

# FORTUNE Prelims Precise

JANUARY 2024



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FORTUNE IAS

# Toppers in Top 100

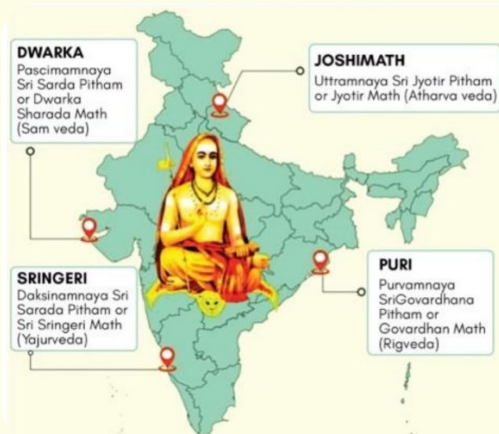


# History & Culture

## Shankaracharyas

- Recently, the **four Shankaracharyas** said that they will not attend the inauguration of the Ram temple in Ayodhya.
- Shankaracharya, literally means '**teacher of the way of Shankara**'.
- It is a religious title used by the heads of the four Hindu mutts that were established by the Hindu saint **Adi Shankara**.
- 4 Mutts or Matthas: Dwarka (Gujarat), Joshimath (Uttarakhand), Puri (Odisha), and Sringeri (Karnataka)
- Each mutt is called peetha or pitha and they were tasked with serving as the **custodian of Vedas**.

- » **Govardhan Math (Puri) - Rig Veda**
- » **Dwarka Sharada Peetham - Sama Veda**
- » **Sringeri Sharada Peetham - Yajur Veda**
- » **Jyotir Math (Joshimath) - Atharva Veda**



## Grantham Inscriptions

- A team of archaeologists recently discovered two stone inscriptions of 'Grantham' and Tamil dating 11th and 16th centuries respectively at Pazhnchervazhi village near Kangayam, TN.

- Grantham or Grantha script developed from the Pallava script** around 5th century CE by Tamils to write Sanskrit or Manipravalam which is a blend of Tamil and Sanskrit. It was common in Tamil regions and south-east Asia.



- The word Grantha denotes in **Sanskrit** '**a literary work**'.
- Pallava inscriptions like Mahendravarman's Tiruchirappalli rock cut cave, Kasakudi plates of Nandivarman, Udayendram plates and Pandyan Nedunjadaiyan's Anaimalai inscriptions are examples of Grantha.
- Both **Grantha and Tamil scripts appear alike in modern forms**. The evolution of both scripts from Brahmi was also more or less similar.

## Kadamba Inscriptions

- Recently, an **inscription said to be of 10th century CE Kadamba period** has been discovered in the **Mahadeva temple at Cacoda in southern Goa**.
- The Kadamba inscription is engraved in **Kannada and Nagari** (for Sanskrit) characters.
- It is in the same literary style of the Talangre Inscription of 10th century found in present day Kasargode.
- This inscription, however, is attributed to the Kadamba dynasty, subordinates of the Chalukyas during that period.
- Kadambas of Goa were feudatories of Kalyani Chalukyas** and helped them to overthrow the Rashtrakutas in the region.





## Madhika Language

- In the remote colony of Kookanam in Kerala the **Chakaliya community** is grappling with the imminent loss of its unique language Madhika.
- **Chakaliya community** that **migrated from Karnataka centuries ago** and has **no script for their Madhika language**.
- It is a **blend of Telugu, Tulu, Kannada, and Malayalam** and largely influenced by Havyaka Kannada, an old form of Kannada.
- There are **only two people left**, who are the last fluent speakers of Madhika.

## Classical Languages

- The External Affairs Minister announced that the Government of India has decided to include **Farsi (Persian)** as one of the nine **classical languages** in India under the **New Education Policy**.
- In **2004**, the Government of India decided to create a **new category of languages called "classical languages"** and **Tamil was the first language to be accorded classical language status** in the same year.
- As of now, **India recognizes six languages as classical**, including **Tamil (2004), Sanskrit (2005), Kannada (2008), Telugu (2008), Malayalam (2013), and Odia (2014)**.
- In addition to these classical languages **Pali, Farsi, and Prakrit and their works of literature are to be preserved according to India's National Education Policy 2020**.
- Once a language is declared classical, it gets **financial assistance** for setting up a **centre of excellence for the study of that language** and also **opens up an avenue for two major awards for scholars of eminence**.
- The **University Grants Commission** can be requested to **create a certain number of professional chairs for classical languages** for scholars of eminence in the language.

## Sapinda Marriages

- The Delhi High Court upheld the constitutional validity of a provision in the Hindu Marriage Act that **bans 'sapinda' marriages**.

- These marriages involve individuals **closely related through common lineal ancestors**.
- According to the Act, individuals are considered 'sapindas' if they are **direct ancestors** within specified limits or **share a common lineal ascendant**.
- **Section 5(v)** of the Act prohibits sapinda marriages unless there's a custom permitting it.
- The Sapinda relationship **extends up to the third generation through the mother's line and the fifth generation through the father's line**.

## Hattee Community

- Recently, the **Himachal Pradesh** state government finally issued the notification to give **Scheduled Tribe (ST) status** to the Hattee community
- Hattis are a **close-knit community** that got their name from their tradition of selling homegrown vegetables, crops, meat, wool, etc. at small markets called '**haat**' in towns.
- They follow a **rigid Caste System** - the **Bhat and Khash are upper castes**, and the **Badhois are the lower caste** and **inter-caste marriages are strictly discouraged** among them.
- The Hattis are governed by a traditional council called **Khumbli**, which like the Khaps of Haryana, decide community matters.
- The **Khumbli's power has remained unchallenged** despite the establishment of the Panchayati Raj System.
- Hatti men traditionally wear a **distinctive white headgear** on ceremonial occasions.

## Registered Unrecognised Political Parties (RUPP)

- Recently, the **Election Commission of India** introduced new rules for the allocation of symbols to Registered Unrecognized Political Parties (RUPP).
- ECI has the power to **register and recognise parties at state and National levels**.
- RUPPs are those political parties that are **either newly registered or have not managed to secure a sufficient percentage of votes in assembly or general elections to become a state or national party**, or have **never contested** elections since their registration.
- They **do not enjoy all the benefits** that recognized parties do like:
  - ◆ **Not entitled** to an **exclusive allotment of a reserved election symbol**. They must choose from a **list of 'free symbols' issued by the Election Commission**. Common symbols are provided to **RUPP under Symbols Order, 1968**.
  - ◆ They are also **not eligible to receive free copies of electoral rolls**, free authorisation for broadcast/telecast facilities over All India Radio/Doordarshan.
  - ◆ A registered unrecognised party can **only nominate a maximum of 20 "star campaigners"**.
- New rules for symbol allocation to RUPPs:
  - ◆ To submit their **electoral contribution reports and audited annual accounts** for the past **three financial years**.
  - ◆ To **furnish election expenditure statements for their last two contested elections**, will be eligible for 'concession of common symbol allotment'.

## Padma Awards



- The Padma Awards are **one of the highest civilian honours** of India **instituted in the year 1954** announced **annually on the eve of Republic Day**.
- The award is given in three categories, namely,
  - 1. Padma Vibhushan: For exceptional and distinguished service**
  - 2. Padma Bhushan: For distinguished service of a high order**
  - 3. Padma Shri: For distinguished service**
- The awardees are presented a **Sanad** (certificate) signed by the President and a **medallion**.
- All persons **without distinction of race, occupation, position or sex** are eligible for these awards.
- The award is **normally not conferred posthumously**. However, in highly deserving cases, the Government could consider giving an award posthumously.
- The **award does not amount to a title and cannot be used as a suffix or prefix to the awardees' name**.

## Nominations & Selection Process

- Nominations are invited from **Central Ministries/Departments, States/UT Governments, Bharat Ratna and Padma Vibhushan awardees, Institutes of Excellence**.
- All citizens can make **nominations/recommendations** including self-nomination.
- Later the nominations are placed before the **Padma Awards Committee (constituted by the Prime Minister every year)**.
- On the basis of the **recommendations of the Awards Committee, and after approval of the Home Minister, Prime Minister and President**, the Padma Awards are announced on the eve of the Republic Day.



## Denotified, nomadic and semi-nomadic tribes

- Recently, the National Human Rights Commission (NHRC) stressed on the need to implement the **Bhiku Ramji Idate Commission report (2018)**.
- Idate commission recommended setting up a **permanent commission for Nomadic, Semi Nomadic, and De-Notified Tribes** (NTs, SNTs, and DNTs).
- They are the **most neglected, marginalized and economically and socially deprived** communities in the country.
- DNTs are those communities that were **'notified' as being 'born criminals'** during the British regime under a series of laws including the **Criminal Tribes Act of 1871**.
- These Acts were repealed by the government in 1952, and these communities were **"De-Notified"**.
- A few of these communities which were listed as de-notified were also **nomadic**.
- Nomadic and semi-nomadic** communities are defined as those who move from one place to another rather than living in one place all the time.
- Historically, Nomadic Tribes and De-notified Tribes **never had access to private land or home ownership**.

## Election Seizure Management System

- Recently, the **Election Commission of India (ECI)** introduced the Election Seizure Management System (ESMS).
- It is a dedicated technology platform designed and developed to **digitise data for Seized items** (Cash, Drugs, Freebies etc.) directly through a mobile App.
- Its primary objective is to facilitate **real-time information sharing among different enforcement agencies** involved in election-related activities.
- The agencies include the police, Central tax agencies, ECI etc.

## Serious Fraud Investigation Office (SFIO)

- The Supreme Court, while dismissing a petition for quashing a complaint filed by the Serious Fraud Investigation Office (SFIO), has left a crucial question of law open i.e., whether SFIO are police officer(s) under the Code of Criminal Procedure, 1973.
- SFIO is a **multi-disciplinary body which comes under the Ministry of Corporate Affairs**.
- It was set up in 2003 by government resolution on the **recommendations given by the Naresh Chandra Committee**.
- Later, SFIO was granted **statutory status** in 2013 as per **Section 211 of the Companies Act, 2013**.
- The primary objective of SFIO is to **investigate and to detect and prosecute or recommend to prosecute white-collar frauds or crimes**.
- SFIO is headed by a **Director in the rank of Joint Secretary** to the Government of India.

### Types of Cases taken up by SFIO:

- Complex cases needing investigation across multi-discipline and inter-departmental affairs.
- Cases with a huge monetary impact on the public.
- Cases where investigation can lead to the cleaning up of systems and the implementation of changes in laws and procedures.
- Serious fraud cases sent by the Department of Company Affairs.
- SFIO can also **take up cases on its own with the prior approval from the Director of the SFIO**.

## Post Office Act 2023

- Post Office Act, 2023 has been passed to consolidate and amend laws pertaining to Indian Post offices that have taken multifaceted roles today.
- It **repealed the Indian Post Office Act, 1898**.
- It seeks to **facilitate the evolution of the post office** into a network for delivery of citizen centric services. However, there are criticisms regarding its provisions allowing officials to intercept any shipment for public safety.

- Some of the changes are as follows:

- **Empowering post offices employees to open or detain any item** during transmission in the interest of **national security or public safety**.
- The Post Office **shall have the exclusive privilege of issuing postage stamps**.
- It provides that the **Director General may make regulations regarding any activity** necessary to provide postal services.
- The Post Office will be **empowered to deliver an item, received from a domestic or international source, to customs or any concerned authority in case there is suspicion of duty evasion or it is prohibited under the law**.

### PM Adi Adarsh Gram Yojana

- A parliamentary panel has asked the **Union tribal affairs ministry** to set a timeline for the implementation Pradhan Mantri Adi Adarsh Gram Yojana (PMAAGY).
- It is an **initiative aimed at transforming tribal villages into model villages** with improved infrastructure and services.
- Tribal villages with at **least 50% Scheduled Tribe (ST) population and a minimum of 500 ST residents** are eligible under this scheme.
- It supplements the efforts of **State Governments for development and welfare of tribal people** by extending **Special Central Assistance** as an additive to the **State Tribal Sub-Plan (TSP)**.
- It includes **preparing a Village Development Plan based on the needs, potential, and aspirations**.

### e-SAKSHI Mobile Application

- The Minister of State of the **Ministry of Statistics and Programme Implementation (MoSPI)** launched the **MPLADS e-SAKSHI Mobile Application** for revised fund flow procedure under **MPLAD Scheme**.

- The objective of **MPLAD Scheme** is to **enable the Members of Parliament (MPs) to recommend works of developmental nature** with emphasis on the **creation of durable community assets based on the locally felt needs**.
- The mobile app would offer **convenience and accessibility**, allowing MPs to **propose, track, and oversee the projects at their fingertips**.
- The app will also **promote transparency by providing MPs with instant updates** on the status and progress of their proposed projects.

### Finance Commission

- The **Sixteenth Finance Commission** was constituted with Shri Arvind Panagariya, former Vice-Chairman, NITI Aayog as its Chairman.
- The Finance Commission (FC) is a **constitutionally mandated body** that is envisaged as the **balancing wheel of fiscal federalism in India**.
- Article 280** of the constitution provides for a Finance Commission as a **quasi judicial body, constituted by the President every 5th year or at such earlier time as he/she considers necessary**.

#### Composition

- The Finance Commission consists of a **chairman and 4 other members** to be **appointed by the President**.
- They hold office for such a period as specified by the President and are **eligible for reappointment**.
- The constitution authorises the **parliament to determine the qualifications of members** of the commission and the **manner in which they should be selected**.

#### Functions

- The FC is required to make **recommendations to the President** on the following matters.
  - ★ The **distribution of net proceeds of taxes** to be shared between the centre and the states and the **allocation between the states** of the respective shares of such proceeds.
  - ★ The principles that should govern the **grants-in-aid to the states**.



- ★ The measures needed to augment the **consolidated fund of a State** to supplement the resources of the panchayats and municipalities on the recommendations made by the **state finance commission**.
- ★ Any other matter referred to it by the **President in the interests of sound finance**.
- Recommendations made by the FC are **only of advisory nature**.

## Article 370

- In December 2023, the **Supreme Court unanimously upheld the power of the President to abrogate Article 370** in August 2019.
- Underscoring that **J&K became an integral part of the territory of India with the adoption of the Indian constitution**, the court observed that **any interpretation of Article 370 cannot postulate that the integration of J&K with India was temporary**.
- Article 370** of the Constitution was a **temporary provision** which promises to **grant autonomous status to Jammu and Kashmir and limits Parliament's powers to make laws for the state**.
- Included in the Constitution on **17 October, 1949**, It lays down that **only two Articles of the Constitution- Article 1 which defines India and Article 370 itself-will apply to Jammu and Kashmir**.
- Article 370(3)** permits its **deletion by a Presidential Order**. But such an order is to be preceded by the **concurrence of J&K's Constituent Assembly**.
- Jammu and Kashmir Reorganisation Act, 2019** revised the definitions of Constituent Assembly and Government to help enable the abrogation.

## Social Audit Advisory Body (SAAB)

- Recently, the inaugural meeting of the **Social Audit Advisory Body (SAAB)** took place at the Dr. Ambedkar International Centre in New Delhi.
- This **advisory body, a first of its kind**, has been established to guide the **Ministry of Social Justice** in institutionalising social audits for its various schemes.

- SAAB will provide inputs to strengthen the social audit process and align it with social justice principles.
- Social Audit** is the process in which details of resources, both financial and non-financial, used by public agencies for development initiatives are shared with the people, often through a public platform.
- The body has been set up under **National Institute of Social Defense (NISD)**.
- It will have **members from various ministries** like Rural Development, Health and Family Welfare, Women and Child Development and major social sector academies.

## India Club

- India plans to establish its **own Protection and Indemnity (P&I) entity**, named the India Club, to provide **insurance for ships operating along its coasts and waterways**. Presently, the Indian shipping industry relies on global firms for insurance coverage.
- The initiative aims to **reduce vulnerability** to international pressures, particularly in conflicts like the **Russia-Ukraine situation**.
- The India Club will initially focus on **insuring ships involved in domestic movements**, led by the **Ministry of Ports, Shipping, and Waterways**.
- The Global P&I club is an international group of P&I clubs comprising 13 clubs which collectively covers **90% of the current ocean going vessels of the world**.

### What are P&I entities?

They are mutual insurance associations that offer risk pooling and coverage for third-party risks like cargo damage, war, and environmental hazards.

# Economy

## Design Linked Scheme

- As per latest reports, the semiconductor Design-Linked Incentive (DLI) scheme has approved only **seven start-ups**, which is far below its **five-year target of 100**.
- The DLI Scheme was announced by the **Ministry of Electronics and Information (MeitY)** in 2021.
- Through this scheme **financial incentives and design infrastructure support** are extended to **domestic companies, startups and MSMEs** for development and deployment of **semiconductor and semiconductor linked design** for over a **period of 5 years**.
- C-DAC (Centre for Development of Advanced Computing)**, a scientific society operating under MeitY, is the **nodal agency** for implementation of the DLI scheme.
- It aims to nurture at least **20 domestic companies per year involved in semiconductor design and facilitate** them to achieve turnover of **more than ₹1500 Crore** in the next 5 years.

The scheme has three components :

- Chip Design infrastructure support,
- Product Design Linked Incentive and
- Deployment Linked Incentive.**

## Direct Listing of Public Indian Companies

- The Union government recently permitted the direct listing of securities by **Indian companies** on international exchanges of **GIFT IFSC**.
- A company looking to raise interest-free capital from the public by listing its shares has two options—**an IPO or a direct listing**.
- Direct listing** is the process by which companies sell their shares to the public without using an intermediary, like an underwriter, but through a stock exchange.

- On the other hand in IPO, the company creates new shares and sells it with the help of an underwriter who charges a commission.
- Earlier domestic listed companies used **American Depository Receipts (ADR) or Global Depository Receipts (GDR)** to list in the overseas market and access capital.
- The union government amended the **Companies (Amendment) Act, 2020** and provisions were included in the Companies Act, 2013, to allow direct listing of Indian companies in the GIFT-IFSC and other foreign stock exchanges. This will help Indian companies, particularly startups, access capital, outside the domestic exchanges.

A **depository receipt (DR)** is a negotiable certificate issued by a bank.

## Momentum Investing

- Recent studies have shown that momentum investing can **generate higher returns** than that of benchmark indices.
- It refers to a style of investing wherein investors purchase assets such as stocks or bonds that are **consistently rising in price, while selling assets whose prices are falling**.
- It is based on the philosophy that there can be noticeable trends in asset prices and that these trends tend to persist over time.
- Momentum investors generally do not conduct a deep analysis of the **fundamental or intrinsic value** of the assets in which they invest their money.

## Global Economic Prospects Report

- Recently, the **World Bank (WB)** has released its Global Economic Prospects Report.
- It is issued **twice a year, in January and June**.
- It has a special focus on **emerging markets and developing economies**.

### Key Findings

- The global economy is **projected to experience the slowest half-decade of GDP growth in three decades**, with a growth rate of 2.4% in 2024.



- **Global trade growth in 2024 is expected to be only half the average** in the decade preceding the Pandemic.
- The **risk of a global Recession has receded**, attributed to the strength of the US economy, resulting in a better global economic position than the previous year.

## World Employment and Social Outlook Trends 2024

- The **International Labour Organisation's (ILO)** released the World Employment and Social Outlook: Trends 2024 report.
- The ILO's **flagship report details the impact of the economic slowdown on the global labour market.**

### Key Findings of Reports

- 📄 **Joblessness and the jobs gap have both fallen** below pre-pandemic levels (The global unemployment rate in 2023 was 5.1%).
- 📄 **Real wage declined in the majority of G20 countries** as wage increase was not proportionate to inflation growth.
- 📄 **Only China, the Russian Federation, and Mexico enjoyed positive real wage growth** in 2023.
- 📄 The **number of workers earning less than US\$2.15 per day** (international poverty line used by the World Bank to measure extreme poverty globally) **in purchasing power parity (PPP) terms** grew by about one million globally.

## Market Access Initiative (MAI) scheme

- Ahead of the **interim Budget 2024**, exporters have urged the government to allocate more funds for the Market Access Initiative (MAI) scheme.
- Marketing Access Assistance (MAI), managed by the **Ministry of Commerce and Industry**, is a **government grant/subsidy provided to member exporters for their export promotion** activities like participation in **Export Promotion Council (EPC)** led international Trade Fairs/Exhibitions/ Buyer Seller Meets (BSM) abroad to explore new markets for export of their handicrafts or specific product(s) and commodities from India in the initial phase. It was launched in 2003.

- Registered Indian exporters with an export value of up to Rs.50 Crore in the preceding year are eligible for the benefits.

## Investment Forum for Advancing Climate Resilient Agrifood Systems in India

- Recently, the **'Investment Forum for Advancing Climate-Resilient Agrifood Systems in India'** was launched in New Delhi.
- The initiative aims to create an **investment and partnership strategy** fostering climate resilient food systems among various stakeholders in India.
- It is a joint initiative of **NITI Aayog, Ministry of Agriculture & Farmers' Welfare and Food and Agriculture Organisation (FAO).**
- The Forum facilitated discussions and deliberations on **six key areas** namely,
  - ▶ **Climate resilient agriculture** (experiences and pathways).
  - ▶ **Digital infrastructure and solutions.**
  - ▶ **Financing climate resilient agrifood systems** (domestic and global).
  - ▶ **Climate resilient value chains.**
  - ▶ **Production practices and inputs for climate resilience.**
  - ▶ **Gender mainstreaming and social inclusion for climate resilience.**

## Bharatmala Pariyojana

- Recently, the Government has extended the deadline for completion of the flagship highway development project Bharatmala Pariyojana to **2027-28.**
- The move follows an over **100% increase** in the estimated cost of the mega project and reflects the slowing of implementation, and financial constraints.

### About Bharatmala Pariyojana

- It is an umbrella programme launched under the **Ministry of Road Transport and Highways.**
- The first-phase of Bharatmala was announced in 2017 and was to be **completed by 2022.**

- Bharatmala focuses on enhanced effectiveness of already built infrastructure, multi-modal integration, bridging infrastructure gaps for seamless movement and integrating National and Economic Corridors.

#### Six key features of the programme are :

- 🚗 **Economic Corridors:** Integrating the economic corridors facilitates larger connectedness between economically important production and consumption centres.
- 🚗 **Inter-corridor and Feeder routes:** This would ensure first mile and last mile connectivity.
- 🚗 **National Corridor Efficiency Improvement:** Through this, the greater actionable goal is to undertake lane expansion and decongestion of existing National Corridors.
- 🚗 **Border and International Connectivity roads:** Better border road infrastructure would ensure greater manoeuvrability, while also boosting trade with neighbouring countries.
- 🚗 **Coastal and Port connectivity roads:** Port-led economic development is further boosted through connectivity to coastal areas, encouraging both tourism and industrial development.
- 🚗 **Green-field Expressways:** Expressways have higher traffic configuration and choke points would benefit from green-field expressways.

#### **Anti-Profitteering Provisions under GST Law**

- The Delhi High Court has upheld the **anti-profitteering clause of GST laws, as per Section 171 of the CGST Act.**
- This clause mandates that suppliers of goods and services must **pass on the benefits of any tax rate reduction or input tax credit to recipients** through a corresponding reduction in prices. Failure to do so constitutes profiteering.
- Previously, complaints were filed with the National Anti-Profitteering Authority (NAA), which has since been dissolved, **and the responsibility now lies with the Competition Commission of India (CCI).**

## International Relations

### **Davos Meeting 2024**

- This year's edition of the **World Economic Forum (WEF) annual meeting** was held from January 15 to January 19.
- Annually, the **WEF organises a meeting at the end of January in Davos**, a mountain resort in Graubünden, in the **eastern Alps region of Switzerland.**
- The Annual Meeting, also known as the **Davos Agenda**, has the objective of orienting **global leaders on the imperatives of the year ahead.**

#### Key takeaways from Davos meeting 2024

- 🗨 The **summit highlighted the risk posed by a fragile geopolitical situation**, wars in the **Middle East and Europe**, the threats to global supply chains, and the uncertainty around food security.
- 🗨 The summit announced **the launch of a Global Good Alliance for Gender Equity and Equality with the support and endorsement by WEF and Government of India.**
- 🗨 The **need for businesses to adapt to climate change and for countries to unite for action** against it despite differences was another topic of discussion.

### **Global Alliance for Global Good - Gender Equity and Equality**

- Global Alliance for Global Good is a **new alliance** for global good, gender equity, and equality **established by India** on the sidelines of the **54th annual World Economic Forum (WEF) meeting in Davos.**
- It will **bring together worldwide best practices, knowledge sharing, and investment opportunities in women's education, health and enterprise.**
- It has garnered support from industry leaders such as MasterCard, Uber, Tata and over 10,000 partners from **industry through the Confederation of Indian Industry (CII).**



- The **WEF** has come on board as a '**Network Partner**' and **Invest India** as an '**Institutional Partner**' of the alliance.
- **Invest India** was formed in 2009 under Companies Act 1956 for promotion of foreign investment with 49% equity of the Ministry of Commerce and Industry and 51% shareholding by FICCI, a trade association to promote business in India.

### Information Fusion Centre - Indian Ocean Region (IFC-IOR)

- IFC-IOR played a critical role in **rescuing the crew members** of the hijacked Indian shipping vessel near the **Gulf of Aden**.
- It is **hosted by the Indian Navy**, and was established in **December 2018** to **promote regional collaboration for maritime safety and security**.
- The Centre aims at **strengthening maritime security in the region** by building a common coherent maritime situation picture and **acting as a maritime security information sharing hub**.
- Since its inception, the Centre has established **67 linkages in 25 countries**.
- To enable better correlation, compressed information cycles and timely inputs, the Centre hosts **International Liaison Officers (ILOs) from 12 partner nations**;
  - » Australia, France, Italy, Japan, Maldives, Mauritius, Myanmar, Sri Lanka, Seychelles, Singapore, United Kingdom and United States of America
- It monitors the Indian Ocean and adjoining seas to understand each region and generates various periodic reports such as **Weekly Maritime Security Updates (WMSU)**, **Monthly Maritime Security Updates (MMSU)** and **Half Yearly Overviews and Annual Reports**.

### United Nations' Refugee Agency for Palestinians (UNRWA)

- The UN has urged countries to reconsider their decision to suspend funding for the United Nations Relief and Works Agency for Palestine Refugees (UNRWA).
- Established by a **UN General Assembly resolution in 1949**, UNRWA provides assistance to Palestine refugees, offering education, healthcare, relief, social services, and more across its five fields of operation.

- **Funded mostly by voluntary contributions** from UN member states, with some support from the UN Regular Budget, UNRWA remains vital in the absence of a solution to the Palestine refugee problem.

### Apostille Convention

- The Allahabad High Court ruled that the government must accept documents from countries under the Apostille Convention.
- This international treaty **simplifies document authentication for foreign use**, replacing lengthy legalisation processes with a standardised certificate called an Apostille.
- Adopted in **1961**, it's known formally as **the Hague Convention Abolishing the Requirement of Legalisation for Foreign Public Documents**.
- **The Apostille**, meaning "**bottom note**" in **French**, is similar to **notarization** and confirms a **document's authenticity**.
- In India, the **Ministry of External Affairs** is the Competent Authority issuing Apostilles.
- With over **125 countries ratifying the convention**, it streamlines international transactions and legal proceedings involving public documents.

### Henley Passport Index 2024

- The average number of visa-free destinations has nearly doubled since 2006, according to the 2024 Henley Passport Index.
- Henley Passport Index was started in **2006 as the Henley & Partners Visa Restrictions Index (HVRI)**.
- It is the **original, authoritative ranking of all the world's passports** according to the number of destinations their holders can access without a prior visa.
- The index **includes 199 different passports and 227 different travel destinations**.
- The number of countries that a specific passport can access becomes its visa-free '**score**'.

## Highlights of Henley Passport Index 2024

- **France, Germany, Italy, Japan, Singapore, and Spain** hold the top spot as the world's most powerful passports, allowing visa-free entry to **194 global destinations**.
- The **top 10** is largely dominated by **European countries**.
- **India's** passport **ranked 80th** in the list, with citizens **allowed to travel to 62 countries without a visa**.

## Free Movement Regime (FMR) along India-Myanmar Border (IMB)

- The FMR along the IMB will be cancelled soon to **stop its misuse by insurgent groups to carry out attacks, put a halt to the influx of illegal immigrants and paralyse drugs and gold smuggling networks**.
- The free movement regime allows people residing close to the **India-Myanmar border on either side to venture into the other's territory without a visa**.
- Under this, every member of the hill tribes, who is either a citizen of India or a citizen of Myanmar can **travel within 16 km on either side of IMB** on production of a **border pass with one year validity and can stay up to two weeks per visit**.
- It was implemented in **2018** as part of **India's Act East policy**, an effort to boost the region's economy by boosting India's trade with **ASEAN and other Southeast Asian nations**.

## Non-Aligned Movement (NAM)

- The **19th Non-Aligned Movement (NAM) Summit** is being held under **Uganda's leadership** under the theme **"Deepening Cooperation for Shared Global Affluence"**.
- Established in **1961**, at the height of the **Cold War**, the NAM is an **alliance of developing nations that refuses to identify with any major superpower**.
- The NAM, which never became an organisation, has its origin in a **1955 conference in Indonesia** during which **representatives from 29 Asian and African countries**, including newly independent states that had been colonised for years, discussed common concerns.

- The movement's founders are **President Sukarno of Indonesia, Prime Minister Jawaharlal Nehru of India, Gamal Abdel Nasser of Egypt and President Josip Tito of Yugoslavia**.
- Currently, NAM membership consists of **120 countries; 53 from Africa, 39 from Asia, 26 from Latin America and the Caribbean and 2 from Europe**. It also includes **17 other observer countries and 10 observer organisations**.
- Its purpose was enumerated in the **Havana Declaration of 1979** to ensure the national independence, sovereignty, territorial integrity and security of non-aligned countries in their struggle against imperialism, colonialism, neo-colonialism, racism, and all forms of foreign subjugation.

The **Non-Aligned Movement Summit**, started in **1961** in **Belgrade, Yugoslavia**, usually **takes place every 3 years** where the **Heads of State or Government of the NAM countries** will meet to address the existing, new and emerging global issues of collective concern and interest to the movement, with the view of generating necessary responses.

## Convention on the Prevention and Punishment of the Crime of Genocide 1948

- **South Africa** instituted proceedings against Israel in the **International Court of Justice (ICJ)**, arguing that the manner in which Israel was conducting its military operations in Gaza violated the Genocide Convention.
- The **Convention on the Prevention and Punishment of the Crime of Genocide 1948** or the **Genocide Convention** is an **instrument of international law that codified for the first time the crime of genocide**.
- It was the **first human rights treaty adopted by the General Assembly** of the United Nations on **9 December 1948** and signified the international community's **commitment to 'never again'** after the atrocities committed during the Second World War.
- The Genocide Convention has been **ratified or acceded to by 153 States**. **India ratified the convention in August 1959**.
- Every year on **9 December**, the UN marks the adoption of the Genocide Convention, which is also the **International Day of Commemoration and Dignity of the Victims of the Crime of Genocide and of the Prevention of this Crime**.



## Global Cooperation Barometer

- The **World Economic Forum** has released the **Global Cooperation Barometer**, a tool developed to **gauge the state of world cooperation**, in collaboration with McKinsey & Company.
- The barometer uses **42 indicators to analyse five core areas of global cooperation**, including **trade and capital, innovation and technology, climate and natural capital, health and wellness, and peace and security**.
- It looks back at the **last 11 years, from 2012 through 2022 to establish a trend line of cooperation**.
- It observed that **despite demonstrating resilience across various dimensions from 2012 to 2020, cooperation saw a 2 percent decline from 2020 to 2022**.
- While some sectors showed signs of strength, there were significant global challenges, particularly in **health cooperation and peace and security**.

## FAO's Committee on Fisheries (COFI)

- India has been elected as the **First Vice Chair** of the Food and Agriculture Organization's Committee on Fisheries (COFI) Sub-Committee on Fisheries Management.
- This subsidiary body of the **Food and Agriculture Organization (FAO)** was **established in 1965 to address international fishing and aquaculture issues**, providing policy guidance on fisheries management and promoting sustainability in the industry.
- The Committee reviews specific matters related to fisheries and aquaculture referred to it by the **FAO Council, the 49-member executive arm of FAO**.

## Migration and Mobility Agreement

- Recently, the Union Cabinet granted **ex-post facto approval** to the Migration and Mobility Agreement between **India and Italy**.

- The agreement aims to **enhance people-to-people contacts**, promote the mobility of students, skilled workers, business people, and young professionals, and **strengthen cooperation on issues related to irregular migration**.
- Once approved by both parties, it **stays in force for 5 years**. The agreement will be **automatically renewed for successive periods**, unless terminated by a participant.

### Key provisions :

- **Granting temporary residence in Italy for up to 12 months to Indian students** seeking initial professional experience after completing academic or vocational training.
- **Reserves quotas for non-seasonal and seasonal Indian workers** under the existing labour mobility pathways.
- Cooperation in **combating irregular migration**.
- The Agreement establishes a formal monitoring mechanism through a **Joint Working Group (JWG)** that will meet periodically, either virtually or in person, as needed, to **oversee its implementation**.

## UAE – India CEPA Council (UICC)

- India and the UAE launched the **UAE-India CEPA Council (UICC)** at the **Vibrant Gujarat Global Summit** in Ahmedabad to foster close partnerships and cooperation between their business communities.
- The council focuses on **critical industries like startups, women entrepreneurs, MSMEs, and the services sector**.
- Its objectives include deepening commercial ties, leveraging the strategic partnership between the two countries, encouraging business partnerships, and holding events to build trust among business communities.
- India and UAE had signed the **Comprehensive Economic Partnership Agreement (CEPA)** in 2022.

## International Court of Justice (ICJ)

- In proceedings before the **International Court of Justice (ICJ)**, the **Republic of South Africa** is alleging that Israel is responsible for violations of the **Genocide Convention** in respect of its actions taken in Gaza.
- The ICJ is the **principal judicial organ of the United Nations**, established in **June 1945** by the **Charter of the UN** and **began work in April 1946**.
- The court is the **successor to the Permanent Court of International Justice (PCIJ)** which was brought into being through, and by, the **League of Nations**.
- Its role is to **settle, in accordance with international law, legal disputes** submitted to it by States and to **give advisory opinions on legal questions referred to it by authorised UN organs and specialised agencies**.
- Situated at the **Peace Palace in the Hague**, it is the **only one of the six principal organs of the UN that is not located in New York City**.
- **All members of the UN are automatically parties to the ICJ Statute.**
- Only States which are **members of the United Nations** and which have become **parties to the Statute of the Court** or which have **accepted its jurisdiction under certain conditions**, are **parties to contentious cases**.
- The judgement of ICJ is **final and is binding on the parties to a case** but they are often defied in the **absence of an enforcement mechanism of its own**.
- The ICJ has **15 judges** who are elected to **9 year terms** by the **UN General Assembly and Security Council**, which vote simultaneously but separately.

**4 Indians have been members of the ICJ so far-** Justice Dalveer Bhandari, Justice R S Pathak, Nagendra Singh and Benegal Rau.

- The judges of the court are assisted by a **Registry**, the **administrative organ of the ICJ** and **English and French are the ICJ's official languages**.
- **India has been a party to a case at the ICJ on 6 occasions**, 4 of which have involved Pakistan.

## Environment & Ecology

### Wetland City Accreditation

- Recently, the **Ministry of Environment, Forest and Climate Change** has submitted three nominations from India for Wetland City Accreditation.
- It recognizes cities which have taken **exceptional steps to safeguard their urban wetlands**.
- It also recognizes the **importance of wetlands** in urban and peri-urban environments and to take appropriate measures to conserve and protect these wetlands.
- It was approved during the **Ramsar Convention at COP12** in 2015.
- So far **43 cities from 17 countries** have been officially recognized as Wetland Cities.

#### Nominated cities:

- **Indore (Madhya Pradesh) - Sirpur Lake**
- **Bhopal (Madhya Pradesh) - Bhoj Wetland**
- **Udaipur (Rajasthan)- It has five major wetlands: Pichola, Fateh Sagar, Rang Sagar, Swaroop Sagar, and Doodh Talai**

### Green Fuels Alliance India (GFAI)

- The Green Fuels Alliance India (GFAI) is a strategic initiative **between Denmark and India has been launched**.
- It seeks to promote collaboration on **green fuels, including green hydrogen, and support the sustainable energy sector**.
- The initiative is part of the **Green Strategic Partnership signed in 2020** between India and Denmark, and **coincides with India's push for carbon neutrality by 2070**.
- Green fuels have a **high energy density**, making them well suited for power generation and transport. However, their **production is energy-intensive and not yet economically viable**.



## National Clean Air Programme (NCAP)

- The **Ministry of Environment, Forest and Climate Change** released a **five-year report on the National Clean Air Programme (NCAP)**, prepared by **Climate Trends and Respirer Living Sciences**.
- Launched in 2019, NCAP aims to comprehensively address air pollution nationwide.
- It targets a **20%-30% reduction in PM10 and PM2.5 concentrations by 2024**, using 2017 as the baseline.
- The program covers **132 non-attainment cities with a million-plus population**, identified by the **Central Pollution Control Board (CPCB)**.
- NCAP involves **collaborative efforts among central ministries, state governments, and local bodies**, dovetailing existing policies like the National Action Plan on Climate Change.
- Climate trends** is a climate-research consultancy initiative and **Respirer Living Sciences** is a climate-based startup.
- Climate Trends and Respirer Living Sciences are both involved in the **NCAP Tracker**, an online hub that provides updates on India's clean air policy.

## Green Cover Index

- The National Highways Authority of India (NHAI) will prepare a **Green Cover Index** in collaboration with the **National Remote Sensing Centre (NRSC)**, an arm of the Indian Space Research Organization (ISRO) in the next three years.
- The **project's primary goal** is to capture the Green Cover Index **region-wise for National Highways in the first assessment cycle**, followed by annual cycles focusing on estimating growth patterns.
- This innovative approach promises a **reliable, time-saving, and cost-effective solution**, allowing for a **macro-level assessment of greenness along highways**.
- NRCS gauges afforestation levels along India's vast highway network using **satellite imagery analytics**.
- The **Green Highways Policy**, initiated in 2015, **prioritises greening highway corridors**, and **currently, monitoring relies on field visits**.

## Ultraviolet Index (UVI)

- Recently, **Kerala** observed higher variability of ultraviolet index (UVI).
- The UVI is a **measure of the level of Ultraviolet Radiation** and is an important vehicle to raise public awareness of the **risks of excessive exposure to UV radiation** and to alert people about the need to adopt protective measures.
- The values of the index range from **zero upward-the higher the UVI, the greater the potential for damage to the skin and eye and less time it takes for harm to occur**.
- It was developed by the **World Health Organisation (WHO)**, the **United Nations Environment Programme (UNEP)**, the **World Meteorological Organisation (WMO)** and the **International Commission on Non-Ionizing Radiation Protection (ICNIRP)**.



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## Alpenglow



- Recently, the **International Space Station (ISS)** shared images of the Alpenglow phenomenon near the **Hindu-Kush mountain range**.
- It is a natural phenomenon when **mountain slopes are illuminated by the sun** as it rises or sets.
- It occurs when sunrise or sunset is reflected off **airborne precipitation, ice crystals, or particulates** in the lower atmosphere.
- The slopes of the mountains turn a rosy, reddish, or orange **depending on the angle of the sun and atmospheric conditions**.

## Indian Landslide Susceptibility Map

- Indian Institute of Technology Delhi has made the first high-resolution landslide susceptibility map for India.
- The **ILSM, developed by the IIT Delhi researchers, is a national-scale artificial intelligence based landslide susceptibility map**, which is the first of its kind covering India.
- It has a **spatial resolution** (size of the smallest feature that can be detected by a satellite or displayed in a satellite image) of **100 metres with over 95% accuracy**.
- It is developed using a historical landslide inventory of more than 150,000 events in India, including data covering all past landslides as per the government records.
- The researchers used the **Ensemble Machine Learning Approach**, where the results of **multiple machine learning models are combined to enhance overall accuracy**.

## Prithvi Vigyan Scheme

- The Union Cabinet approved the overarching scheme “**PRITHvi Vigyan (PRITHVI)**” of the **Ministry of Earth Sciences** for implementation during the period from 2021-26.

It encompasses five ongoing sub-schemes namely :

- **Atmosphere & Climate Research-Modelling Observing Systems & Services (ACROSS)**
- **Ocean Services, Modelling Application, Resources and Technology (O-SMART)**
- **Polar Science and Cryosphere Research (PACER)**
- **Seismology and Geosciences (SAGE)**
- **Research, Education, Training and Outreach (REACHOUT)**

The major Objectives of the overarching Prithvi Scheme are:

- **Augmentation and sustenance of observations of the atmosphere**, ocean, geosphere, cryosphere and solid earth.
- **Development of systems** for understanding and predicting weather, ocean and climate hazards.
- **Exploration polar and high seas regions** of the Earth.
- **Development of technology for exploration and sustainable harnessing of oceanic resources.**
- **Translation of knowledge and insights from Earth systems science** into services for societal, environmental and economic benefit.

## Humboldt's Enigma

- Humboldt's enigma has garnered increased attention in the field of ecology.
- Humboldt's enigma refers to the **unexpected biodiversity found in certain mountain regions**, particularly in the **tropics**, which contradicts the general pattern of biodiversity decreasing as we move away from the equator.



- Named after the renowned **19th century naturalist Alexander von Humboldt**, this phenomenon remains a puzzle in ecology, with scientists striving to understand the precise mechanisms driving the exceptional biodiversity in mountain ecosystems.
- Despite extensive research, Humboldt's enigma **remains partially unsolved**, with researchers exploring numerous hypotheses and factors contributing to this phenomenon.

## Global Ocean Heat Content

- A recent study reveals that the **ocean heat content (OHC)**, which measures **thermal energy stored in the global oceans**, reached 286 zettajoules in 2023, relative to the 1981–2010 average.

**Zettajoules** means a **billion trillion joules**.

- OHC is crucial for understanding **global warming** as oceans absorb much of the heat trapped by greenhouse gases.
- **Over the past decade, OHC in the upper 6,500 feet of the oceans**, responsible for absorbing about 90% of global warming, **has consistently increased annually**.
- This rise is attributed to both **long-term global warming trends** and **short-term fluctuations**, such as El Niño.

## Soda Lake



- Recently, scientists have discovered a shallow “soda lake” in **western Canada**.
- It is a lake with a **pH value usually between 9 and 11**.
- High carbonate concentration, especially **sodium carbonate**, is responsible for the alkalinity of the water.

- It may also contain a high concentration of **sodium chloride** and other salts making it saline or hypersaline Lake.
- These are the most productive aquatic environments on Earth **because of the availability of dissolved carbon dioxide**.
- Biodiversity in soda lakes is primarily led by **prokaryotes like bacteria and archaea**, particularly in lakes with elevated alkalinity levels.
- Multicellular organisms like **brine shrimp and fish** are abundant in many soda lakes.
- They **occur naturally in both arid and semi-arid areas**.



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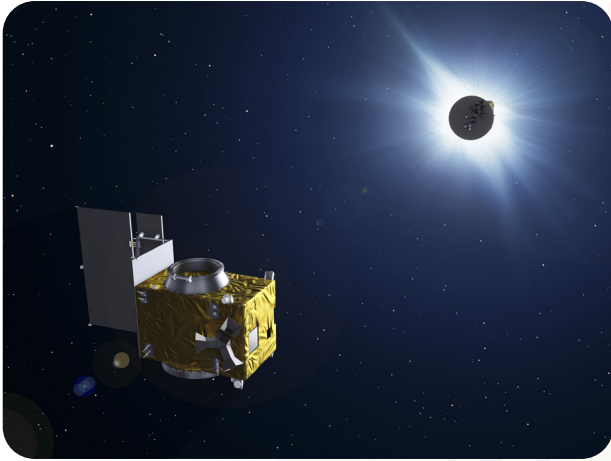
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## Proba 3 Mission



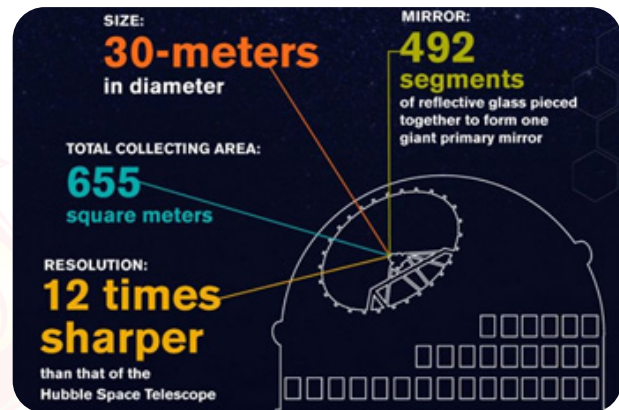
- As per latest reports, India will launch the **European Space Agency's (ESA)** pioneering Proba-3 mission in September 2024.
- Proba-3 is hailed as the **world's first precision formation flying mission**.
- It aims to establish a **144-metre-long solar coronagraph** through two small satellites, demonstrating precise formation flying in space.
- Proba-3 consists of **two small satellites** — a **Coronagraph spacecraft** and a **solar-disc-shaped Occulter spacecraft**.

A **coronagraph** is an instrument that will allow scientists to study the Sun's elusive **corona** with unprecedented proximity and detail.

### The Mission

- 🚀 By maintaining a tight formation approximately 150 metres apart, the **Occulter spacecraft will cast its shadow precisely onto the Coronagraph's telescope**.
- 🚀 This strategic positioning will create an artificial eclipse, allowing the Coronagraph to **capture images of the faint solar corona in visible, ultraviolet, and polarised light for extended durations**.

## Thirty Meter Telescope (TMT)



- Recently, an official delegation from the Department of Science and Technology visited Mauna Kea to discuss “challenges” to the Thirty Meter Telescope (TMT) project.
- It has been conceived as a **30-metre diameter primary-mirror optical and infrared telescope** that will enable observations into deep space.
- It is proposed as a joint collaboration involving institutions in the **U.S., Japan, China, Canada, and India**.
- It will be the **world's most advanced** and capable ground-based optical, near-infrared, and mid-infrared observatory.
- It will integrate the latest innovations in **precision control, segmented mirror design, and adaptive optics**.
- **Location: Mauna Kea**, an inactive volcano on the island of Hawai'i in the United States.

### Indian Contribution

- 🇮🇳 **India** expects to be a **major contributor to the project** and will provide;
  - ▶ **Hardware** (segment support assemblies, actuators, edge sensors, segment polishing, and segment coating), instrumentation (first light instruments).
  - ▶ **Software** (observatory software and telescope control systems) worth \$200 million.
- 🇮🇳 The **Indian Institute of Astrophysics (IIAP)** is leading the consortium of Indian institutions that are involved with the TMT project.
- 🇮🇳 India TMT will be jointly funded by the **Departments of Science and Technology and Atomic Energy**.

## Square Kilometre Array Observatory (SKAO)

- Recently, the Government of India has accorded its approval for India's participation in the international mega science project, Square Kilometre Array Observatory (SKAO), at an estimated cost of 1250 Cr rupees.
- SKAO is an international project to build the **world's largest radio telescope**, with eventually over a square kilometre (one million square metres) of collecting area.
- The SKAO project will consist of a **group of radio telescopes operating out of South Africa and Australia** in two frequency ranges and a **Square Kilometre Array Observatory headquartered in the UK**.
- **Other ten countries involved are** - Australia, Canada, China, India, Italy, New Zealand, South Africa, Sweden, and the Netherlands.

### India's Contribution

- ◆ India's primary contribution to the SKAO lies in the **development and operation of the Telescope Manager element**—the neural network or software orchestrating the telescope's functions.
- ◆ It has been built by **Pune-based National Centre for Radio Astrophysics (NCRA)** along with some other international institutes.
- ◆ India is also making significant **financial contributions** to the project.

### What is a Radio Telescope?

It is a **astronomical instrument** consisting of a **radio receiver** and an **antenna system** that is used to detect radio-frequency radiation between wavelengths of about **10 metres (30 megahertz [MHz])** and **1 mm (300 gigahertz [GHz])** emitted by extraterrestrial sources, such as stars, galaxies, and quasars.

## Amaterasu

- Recently, Japanese scientists discovered a **high-energy cosmic-ray event** named 'Amaterasu,' making it the **second-highest-energy cosmic ray ever detected**.
- It comes **only second to the Oh-My-God particle**, another ultra-high-energy cosmic ray detected in 1991.
- The energy level of Amaterasu is about **40 million times higher** than that produced by the **Large Hadron Collider**.
- It has been named Amaterasu after the **Japanese sun goddess**.
- The discovery of such **ultra-high-energy cosmic rays (UHECRs)** could contribute to understanding cosmic phenomena and subatomic particles better, as well as potentially challenging existing theories in high-energy particle physics.
- Amaterasu's unique characteristic is that it appears to have **originated from an empty region of the universe**, presenting intriguing possibilities for **unknown astronomical phenomena**.
- The study of these cosmic rays may offer insights into the sources of cosmic rays and enhance our understanding of high-energy physics **beyond the Standard Model**.

## Bubble Baby Syndrome

- Recently, a two-month-old girl from Karnataka was diagnosed with 'bubble baby syndrome'.
- Bubble baby syndrome, also known as **severe combined immunodeficiency (SCID)**, is a rare genetic disorder affecting newborns, where functional T cells and B cells, **crucial components of the immune system, are absent**.
- It is a type of **primary immune deficiency**.
- The disease is known as **"living in the bubble"** syndrome because living in a normal environment can be fatal to a child who has it.

### Causes:

- ➔ **Inherited mutations** in more than a different genes cause SCID.
- ➔ This means **one or both birth parents** pass down the disease to their child.

- The most common treatment is a stem cell transplant (also called a **bone marrow transplant**). **Gene therapy** is also considered as an experimental approach in correcting the defective gene.

## Cyber Kidnapping

- Recently, a Chinese student who was a victim of '**cyber kidnapping**' has been found in rural Utah, unharmed.
- Cyber kidnapping refers to a crime where the '**kidnappers**' **convince their victim** to hide, and then contact their loved ones for ransom.
- The **victim is also made to send pictures** that make it look like they are being held captive and showing them bound or gagged.
- The 'kidnappers', though **not physically present**, monitor the victim online through video-call platforms.
- Unlike traditional kidnaps **virtual kidnappers have not actually kidnapped the victim**.

## Second Generation Distress Alert Transmitter (DAT-SG)

- **Indian Space Research Organisation (ISRO)** has developed an improvised **Distress Alert Transmitter (DAT)** with advanced capabilities and features for the **fishermen at sea to send emergency messages from fishing boats**.
- The first version of DAT has been **operational since 2010 and till now more than 20000 DATs are being used**.
- It will send messages through a **communication satellite** and be received at a **central control station (INMCC: Indian Mission Control Centre)**, where the **alert signals are decoded for the identity and location of the fishing boat**.
- The extracted information is then forwarded to **Maritime Rescue Coordination Centres (MRCCs) under the Indian Coast Guard (ICG)** for rescue operations.
- The INMCC has a web based network management system called **Sagarmitra** which **maintains a database of registered DAT-SGs** and helps MRCCs to access the information about boat, coordinate the boat in distress in real time.

## PSLV Orbital Experimental Module (POEM)-3

- The **Indian Space Research Organisation (ISRO)** informed that the space agency has performed all experiments in the POEM-3 mission launched by the **PSLV-C58 mission**.
- In a bid to ensure that no debris is left behind in space, ISRO is now preparing for a **controlled re-entry into Earth within the next 75 days**.
- The POEM-3 was a **unique and inexpensive space platform** created by **utilising the spent fourth stage of the PSLV-C58 vehicle that launched XPoSat**.
- It flew with **nine Payloads** from **VSSC, Physical Research Laboratory, Academia, and Space start-ups inducted through IN-SPACE**. Over this period, each payload was put into operation, as planned and performance was demonstrated.

## Bio-Imaging Bank

- Tata Memorial Hospital (TMH), Mumbai, is using AI to **tackle the shortage of cancer specialists by establishing a Bio-Imaging Bank for cancer**.
- This bank creates a **repository of radiology and pathology images** linked with clinical data and treatment specifics.
- The project, funded by the **Department of Biotechnology and in collaboration with institutions like IIT-Bombay**, aims to train AI algorithms for early cancer detection and therapy response prediction.
- **Bio-imaging** involves visualising biological structures and functions within living organisms using various techniques like X-rays and microscopy.

## Bharat 5G Portal





- Recently, the Department of Telecommunications (DoT) under the **Ministry of Communications**, launched the “Bharat 5G Portal.”
- It is a **comprehensive platform** which aims to address the interests of startups, industry and academia in quantum, 6G, IPR and 5G domains.
- It will act as a one-stop solution for all quantum, IPR, 5G and 6G-related works.
- It also consists of the **Future Tech-Experts** registration portal in collaboration with **PANIIT USA**, which is supposed to help and advise the Indian Telecom ecosystem to advance the goal of Atmanirbhar Bharat.

### Direct-to-mobile (D2M) technology

- Recently, Indian telecom operators have urged the government to auction spectrum for **Direct-to-mobile (D2M) technology services**.
- It is a modern technology which **combines broadband and broadcast**.
- It will allow mobile phones to capture territorial digital TV signals, enabling the direct streaming of multimedia content **without the need for internet connectivity**.
- It is **similar to that of an FM radio**, where a receiver within the device can tap into different radio frequencies.

**Broadband** involves **high-speed internet access, transmitting data in both directions**. **Broadcast** is a **one-way transmission of content**, such as TV or radio signals, to a wide audience. Broadband is interactive, while broadcast is typically unidirectional.

### Mpemba effect

- The **Mpemba effect** has recently captured the attention of scientists.
- It is the phenomenon that **hot water may freeze faster than cold water**.
- It is named after Tanzanian student **Erasto Mpemba**, who observed this effect while making ice cream.
- The exact cause of the Mpemba effect is still debated, but factors like evaporation, dissolved gases, and convection currents may play a role in accelerating the cooling process **of hot water, leading to faster freezing compared to cold water**.

### Havisure vaccine

- Recently, **Indian Immunologicals Ltd (IIL)**, a subsidiary of the **National Dairy Development Board (NDDB)** and a biopharmaceutical company from India, has launched India's first indigenously developed **Hepatitis A vaccine called 'Havisure'**.
- It is a **two-dose vaccine: first dose administered** at above **12 months of age** and the **second at least six months after the first dose**.
- The vaccine is recommended for **children as part of the routine immunization** as well as for individuals at risk of exposure or travel to the regions with high hepatitis A prevalence.
- Hepatitis** is liver inflammation caused by various factors, including viral infections, alcohol, medications, toxins, autoimmune diseases, and metabolic disorders.

### Camptothecin (CPT)

- Recently the **Indian Institute of (IIT) Madras and IIT Mandi researchers** have **metabolically engineered the plant cells of Nothapodytes nimmoniana** to increase the production of Camptothecin.
- Camptothecin is an important **anti-cancer drug lead molecule for high value drugs** like **Topotecan and Irinotecan**.
- It is mainly extracted from **Camptotheca acuminata (native to Eastern Asia)** and **Nothapodytes nimmoniana (native to India)**.



Camptotheca acuminata



Nothapodytes nimmoniana

- The conjunction of climate change and extensive deforestation undertaken for CPT extraction has pushed these plants into the **endangered species category**.

## Samavesha Project

- I-STEM (Indian Science, Technology, and Engineering facilities Map) is launching the Samavesha project at IISc, Bengaluru
- The **project aims to improve accessibility to facilities** and labs by connecting researchers and industries with institutions that have the required equipment.
- It can help to save capital expenditure for researchers, industries and startups, and prevent duplication of resources at the national level.

### I-STEM (National Web Portal)

- **I-STEM, an initiative of the Office of Principal Scientific Advisor**, Government of India.
- It is planning to conduct around 50 Samavesha across India in 2024.
- It is developed with the concept “**One Nation One Portal**” for the scientific community, aimed at “Linking Researchers and Resources

## National Quantum Mission

- The National Quantum Mission (NQM) was reached with the launch of the call for pre-proposals for setting up **Thematic Hubs (T-Hubs)** launched by Secretary, **Department of Science and Technology (DST)**.
- NQM is led by the **Department of Science and Technology (DST)** for **strengthening India's R&D in the quantum arena**.
- It will **target developing intermediate scale quantum computers with 50-1000 physical qubits in eight years in various platforms** like superconducting and photonic technology.
- **Four ‘Thematic Hubs’ (T-Hubs)** will be set up in top academic and national R&D institutes in the domains of **quantum computing, communication, sensing and metrology**.
- The hubs will focus on generation of new knowledge through basic and applied research as well as promote R&D.
- The Mission will have **wide-scale applications ranging from healthcare and diagnostics, defence, energy and data security**.

## OSIRIS-APEX



- In an unprecedented extension of its celestial duties, the spacecraft that delivered asteroid samples from Bennu, OSIRIS-REx, has embarked on a new mission, and **NASA has renamed it as OSIRIS-APEX**.
- **OSIRIS-APEX is a mission to study the physical changes to asteroid Apophis** that will result from its **rare close encounter with Earth in April 2029**.
- The mission **aims to observe the physical changes induced by Earth's gravitational pull** during Apophis' flyby.
- These **changes could include alterations in the asteroid's orbit, rotation speed, and surface features** such as quakes or landslides.
- Additionally, the **OSIRIS-APEX spacecraft will dip toward the surface of Apophis**.

### Apophis

- 🌐 It is a **stony “S-type” asteroid made of silicate (or rocky) material** and a mixture of metallic nickel and iron .
- 🌐 It is a **remnant from the early formation of our solar system** about 4.6 billion years ago.
- 🌐 It originated in the **main asteroid belt between Mars and Jupiter**.

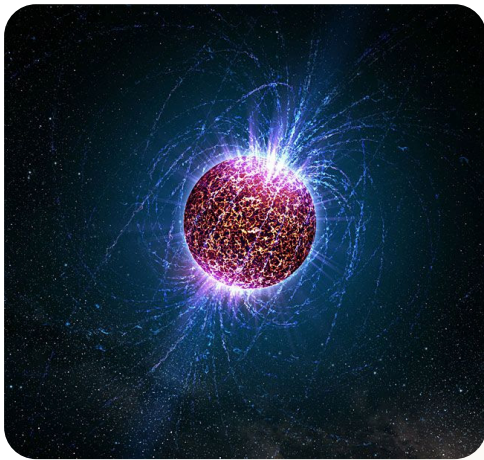
## Kilonova Explosion

- A kilonova explosion is a **rare and powerful cosmic event** with the potential to pose a significant threat to life on Earth.
- It occurs when **two neutron stars or a neutron star and a black hole collide and merge, producing a blast of gamma rays** that lasts only a matter of seconds.



- While **not as violent as a supernova**, a **kilonova can still have devastating consequences for Earth** if it were to occur within a relatively close proximity.

### Neutron Star



- Neutron stars are **incredibly dense remnants left behind after massive stars undergo supernova explosions**.
- They are **composed almost entirely of neutrons, packed tightly together**, and have masses typically several times that of the Sun but squeezed into a sphere with a diameter of only about 20 kilometers (12 miles) or less.
- Neutron stars have **extremely strong gravitational fields** and are known for their rapid rotation, intense magnetic fields, and emission of radiation across the electromagnetic spectrum, including radio waves, X-rays, and gamma rays.

### Ugram



- The Defence Research and Development Organisation recently launched an indigenous assault rifle named 'Ugram'.
- 'Ugram' is a **state-of-the-art indigenous assault rifle** developed in less than 100 days.
- It has been developed by the **Armament Research and Development Establishment (ARDE)**, a unit of DRDO, in collaboration with a private industry partner.

- It has an effective **range of 500 metres and weighs less than four kilograms**.
- It will **deploy rounds of 7.62 mm calibre, making it more ferocious than rifles that use 5.62 mm calibre rounds, like the INSAS rifle**, which is popularly used by the armed forces in India.

### Multiple Sclerosis (MS)

- Recently, the researchers found that **DNA obtained from the bones and teeth of ancient Europeans** who lived up to 34,000 years ago is providing **insight into the origin of multiple sclerosis**.
- Multiple sclerosis is a **potentially disabling disease of the brain and the central nervous system**.
- In MS, the **immune system attacks the protective sheath (myelin)** that covers nerve fibres and causes **communication problems between the brain and rest of the body**. Eventually, it can cause **permanent damage or deterioration of the nerve fibres**.
- Signs and symptoms of MS vary widely between patients and depend on the **location and severity of nerve fibre damage in the central nervous system**.
- Common symptoms include **numbness or weakness in one or more limbs, lack of coordination, inability to walk and prolonged double vision among others**.
- There's **no cure for multiple sclerosis**. However, there are treatments to help speed the recovery from several symptoms and modify the course of the disease.



## Miscellaneous

### PM Young Achievers Scholarship Award Scheme (PM YASASVI)

- Recently, the union government released Rs 32.44 Crore for Pre-matric Scholarship and Rs 387.27 Crore for Post-Matric Scholarship to States/UTs under **PM YASASVI scheme**.
- PM YASASVI is a Scholarship scheme for **Other Backward Class (OBCs), Economically Backward Class (EBC) and Denotified Nomadic Tribes (DNT) Students**.
- It was launched by the **Ministry of Social Justice and Empowerment (MSJ&E)**.
- Under this Scheme students can avail **Pre-Matric Scholarship** from Class 9 to 10 and **Post Matric Scholarship** for their higher studies at post-matriculation.

### Swadesh Darshan 2.0 scheme

- Debrigarh Wildlife Sanctuary** in Odisha has been added to the **Swadesh Darshan 2.0 scheme**
- The **scheme** was initially launched in 2015 by the **Ministry of Tourism**.
- This scheme aims to **develop sustainable tourism destinations across India** by providing financial assistance to state governments and union territories for tourism infrastructure development.
- The **responsibility** of operating and maintaining the projects lies with the respective state governments or UT administrations.
- Swadesh Darshan 2.0 covers various aspects** of tourism development, including infrastructure, services, human capital, destination management, and promotion, with a focus on increasing private sector investment in the tourism and hospitality sectors.

## Prasadam

- The Union Minister of Health & Family Welfare inaugurated **India's first Healthy & Hygienic Food Street, 'PRASADAM,'** in Madhya Pradesh.
- PRASADAM aims to provide pure and **safe local and traditional food** to common citizens across the country, promoting healthy eating habits among both locals and tourists.
- Spanning 939 square meters with 19 shops, PRASADAM offers culturally rich dining options for the 1-1.5 lakh devotees who visit the **Mahakaleshwar Temple** daily.
- The food street also includes facilities such as a kid's play area, drinking water facility, CCTV surveillance, parking, public conveniences, and seating spaces.

### National Sports and Adventure Awards 2023

- Recently, the President of India presented the National Sports and Adventure Awards 2023 at a function in Rashtrapati Bhavan.

#### Categories of National Sports Award



**Major Dhyan Chand Khel Ratna Award:** It is considered India's highest sporting honour, the Khel Ratna was **established in 1991-92**. The award is named after the **Indian hockey legend, Major Dhyan Chand**. The award is given for outstanding performances in sports spanning **over a period of four years** and the Khel Ratna winners receive a **medallion, certificate and a cash prize**.




**Arjuna Award:** It is awarded for **consistent good performance over a period of four years**. The winners of the Arjuna Award receive a **statuette of Arjuna, a certificate and a cash prize**.



**Dronacharya Award:** It was instituted in **1985**, is India's highest sports honour **for coaches**. It is awarded to individuals for producing medal winners at prestigious international events. Awardees receive a **bronze statue of Dronacharya, a certificate and a cash prize**.

 **Major Dhyan Chand Award:** This award represents India's highest honour for **lifetime achievements in sports**. Presented for good performance and contributing towards the promotion of sports in an individual capacity **since 2002**, the winners get a **Dhyan Chand statuette, a certificate and a cash prize**.

 **Maulana Abul Kalam Azad Trophy (MAKA):** It was instituted in **1956–1957**. It is given to an **institution or university for top performance in inter-university tournaments** over the last one year.

 **Rashtriya Khel Protsahan Puraskar:** Awarded to **organisations or corporates (both private and public) and individuals** for playing a role in the **area of sports promotion and development over the last three years**, the Rashtriya Khel Protsahan Puraskar has been a fixture in the **National Sports Awards list** since 2009.

## PRERANA Program



- The **Ministry of Education** recently launched 'Prerana', an experiential learning programme catering students from **Classes 9 to 12**.
- It will operate from the **vernacular school in Prime Minister Narendra Modi's birthplace Vadnagar, Gujarat**.
- The **weekly residential programme** will host **20 students** from across the country on a rotational basis.
- The students will **engage in diverse activities, embracing indigenous knowledge systems, latest state-of-the-art technologies**, and learning from inspirational personalities.
- The **registered applicants will go through a selection process** based on prescribed conditions.

## Operation AMRITH (Antimicrobial Resistance Intervention for Total Health)

- Kerala recently launched Operation AMRITH (Antimicrobial Resistance Intervention for Total Health) to **combat antimicrobial resistance (AMR)**.

- The initiative, led by the **Kerala Drug Control Department**, aims to reduce antibiotic overuse by conducting surprise **raids on pharmacies** to detect over-the-counter sales of antibiotics without prescriptions.
- Pharmacies are now mandated to keep records of antibiotic sales and display posters stating **"antibiotics not sold without doctor's prescription."**

## The H1 rule

-  In 2011, the **Indian government introduced the H1 rule** to **prohibit the over-the-counter (OTC) sales of antibiotics without a prescription**, responding to the growing concern over antimicrobial resistance (AMR).
-  In 2013, following the **Chennai Declaration document** and initiative by medical societies in India, the Indian government **modified the rule to limit the OTC restriction to second- and third-line antibiotics, allowing the sale of first-line antibiotics without a prescription**.

## MARCOS

- **Indian Navy MARCOS (Marine Commandos)** secured and safely evacuated all from the merchant vessel Lila Norfolk after it came under a **hijacking attempt**.
- The **Marine Commandos**, abbreviated to **MARCOS** and officially called the **Marine Commando Force (MCF)** are the **special forces of the Indian Navy**.
- Founded in **February 1987**, they are capable of **operating in all types of environments; at sea, in air and on land**.
- The core tasking of MARCOS include;
  - » To conduct **clandestine attacks against enemy ships, offshore installations** and other vital assets behind enemy lines.
  - » Conduct **surveillance and rescue missions** in support of naval operations.
  - » conduct **clandestine diving operations**.
  - » Combating terrorism in a maritime environment.
- **Operation Pawan, Operation Cactus, Operation Black Tornado** and various **anti-piracy operations** are some of the major achievements of the elite force.

### Scope for Mainstreaming Ayurveda Research among Teaching professionals (SMART) 2.0

- The **Central Council for Research in Ayurvedic Sciences (CCRAS)** along with **National Commission for Indian System of Medicine (NCISM)** has launched **SMART 2.0 Program**.
- The SMART 2.0 aims to **promote robust clinical studies in priority areas of Ayurveda** with Ayurveda academic institutions or hospitals across the country through mutual collaboration.
- The program will work towards **generating tangible evidence to demonstrate efficacy and safety of Ayurveda interventions using interdisciplinary research methods**.
- Under the '**SMART 1.0**', around **10 diseases were covered** with the active participation of teaching professionals from 38 colleges.

### Operation Sarvashakti

- To counter rising terror activities in border **Rajouri and Poonch districts of Jammu and Kashmir**, the Army is launching '**Operation Sarvashakti**'.
- The focus of the operation will be on **stepping up human intelligence and use of technology to flush out terrorists** who have been involved in a series of ambushes on the army in **Rajouri and Poonch, also known as Pir Panjal Range**.
- There will be **additional deployment of troops** on both sides of the Pir Panjal region.
- The operation will be on the lines of '**Operation Sarpvishay**', which was **launched against terrorists south of the Pir Panjal range in 2003**.

### AKASH-NG Missile



- The DRDO successfully tested the New Generation AKASH (AKASH-NG) missile from the **Integrated Test Range (ITR), Chandipur, Odisha**.
- Developed by DRDO and produced by Bharat Dynamics Limited and Bharat Electronics, AKASH-NG is a **medium-range mobile surface-to-air missile defense system with a range of approximately 80 km**.
- It is equipped with advanced technologies and features, including improved missiles, seekers, and radars, to intercept high-speed and agile aerial threats more effectively.

### eMigrate Portal

- The '**e-migrate**' system introduced to streamline guarantees for workers, will not be used for those going to **Israel**.
- The Government of India introduced the **eMigrate system in February 2015** to facilitate **transparent, safe and secure recruitment of Indian nationals** for employment abroad.
- It provides for **registration of recruitment agencies, foreign employers and issue of emigration clearance** to prospective emigrants and ensures safe and legal migration of Indian workers to **18 Emigration Check Required (ECR) countries**.
- Companies may recruit workers either **directly or through an Indian recruitment agency**. **Direct recruitment is limited to 10 persons per year per employer**, while companies may recruit any number of people through Indian recruiting agencies.

The **Emigration Act 1983** recognised that **certain countries (currently 18)** do not have **strict laws regulating the entry and employment of foreign nationals** and do not provide avenues for **grievance redressal**, classified as **ECR countries**.



## Places in News

### Cabo Verde



- Recently, the World Health Organization (WHO) has certified Cabo Verde (also known as Cape Verde) as a malaria-free country.
- Cabo Verde has become the **third country** to acquire the status in the global health organisation's African region. The country has now joined **Mauritius and Algeria**, who were certified in **1973 and 2019**, respectively.
- It is also known as **Cape Verde** which comprises a group of islands that lie off the **west coast of Africa**.
- It is located near **Senegal** and is the nearest point on the continent.

### Kochi-Lakshadweep islands submarine optical fibre connection project



- Recently, the Prime Minister of India inaugurated Kochi-Lakshadweep islands submarine optical fibre connection (**KLI-SOFC**) project.
- It is the **submarine cable connectivity project** from Mainland (Kochi) to eleven Lakshadweep Islands.
- The project is funded by **Universal Services Obligation Fund (USOF)**, **Department of Telecommunication** and **BSNL** is the **executing agency**.
- The project introduces Submarine Optical Fibre connectivity for the **first time in Lakshadweep since independence**.

### Gulf of Aden



- The Indian Navy has recently **enhanced maritime surveillance** efforts in the Central/ North Arabian Sea and the Gulf of Aden.
- It is an extension of the Indian Ocean, tucked between the **Arabian Peninsula and the African continent**.
- The Gulf **connects the Red Sea to the Arabian Sea via the Strait of Bab el Mandeb**.
- The gulf is named after "**Aden**," a port city on **Yemen's coast**.
- It is bounded to the south by **Somalia** and the **Socotra Islands**, north by **Yemen**, east by the **Arabian Sea**, and west by **Djibouti**.

## India's First Dark Sky Park

- Recently, **Pench Tiger Reserve** that spans **Madhya Pradesh and Maharashtra** has been designated as India's first Dark Sky Park.
- Dark sky parks are **areas designated for the protection of night skies from light pollution**, resulting in an environment that allows for the local ecosystem to thrive.
- These places are not only important for **nature and wildlife but equally aid in research** for those interested in astronomy.
- It will also become the **fifth such park in Asia**.
- The certification was given by the **International Dark-Sky Association**, a global dark-sky movement to promote astronomy.

## 1st National Highway Steel Slag Road

- NITI AAYOG** has inaugurated **India's First National Highway Steel Slag Road** section on **NH- 66 Mumbai-Goa National Highway**.
- The **Steel Slag Road Technology** which was **developed by CSIR-Central Road Research Institute (CSIR-CRRI)** is transforming the waste of steel industries into wealth.
- India is **the second largest steel producing country in the world** and about 19 million tonnes of steel slag is generated in the country as a solid waste, which will increase to 60 million tonnes by the year 2030.
- Steel slag is a by-product** of steel manufacturing that occurs when molten steel is separated from impurities in furnaces.

## Strait of Gibraltar



- Iran has recently threatened to close the Strait of Gibraltar and the Mediterranean Sea unless Israel stops bombing Gaza.
- It is a **narrow waterway separating Europe from Africa** and connecting the Mediterranean Sea to the Atlantic Ocean.
- Until the opening of the Suez Canal** in 1869, the **Strait of Gibraltar served as the only access point to the Mediterranean Sea**.
- It is bordered by **Spain and the British Overseas Territory of Gibraltar** in the north, and by the **African country of Morocco and the Spanish enclave of Ceuta** in the south.

## Atal Setu Bridge



- The **Mumbai Trans Harbour Link (MTHL)**, also known as the **Atal Bihari Vajpayee Sewri Nhava Sheva Atal Setu**, was opened.
- It is the **longest sea bridge in India, and the world's 12th longest sea bridge**.
- The **21.8 km 6 lane elevated highway bridge will connect Mumbai with Navi Mumbai** and is expected to be a significant engine of economic growth for the region by **reducing travel time between Mumbai and Navi Mumbai to just 20 minutes**.
- Steel equivalent to the weight of 500 Boeing aeroplanes and 17 times that of the Eiffel Tower's weight** was used for its construction.



## Kuno National Park



- A **Namibian cheetah** has given birth to three cubs at the Kuno National Park in Madhya Pradesh.
- The park gets its name from the **Kuno River in the region**.
- It is nestled amidst the **Vindhyan Hills of Central India**, presenting a beautiful contrast between the **rocky landscape and the verdant forest cover**.
- The forests of Kuno National Park showcase a unique **blend of woodlands and grasslands**, unlike anywhere else in Madhya Pradesh and the dominant tree species here include **Kardhai, Salai, and Khair** etc.
- The park boasts a vibrant wildlife population including **Asiatic lions, leopards, sloth bears, spotted deer, chinkara, striped hyenas, and langurs**.
- The park was chosen as a **reintroduction site for the Asiatic lion from the Gir Forest National Park** and **translocation site for the Cheetahs from South Africa and Namibia** under the Cheetah Reintroduction Project.

## Species in News

### Indian Grey Wolf



- The Indian grey wolf has recently been sighted in the confines of **National Chambal Sanctuary in Uttar Pradesh**.
- The last sightings were reported during '**Operation Bhediya**' carried out between **1997 and 2000** to map the **canines footprint in Chambal**.
- It is a **subspecies of grey wolf** that ranges from **Southwest Asia to the Indian Subcontinent**.
- Usually, living in **warmer conditions** they are intermediate in size between the **Tibetan and Arabian wolf** and lack the former's luxuriant winter coat due to it living in warmer conditions.
- It **travels in smaller packs** and is **less vocal** than other variants. They are **nocturnal** and **hunt from dusk to dawn**.

#### Conservation Status

- **IUCN:** Least Concern
- **WPA 1972:** Schedule I
- **CITES:** Appendix 1

"Achieve your Dreams with Fortune"

## Binturong



- Recently, the **Kaziranga National Park and Tiger Reserve** in Assam has received the addition of two new mammalian species, the elusive **binturong** (*Arctictis binturong*) and the **small-clawed otter**.
- It is the **largest civet** in India colloquially known as the **bearcat**.
- It is a generally **solitary and nocturnal animal** that spends the majority of its time moving about slowly and cautiously amongst the trees.
- It has **scent glands which are located just under its tail**. These glands are used to mark trees and foliage to **outline an individual's territory**.
- The binturong is one of only two carnivores that has a **prehensile tail**. (The other is the **kinkajou**).
- The prehensile tail acts **almost like another leg** helping both with climbing, and gripping onto branches to give the Binturong **more stability**.

### Conservation status

- **IUCN:** Vulnerable
- **Wildlife Protection Act of 1972:** Schedule I
- **CITES:** Appendix III

## Laughing Gull



- Recently, a laughing gull, a migratory bird from North America, has been sighted for the first time in the country at the Chittari estuary in Kerala.
- The bird is known for its **unique laughter-like calls** which **resemble human laughter**.
- **Habitat:** These are a **coastal species** and are only occasionally seen very far inland.
- **Distribution:** These birds are mainly found on the **Atlantic coast of North America, the Caribbean, and northern South America**.
- **IUCN:** Least Concern

## Baleen Whales



- Roughly 19 million years old fossil jaw bone of a baleen whale estimated to be around nine metres in length found recently on the banks of the Murray River in South Australia.
- Baleen whales, scientifically known as **Mysticeti**, are a group of **large marine mammals**.
- These whales are characterised by the presence of **baleen plates, comb-like structures** in their mouths, used for filter feeding.
- Baleen plates are **made of keratin** and are used by baleen whales to **filter small organisms like krill from the water during feeding**.
- They play a **crucial role in marine ecosystems** and have cultural significance in various societies.
- There are **14 species of baleen whale** including the blue, bowhead, right, humpback, minke and grey whale.
- **IUCN:** Critically Endangered



## Tibetan Brown Bear



- A rare and elusive bear, the **Tibetan brown bear**, has been recently sighted in **Sikkim**, making it the **first confirmed record of the animal being sighted in India**.
- Also known as the **Tibetan blue bear**, is **one of the rarest subspecies of bears** in the world and is **rarely sighted in the wild**.
- **Historically** found mainly on the **alpine eastern Tibetan plateau** (4,500 to 5,000 metres) in **eastern Tibet, western China, Nepal, and Bhutan**.
- Remaining bears in the wild seem to be confined to **eastern Tibet and Bhutan**.
- **Habitat:** It inhabits **alpine forests, meadows, and steppes, close to the tree line**.
- This rare bear is very different from the more commonly found Himalayan black bear in terms of its appearance, habitat, and behaviour.
  - ★ Its **sense of smell is much more acute** than its hearing and sight.
  - ★ They are **solitary**, but the territories between two Himalayan brown bears have been seen to **overlap**. They are **one of the most terrestrial of the bears**.
  - ★ It feeds on **marmots and alpine vegetation**.

### Conservation Status:

- **IUCN:** Least Concern
- **CITES:** Appendix I
- **Wildlife Protection Act of 1972:** Schedule II

## Pallas Fish Eagle



- After 10 years, the Pallas fish eagle was sighted in the Chilika during the bird census carried out by the Chilika wildlife division.
- It is also known as **Pallas's sea eagle or band-tailed fish eagle**, is a large, brownish, **partially migratory sea eagle**.
- It can be seen **near lakes, marshes and large rivers**, from lowlands to 5,000 metres of elevation.
- It **feeds primarily on fish**, but many other prey are part of its diet.
- It **breeds usually near water in a large nest placed in a tall tree**.
- **Distribution:** Kazakhstan, Russia, Tajikistan, Turkmenistan, Uzbekistan, Mongolia, China, India, Nepal, Bangladesh and Myanmar
- **IUCN:** Endangered

## Himalayan Wolf



- Recently, the Himalayan Wolf has been **assessed for the first time** in the International Union for Conservation of Nature (**IUCN**)'s **Red List and categorised as 'Vulnerable'**.
- The Himalayan Wolf (*Canis lupus chanco*), a **prominent lupine predator** found across the Himalayas.
- It is also called **Tibetan wolves**, which live at more than 4,000 metres altitudes and are genetically distinct from grey wolves.
- Living at such high altitudes, these wolves have genetically adapted themselves to live in **low oxygen (hypoxic) conditions**.

### Conservation status

- **IUCN:** Vulnerable
- **CITES:** Appendix I
- **Wildlife Protection Act, 1972:** Schedule I

## European Wood Bison



- A new study has warned that the ongoing war in Ukraine could act as a spanner in the works for efforts to save the last remnant of the megafauna European wood bison.
- European wood bison also known as **wisent** are the **largest and heaviest land mammals in Europe**.
- There were formerly **three subspecies, although only one (Bison bonasus bonasus) remains** – the other two are now extinct.
- It has a thickset body shape, with a pronounced shoulder hump and a short neck.
- Their major habitats include **grassland, deciduous and mixed forests**.
- It serves an important role as an **ecosystem engineer, restoring grassland habitat**.

Conservation status:

- **IUCN: Near Threatened**

### Event of the Month



**One on One Sessions with former  
UPSC Chairman Prof. DP Agrawal**  
**Fortune Interview Mentorship Programme 2023**

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