrate the virtuous occasion during the last day of the first month of the Lunar calendar.

- It is also the place where the **14th Dalai Lama had his first rest** after fleeing from Tibet in 1959.

Geoglyphs of Konkan Region

- The Bombay High court was hearing a PIL seeking protection and preservation of **ancient rock art petroglyphs and geoglyphs** found in the **Konkan region** that are included in the UNESCO world heritage tentative list.

- **Geoglyphs and petroglyphs** are a form of **prehistoric rock art**, made by **removing a part of the rock surface through an incision, picking, carving or abrading.**

- Geoglyphs are larger carvings done on ground while petroglyphs are smaller and done on rock surfaces.

- The UNESCO listing mentions "Konkan geoglyphs." However, the term petroglyph is also used. They are created on the surface of laterite plateaus (Sada in Marathi).

Kalyani Chalukya Dynasty
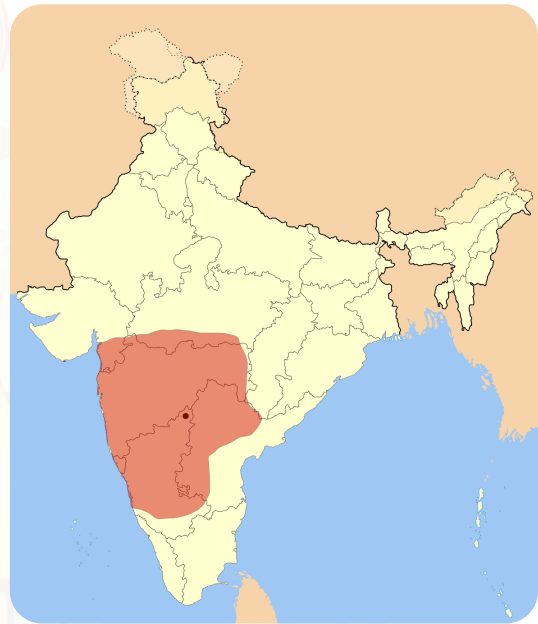
- A **900-year-old Kannada inscription** belonging to the Kalyani Chalukya dynasty was discovered near **Chowdamma temple in Telangana**.

- The inscription, dated **June 8, 1134 CE**, which records **toll tax remission for a temple lamp** was issued by Customs Officers under **Tailapa-III, son of Emperor 'Bhulokamalla' Someswara-III** of the Kalyani Chalukya dynasty.

- The Chalukya Dynasty ruled the central Indian plateau of Deccan between **6th and 12th centuries.**

- The **Western Chalukya Empire**, also known as the Kalyani Chalukyas, ruled the **western Deccan and South India from the 10th to 12th centuries.**

- The empire was founded by **Tailapa II** during Rashtrakuta rule. They defeated Rashtrakuta in 973CE.

- The Chalukyas ruled as **three closely related but individual dynasties.** The **Chalukyas of Badami**, who ruled between the **6th and 8th centuries**, and the two sibling dynasties of the **Chalukyas of Kalyani, or the Western Chalukyas**, and the **Chalukyas of Vengi, or the Eastern Chalukyas.**

- They were primarily **Hindus** but also were tolerant of **Buddhism and Jainism.**

- The Western Chalukya minted **punch-marked gold coins** called **pagodas**.

- **Art and Architecture:** Contributed to **Kannada and Telugu literature**. They developed the **Vesara School of Temple Architecture.** Known for **'Gadag style'** temples in **Tungabhadra-Krishna doab region.**

World Monuments Fund Watch

- The **Kazhuveli watershed** (Eri) in Villupuram, Tamil Nadu, was recently proposed for inclusion in the **2025 World Monuments Fund Watch** by conservationists.

- The World Monuments Watch, initiated in 1996, is a **biennial program by the World Monuments Fund (WMF)** that highlights heritage sites globally nominated by individuals and community-based organisations.

- WMF, an independent organisation, strives to protect the world's most cherished places and raise awareness about threatened cultural heritage due to conflict, vandalism, disaster, or neglect.

- **India joined WMF in 2015 and there are 52 entries from** India including **Taj Mahal, Jaisalmer Fort, Juna Mahal etc.**

Polity & Governance

One Nation One Election Report

- The High-level Committee (HLC) on One Nation, One Election submitted its report to the President recommending simultaneous elections.

- The committee was constituted under the **chairmanship of former President Ram Nath Kovind.**

- **One Nation, One Election** concept refers to **conducting simultaneous elections for Lok Sabha, all state Legislative Assemblies, and urban and rural local bodies** (municipalities and panchayats).

Key Recommendations

◆ It highlighted that **simultaneous elections would reduce voter fatigue** arising from frequent elections year after year, increase voter turnout, and enhance efficiency.

◆ The panel recommended **amending the Constitution so elections for the Lok Sabha, all state assemblies and local bodies** can be held by **2029**.

◆ Also suggested to make a single **electoral roll and electoral photo identity cards for use in elections to all the three tiers of government,** the committee recommended that Article 325 of the Constitution be amended.

◆ In the event of **a hung House, a no-confidence motion, or any such event, fresh elections should be held** to constitute the new Lok Sabha or state Assembly for the **unexpired term of the House.**

Chakshu

- The Department of Telecommunications (DoT) launched the Chakshu facility available on Sanchar Saathi portal (https://sancharsaathi.gov.in/sfc/)

- Chakshu facilitates **citizens to report the suspected fraud communications** with **the intention of defrauding** telecom service users for cyber-crime, financial frauds, non-bonafide purposes like impersonation or any other misuse through Call, SMS or WhatsApp.

- Chakshu facility **does not handle** financial fraud or cyber-crime cases where citizens **have already lost money.** Chakshu is only to report suspected fraud communications.

- For cyber or financial crimes where money was lost citizens are to report to cyber **crime helpline number 1930 or website https:// www.cybercrime.gov.in**

Digital Intelligence Platform (DIP)

- The Minister of Communications launched the **Digital Intelligence Platform (DIP).**

- Digital Intelligence Platform (DIP) is a **secure and integrated platform for real time intelligence sharing, information exchange and coordination among the stakeholders** such as Telecom Service Providers (TSPs), law enforcement agencies (LEAs) etc.

- The DIP is developed by the Department of Telecommunications (DoT) to prevent the misuse of telecommunication resources in cyber crimes and financial frauds.

- The portal also contains **information regarding the cases detected as misuse of telecom resources.**

- Citizens do **not have access** to this platform.

Democracy Report 2024

- The annual Democracy Report 2024 was released by the **V-Dem Institute at Sweden's University of Gothenburg**.

- The report classifies countries into four regime types based on their score in the **Liberal Democratic Index (LDI):**

  - Liberal Democracy
  - Electoral Democracy
  - Electoral Autocracy
  - Closed Autocracy.

- The LDI captures both liberal (individual and minority rights) and electoral aspects (free and fair elections) of a democracy based on 71 indicators.

Key Findings

- In 2023, **42 countries (home to 35% of the world's population)** were undergoing **autocratisation**.

- **India**, with **18% of the world's population**, accounts for about half of the population living in autocratising countries.

- Democratisation was taking place **only in 18 countries, accounting for just 400 million people, or 5% of the world's population**.

- The sharpest decline in democracies occurred in **Eastern Europe, South Asia and Central Asia.**

Fact Check Unit

- The Supreme Court stayed government notification establishing the Press Information Bureau's **Fact Checking Unit (PIB FCU) as the official FCU of the central government.**

- A Fact Check Unit under PIB was established in November 2019 with two **main objectives:**

  - Act as a **deterrent to creators and disseminators of fake news** & misinformation

  - An **easy avenue to report suspicious and questionable information** pertaining to the Government of India for fact-checking.

- The unit **only takes up complaints related to the Government of India,** its Ministries, Departments, Public Sector entities etc.

- It has an online **presence and places all fact-checked information** on platforms like **Twitter, Facebook, Koo, Instagram and Telegram.**

- However , recently a **three-judge Supreme Court bench stayed** the Centre's notification operationalizing PIB's fact check unit as it **involves serious constitutional issues** related to **Article 19** freedoms.

Cinematograph (Certification) Rules, 2024

- Pursuant to the **Cinematograph (Amendment) Act, 2023**, **the Ministry of Information and Broadcasting** has notified the **Cinematograph (Certification) Rules, 2024.**

- These new rules, in suppression of **Cinematograph (Certification) Rules, 1983**, aim to **streamline and modernise the film certification process for the digital age**.

Key Features

- ☞ **Reduction in time-lines for the processing of film certification** and **adopting complete digital processes** for eliminating all transactional time.

- ☞ Introduction of **age-based categories of certification** by further sub-dividing the existing UA category into three age-based categories, **seven years (UA 7+), thirteen years (UA 13+), and sixteen years (UA 16+)**, instead of twelve years.

- ☞ **Greater representation of women** in the CBFC Board & CBFC Advisory Panels.

- ☞ Removal of the restriction on validity of certificate for only 10 years for **perpetual validity of certificates of Central Board of Film Certification (CBFC).**

NITI for States Platform

- Central government launched the **NITI for States platform.**

- NITI for States offers a **centralised repository of valuable resources**, including best practices, policy documents, datasets, and NITI Aayog publications.

- It will have **knowledge products of 10 sectors** including **agriculture, education, energy, health, livelihoods and skilling, manufacturing, MSME, tourism, urban, water resources and sanitation and hygiene** across cross-cutting themes like **gender and climate change.**

- In the near future the platform will be available in **22 major Indian languages and 7 foreign languages**, ensuring inclusivity for diverse user groups.

PM Suraj Portal

- Recently, PM Modi launched **Pradhan Mantri Samajik Utthan evam Rozgar Adharit Jankalyan (PM-SURAJ) portal.**

- The portal will act as a **one-stop point** where people from **disadvantaged sections** of society can apply for and monitor the progress of **all loan and credit schemes** already available to them.

- This initiative will help in providing **financial assistance directly to beneficiaries**, eliminating middlemen and commissions.

- It aims at **uplifting the most marginalised segments** of society.

- Implementing agency: **Ministry of Social Justice and Empowerment**.

Dying Declaration

- The Supreme Court recently held that the **conviction of the accused** can be sustained solely based on the dying declaration, if the declaration made by the victim inspires the confidence of the court and proves to be trustworthy.

- A Dying Declaration is a statement made by a **person who is now dead.**

- It is dealt with under clause (1) of **Section 32 of the Indian Evidence Act 1872.**

- It is **admissible as evidence in all proceedings, civil or criminal.**

- The reason behind this can be followed by the Latin maxim **'Nemo Mariturus Presumuntur Mentri'** which means that **"Man Will Not Meet His Maker with Lying on His Mouth.**

- The best form of declaration of dying would be the one recorded by the **Magistrate.** However, according to the Supreme Court's guidelines, **anyone can record the dying statement.**

Denotification of Cantonments

- Recently, the **Ministry of Defence** has denotified civil areas of **10 cantonments**.

- The process involves **merging these areas with state municipalities.**

- A cantonment refers to a **permanent military station** (a term from the colonial era).

- Cantonments have **strict restrictions on construction, road use,** and **common area** occupation, causing tension between civilians and the military.

- Civilians face challenges in obtaining **home loans and accessing government schemes**.

- In 2023, the Ministry of Defence had notified that **plan to carve out the military areas** in cantonments and convert them into **"exclusive military stations"** with the Army exercising **"absolute control"** over them.

Military stations are **purely military areas** where only military personnel and their families reside.

- The civilian areas, in turn, will be merged with the local municipalities to provide them with the **benefits of various government schemes.**

Cantonments were established by the East India Company after the Battle of Plassey in 1757. Barrackpore (Calcutta) was the first Cantonment established in 1765. Currently, there are 62 cantonments in India.

- Cantonment Boards are categorised into four categories based on population: **Category I** (>50,000), **Category II** (10,000-50,000), **Category III** (2,500-10,000), and **Category IV** (<2,500).

Cashless Treatment for Road Accident Victims

- The Government of India has launched a pilot program for cashless treatment of road accident victims, in alignment with its commitment to **reduce fatalities due to road accidents.**

- Developed by the **Ministry of Road Transport & Highways**, the pilot programme aims to establish an ecosystem for providing **timely medical care** to road accident victims, including during the **golden hour**.

- The **National Health Authority** will oversee implementation in coordination with police, hospitals, and State Health Agencies.

- Victims are entitled to cashless treatment of **up to Rs. 1.5 lakhs per person** for a **maximum of 7 days** from the date of the accident, applicable to all road accidents.

- Hospital claims for treatment will be reimbursed from the **Motor Vehicle Accident Fund.**

E-Shram Portal

- Recently, the Supreme Court of India has directed all states and Union territories to **issue ration cards to migrant labourers** registered on the e-shram portal within two months.

- E-Shram portal is a **centralised database** that helps to **implement social security services for unorganised workers.**

- Launched in **2021** by the **Ministry of Labour and Employment**, the workers are issued with a **unique 12 digit e-shram card.**

- If a worker is registered on the E-SHRAM portal and meets with an accident, he will be eligible for **Rs 2.0 Lakh on death or permanent disability and Rs 1.0 lakh on partial disability.**

- The portal uses **Aadhaar** to deliver social security benefits and ensure that the benefits are portable to migrant and construction workers at their workplaces.

- It also helps to share information with stakeholders and provide a **comprehensive database for national crises.**

Citizenship Amendment Rules 2024

- Recently, the **Union Ministry of Home Affairs** notified the Citizenship Amendment Rules, 2024, enabling the **implementation of CAA four years after the legislation was passed.**

- It also **launched the helpline number 1032** "for **assistance and information**" on CAA, so that applicants can make free calls from anywhere in India.

- The entire process is online but **applicants will have to present themselves on an appointed day** before a **district-level committee headed by the Superintendent** of the Department of Post. to **verify the documents.**

- The applicants have to submit a **set of documents including a certificate to validate their religion.**

- The **reasons for which applicant wishes to acquire Indian citizenship"** must also be stated.

- **Any community institution** which has the trust of people **can issue the certificate**. The final decision to grant citizenship will be taken by the empowered committee, the local

institution is only recommending that **they belong to a particular faith**.

- The community institution or priest must certify that the applicant **belongs to Hindu/ Sikh/ Buddhist/Jain/Parsi/Christian community and continues to be a member** of the above-mentioned community.

- The final decision on applications will **then be taken by the empowered committee headed by the Director (Census Operations) in each State**, which will include officers from the Intelligence Bureau, the PostMaster General, State or National Informatics Centre official, and a representative each from the Department of Home of the State government and the Divisional Railway Manager.

S. R. Bommai v. Union of India Case 1994

- It has been **30 years since the Supreme Court** passed the historic verdict significant in the centre-state relationship.

- In Karnataka, the 8 **month-old Janata Dal government led by S.R Bommai was dismissed on April 21, 1989 under Article 356** of the Constitution and President's Rule was imposed which was a common practice then.

- S.R.Bommai went to Supreme Court after Karnataka High Court dismissed his petition.

Important observations in verdict

- **Power to dismiss governments:** The President's rule **proclamation can be issued only after approval** of both houses of parliament. The President can **only suspend** the Legislative Assembly.

- **Revive assembly:** If two months pass since proclamation but without parliamentary approval, the assembly will revive from suspension.

- **Judicial review:** The SC unanimously held that the President's proclamation can be subject to **judicial review** on grounds of illegality, malafide, extraneous considerations, abuse of power, or fraud.

- **Floor test:** The **floor of the Assembly is the only forum that should test the majority** of the government of the day, and not the subjective opinion of the Governor.

- **Basic features:** SC ruled that **secularism** and **federalism** are fundamental characteristics of the constitution.

Criminal Case Management System (CCMS).

- Recently, the **Ministry of Home Affairs** inaugurated a digital Criminal Case Management System (CCMS).

- The CCMS is a digital platform which aims to **standardise investigations and compile terror-related data** across India.

- It is developed by the **National Investigation Agency (NIA)**.

- It also facilitates **cooperation between central and state agencies**.

Sankalan App

- Recently, the **Ministry of Home Affairs** launched the Sankalan App.

- The application was designed for navigating through **new criminal laws as a bridge between old and new criminal laws.**

- It will work in **offline mode** and is available to all stakeholders.

- It is developed by the **National Investigation Agency** and managed by the **National Crime Records Bureau.**

BhashaNet portal

- Recently, the **Ministry of Electronics and Information Technology (MeitY) and National Internet Exchange of India (NIXI)** launched the BhashaNet portal.

- Its primary objective is to promote **digital inclusion and Universal Acceptance (UA)** across India.

- It is developed by the **Centre for Development of Advanced Computing** (C-DAC) with support of **National Internet Exchange of India.**

- It provides resources, tools, and information to help developers, businesses, and organisations make their applications and systems UA-compliant.

- It also aims to provide a **multilingual internet**, where local language website name and local language email id is used.

Universal Acceptance (UA)- It is a concept that aims to ensure that all domain names and email addresses, regardless of language or script, can be used by all internet-enabled applications, devices, and systems.

Enforcement Case Information Report (ECIR)

- An Enforcement Case Information Report (ECIR) was filed **against Delhi Chief Minister Arvind Kejriwal by the Enforcement Directorate (ED).**

- While the ECIR **isn't mentioned** in the Prevention of Money Laundering Act, 2002 (PMLA Act) or its rules, the ED typically lodges it before taking action under the PMLA Act.

- The ECIR is **similar to a First Information Report (FIR)** which is the name used for the complaint recorded by a police officer in cognizable cases under the Code of Criminal Procedure, 1973 (Cr.P.C.), but the **Supreme Court has ruled** that it isn't equivalent to an FIR and isn't required to be shared with the accused.

India Employment Report 2024

- The report was jointly published recently by the **International Labour Organisation (ILO) and the Institute of Human Development (IHD**).

Key Highlights of the Report:

- The youth unemployment **increased from 5.7% in 2000 to 17.5% in 2019**.

- The **employment growth remained stagnant until 2019**, then started to rise.

- The **female labour market participation rates increased**, especially in rural areas.

- There's a gradual **shift from agriculture to non-farm sectors in the workforce**. The employment is **dominated by the informal sector (about 82%)**

- India is expected to have a migration rate of around **40% by 2030**.

UNNATI 2024

- The Union Cabinet approved the **Uttar Poorva Transformative Industrialization Scheme,** 2024 (UNNATI – 2024).

- UNNATI 2024 is **aimed at developing industries and generating employment in the NorthEast Region**

- It is to be overseen by the Department for Promotion of Industry and Internal Trade, **Ministry of Commerce and Industry** in cooperation with the states.

- It is set to be **effective from the date of notification and will run until March 31, 2034.**

- The districts are **categorised in two zones: Zone A** (Industrially Advanced Districts) & **Zone B** (Industrially Backward Districts).

Human Development Index (HDI)

- India has moved up a rank on the global **Human Development Index (HDI)**, according to the United Nations Development Programme (UNDP) report **'Breaking the gridlock: Reimagining cooperation in a polarised world'**.

- The report stated that while **India ranked 135 in 2021, it had moved up to 134 in 2022.**

- HDI was introduced by the **United Nations Development Programme (UNDP)** in **1990**.

The **dimensions of HDI** are;

- ✅ **Health dimension:** Assessed by **life expectancy at birth**

- ✅ **Education dimension:** Measured by the **mean of years of schooling for adults aged 25 years** and **expected years of schooling for children of school entering age**.

- ✅ **Standard of living dimension:** Measured by **gross national income per capita** at purchasing power parity in US dollars.
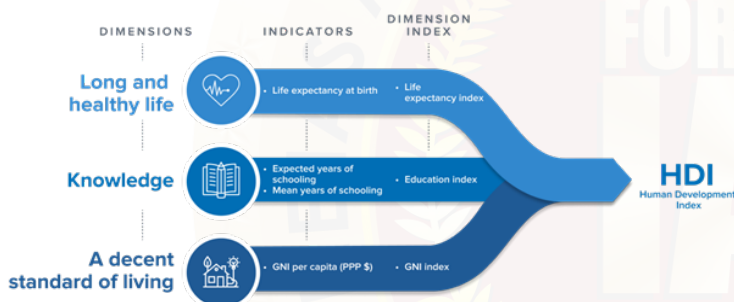
- The scores for the three HDI dimensions indices are then aggregated into a **composite index** using geometric mean.

- HDI sets a **minimum and maximum for each dimension** known as **goalposts** and then shows where each country stands to these goalposts, **expressed as values between 0 and 1**.

- The countries are classified into **four categories** of human development achievements;

- 👉 **Very high human development:** HDI value **0.800 and above**

- 👉 **High human development:** HDI value **0.700-0.799**

- 👉 **Medium human development:** HDI value **0.550-0.699**

- 👉 **Low human development:** HDI value **below 0.550**

HDI and India

- ▶ After a drop in 2021, **India's HDI value increases from 0.633 to 0.644 in 2022**, placing the country in the **medium human development category.**

- ▶ With a **Gender Inequality Index value of 0.437 in 2022,** India has shown progress and fares better than the **global average of 0.462.**

- ▶ India's **life expectancy at birth** has slightly improved **from 67.2 years in 2021 to 67.7 years in 2022.**

- ▶ There is an overall increase in **expected years of schooling (EYS) from 11.9 years to 12.6 years**.

- ▶ The **Gross National Income (GNI) per capita** also improved from **$6,542 to $6,951.**

National Urban Cooperative Finance and Development Corporation Limited (NUCFDC)

- The Union Home Minister and Minister of Cooperation inaugurated the **umbrella organisation for Urban Cooperative Banks (UCBs),** the **National Urban Cooperative Finance and Development Corporation Limited (NUCFDC).**

- The main objective of NUCFDC is to **help UCBs adhere to the Banking Regulations Act** and bring professionalism in their work.

- NUCFDC has received **RBI's approval to function as a non-banking finance company and a self-regulatory organisation** for the urban cooperative banking sector.

- There are **more than 1,500 UCBs with 11,000 branches, having a deposit of ₹5 lakh crore and credit base of ₹3.50 lakh crore** across the country.

Bharat Bill Payment System (BBPS)

- RBI has put in place a revised regulatory framework for Bharat Bill Payment Systems (BBPS) based on a review of developments in the payments landscape.

- The Bharat Bill payment system is a **Reserve Bank of India (RBI) conceptualised system** driven by **National Payments Corporation of India (NPCI).**

- It is a **one-stop ecosystem for payment of all bills providing** an interoperable and accessible **"Anytime Anywhere" Bill payment service to all customers across India** with certainty, reliability and safety of transactions.

- It facilitates different payment modes enabling bill payments such as **cards, NEFT internet banking, UPI, Wallets, Aadhar based payments and cash.**

- An effective **mechanism for handling consumer complaints** has been put in place to support consumers regarding any Bill related problems in the system.

- A **Bharat Bill Payment Operating Unit (BBPOU)** is an **RBI authorised entity that facilitates bill payments through the Bharat Bill Payment System**. It can be a **Bank or a Non-Bank** and can be **integrated with customers as well as billers.**

E-Kisan Upaj Nidhi

- **The Ministry for Consumer Affairs, Food & Public Distribution** launched **'e-Kisan Upaj Nidhi'**.

- The digital platform seeks to facilitate farmers in obtaining post-harvest loans from banks against their stocks stored in the **Warehousing Development and Regulatory Authority (WDRA)** registered storehouses**.**

- The platform allows banks to offer loans against **electronic negotiable warehouse receipts (e-NWRs).**

- This initiative, featuring a **no collateral, extra security deposit policy**, aims **to prevent distress sales by farmers**, enabling better post-harvest storage opportunities.

- The farmers can thus easily **store their produce and sell them at the right time** and meanwhile obtain loans at a cheaper rate of around 7% from banks.

Interoperable Payment Systems

- The RBI is set to introduce an interoperable internet banking payment system in 2024.

- It seeks to **streamline fund settlements for merchant**s and bolster online transactions.

- Operated by **NPCI Bharat BillPay Ltd (NBBL)**, a subsidiary of National Payments Corporation of India NPCI, the system will allow customers to make net banking payments to businesses seamlessly, irrespective of their banks or the merchants' payment aggregators' integration status.

- This move aims to **address delays and settlement risks** associated with the current non-interoperable payment aggregator system.

Reserve Bank of India – Integrated Ombudsman (RBI–IOS) Scheme 2021

- Recently, the Reserve Bank of India (RBI) has reported a spike of **68.2% in complaints** under the Integrated Ombudsman Scheme (RB-IOS) for the financial year 2023.

- The RBI-IOS Scheme **integrates the erstwhile three Ombudsman schemes of RBI** namely, the **Banking Ombudsman Scheme, 2006, the Ombudsman Scheme for Non-Banking Financial Companies, 2018 and the Ombudsman Scheme for Digital Transactions, 2019.**

- It simplifies the grievance redress process at RBI by **enabling the customers of Regulated Entities (REs)** like banks, Non-Banking Financial Companies (NBFCs), Payment System Participants (PSPs) **and Credit Information Companies to register their complaints at one centralised reference point.**

- An **RBI Ombudsman** is a **senior official of RBI appointed by RBI to redress the complaints from customers of the REs against deficiency in service, as defined in the scheme**.

- The Scheme adopts the **'One Nation One Ombudsman'** approach by making the RBI's Ombudsman mechanism jurisdiction neutral.

Electric Mobility Promotion Scheme 2024

- Recently, the **Ministry of Heavy Industries** launched the **Electric Mobility Promotion Scheme 2024**.

- The scheme aims to **accelerate the adoption of Electric Vehicles** in the country.

- Under this scheme **financial assistance** is provided with a subsidy of Rs 5,000 per kilowatt-hour of battery capacity.

- It mainly focuses on **electric two-wheelers (e-2W) and three-wheelers (e-3W)**.

- The scheme is a fund-limited initiative with a total outlay of Rs. 500 crore for a period of 4 months, starting from 1st April 2024 till 31st July 2024.

International Relations

India–EFTA Trade and Economic Partnership Agreement (TEPA)

- After 15 years of negotiations, India recently signed a **Trade and Economic Partnership Agreement (TEPA) with the European Free Trade Association (EFTA).**

> **EFTA** is an **intergovernmental organisation of four member countries** that are not part of the **European Union (EU): Iceland, Liechtenstein, Norway, and Switzerland**. It was set up in **1960** to promote **closer economic cooperation and free trade in Europe**.

> **TEPA** is a type of **economic partnership agreement between countries.** They offer flexibility in terms of negotiating terms and conditions, as the **parties involved can tailor the agreement to their specific needs and interests**.

- The agreement comprises **14 chapters** with main focus on **market access related to goods, rules of origin, trade facilitation, trade remedies, sanitary and phytosanitary measures, technical barriers to trade, investment promotion among** others.

- For the first ever time in the history of FTAs, a **legal commitment is being made about promoting target-oriented investment and creation of jobs** with $100 billion in investment and 1 million direct jobs in India over the next 15 years.

Operation Indravati

- India launched **Operation Indravati** to **evacuate its citizens from the turmoil-stricken Haiti to the neighbouring Dominican Republic.**

- **Haiti**, situated in the Caribbean, has plunged into chaos with **armed gangs seizing control of the streets, resulting in the virtual disappearance of the government.**

- **India doesn't have an embassy in Haiti** and the situation in the country is being monitored by the **Indian mission at Santo Domingo, the capital of the Dominican Republic.**

Group of Friends

- At the second meeting of the India-led Group of Friends (GOF), India launched a new database designed to record crimes against peacekeepers and monitor progress in holding perpetrators accountable.

- Group of Friends to **Promote Accountability for Crimes Against Peacekeepers** was **launched in 2022.**

- **It seeks facilitation of capacity building and technical assistance** to the host state authorities.

- It comprises **40 member states**. **India, Bangladesh, Egypt, France, Morocco, and Nepal are co-chairs.**

Yaounde Declaration

- The **Ministers of Health from African countries** with the **highest burden of malaria recently signed the Yaounde Declaration** with the objective of ending malaria deaths.

- It was **signed by the health ministers of 11 African countries with the highest burden of malaria**, committing to accelerated action to end deaths from the malaria disease.

- It was signed at the **Yaoundé conference, co-hosted by the World Health Organization (WHO)** and the **Government of Cameroon**.

- They **pledged to sustainably and equitably address the threat of malaria** in the African region, which **accounts for 95% of malaria deaths** globally.

Katchatheevu Island Issue

- **PM Modi** recently mentioned Katchatheevu Island.

- In 1974, India 'recognised' Sri Lanka's ownership of the 285-acre (1.15-sq km) of the island under the **'Agreement on the boundary in Historic Waters between the two countries and Related Matters**.'

- Since then, Indian fishermen have only been allowed "**access**" to the island during a festival of **St. Antony's Church at Katchatheevu.**

- Sri Lankan **navy tightened surveillance** of its northern maritime boundary to halt a potential return of Tamil insurgents and also stop the **trespassing Indian fishermen,** leading to many arrests.
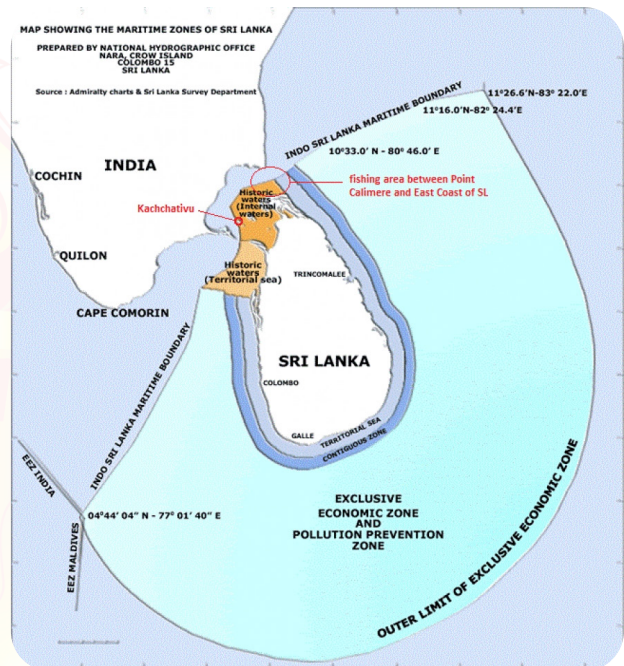
2+2 Ministerial Dialogue

- Recently, **India and Brazil** held the first '2+2' dialogue.

- The '2+2' defence and foreign ministerial dialogue involves the participation of the **defence and foreign ministers of two countries.**

- They primarily focus on **strategic and security-related issues**, as well as diplomatic matters.

- India conducts '2+2' dialogues with **US, Australia, Japan, Russia, United Kingdom.**

Samudra Laksamana

- The Samudra Laksmana, **bilateral maritime exercise** between **India and Malaysia** was recently concluded off the coast of **Visakhapatnam**.

- The exercise aims to **strengthen ties and improve coordination** between the Indian and Royal Malaysian Navy.

- This is the **3rd Edition of this exercise** which includes harbour professional interactions followed by sea phase.

- **Participating ships-** Indian Naval Ship Kiltan and Royal Malaysian Ship KD Lekir

- INS Kiltan is a **Kamorta class anti submarine warfare stealth corvette** of the Indian Navy.

Commonwealth Games

- Recently, Malaysia had decided against hosting the **2026 Commonwealth Games** because of the costs involved, raising fresh doubts over the future of the **international multi-sport event.**

> **Australia** decided against hosting in 2023; **Malaysia and Singapore** decided against hosting in 2024.

> The most recent Games were in **Birmingham, UK in 2022**. **India** hosted the event in **2010** (in Delhi).

- The Commonwealth Games is a multi-sport event that takes place **every four years** and involves athletes from countries that are part of the Commonwealth of Nations.

- The Commonwealth of Nations, formerly known as the **British Commonwealth**, is an association of **54 member countries**, most of which are **former territories of the British Empire.**

- The **Commonwealth Games were first held in 1930** and were known as the **British Empire Games.**

- The event was rebranded as the **British Commonwealth Games in 1954**, and later in 1978, it adopted the name "Commonwealth Games" to reflect the **inclusivity of all member nations.**

NATO

- Recently, **Sweden** has officially become the **32nd member** of NATO, joining the military alliance two years after applying following Russia's invasion of Ukraine.

- NATO is a **military alliance** established by the North Atlantic Treaty (also called the **Washington Treaty**) of **April, 1949.**

- Its original members were **Belgium, Canada, Denmark, France, Iceland, Italy, Luxembourg, the Netherlands, Norway, Portugal, the United Kingdom**, and the **United States.**

- **Headquarters:** Brussels, Belgium.

- NATO's essential and enduring purpose is to **safeguard the freedom and security** of all its members by political and military means.

- A key provision of the Nato treaty, **Article 5** states that **any attack on one of its members is an attack on all members.**

- **NATO has only once invoked Article 5,** on 12th September 2001 following the **9/11 attacks on the World Trade Center in the US.**

Finland
Joined April 4, 2023

Sweden
Joined March 7, 2024

Environment & Ecology

Global Waste Management Outlook

- The Global Waste Management Outlook 2024 was released.

- Jointly published by the **United Nations Environment Programme (UNEP) and the International Solid Waste Association (ISWA)**, the report provides an update on **global waste generation and the cost of waste and its management** since **2018**.

Key Highlights and Recommendations

- ◆ The report underscores that **waste contributes to the triple planetary crisis of climate change, pollution, and biodiversity loss.**

- ◆ **Municipal solid waste generation** will grow from **2.3 billion tonnes in 2023 to 3.8 billion tonnes in 2050.**

- ◆ By **2050**, the **global direct cost of waste management** could rise to **USD 640.3 billion** unless urgent action is taken to improve waste management.

- ◆ Moving towards a **circular economy** and taking a **zero-waste approach** is the only route to a safe, affordable and sustainable future.

National Dolphin Research Centre (NDRC)

- India's **first-ever dolphin research centre** was inaugurated in **Patna, Bihar.**

- The **National Dolphin Research Center (NDRC)**, stands on the banks of the **Ganges** inside the **Patna University** campus will help students and researchers **understand the behaviour of freshwater dolphins, particularly of those found in the Ganges.**

- The **Ganges River Dolphin** (IUCN Status-**Endangered**) lives in the **Ganges-Brahmaputra-Meghna and Karnaphuli Sangu river systems of Nepal, India and Bangladesh** and is the **National Aquatic Animal of India.**

Financing Agrochemical Reduction and Management (FARM) Program

- The governments of **Ecuador, India, Kenya, Laos, Philippines, Uruguay, and Vietnam** have joined forces to initiate the **Financing Agrochemical Reduction and Management (FARM) Program.**

- The FARM is a **five year program** led by the **United Nations Environment Programme (UNEP)** and funded by the **Global Environment Facility (GEF).**

- It seeks to **reorient the policy and financial resources towards farmer**s to help them **adopt low and non-chemical alternatives to toxic agrochemicals** and facilitate a transition towards better practices.

- The FARM programme will support government regulation to **phase out Persistent Organic Pollutants (POPs)-containing agrochemicals and agri-plastics.**

Food Waste Index 2024

- The **Food Waste Index** was recently released by the **United Nations Environment Programme (UNEP)** and **WRAP**, a UK-based NGO.

- It provides the **most comprehensive food waste data collection and analysis**

- It also publishes a methodology for countries to measure food waste, at **household, food service and retail level,** to track national progress towards 2030.

- It measures **total food waste** (rather than loss or waste associated with specific commodities).

Key Findings

- ✍ Households **across all continents wasted over 1 billion meals a day in 2022,** while 783 million people were affected by hunger and a third of humanity faced food insecurity.

- ✍ Out of the total food wasted in 2022, **60 per cent happened at the household level,** with food services responsible for 28 per cent and retail 12 per cent.

- ✍ **Only four G20 countries (Australia, Japan, UK, the USA)** and the **European Union have food waste estimates suitable** for tracking progress to 2030.

Global Methane Tracker 2024

- **Methane emissions from fuel use in 2023** were close to being the highest ever at 120 million tonnes (Mt), according to the **International Energy Agency's (IEA) Global Methane Tracker 2024.**

- **Global Methane Tracker** is an annual report released by the **International Energy Agency (IEA).**

The **International Energy Agency (IEA)**, headquartered in **Paris**, is an autonomous intergovernmental organisation founded in **1974**. It offers policy guidance, analysis, and data concerning the worldwide energy industry. Comprising 31 member countries and 13 association countries, the IEA collectively represents 75% of the global energy demand. India is not a member but an association country.

Highlights of Global Methane Tracker 2024

- Methane **emissions from fuel use in 2023** were close to being the highest ever at **120 million tonnes** (Mt). This is a small rise compared to 2022.

- **Bioenergy**, a form of renewable energy generated by plant and animal waste, **caused another 10 million tons of emissions.**

- The world **needs to slash methane emissions from fossil fuels by 75 percent by 2030** to achieve the Paris Agreement goal of limiting warming to 1.5ºC.

- The IEA estimated that **this goal would require about $170 billion in spending.** This is **less than 5 percent** of the income generated by the **fossil fuel industry in 2023.**

UN World Water Development Report

- The United Nations World Water Development Report (WWDR) was released recently.

- It is a **global report that provides an authoritative, comprehensive assessment** of the world's freshwater resources.

- The **UNESCO World Water Assessment Programme (WRAP)** coordinates the production of the **WWDR (World Water Development Report) on behalf of UN-Water, and UNESCO** publishes it.

- This yearly report is unveiled **on World Water Day,** which is celebrated on **22nd March**.

- **Key highlights**

- Around **10% of the world's population resides in nations** that experience significant or extreme water scarcity.

- The report **highlights that 26% of the world's population doesn't have access to safe drinking water** and **46% lack access to basic sanitation.**

- **Floods in tropical regions** have **increased four times**, while **floods in the mid-latitudes of the north have risen by 2.5 times** since 2000.

Fish otoliths

- Recently, **ornaments from fish otoliths, named sea gems**, have made a market debut through the **fisherwomen** in Vizhinjam, Kerala, trained by the **scientists from the Central Marine Fisheries Research Institute (CMFRI).**

- **Otoliths, also** sometimes **called ear stones,** are hard, calcium carbonate structures found in the **heads of bony fish, behind their brains.**

- They play a dual role in a fish's life:

  - **Balancing**: Otoliths are part of **the inner ear and help fish maintain balance** and sense their orientation in the water.

  - **Hearing**: They **contribute to the hearing process** by detecting vibrations and converting them into electrical signals.

- Throughout the **fish's life,** these otoliths add **new layers of calcium carbonate** similar to the growth rings of a tree.

- Scientists can use **these layers to estimate the age of a fish.**

BioTRIG

- As per recent studies, **BioTRIG** could make a huge impact on rural issues of indoor air pollution, soil degradation, and lack of reliable electricity..

- It is a new **waste management technology** based on the **pyrolysis** system.

- In this process waste is sealed inside an **oxygen-free chamber and is heated above 400 degrees Celsius.**

This process **converts organic waste into useful products** like bio-oil, syngas, and biochar fertiliser.**Pyrolysis:** It is a kind of chemical recycling that turns leftover organic materials into their component molecules.

Credit: Trigeneration based on the pyrolysis of rural waste in India: Environmental impact, economic feasibility and business model innovation
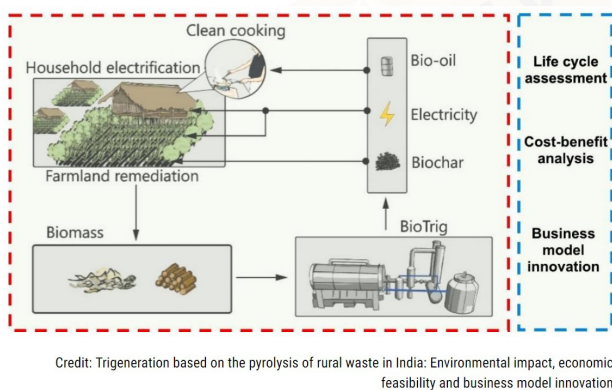
Green Credit Programme

- Recently, the **Ministry of Environment, Forest and Climate Change (MoEFCC)** has issued guidelines for the Green Credit Programme.

- It is **an innovative market-based mechanism** designed to incentivize voluntary environmental actions across diverse sectors.

- It is an initiative under the government's **Lifestyle for Environment (LiFE) mission.**

- The main objective is to establish a mechanism where participants could earn incentives in the form of **'Green Credits'.**

- **GCP focuses** on Tree Plantation, Water Management, Sustainable Agriculture, Waste Management, Air Pollution Reduction, Mangrove Conservation and Restoration**.**

- The **Green Credit Registry and trading platform** developed by **Indian Council of Forestry Research and Education** (ICFRE) along with experts, would facilitate **the registration**, **the buying and selling** of Green Credits.

- To obtain Green Credits, **individuals and entities must register** their activities through the **central government's dedicated app/ website**.

Zero–Budget Natural Farming

- The recent report published by the **National Bank for Agriculture and Rural Development (NABARD)** and the **Indian Council for Research on International Economic Relations (ICRIER)** has cautioned the Centre against **"a complete switch"** to natural farming, on the ground that it can **hamper national food production**.

- Zero budget natural farming is a method of **chemical-free agriculture** and makes use of **traditional Indian practices.**

- It was first used by agriculturist **Subhash Palekar.**

- It is a unique model that relies on **Agro-ecology** and aims to bring down the **cost of production to nearly zero.**

- It is based on 4 pillars:

  - **Jeevamrutha**: It is a mixture of fresh cow dung and aged cow urine, jaggery, pulse flour, water and soil.

  - **Bijamrita**: It is a mixture of neem leaves & pulp, tobacco and green chilies prepared for insect and pest management, that can be used to treat seeds.

  - **Acchadana** (Mulching): It protects topsoil during cultivation and does not destroy it by tilling.

  - **Whapasa** (Soil Aeration): It is the condition where there are both air molecules and water molecules present in the soil. Thereby helping in reducing irrigation requirements.

Project GAIA

- Central banks like the **European Central Bank and the Bank of Spain** have launched Project Gaia, leveraging **artificial intelligence (AI) to assess climate-related financial risks.**

- This groundbreaking initiative tackles the absence of consistent reporting standards by **scrutinising corporate carbon emissions, green bonds, and disclosures of net-zero commitments**.

- The goal is to **democratise climate risk analysis,** potentially making Gaia accessible to the public as an online tool.

- Project Gaia is **developed by the Bank for International Settlements (BIS).**

UN Environment Assembly

- The **Sixth Assembly session** of the **United Nations Environment Programme,** (UNEA-6) is being held at their headquarters in **Nairobi, Kenya.**

- It was established in **2012** during the **United Nations Conference on Sustainable Development (Rio+20).**

- UNEA is the **world's highest-level decision-making body** for matters related to the environment.

- **Membership:** It has a **Universal membership comprising all 193 UN member states**.

- Its function includes setting the **global environmental agenda** and defines policy responses **to address emerging environmental challenges.**

## City–Specific Zero Carbon Buildings Action Plan

- Recently, **Nagpur** has initiated **India's first city-specific Zero Carbon Buildings Action Plan (ZCBAP)**, aiming to achieve net-zero carbon emissions from buildings by 2050.

- The plan covers public buildings, affordable housing, commercial buildings, and homes, focusing on **decarbonization and sustainable development.**

- Developed by **Nagpur Municipal Corporation (NMC) and Nagpur Smart and Sustainable City Development Corporation Limited (NSSCDCL)**, with support from international partners, the ZCBAP aligns with India's climate goals and global commitments.

Geography

Critical and Strategic Minerals

- The Union Cabinet approved the amendment of Second Schedule to the **Mines and Minerals (Development and Regulation) Act, 1957** for specifying rate of royalty in respect of 12 critical and strategic minerals.

- Critical minerals are those minerals that are **vital to the production of important technologies** and **essential for economic development and national security.**

- The **lack of availability of these minerals** or concentration of extraction or processing in a few geographical locations may lead to **supply chain vulnerabilities and even disruption of supplies**.

- Specific minerals on the critical list can vary by country, but some common examples include **lithium (batteries), cobalt (electric vehicles), rare earth elements (electronics and magnets), and graphite (used in steel production).**

- **Strategic Minerals** are a subset of critical minerals and are those that are essential for **national security applications.**

- A joint venture company **Khanij Bidesh India Ltd. (KABIL)** has been incorporated with **National Aluminium Company Ltd, Hindustan Copper Ltd and Mineral Exploration Company Ltd** with the objective to **identify and acquire overseas mineral assets of critical & strategic nature.**

Desert Star dunes
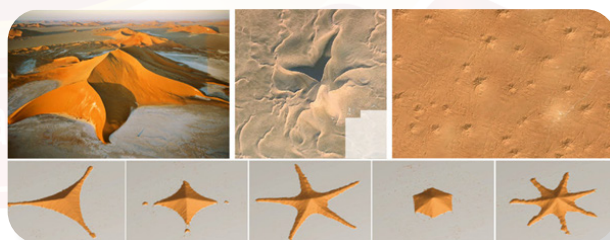
- Scientists unveiled the first **in-depth study** of a star dune.

- Star dunes or pyramid dunes are **named after their distinctive shapes** and reach hundreds of metres in height.

- They are found **in Africa, Asia and North America** and also have been spotted on **Mars and on Saturn's largest moon Titan.**

- Star dunes **makeup just under 10% of the dunes** in Earth's deserts.

- These are formed in **areas with complex wind regimes, where winds blow from different directions**, and net sand accumulation points within the desert where big piles of sand can be **blown around to form giant dunes.**

- The **earth's largest star dunes** are found in the **Badain Jaran desert** in western China**.**

Cavum Cloud

- Recently, **NASA** captured a cluster of cavum clouds over the **Gulf of Mexico**.

- Cavum clouds, also known as **hole-punch clouds or fallstreak holes**, are large gaps that can appear in cirrocumulus or altocumulus clouds.

- They are caused by **supercooled water in the clouds suddenly evaporating or freezing,** and may be **triggered by passing aircraft.**

- As air moves around the plane, a process known as **adiabatic expansion** can make the droplets freeze into **ice crystals.**

- The ice crystals finally grow heavy and fall out of the sky, **leaving a hollow** within the cloud layer.

Recent Addition to list of GI Tags Products

Product	Description	State	
Cuttak Rupa Tarkasi	• The incorporation of **silver filigree into jewellery** dates back to around **3500 BCE in Mesopotamia**, and it is still practised today as **Telkari work**. It was introduced to Cuttack from **Persia via Indonesia.** • It is an **intricate art of twisting and curling thin silver wires** to create delicate patterns and designs. • Used in **jewellery, utensils, decorative items, and souvenirs**	**Odisha**	

Product	Description	State	
Risa Textile	• Risa Textile is a traditional tribal attire worn by women from Tripura, known for its vibrant designs and cultural significance. • Unique weaving techniques and motifs representing tribal identity.	**Tripura**	
Banglar Muslin	• Banglar muslin is a **traditional handloom craft** made of cotton. • This fine muslin is crafted from cotton threads, spun to maintain **tensile strength at counts ranging from 300 to 600**, surpassing other cotton products.	**West Bengal**	
Narasapur Crochet Lace Products	• **Handcrafted** crochet lace-making using fine threads. • **Intricate patterns and motifs** inspired by **nature and traditional motifs** • Crochet lace products were introduced to Narasapur by **missionaries.**	**Andhra Pradesh**	
Ratlam Riyawan Lahsun	• Ratlam Riyawan Lahsun refers to garlic from Ratlam, known for its **unique taste, medicinal properties and aroma.** • Grown organically in **fertile soil and favourable climate** • **Distinct flavour and pungency,** popular in culinary uses and **Ayurvedic medicine** • **Rich in antioxidants,** believed to have medicinal properties for various ailments	**Madhya Pradesh**	
Majuli Mask and Majuli Inscription Painting	• Also known as **Mukha Shilpa,** they are made from **eco-friendly materials** like bamboo, clay, and cloth • Masks depict **mythological characters, deities**, and animals, **preserving Assamese culture.** • Used in traditional **Sattriya dance forms, rituals, and festivals**	**Assam**	

Product	Description	State	
Hyderabad Lac Bangles	• Lac bangles made in Hyderabad are the **second item to receive GI tag after Haleem.** • Bangles are crafted using lac, a **natural resin,** and are known for their **intricate designs and vibrant colours**, reflecting the rich cultural heritage of the region.	**Telangana**	
Kutch Rogan Craft	• Rogan Craft from Kutch is an ancient art form involving the use of **castor oil and pigments** to create intricate designs on fabric. • Also known as **Rogan painting**, it uses a **special resist painting technique.**	**Gujarat**	

Science & Technology

India's Three-Stage Nuclear Programme

- The indigenous **Prototype Fast Breeder Reactor (PFBR)** at the Madras Atomic Power Station in **Kalpakkam, Tamil Nadu**, achieved a milestone by core-loading, marking the **beginning of stage II** of India's three-stage nuclear power program.

- Initiated by **Dr. Homi J. Bhabha and Jawahar Lal Nehru in 1954**, this program emphasises **self-reliance** and a **closed fuel cycle**, where spent fuel from one stage is reprocessed to fuel the next.

- The stages include **Pressurised Heavy Water Reactors (PHWR)** fueled by natural **Uranium**, **Fast Breeder Reactors (FBR) fueled by a mix of Uranium and Plutonium** from reprocessed spent fuel, and **Thorium-based systems** in the final stage.

- FBRs, also known as **Breeders, produce more fuel than they consume** by transmuting Uranium into Plutonium.

- In the third stage, **Plutonium combined with Thorium in reactors produces energy and Uranium.**

- **Core loading** is the process of loading nuclear fuel assemblies into the core of a nuclear reactor.

Prototype Fast Breeder Reactor (PFBR)

- PFBR has been **fully designed and constructed indigenously by Bharatiya Nabhikiya Vidyut Nigam Limited (BHAVINI)** with significant contribution from more than 200 Indian industries including MSMEs.

- Once commissioned, **India will only be the second country after Russia to have a commercial operating Fast Breeder Reactor.**

INDIA'S THREE-STAGE NUCLEAR PROGRAMME

Homi Bhabha envisioned India's nuclear power programme in three stages to suit the country's low uranium resource profile

Tarapur Atomic Power Station
- PHOTO: VV KRISHNAN
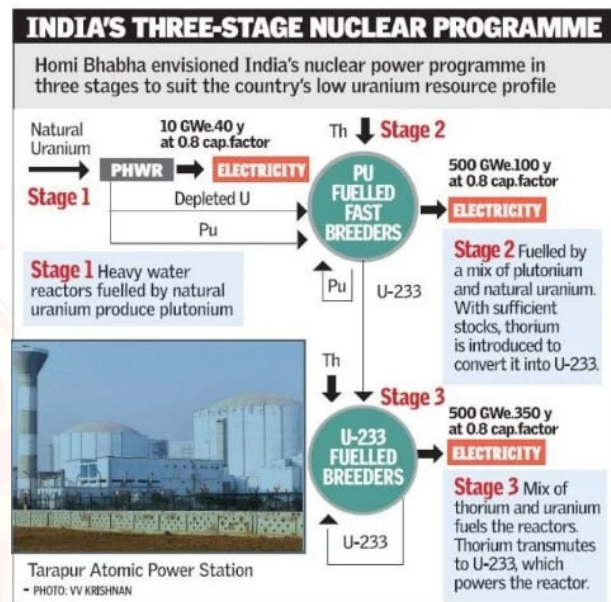
Pine Needles-based Fuel-Making Technology

- **CSIR-Indian Institute of Petroleum** signs MoU with **Uttarakhand State Council for Science And Technology (UCOST)** to deploy the **pine needles-based fuel-making technology.**

- A **briquetting unit** with a capacity of 50 kg per hour based on Pine Needles will be established under this agreement.

- The primary method for utilising pine needles as fuel is through briquetting.

- **Briquetting is a process that compresses loose biomass materials like pine needles into denser logs or bricks called briquettes.** This densification makes them **easier to transport, store, and burn.**

- The **biomass cookstove works with Pine Needles briquettes at an energy efficiency of 35% and reduces household pollution by 70%.**

Multiple Independently Targetable Re-entry Vehicle (MIRV) Technology

- **Mission Divyastra**, the **first flight test of indigenously developed Agni-5 missile** with **Multiple Independently Targetable Re-entry Vehicle (MIRV) technology** was conducted successfully by DRDO.

- The MIRV technology **allows a single missile to carry multiple warheads** including nuclear warheads, each **capable of being aimed at a different target.**

- Originally developed in the early **1960s**, it enables a single missile to **destroy several targets simultaneously, complicating the enemy's missile defence strategy.**

- It significantly **increases the firepower and deterrent value** of a missile system.

- **The United States, the United Kingdom, France, Russia, China, and India** are among the nations that possess the MIRV technology.

ETHANOL 100

- Recently, the union Minister for Petroleum & Natural Gas and Housing and Urban Affairs, launched the **ETHANOL 100,** a revolutionary automotive fuel at IndianOil Retail Outlet.

- ETHANOL 100 has **high-octane rating**, typically between **100-105**.

- It proves **ideal for high-performance engines**, ensuring improved efficiency and power output all while minimising environmental impact.

- It includes **93-93.5 percent ethanol blended** with **5 percent petrol** and 1.5 percent co-solvent, which is a binder.

- It stands as a **cleaner, greener alternative to gasoline, boasting lower emissions of greenhouse gases** and pollutants, thus aiding in combating climate change and enhancing air quality in our communities.

Station Shiv Shakti

- The **International Astronomical Union** (IAU) approved the name **'Station Shiv Shakti'** for the landing site of Chandrayaan-3's Vikram lander on the Moon.

- The Gazetteer of Planetary Nomenclature, which documents IAU-approved planetary names, defines **'Station Shiv Shakti'** as a compound word from **Indian mythology**, representing the **masculine (Shiva) and feminine (Shakti) duality of nature.**

International Astronomical Union (IAU)

- IAU was **founded in 1919** as the **primary organisation responsible for the official naming of celestial bodies and their surface feature**s, including those on the Moon.

- **India** is among its **92 member countries.**

- It aims to **promote and safeguard the science of astronomy in all its aspects**, including research, communication, education and development, through international cooperation.

- They have **established guidelines and procedures for naming** lunar craters, mountains, valleys, and other features.

Norms for naming Space objects

- For **planetary objects**, it states the **name should be simple, clear, and unambiguous** and should not duplicate existing names.

- **No names having political, military or religious significance** may be used, except for names of political figures prior to the 19th century.

- **Commemoration of persons on planetary bodies** should not normally be a goal in itself, but may be employed in special circumstances.

- Persons **being so honoured must have been deceased for at least three years**, before a proposal may be submitted.

- Note: In the present case the gazette notification regarding "Shiv Shakti" mentions that the Shiv and Shakti represents the masculine and feminine duality of nature in Indian Mythology. It is thus inferred that it is not the reference to religion.

Very Short Range Air Defence System Missile
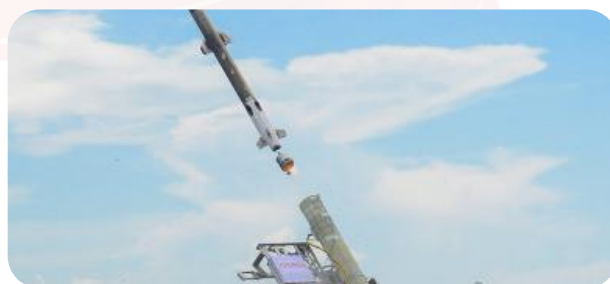
- Recently, the Defence Research and Development Organization (DRDO) conducted two successful flight tests of the Very Short-Range Air Defence System (VSHORADS) missile.

- The VSHORADS missile system is a **fourth generation man-portable air-defence system (MANPADS)**.

- It is developed by **Research Centre Imarat (RCI) in collaboration with other DRDO laboratories** and other industry partners.

Features

- ⚓ It is meant for **neutralising low altitude aerial threats** at short ranges.

- ⚓ It has a range of up **to 6-km.**

- ⚓ The missile has many novel technologies including **Dual-band IIR Seeker, miniaturised Reaction Control System** and integrated avionics.

- ⚓ It is more portable and lightweight than the other missile systems in the Army's arsenal.

e-Crop (electronic crop)

- Recently, Electronic crop (e-Crop), a device for smart farming was **granted paten**t by the Indian Patent Office.

- The **Thiruvananthapuram-based ICAR institution - Central Tuber Crops Research Institute (CTCRI)** has developed **e-Crop (electronic crop).**

- It is an **Internet of Things (IoT) device for providing crop-specific agro advisories** to farmers **through text messages**.

- It is **highly advantageous than traditional farming because of the precise application of fertiliser and water** via fertigation based on the climate and real-time plant growth.

- It **calculates nitrogen, phosphorus, potassium and water requirements of field crops** with an aim of **minimising the yield gap.**

- The technology was **recognised as one of five best technologies** developed for the horticultural sector in 2022- 23 at the **95th foundation day ceremony of Indian Council of Agriculture Research (ICAR).**

Cervical cancer
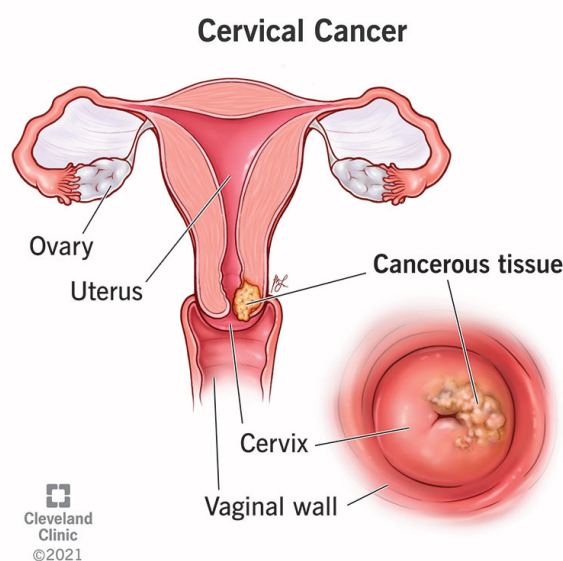
- The interim Union Budget emphasises the **vaccination of girls aged 9-14** against cervical cancer.

> **Cervical cancer** is cancer that starts in the cells of the cervix, the lower end of the uterus that connects to the vagina. It's caused by a long-lasting infection with human papillomavirus (HPV), a common virus that's passed from one person to another during sex. HPV usually goes away on its own, but for some, the virus can cause changes in the cells that may lead to cancer.

- Cervical cancer is **preventable and curable** if it is detected early and managed effectively.

- It is the **second most common cancer in women in India**, and the cause of a large number of deaths annually.

- It is caused by infection with the Heterotrophic Plate Count (HPC), and there are vaccines to protect against cancerous **Human Papillomavirus.**

- **Cervavac** is an indigenous vaccine developed by the Pune-based Serum Institute of India in coordination with the Government of India's Department of Biotechnology (DBT).

Cervical cancer in India

- In India, cervical cancer is the second most common cancer in women, after breast cancer.

- India contributes the largest share of the global cervical cancer burden.

- India accounts for nearly one in every four deaths globally due to cervical cancer.

90-70- 90 Strategy

- **World Health Organisation's Global strategy to eliminate cervical cancer** proposes the following 90-70-90 targets must be met by 2030 for countries to be on the path towards cervical cancer elimination:

  1. **90% of girls** are fully vaccinated with the HPV vaccine by the age of 15 years.

  2. **70% of women** are screened with a high-performance test by 35 years of age and again by 45 years of age.

  3. **90% of women** identified with the cervical disease receive treatment (90% of women with pre-cancer treated, and 90% of women with invasive cancer managed).

Submarine Communications Cable

- Recently, three undersea cables connecting India to global telecom networks, **Asia-Africa-Europe-1, Europe India Gateway, and Tata Global Network was damaged in the Red Sea Conflict.**

- Submarine cables are laid on the **seabed between land-based stations to transmit telecommunication signals** across stretches of ocean and sea.

- These cables use **fibre-optic technology,** with optical fibre elements coated with protective layers suitable for the marine environment.

- At present India has **17 submarine cables landing in 14 cable landing stations across 5 cities (Mumbai, Chennai, Cochin, Tuticorin and Trivandrum).**

Pushpak Reusable Landing Vehicle (RLV) LEX 02

- Recently, the **Indian Space Research Organisation (ISRO)** has successfully conducted the Pushpak Reusable Landing Vehicle (RLV) LEX 02 landing experiment.

- It is designed as an **all-rocket, fully reusable Single-stage-to-orbit (SSTO)** vehicle, incorporating advanced elements from previous demonstrators.

- Re-Usable Landing Vehicle is a vehicle that is **launched into space many times.**

Lab Grown Fish

- Recently, **ICAR-Central Marine Fisheries Research Institute (CMFRI)** has entered into a collaborative research agreement with a private-sector start-up offering cultivated meat technology solutions to **grow fish meat in the laboratory.**

- Lab-grown fish, also known as c**ultivated or cell-based fish**, is produced through **cellular agriculture techniques** in a controlled environment.

- Seafood **without the sea is 'grown'** in the same way as other cultivated meats are grown - **without the need to raise and kill an animal.**

Magnetofossils

- Scientists from the **CSIR-National Institute of Oceanography, Goa**, have discovered a **50,000-year-old giant magnetofossil in the Bay of Bengal**, making it one of the youngest magnetofossils found to date.

- Magnetofossils are **fossilised remains of magnetic particles** created by **magnetotactic bacteria**, which **align themselves along Earth's magnetic field.**

- Magnetotactic bacteria are mostly **prokaryotic (nucleus-less single celled) organisms** and were discovered by **Salvatore Bellini in 1963.**

- These organisms follow the magnetic field to reach places that have **optimal oxygen concentration**. This process is facilitated by the presence of **iron-rich crystals** within their cells.

Miscellaneous

India's Prevalence of Zero–Food Children

- A study published recently in the peer-reviewed JAMA Network Open journal found the **prevalence of zero-food children in India at 19.3%**, drawing attention to **extreme food deprivation among children.**

- The study defined the **zero-food** children as those **between 6-23 months who had not consumed any animal milk, solid or semisolid food in the last 24 hours.**

- It was conducted across **92 low and middle-income countries (LMIC)**.

- The data for India was sourced from the **National Family Health Survey 2019-21.**

Key Highlights

- The study **ranks India as having the third-highest percentage (19.3%) of zero-food children**, above **Guinea (21.8%) and Mali (20.5%).**

- India has by far the **highest number of 'zero-food' children at 6.7 million**, accounting for almost **half of all 'zero-food children' across 92 countries** in the survey

- It also talks about the **importance of introducing solid or semisolid foods to a child's diet** - as breastfeeding alone is not sufficient to provide children with nutrition, which, in turn, might hinder their growth and development.

Another study published in 2023 in eClinical Medicine, part of the noted Lancet Discovery Science, found that **Uttar Pradesh alone accounts for 28.4% of zero-food children in India, followed by Bihar (14.2%), Maharashtra (7.1%) and Rajasthan (6.5%)**.

Advanced Medium Combat Aircraft (AMCA)

- The **Cabinet Committee on Security (CCS)** cleared a project to design and develop the **Advanced Medium Combat Aircraft (AMCA)**

- The **Aeronautical Development Agency (ADA)** under the **Defence Research and Development Organisation (DRDO)** will be the **nodal agency** for executing the programme and **designing the aircraft.**

- It will be **manufactured by state-owned Hindustan Aeronautics Limited (HAL).**

- The AMCA will be **India's indigenous fifth-generation fighter aircraft.**

Key Features

- The aircraft will have a **low electro-magnetic signature**, which will make it **difficult for enemy radar to detect it.**

- It will have **powerful sensors and new weapons,** so it is able to register the signature of enemy aircraft and take them out.

- Stealth features such as an **internal weapons bay and a bigger internal fuel tank** are part of fifth-generation aircraft like AMCA.

- An **Integrated Vehicle Health Management (IVHM) system** will be included to **keep track of multiple structural components,** and to **assess the condition of the aircraft in real-time.**

National Curriculum for Early Childhood Care and Education (ECCE) and National Framework for Early Childhood Stimulation

- The **Ministry of Women and Child Development** has launched the National Curriculum for Early Childhood Care and Education (NECCE) , the National Framework for Early Childhood Stimulation (NFECS).

- The **National Curriculum for ECCE will be for children aged between three and six years** and the **National Framework for Early Childhood Stimulation will be offered for children from birth to three years.**

National Curriculum for ECCE

- It covers all domains of development as per the **National Curriculum Framework for Foundational Stage 2022 (NCF-FS)**, including physical/motor, cognitive, language and literacy, socio-emotional, cultural/aesthetic as well as positive habits.

- It addresses **how children learn in early years**, with a focus on playful joy-based learning, in preparation for primary school.

- The curriculum is structured to provide a **weekly calendar comprising 36 weeks of active learning, eight weeks of reinforcement and four weeks of initiation**, together with **5+1 days of play-based learning in one week**.

National Framework for Early Childhood Stimulation

- It aims to **empower caregivers and anganwadi workers for holistic early stimulation**, through responsive caregiving and opportunities for early learning, for the **optimal development of children, both body and brain.**

- The framework will provide **anganwadi workers** a basic **understanding of how children grow and develop**, the importance of brain development and the need for nurturing care.

- **36 month-wise age-based activities are provided** that can be **conducted both within the household as well as at the anganwadi centre or a creche.**

- The documents have been prepared by the **National Institute for Public Cooperation and Child Development (NIPCCD)**, with the support of an internal committee and development partners. NIPCCD will lead the training of anganwadi functionaries.

National Cooperative Database (NCD)

- **The Ministry of Cooperation** launched the National Cooperative Database (NCD) to foster a cooperative-centric economic model**.**

- It is a web-based digital dashboard wherein data of cooperative societies, including National/State Federations have been captured.

- NCD has **collected/mapped information about 8 lakh cooperatives** with collective membership of **more than 29 crores spread** across various sectors in the country.

- It also provides **comprehensive contact details for registered societies,** facilitating smooth communication between government entities and these societies.

Uniform Code for Pharmaceutical Marketing Practices (UCPMP) 2024

- The Department of Pharmaceuticals issued the Uniform Code for Pharmaceutical Marketing Practices (UCPMP) 2024.

- It **aims to ensure transparency, integrity, and accountability** in the marketing of pharmaceutical products, emphasising ethical practices within the industry.

- Under the UCPMP 2024, several key provisions have been outlined to govern the conduct of pharmaceutical companies and their representatives. These include:

  - ☞ It **prohibits the offering or providing of gifts for the personal bene**fit of any healthcare professional or their family members by pharmaceutical companies, agents, distributors, wholesalers, or retailers.

  - ☞ The **promotion of a drug must be consistent with the terms of its marketing approval,** and a **drug must not be promoted prior to the receipt of its marketing approval** from the competent authority, authorising its sale or distribution.

  - ☞ **All Indian pharmaceutical associations are to upload the UCPMP on their website along with the detailed procedure for lodging of complaints**, which will be linked to the UCPMP portal of the Department of Pharmaceuticals.

Frontier Technology Labs (FTL)

- Recently, the **Atal Innovation Mission (AIM), NITI Aayog and Meta** launched the Frontier Technology Labs (FTL).

- FTL is an advanced version of **Atal Tinkering Lab.**

- Its primary objective is to promote **digital inclusion, skilling and growth.**

- **Atal Innovation Mission and Meta** will partner to set up FTLs in schools.

- It enables students to innovate using technologies such as Artificial Intelligence, Augmented & Virtual Reality, Blockchain, Cybersecurity, Robotics, 3D Printing, and Internet of Things.

- It will be **funded by Meta** and **Atal Innovation Mission will be the knowledge partner**.

- These labs will be managed by Meta's partner **1M1B** (One Million for One Billion).

Acing Development of Innovative Technologies with iDEX (ADITI) Scheme

- Recently, the Union **Minister of Defence** launched the ADITI scheme.

- The scheme aims to promote innovations in **critical and strategic defence technologies.**

- It also aims to develop about **30 deep-tech critical and strategic technologies.**

- Under this scheme start-ups are eligible to receive **grant-in-aid of up to Rs 25 crore** for their research, development, and innovation endeavours in defence technology.

- It will spend Rs 750 crore for the period 2023-24 to 2025-26.

- It falls under the **iDEX (Innovations for Defence Excellence) framework of the Department of Defence Production ,Ministry of Defence.**

Calling Name Presentation (CNP)

- Recently, TRAI proposed to introduce **CNAP, or Calling Name Presentation** to reduce **incessant spam and Unsolicited Commercial Communication (UCC).**

- It aims to show the **caller's name when receiving a call**, similar to services like Truecaller.

- Unlike **crowd-sourced services**, CNAP will rely on **verified information from Customer Application Forms (CAFs)** filled by subscribers.

- TRAI recommends telecom providers maintain a **database linking phone numbers** with customer names from CAFs.

- This initiative has **raised privacy concerns** among industry players, with suggestions for **opt-in mechanisms and limitations to protect user privacy.**

Prasar Bharati–Shared Audio Visuals for Broadcast and Dissemination (PB–SHABD)

- Recently, the Union **Minister of Information and Broadcasting** launched **PB-SHABD.**

- PB-SHABD is a **news sharing service from Prasar Bharati**, the public service broadcaster of the country.

- The news sharing service will provide news stories in **all major Indian languages across fifty categories as a free service** for a year to **news organisations registered with the ministry.**

- The news entities can **use and re-distribute content from SHABD using their own logo without giving SHABD any credit for it.** However the news entities are not allowed to edit and change the context of the news.

Holistic Progress Cards

- The **National Council for Educational and Research Training (NCERT)** has introduced a new 'Holistic Progress Card' (HPC) to **assess students' academic performance.**

- Departing from traditional marks or grades, the HPC employs a **360-degree evaluation system,** considering various aspects of a student's development and learning experience.

- It encompasses **academic performance, cognitive abilities, socio-emotional skills**, and **creativity**, incorporating feedback from parents, classmates, and self-evaluation by students.

> The HPCs have been devised by **PARAKH**, a standard-setting body under the NCERT, for the **foundational stage (Classes 1 and 2)**, **preparatory stage (Classes 3 to 5)** and **middle stage (Classes 6 to 8)**, as per suggestions by the **NEP, 2020.**

Juice Jacking

- The **Reserve Bank of India (RBI) issued a cautionary message** to mobile phone users regarding **juice jacking, a cyberattack exploiting public USB charging ports**.

- In this attack, **hackers tamper with the charging port to steal data** or install malware on connected devices.

- Personal and financial information like passwords and credit card details are targeted mainly in public places like **airports and hotels**.

Signals Technology Evaluation and Adaptation Group (STEAG)

- Recently, the Indian Army has established the **"Signals Technology Evaluation and Adaptation Group" (STEAG)**.

- It is a unit dedicated to researching and evaluating futuristic communication technologies like **6G, artificial intelligence (AI), machine learning and quantum computing** for military applications.

- Its primary objective is to **nurture technologies** across wired and wireless systems, covering a wide spectrum of domains including electronic exchanges, mobile communications, software-defined radios, electronic warfare systems, and more.

- **Operated under the Corps of Signals**, STEAG will play a crucial role in enhancing the Army's digital capabilities by **scouting, evaluating, developing, and managing cutting-edge ICT solutions.**

- STEAG aligns with India's goals of **self-reliance in high-end communication technologies**, contributing to the nation's strategic autonomy in accordance with ideals of **Atmanirbhar Bharat and Start up India.**

Places in News

- It will strengthen the **Indian Navy's foothold in the Lakshadweep islands** while extending capacity building, operational reach and sustenance in the region, and will add impetus to **overall development of the islands.**

Land Port Sabroom

- The Prime Minister of India inaugurated Tripura's second Integrated Check Post (ICP) located in Sabroom.

- It lies **along the international border between India and Bangladesh.**

- It provides **direct access for India's northeastern region to the Chittagong Port in Bangladesh**, a mere **75 km away,** compared to the **distant Kolkata/Haldia Port, which is 1,700 km away.**

- Constructed at an expenditure of Rs 230 crore, the Sabroom Land Port is seamlessly **linked to Bangladesh's Chittagong port via the Maitree Setu (Friendship Bridge) over the River Feni.**

Land Ports also called border stations for import and export. A land port houses the customs and border protection, and other inspection agencies responsible for the enforcement of country's laws pertaining to such activities.

INS Jatayu

- INS Jatayu, commissioned at **Minicoy island**, is the **second naval base in Lakshadweep** after **INS Dweeprakshak in Kavaratti.**

- INS Jatayu will be functioning under the **operational control of Naval Officer in Charge (Lakshadweep), Southern Naval Command.**

- The base will help the Navy in **maintaining vigil over anti-narcotics and anti-piracy activities in the western Arabian Sea** while being the first responder in the region.

Sela Tunnel

- The Prime Minister recently **inaugurated the long-awaited Sela Tunnel.**

- **Sela Tunnel** is the **longest bi-lane road tunnel in the world**, at an altitude above **13,000 feet**, located in the **West Kameng district of Arunachal Pradesh.**

- It will connect **Tezpur**, in Assam with **Tawang in Arunachal Pradesh.**

- It is built by the **Border Roads Organisation (BRO) under Project Vartak,** and the tunnel's construction commenced in 2019.

- The tunnel is significant as it **will provide all-weather connectivity to Tawang**, bordering China. It will cut down the travel time between Tezpur and Tawang by over an hour.

Ramgarh Crater

- Recently, the Rajasthan government officially recognised the 3-km diameter Ramgarh Crater as the country's first notified Geo-Heritage Site.

- Ramgarh crater also known as **Ramgarh structure** is a **meteor impact crater located in the Kota plateau of Vindhya range in Rajasthan.**

- It was formed around 165 million years ago due to a **meteor impact, this 3-km diameter crater** provides essential ecosystem services, contributing to the region's ecological balance and biodiversity.

- It is declared as **the Ramgarh Conservation Reserve under the Wildlife (Protection) Act, 1972 and the presence of Pushkar Talab complex** within the crater, recognised as **wetlands under Wetland** (Conservation & Management) Rules, 2017.

Afanasy Nikitin Seamount

- India recently applied to the International Seabed Authority (ISBA) for rights to explore the Afanasy Nikitin Seamount (AN Seamount).

- The AN Seamount is a **structural feature** (400 km long and 150 km-wide) in the **Central Indian Basin**, located about 3,000 km off India's coast.

- Discovered in **1959 by the Soviet research vessel "Vityaz,"** the seamount was named after **Afanasy Nikitin, a 15th-century Russian merchant** and explorer who famously travelled to India.

- From an **oceanic depth of about 4,800 km, it rises to about 1,200 metres** and is rich in deposits of cobalt, nickel, manganese, and copper.

Biligiri Ranganatha Swamy Temple (BRT) Tiger Reserve
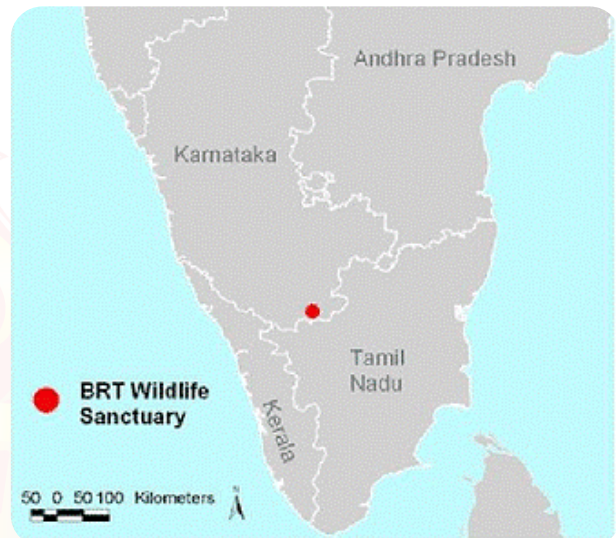
- Nearly 60 acres of forest were affected by a major forest fire triggered by some unidentified miscreants, at Biligiri Ranganathaswamy Temple Tiger (BRT) Reserve.

- The Biligiri Ranganatha Swamy Temple Tiger Reserve, also known as the Biligiriranga Swamy Temple Wildlife Sanctuary, is a **wildlife sanctuary and tiger reserve** located in the **Chamarajanagar district of Karnataka, India.**

- The name Biligiri Ranganatha Swamy comes from the **Biligiriranga Hills**, a mountain range that forms the **core area of the reserve.**

- **Situated between the Eastern Ghats and the Western Ghats**, it acts as a **vital wildlife corridor** connecting these two mountain ranges.

Agalega Atoll
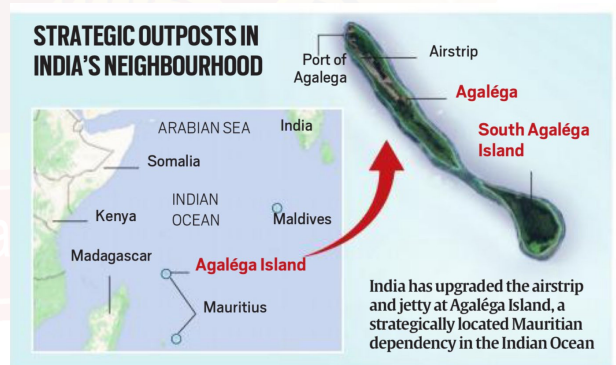
- Prime Minister Narendra Modi and Mauritius Prime Minister Pravind Jugnauth virtually inaugurated an air strip and a jetty to ensure **maritime security and connectivity to Mauritius' Agalega islands.**

- Agalega islands lies approximately 650 nautical miles (1,050 km) north of Mauritius.

- It is a group of two islands with a total area of 26 sq km and a native population of about 300 people.

- The joint development of Agalega underscores India's commitment to the vision of **Security and Growth for All inside the Region (SAGAR)**.

Gulf of Tonkin

- China has officially disclosed a new baseline outlining its territorial claims in the northern part of the Gulf of Tonkin, an area shared with **Vietnam.**

- It is a **crescent-shaped**, **shallow**, **semi-enclosed water body** situated **in** the **South China Sea**'s northwestern portion.

- The gulf is bordered by the **northern coastline of Vietnam** in the west and northwest; by **China's Guangxi Zhuang Autonomous Region** in the north; and by the **Leizhou Peninsula and Hainan Island** in the east.

- The Gulf of Tonkin is best known for the **"Gulf of Tonkin Incident"** during the Vitenam War (1964) when two US warships were blown up by North Vietnam forces.

Darien Gap

- As per recent reports a large number of illegal migrants entered the US via the Darien Gap.

- The **Darién Gap is a geographic region** in the Isthmus of Darién or **Isthmus of Panama** connecting the **American continents within Central America.**

- The Darien Gap is a stretch of densely forested **jungle across northern Colombia and southern Panama**.

Pandavulla Gutta
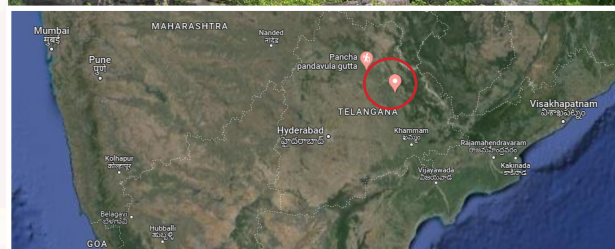
- Recently, Pandavula Gutta has been **officially recognised as a Geo-heritage site in Telangana.**

- The site, first **discovered in the year 1990**, is a geological marvel **older than the Himalayan hills.**

- It is rich in terms of number of paintings, rock shelters and its habitation, right from the **mesolithic to medieval times.**

- The paintings feature geometrical designs and impressions in **green, red, yellow and white pigment colours.**

- The rock art paintings depict wild life like **Bison, Antelope, Tiger, Leopard** etc.

- Other shapes like **swastika symbols**, **circles and squares, weapons such as bows, arrows, sword and lancer** etc are present in these paintings.

Sudarshan Setu
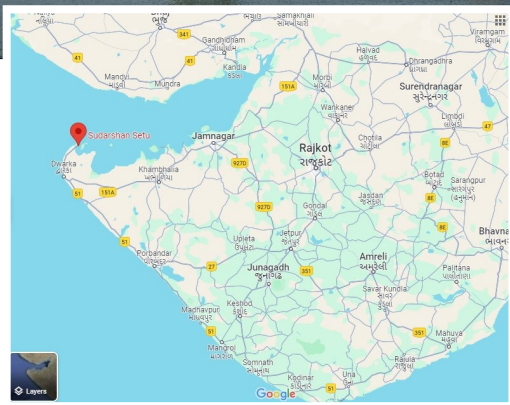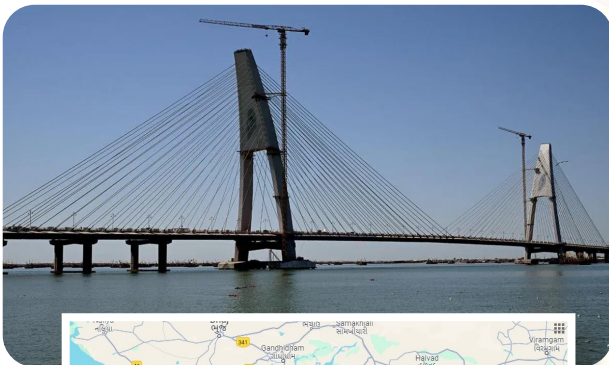
- Prime Minister Narendra Modi recently inaugurated the **'Sudarshan Setu' bridge.**

- It is **India's longest cable-stayed bridge**, at 2.32 km, on the Arabian Sea, connecting Beyt Dwarka island to mainland Okha in Gujarat's Devbhumi Dwarka district.

- It boasts a **unique design**, featuring a footpath adorned **with verses from the Bhagavad Gita and images of Lord Krishna** on both sides.

- The bridge aims to **enhance transportation and reduce travel time for devotees** visiting Dwarka and Beyt-Dwarka, **reducing the reliance on boat transport.**

Species in News

Melanochlamys Droupadi

- The **Zoological Survey of India** named a new marine species of head-shield sea slug after **President of India Droupadi Murmu.**

- **Melanochlamys Droupadi**, the slug species named after the President, is a **head-shield brownish-black sea slug with a ruby red spot** and a **maximum length of up to 7mm.**

- The marine slug was found along the three-km stretch from the **low intertidal zones of the Digha in West Bengal and Udaypur in Odisha coast.**

- It is **hermaphrodite** (having both male and female reproductive parts).

- **Sea slugs** are a **group of molluscs** that live **primarily in marine habitats and are slug-like.**

- They are **rapid hunters and feed upon mobile prey** such as other shelled and unshelled sea slugs, roundworms, marine worms and small fishes.

Baleen Whales

- Recently the scientists discovered the anatomy behind the songs of baleen whales.

- Baleen whales, scientifically known **as Mysticeti, are a group of large marine mammals** belonging to the cetacean order.

- These whales are characterised by the **presence of baleen plates,** comb-like structures made of keratin in their mouths, used for filter feeding.

- Some baleen whales, notably humpback whales, are known for their complex songs. These songs are believed to be related to breeding and communication.

- The **North Atlantic right whale** (category of baleen whale) is ranked **Critically Endangered** by the **International Union for Conservation of Nature**.

- Many **baleen whale species undertake extensive migrations** between feeding and breeding grounds. These migrations often cover thousands of kilometres.

Golden Langur

- According to the comprehensive population estimation by the **Primate Research Centre NE India (PRCNE)**, **Assam Forest Department, Bodoland Territorial Council, Salim Ali Centre for Ornithology and Natural History (SACON)**, and **Conservation Himalayas** there are an estimated 7,396 golden langurs in India.

- They are easily recognized by the colour of their fur, after which they are named. It has also been noted that their **fur changes colours according to the seasons.**

- The **colour of the young** also differs from adults in that they are **almost pure white**.

- It is limited to **Assam, India and neighbouring Bhutan** where they live year-round.

- The area they inhabit is **restricted** to the region surrounded by **four geographical landmarks**: the foothills of **Bhutan (north)**, **Manas river (east)**, **Sankosh river (west)**, and **Brahmaputra river (south)**.

- **IUCN:** Endangered

- **CITES:** Appendix I

- **Wildlife Protection Act, 1972:** Schedule I