

National and International Weekly Current Affairs 01 to 06 April 2024

National News

Central Pollution Control Board

- The **Central Pollution Control Board (CPCB) has only utilized 20%** of the funds collected for mitigating air pollution in Delhi-NCR and environmental protection.
- Only Rs 156.33 crore out of Rs 777.69 crore collected has been disbursed.

Key points:

- Funds are collected **under two categories: Environment Protection Charge (EPC) and Environmental Compensation (EC).**

Environment Protection Charge (EPC):

- Mandated by the **Supreme Court**, dealers/manufacturers pay a one percent EPC on the ex-showroom price of new diesel vehicles with engine capacity of 2000cc and above, registered only in Delhi and NCR.

Environmental Compensation (EC):

- Ordered by the **National Green Tribunal (NGT)**, used to rejuvenate and protect the environment through various means such as strengthening laboratories, monitoring networks, and compliance with NGT orders.

CPCB:

- The Central Pollution Control Board (CPCB), **statutory organisation, was constituted in September, 1974 under the Water (Prevention and Control of Pollution) Act, 1974.**
- Further, CPCB was entrusted with the **powers and functions under the Air (Prevention and Control of Pollution) Act, 1981.**

Plastic Waste Management Amendment Rules 2024

- The **Union Environment Ministry** has recently introduced **stricter rules to regulate "biodegradable" plastics** in response to the growing concern over microplastic pollution.
- These rules aim to ensure that the environmental impact of disposable plastic ware is accurately communicated through labelling.

Key points:

- **Biodegradable plastics were initially seen as a solution to plastic waste**, as they were expected to decompose naturally after use, **reducing plastic accumulation in landfills and the environment.**
- However, previous regulations in India lacked clear definitions for **"biodegradable,"** leading to incomplete breakdowns and the potential for microplastics to remain.
- The new rules **require complete biodegradation, with no microplastics left behind, representing a significant step towards preventing further plastic waste pollution.**

Microplastics:

- Microplastics are **small plastic pieces less than five millimeters long** which can be harmful to our ocean and aquatic life.

Govt. to record parents' religion to register births

- The government is set to update its **birth registration process** by requiring parents to separately declare their religion.
- This change, outlined in **Model Rules by the Union Ministry of Home Affairs, will necessitate State governments to adopt and notify these rules for implementation.**

Key points:

- The **Registration of Births and Deaths (Amendment) Act, 2023**, passed by Parliament on August 11 last year, mandates the **maintenance of a national birth and death database**, which may be used to update various records, including the National Population Register (NPR), electoral rolls, Aadhaar numbers, ration cards, passports, and driving licenses.
- Previously, only the **family's religion was noted in birth registers.**
- The new "Form No.1-Birth Report" will expand the **religion column to include the "religion**

of father" and "religion of mother," as well as for parents of an adopted child.

- All births and deaths must now be digitally registered through the Centre's portal for the Civil Registration System (crsorgi.gov.in), as per the law effective since October 1 last year.

Maharashtra State News

Blindness Prevention Week

- **Blindness Prevention Week** is observed annually from **April 1st to 7th**.
- It is an **initiative by the Indian government** to raise awareness about preventable causes of blindness and promote eye care.
- **Aim:** Educate the public about eye health, early detection of eye diseases, and the importance of regular eye checkups.
- **Significance:** India has a high prevalence of blindness, and many cases are preventable. This week aims to address this issue.
- **Activities:** Eye screening camps, awareness programs, and distribution of informative materials are organized during this week.

Theme:

- Theme for 2024 Blindness Prevention Week is "Taking timely treatments for age-related eye conditions"

Rly achieves 100% electrification of tracks in Nanded division

- The **South Central Railway (SCR)** achieved a significant feat by **completing the electrification of all existing broad gauge (BG) tracks in the Nanded division of Maharashtra**.
- This accomplishment marks a major step towards the **national mission of railway electrification**.
- This project involved electrifying the final stretch **between Mirkhal and Maltekdi, covering 43.3 kilometers**.
- With this addition, the **Nanded division now boasts 100% electrification** for its broad gauge network, excluding recently converted meter gauge lines.

Santosh Kumar Jha to assume role as chairman and managing director of Konkan Railway on April

- **Santosh Kumar Jha**, an Indian Railway Traffic Services (IRTS) officer of the **1992 batch**, assumed the role of Chairman and Managing Director of Konkan Railway on **April 1, 2024**.
- Jha brings a wealth of experience to the position, with a background in operations, infrastructure planning, and business development. He previously served as the Director (Operations & Commercial) at Konkan Railway.

Neonatal mortality drops in Maharashtra

- The state of Maharashtra has seen a **positive decline in neonatal mortality rates**.
- This encouraging trend is **attributed to a focus on providing high-quality early care for newborns**.
- **Early care encompasses various aspects crucial for a baby's well-being in the first 28 days of life**.
- This includes access to **skilled medical professionals, proper monitoring, and ensuring mothers receive guidance on breastfeeding and newborn care**.
- These improvements in early care likely play a **significant role in reducing deaths among newborns, leading to a brighter future for Maharashtra's infants**.

About:

- **Neonatal mortality** refers to the death of a newborn baby within the first 28 days of life.
- Each neonatal death can be **further clarified into viable and non-viable deaths** depending on the **gestational age at which they were born, and where they were born**.

Miraj's Sitar and Tanpura Craftsmen Receive GI Tags

- Craftsmen in **Miraj, renowned for their exceptional sitars and tanpuras**, have recently received **geographical indication (GI) tags for their craftsmanship**.
- These artisans use **unique wood and pumpkin gourds** to create these musical

instruments, contributing to Miraj's rich musical legacy.

About:

- The town, located in the **Sangli district**, has been a hub for crafting these instruments since the mid-nineteenth century.
- Miraj city has the tradition of making string instruments since **1850**.
- GI tags will boost the city on tourist map as the '**music city exporting string instruments**'.

World Autism Awareness Day

- **World Autism Awareness Day** is observed annually on **April 2nd**
- It is a **UN-sanctioned day** to highlight the needs and rights of people with **Autism Spectrum Disorder (ASD)**.

It's a day to:

- **Raise awareness:** Increase public understanding of autism and the challenges faced by autistic individuals.
- **Promote acceptance:** Foster a more inclusive society where autistic people can thrive.
- **Celebrate strengths:** Recognize the unique talents and perspectives of the autistic community.

About:

- **Autism Spectrum Disorder (ASD)**, or simply autism, is a developmental condition that impacts how people interact with the world around them.
- **It's characterized by:** Social communication challenges: Difficulty with social interaction, understanding nonverbal cues, or expressing oneself clearly.
- **Restricted interests and repetitive behaviors:** A focus on specific topics, repetitive movements (stimming), or an insistence on routines.

Theme:

- The theme of World Autism Awareness Day 2024 is '**Empowering Autistic Voices**'
- It aims at **providing more support and power to the individuals** with this condition, in order to ensure they lead a meaningful life and even pursue successful careers.

Only 7% of health budget allocated for meds spent in 23-24

- Barely **7% of Maharashtra's health budget allocated specifically for medicines and supplies** was spent in **2023-24**, said activists quoting data from the **Budget Estimation, Allocation & Monitoring System (BEAMS)**
- Their analysis showed that **71% of the public health department's budget** and **52% of the medical education department's budget** were spent in **2023-24**.

Maharashtra secure men and women's titles in National Kho Kho Championships

- **Maharashtra emerged victorious in both the men's and women's categories** at the recently concluded **56th National Kho Kho Championships** held in New Delhi.
- The **men's final was a thriller, with Maharashtra edging past Railways in a close 52-50 contest**.
- The **women's category saw a more comfortable win for Maharashtra, defeating the Airport Authority of India 18-16**.
- This impressive performance marks Maharashtra's dominance in the sport.

3% of India's population affected by autism: IAP

- According to the **Indian Academy of Pediatrics (IAP)**, an estimated **3% of India's population is affected by Autism**.
- To address this growing concern, the **IAP launched a nationwide campaign called 'IAP Ki Baat Community Ke Saath' (IAP Speaks with the Community)** on **World Autism Day (April 2)**.

About:

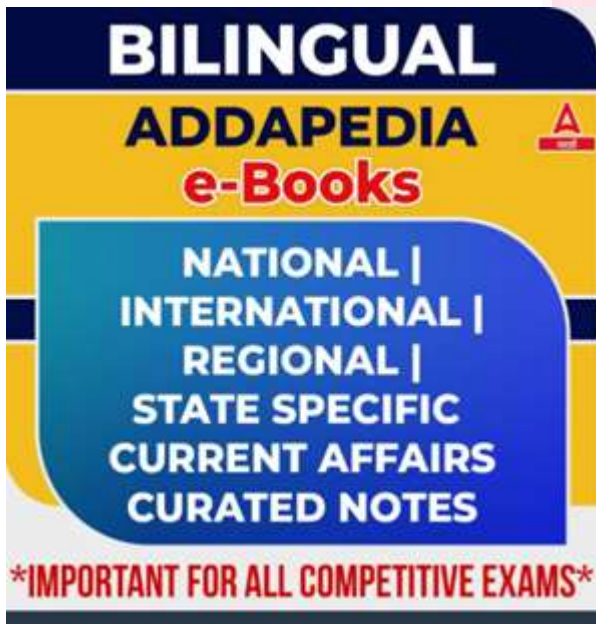
- The **Indian Academy of Pediatrics** was formed after amalgamating the Association of Pediatricians in India based at **Mumbai** and the Indian Pediatric Society based at **Calcutta** during its joint meeting at Hyderabad in 1963.
- The **IAP Secretariat is situated at Mumbai**.

ECI appoints special observers to oversee elections in Maharashtra, five more states

- The Election Commission of India (ECI) had appointed special observers (general and police) in six states, including Maharashtra, to “ensure a level-playing field” in the upcoming Lok Sabha and assembly elections.
- Maharashtra, retired IAS officer Dharmendra S Gangwar was made the general special observer, while former IPS officer NK Mishra would be the police special observer.

About:

- Special observers (general and police) had been deployed in West Bengal, Uttar Pradesh, Maharashtra and Bihar since the population was over seven crore each.
- In case of Andhra Pradesh and Odisha, the decision was taken keeping in view, simultaneous polling for assemblies.



Clean up marshals re-introduced on Mumbai streets

- Mumbai's Brihanmumbai Municipal Corporation (BMC) has relaunched its "Clean up Marshal" scheme, from April 2, to combat littering and public hygiene issues.

About:

- It will focus on high footfall areas such as the Gateway of India, Marine Drive, and CSMT.
- Fines for littering can range from ₹200 to ₹1,000.
- Marshals will use a mobile app to issue penalty receipts electronically.
- Also, now there is an option for online payment of penalties by scanning the QR code.

Did you know?

- The first clean-up marshal scheme launched in 2007 was discontinued by the BMC in 2011.

World Cloud Security Day

- World Cloud Security Day, celebrated annually on April 3rd.
- It is a reminder of the importance of securing data stored in the cloud.
- As cloud technology becomes increasingly integrated into our lives, this day highlights the potential security risks and emphasizes the need for vigilance.

About:

- Cloud storage is a cloud computing model that enables storing data and files on the internet through a cloud computing provider that you access either through the public internet or a dedicated private network connection.
- Cloud storage leverages several key technologies to function:
 1. Remote Servers
 2. Virtualization
 3. Data Distribution
 4. Networking
 5. APIs (Application Programming Interfaces)

Theme:

- The theme for World Cloud Security Day 2024 is “Evaluate the security of your digital identity”

International Day of Mine Awareness

- The International Day for Mine Awareness and Assistance in Mine Action is observed annually on April 4th.
- It's a day to raise awareness about the dangers of landmines and other explosive

remnants of war (ERW) on civilians, particularly in conflict zones.

About:

- On 8 December 2005, the General Assembly declared that 4 April of each year shall be observed as the International Day for Mine Awareness and Assistance in Mine Action.

Theme:

- The theme for International Day for Mine Awareness & Assistance in Mine Action 2024 is 'Protecting Lives, Building Peace.'
- It focuses on the needs and rights of people with disabilities in areas affected by conflict.
- The United Nations Mine Action Service (UNMAS) is highlighting the importance of including people with disabilities in mine action efforts and ensuring their safety and access to assistance.

Crisis in state as dam water levels down to 37.52%

- **Water levels** in the MH state's dams have plunged to a critical level of 37.52%, raising serious concerns about water scarcity.
- This situation is likely to have a significant impact on various sectors, including agriculture, industry, and households.
- **Impact on Agriculture:** Agriculture is the backbone of many states in India, and irrigation plays a vital role in ensuring crop yields. With depleted dam water, farmers may be forced to reduce cultivation or switch to crops that require less water. This could lead to a decline in agricultural output and potentially impact food security.
- **Impact on Industry:** Industries also rely on water for various processes.
- A water shortage could force industries to cut back on production or even shut down operations entirely. This could have a negative impact on the state's economy and lead to job losses.
- **Impact on Households:** Water scarcity can also severely impact households. With limited water availability, people may face challenges in meeting their daily needs for drinking, cooking, and sanitation. This could lead to health problems and a decline in the quality of life.

Indian Navy Brings 9 Pirates Caught Off Somalia to Mumbai During Anti-Piracy Operations

- In a successful anti-piracy operation, the Indian Navy apprehended nine pirates off the coast of Somalia in late March.
- The pirates had hijacked an Iranian fishing vessel with Pakistani crew.

About:

- Following a 12-hour operation, the Indian Navy rescued the crew and captured the pirates.
- The pirates were brought to Mumbai and handed over to the Mumbai Police.
- The arrested individuals now face legal action under the Maritime Anti-Piracy Act of 2022.
- This incident highlights the Indian Navy's commitment to protecting seafarers in the Indian Ocean Region.

e-Mulakat brings ease of visitation across MH state prisons

- Maharashtra Prison Department data shows that altogether 21,963 of the total 1,38,672, which is around 16 per cent of the total meetings of inmates with their families and lawyers, have happened over the video conferencing system through e-Mulakat system.
- Since January this year, the system became fully functional across 60 prisons in Maharashtra.

About:

- The e-Mulakat platform is part of the e-prisons system under the Inter-Operable Criminal Justice System (ICJS) launched by the Union government in 2022
- The ICJS comprises a dedicated and secure cloud-based infrastructure operated by the National Crime Records Bureau (NCRB) and National Informatics Centre (NIC).

Independent Artist Day

- Independent Artist Day is celebrated annually on April 3rd.
- It recognizes the contributions of artists who create and share their work outside the

constraints of mainstream galleries, labels, or publishers.

About:

- It was established by the online art platform **Minted in 2022**.
- They announced the day to mark their **15th-anniversary celebration**.
- This day highlights the unique voice and vision independent artists bring to the world.
- It's a chance to appreciate their creativity and support them directly.

National Maritime Day

- **National Maritime Day** is celebrated in India every year on **April 5th**.
- It marks the maiden voyage of the **SS Loyalty in 1919**, a pivotal moment symbolizing India's journey as an independent maritime nation.

Key Points:

- Recognizes the vital role of the **maritime sector in India's history, economy, and development**.
- **Honors the contributions of seafarers** and those working in the maritime industry.
- **Raises awareness** about the importance of maritime trade and the challenges faced by the industry.

About:

- **SS Loyalty** is the first Indian merchant ship to set sail under the Indian flag in 1919.
- This historic voyage, **departing from Mumbai for London**, marked a significant step towards India's independence as a maritime nation.
- The **Scindia Steam Navigation Company Ltd.**, owned by the visionary industrialist **Seth Walchand Hirachand Doshi**, played a key role in this achievement.

Theme:

- The Theme for 2024 National Maritime Day is **"Navigating the future: safety first!"**

Mum's AQI at 90, BMC credits 'deep cleaning'

- Mumbai's air quality has shown signs of improvement, with the Air Quality Index (AQI) reaching **90**.
- This is an improvement from previous readings and is being attributed to **deep cleaning efforts undertaken by the Brihanmumbai Municipal Corporation (BMC)**.
- While **90 still falls under the 'moderate' category** on the AQI scale, it indicates a **positive trend**.
- The BMC's deep cleaning initiatives including measures like **dust suppression and road cleaning**, are likely contributing to this improvement.

Note:

Read about AQI Index

JN.1 variant has clinical features similar to previous Covid-19 variants: Study

- A **first-of-its-kind study** conducted by experts from **B J Medical College (BJMC)** and **ICMR National Institute of Virology (NIV)** has found that **JN.1**, the dominant **Covid-19 variant in India**, has clinical features similar to previous circulating variants in Maharashtra without increased severity.
- The study titled **'Appearance and prevalence of JN.1 SARS-CoV-2 variant in India and its clinical profile in the state of Maharashtra'** was published in the medical journal **'Cureus of Springer Nature Group'** on March 22.

About:

- **JN.1** is thus likely to cause similar symptoms, including fever, cough, fatigue, and trouble breathing.
- It doesn't appear to cause more severe illness than previous strains.

Nagpur ATC may head air traffic mgmt across India

- **Nagpur City** may be chosen as the country's centre for a unified air traffic management set-up.
- A proposal on these lines is being studied by the **Airports Authority of India (AAI)**

About:

- Nagpur airport is managed by Mihan India Limited (MIL), which is a joint venture between state government's Maharashtra Airport Development Company (MADC) and AAI.

Nagpur Air Traffic Control (ATC):

- Nagpur ATC manages air traffic in its airspace, which likely covers central India.

Indian Airspace Management:

- The Airports Authority of India (AAI) is responsible for managing the Indian airspace.
- The AAI could potentially establish a centralized air traffic management system based in Nagpur, but this is speculative.

Cancer study by researchers from SUK gets two patents

- A crucial research to destroy cancer cells using nano composite-based materials by Prof Dr Sagar Delekar (director of Innovation, Incubation and Linkages of Shivaji University, Kolhapur) and three other researchers has received two patents from the govt of Germany.

About:

- The vivo viability evaluation (kidney, gills muscle tissue, brain and liver) of superparamagnetic iron oxide and chitosan-coated iron oxide nanoparticles was done on Kaveri Garra fish from Satara, and this nanocomposite was found to be non-hazardous and biocompatible.

International Day of Sport for Development and Peace

- International Day of Sport for Development and Peace (IDSDP) is celebrated every year on April 6th,
- IDSDP recognizes the power of sport to drive positive change.
- It's a day to acknowledge how sports and physical activity can:
 - Promote peace and understanding
 - Foster social development and inclusion
 - Encourage health and well-being

About:

- Creating a historical link to the first modern Olympic Games in 1896, 6 April was declared the International Day of Sport for Development and Peace by the United Nations (UN) General Assembly in 2013, and has been celebrated each year since 2014.

Theme:

- The 2024 theme of IDSDP is "Sport for the Promotion of Peaceful and Inclusive Societies"
- It highlights how sports can bridge divides and create a more peaceful world.
- This day is a chance to celebrate organizations and individuals using sports to make a difference.

President Murmu launches indigenously-developed CAR T-cell therapy for cancer treatment

- President Droupadi Murmu launched India's first home-grown CAR-T cell therapy for cancer at Indian Institute of Technology-Bombay (IIT-B) in Mumbai
- CAR-T cell therapy has been developed through collaboration between the Indian Institute of Technology, Bombay and Tata Memorial Hospital in association with industry partner ImmunoACT.
- It provides a new hope for the whole of humankind. and will be successful in giving new lives to countless patients
- It is also an example of the 'Make in India' initiative; a shining example of the 'Atmanirbhar Bharat'.

About:

- CAR T-cell therapy is a powerful form of immunotherapy for certain blood cancers
- Function: It harnesses the body's immune system to target cancer. T-cells (immune fighters) are extracted, genetically modified with a special receptor (CAR), and then infused back into the patient.
- The CAR: This chimeric antigen receptor helps T-cells recognize and destroy cancer cells with a specific antigen (marker) on their surface.
- Treatment for: CAR T-cell therapy is effective for some leukemias, lymphomas, and multiple myeloma, especially when other treatments fail.

- **Process:** It's a multi-step process involving T-cell collection, modification, expansion, and re-infusion.

Shift to EVs losing momentum in Pune with just 7 percent spike this year

- Pune's initial surge in electric vehicle (EV) purchases appears to be waning.
- After a **significant 200% increase in EV registrations in 2022-23**, the growth rate has **slumped to just 7% in the current fiscal year (2023-24)** according to **Regional Transport Office (RTO) data**.
- This slowdown comes **despite a substantial overall rise in vehicle registrations in Pune**.
- While nearly **20,000 new vehicles were registered this year**, only around **2,000 were EVs**.
- **Motorcycles remain the dominant EV category**, with car registrations lagging far behind.

Alibaug as 'Maynagnagri'

- Maharashtra assembly speaker **Rahul Narwekar** has **urged the state government to rename Alibaug as 'Maynagnagri'** in the memory of admiral **Maynak Bhandari**
- **Maynak Bhandari** played a crucial role in **Chhatrapati Shivaji Maharaj's naval prowess**.

About:

- Narwekar stressed that during the reign of Maratha warrior king **Shivaji**, **coastal security and coastal war campaigns were crucial to prevent foreign invasions and that Maynak Bhandari played a crucial role in it**.
- **Bhandari's leadership is credited with victories against the British, including a crucial one near Alibaug**.

International Day of Conscience

- The **International Day of Conscience** is celebrated annually on **April 5**
- It is a **global day of awareness** commemorating the importance of human conscience.
- The day encourages us to **reflect on our values and how we can use them to build a better world**.

About:

- It was established by the **United Nations General Assembly on July 25, 2019**, with the adoption of **UN resolution 73/329**.
- On **April 5, 2020**, the first **International Day of Conscience** was celebrated.

Theme:

- The theme for 2024 is **"Promoting the Culture of Peace with Love and Conscience."**
- This emphasizes using our conscience to guide actions that foster peace and respect for all.

State News

Eturnagaram Wildlife Sanctuary

- Telangana is currently grappling with forest fires in the **Tadvai region** of the **Eturnagaram Wildlife Sanctuary** in **Mulugu** and the **Amrabad Tiger Reserve**.

Key points:

- The **state's dry season, typically from March to June**, has exacerbated the situation due to **increased temperatures and reduced rainfall**, creating ideal conditions for wildfires.

Causes of the fires

- **Mainly include human activity, such as campfires left unattended by people fishing in the nearby river**, which can easily ignite the dry vegetation.
- **Chenchu tribes in the region sometimes burn trees to collect mahua flowers more easily**.

About:

- **Established in 1952**, the **Eturnagaram Wildlife Sanctuary** stands as one of **Telangana's oldest sanctuaries**, revered for its **ecological significance**.
- Originating in the sanctuary, the **Dayyam Vagu River** intricately divides the sanctuary into two distinct sections.
- The sanctuary is graced by the **presence of the Godavari River**, further enhancing its **natural allure**.

- The sanctuary boasts a **rich flora, predominantly adorned by deciduous teak trees, interspersed with axlewood, palas, tendu, and dhobi trees**, forming a diverse canopy conducive to supporting various animal species.
- Among its **diverse wildlife inhabitants are tigers, panthers, gaurs, sambar deer, spotted deer, nilgai, blackbucks, jackals, foxes, mongoose, and rodents**.
- The indigenous **Gond and Pardhan tribes** harmoniously coexist with the sanctuary, actively participating in conservation efforts and responsibly utilizing forest resources for sustenance.
- The majestic **Bogatha Waterfall** graces the sanctuary's core area with its mesmerizing presence.
- Additionally, the **sanctuary hosts the biennial festival of Sammakka Saralamma Jatara**, a tribal commemoration honoring the valor of tribal warriors **Sammakka and Sarakka**.

International News

S.A.R.A.H.

- The **World Health Organization (WHO)** has launched **S.A.R.A.H. (Smart AI Resource Assistant for Health)**, a **digital health promoter**, to provide accurate health information and support users in optimizing their health and well-being journey.

Powered by **generative AI**, S.A.R.A.H. engages users in dynamic conversations that mimic human interactions.

Key Features of S.A.R.A.H. include:

- **Language Support:** Available 24/7 in 8 languages for global accessibility.
- **Health Topics:** Covers major health topics such as healthy habits, mental health, and risk factors for leading causes of death.
- **Engagement:** Provides personalized and empathetic responses to users' queries and concerns.
- **Accessibility:** Accessible on any device, enabling users to conveniently engage with health information.

Economy News

RBI Commemorates its 90th year

- The Reserve Bank of India (RBI) was established under the **RBI Act, 1934**, and began operations on **April 1, 1935**. This year marks its **90th anniversary**.

Key points:

- The Reserve Bank's evolution as an institution has been closely intertwined with the **development of the Indian economy**.
- From being a **central bank primarily concerned with allocation of scarce resources** during the planning period, the Reserve Bank has transitioned into being an **enabler for the market economy**.
- The path-breaking structural reforms are the **enactment of the Insolvency and Bankruptcy Code (IBC)** and the adoption of **Flexible Inflation Targeting**.
- Moving towards **RBI@100**, the Reserve Bank remains focused on **ensuring a stable and strong financial system that would act as a bedrock for our country's economic progress**.

About:

- The Reserve Bank of India (RBI) was established on **April 1, 1934**, following **recommendations from the Royal Commission on Indian Currency and Finance**.
- Its primary goal is to maintain the country's monetary stability. Operations began on **April 1, 1935**, with **Sir Osborne Smith** as its **first Governor**.
- The RBI has seen **26 Governors to date**, with Shaktikanta Das currently serving as Governor since October 2021.
- Initially located in **Kolkata**, the **Central Office was moved to Mumbai in 1937**.

Digital India Trust Agency

- The RBI is planning to establish the **Digital India Trust Agency (DIGITA)** to combat illegal loan apps.

Key points:

- **DIGITA, part of RBI's DIGITA initiative,** collaborates with tech giants to enhance digital lending safety.
- It **verifies apps, removes suspicious ones, and works with the IT Ministry to whitelist legitimate loan apps.**
- RBI's DIGITA initiative aims to **ensure the safety of digital lending by verifying and removing suspicious loan apps.**
- DIGITA acts as a **central hub for vetting digital loan apps,** ensuring compliance with regulations and ethical operation.
- Only verified apps receive a **"DIGITA-approved"** seal, making them easily identifiable for borrowers.
- Unauthorized apps without DIGITA's verification may face penalties, enhancing the safety of borrowers.
- RBI is already working with the government to address the issue.
- It has shared a list of 442 legitimate loan apps with the IT Ministry for whitelisting on app stores like Google Play.
- This collaboration has led to the removal of over 2,200 suspicious lending apps by Google in the past year.
- **These efforts aim to create a safer and more transparent digital lending ecosystem for Indian consumers.**

SCORES 2.0

- The **Securities and Exchange Board of India (Sebi) has launched an upgraded version of SCORES, its online system for handling investor complaints.**
- The new version aims to **improve the efficiency of the complaint redressal process** by introducing automated routing and oversight by designated authorities.

About:

- **SCORES (SEBI Complaint Redressal System) is an online platform where investors can lodge complaints related to the securities market.**
- It was initially launched in **June 2011.**
- The enhanced version of SCORES enhances the investor complaint redressal mechanism by introducing features such as auto-routing, auto-escalation, and monitoring by designated

bodies, reducing complaint resolution timelines," Sebi stated.

Features of Sebi SCORES 2.0

- The new version of SCORES includes **automated routing of complaints to the relevant regulated entity, reducing delays in complaint processing.**
- Other features include **standardized timelines for complaint resolution** (21 calendar days from receipt of complaint) and monitoring of complaint resolution by designated bodies.
- The new version also offers **two levels of review: first by the designated body and, if needed, a second review by Sebi.**
- Additionally, complaints will be auto-escalated to the next level if the regulated entity or designated body fails to adhere to prescribed timelines.
- Integration with the KYC Registration Agency database has been introduced for easy investor registration on SCORES.

RBI defers exchange traded currency derivatives norms

- The Reserve Bank of India (RBI) has decided to delay the implementation of new regulations for the **exchange-traded currency derivatives (ETCD) market.**
- **Originally set for April 5, 2024, the new implementation date is now May 3, 2024.**
- This decision follows concerns raised by market participants.

Key points:

- Under the new norm, users would have been able to take positions **in the foreign exchange derivatives market up to a limit of \$100 million without the need to establish underlying exposure.**
- However, stock exchanges were instructed to inform users that although they are not required to establish underlying exposure, they must ensure the existence of a valid underlying contracted exposure.

About:

- **Exchange Traded Derivatives (ETDs) are standardized financial contracts** traded on stock exchanges, overseen by **regulatory bodies such as the Securities and Exchange Board of India (SEBI)**.
- These contracts derive their value from **underlying assets, which can include stocks, bonds, commodities, or currencies**.
- ETFs, or **Exchange-Traded Funds**, are investment funds traded on stock exchanges, holding portfolios of assets.
- Their value is directly linked to the assets they hold.
- ETDs come in various types, including **stock ETDs, index ETDs, currency ETDs, commodity ETDs, and bond ETDs**, each catering to different investment needs and strategies.

Defense News

Meghayan 2024

- The METOC seminar '**Meghayan 2024**' was conducted on **28th March 2024** by the **School of Naval Oceanology & Meteorology (SNOM)** and Indian Naval Meteorological Analysis Centre (INMAC) at Southern Naval Command.

Key points:

- The seminar commemorated **World Meteorological Day**, which marks the establishment of the World Meteorological Organization (WMO) on 23rd March 1950.
- The theme for the seminar was '**At the Frontline of Climate Action**', aligning with WMO's focus for 2024.
- An indigenous mobile application, **INDRA (Indian Naval Dynamic Resource for Weather Analysis)**, was launched to facilitate weather-related decision-making.
- The application was developed by **BISAG (Bhaskaracharya National Institute for Space Applications and Geo-informatics)** in coordination with the Directorate of Naval Oceanology and Meteorology, Indian Navy.

Onyx Missile

- **Russia's P-800 Onyx supersonic cruise missile**, utilized in attacks on Ukrainian

targets, is set to become deadlier with a new target seeker.

New Seeker for Enhanced Accuracy

- Upgraded with new active homing heads for increased precision in **hitting ground targets of the Armed Forces of Ukraine (AFU)**.
- Development aimed at **ensuring Onyx's invulnerability to electronic warfare systems** of the **Ukrainian Armed Forces**.

Overview of P-800 Onyx

- Developed by Reutov NPO Mashinostroeniya, it targets surface ship groups and ground targets **amidst severe fire and electronic countermeasures**.
- Carried by **Russian Navy surface ships and submarines**, utilized in Syria against terrorist ground targets.

First Tri-service Common Defense Station

- The Indian Armed Forces are planning to establish **Mumbai as India's first "tri-service common defense station"** for the **Army, Navy, and Indian Air Force (IAF)** to enhance jointness among the services.

Key points:

- This initiative aims to **integrate logistics, infrastructure, and administration, which are currently operated separately by the three services in Mumbai**.
- Currently, India lacks common defense stations, with the Andaman and Nicobar command being the only existing tri-service command since 2001.
- **Mumbai will be the first common defense station, with Suler and Guwahati** potentially being chosen as locations for the second and third stations, with different lead services for each.
- This initiative aligns with the broader goal of integrating the three defense services in India through various measures:

Integrated Theatre Commands (ITCs): Establishment of unified commands under a single commander for strategic geographical theatres involving the Army, Indian Air Force, and Navy.

Office of the Chief of Defense Staff (CDS): Centralized leadership responsible for fostering coordination and synergy among the three services.

Cyber and Space Commands: Integration of capabilities in cyber warfare and space operations across the defense services.

Resource Sharing: Pooling and sharing of resources among the services to avoid duplication and enhance efficiency.

Joint Training and Exercises: Conducting combined training programs and exercises to enhance interoperability and cohesion among the forces.

Akashteer system

- The Indian Army has initiated the deployment of the indigenous **Akashteer system to enhance its air defense capabilities.**
- This system enables **monitoring of low-level airspace in battle zones and effective control of ground-based air defense weapons.**

Key Features:

- Integrates **radar and communication systems into a unified network.**
- Provides **unprecedented situational awareness and control.**
- Enables swift engagement of hostile targets
- Reduces the **risk of fratricide.**
- Ensures safety of friendly aircraft in contested airspace
- Vehicle-based control centers maintain operational capabilities in challenging communication environments

Developed by **Bharat Electronics Limited (BEL)**, the system aims to **automate air defense operations and significantly improve India's air defense posture.** It will enhance operational efficiency and integration by digitizing the entire process.

Ranks & Reports News

India's Defence Exports Reach Record High

- India's defence exports exceeded **₹21,000 crore for the first time.**

Key points:

- The Defence Ministry reported a 31-fold increase in exports over the past decade compared to FY 2013-14.
- Mr. Singh expressed his delight, highlighting the significant milestone in India's defence exports.
- The exports reached **₹21,083 crore in FY 2023-24**, marking a remarkable 32.5% growth from the previous fiscal year.

Manufacturing PMI rises to 16-year high

- **India's manufacturing sector showed strong performance in March 2024**, driven by robust production and sales, according to a monthly survey.
- The **HSBC India Manufacturing Purchasing Managers' Index (PMI) reached a 16-year high of 59.1 in March**, up from 56.9 in February 2024.
- This marks the 33rd consecutive month of growth in manufacturing output.

About:

- Purchasing Managers' Index (PMI) is an **economic indicator** derived from **monthly surveys of various companies.**
- It reflects **trends in both manufacturing and services** sectors and indicates whether market conditions, as perceived by purchasing managers, are expanding, contracting, or stable.
- PMI is **closely watched as an indicator of business activity and helps predict a country's economic health.**
- **There are two types of PMI:** Manufacturing PMI and Services PMI, with a combined index also being used.

Science and Technology News

Kalam-250

- The recent successful **test firing of Stage-2, named Kalam-250, of the Vikram-1 space launch vehicle by Skyroot Aerospace marks a significant advancement in India's space industry.**
- **Importance:** Stage-2 is crucial in propelling the launch vehicle from the atmospheric phase to the deep vacuum of outer space, playing a pivotal role in achieving the desired trajectory.

Key points:

- **Kalam-250 is a high-strength carbon composite rocket motor using solid fuel.**
- It features a high-performance **Ethylene-Propylene-Diene terpolymers (EPDM) Thermal Protection System (TPS).**
- The stage-2 includes a carbon ablative flex nozzle and high-precision electro-mechanical actuators for thrust vector control, ensuring **precise trajectory adjustments.**
- The solid propellant for Kalam-250 was processed by **Solar Industries at their Nagpur facility.**
- The successful test firing brings Skyroot Aerospace **closer to the upcoming orbital launch of the Vikram-1 rocket.**

Vikram I Details

- Vikram I is the **first rocket in the series, featuring three solid-fuel-powered stages and a final stage equipped with Raman engines.**
- The Raman engines, powered by MMH and NTO liquid fuels, are used for final orbit adjustments.
- Vikram I is designed to lift payloads of up to 290 kg to a 500 km Sun synchronous polar orbit (SSPO) or **480 kg to a 500 km low Earth orbit (LEO) with a 45° inclination.**

Asteroid 2015 MB54

- NASA has been tracking a massive **170-foot asteroid (Asteroid 2015 MB54) that is moving towards Earth at a speed of 13,798 kilometers per hour.**
- On March 29, NASA's Jet Propulsion Laboratory predicted the passage of **four asteroids near Earth.**
- **Monitoring celestial objects is crucial to protect Earth from potential impacts and damage.**

Key points:

- NASA reassures that Asteroid 2015 MB54 poses no threat to Earth due to its relatively small stature.
- According to **NASA's criteria**, only asteroids **approaching within 4.6 million miles** and

measuring larger than approximately 150 meters are considered **potentially hazardous.**

Asteroids:

- Asteroids, also known as **minor planets**, are **rocky remnants from the early stages** of the solar system's formation around **4.6 billion years ago.**
- These space rocks are primarily located in the **main asteroid belt, a region between Mars and Jupiter, and their total count exceeds 1,351,400.**
- These celestial objects vary **greatly in size**, with the largest asteroid, **Vesta, measuring about 329 miles (530 kilometers) in diameter**, while the smallest are less than 33 feet (10 meters) across. Their shapes range from nearly spherical to irregular double-lobed peanut shapes.
- Asteroids **follow highly elliptical orbits around the Sun**, often rotating unpredictably and tumbling through space.
- Despite their abundance, the combined mass of all asteroids is less than that of **Earth's Moon.** Interestingly, many large asteroids have small moons orbiting them.

Hume AI

- Hume AI is an advanced conversational AI chatbot powered by its **empathic large language model (eLLM).**
- **New York-based startup Hume AI** launched the **first voice AI with emotional intelligence** which can generate conversations for the emotional well-being of its users.

Key points:

- Unlike traditional AI, **Hume emphasizes the tones of voice behind words to understand different emotions.**
- It can emulate tones across **23 different emotions**, including **admiration, adoration, and frustration, to generate human-like conversations.**
- The chatbot is trained on data from millions of human conversations worldwide to understand voice tonality, human reflexes, and feelings.
- **Responses are optimized in real-time based on the user's emotional state.**

Benefits and Applications:

- Hume's product is gaining recognition for its potential uses in various fields such as robotics, healthcare, and wellness.
- AI assistants powered by **Hume's eLLM could not only engage in conversations but also assist in daily tasks.**
- This technology opens up possibilities for AI assistants to understand user frustrations, offer genuine emotional support, and empathize with complaints, according to industry experts.

White Rabbit Collaboration

- **CERN, the European Organization for Nuclear Research,** has recently introduced the **White Rabbit Collaboration,** a technology developed to synchronize devices in accelerators to sub-nanosecond precision.

Key points:

- **White Rabbit (WR) is a technology created at CERN** in partnership with various institutions and companies to synchronize devices in accelerators to sub-nanosecond precision, **addressing the challenge of establishing a common time reference across a network.**
- This technology, previously requiring specialized hard-wired timing systems, now provides **sub-nanosecond synchronization accuracy using White Rabbit Switches within real-time Ethernet networks, offering greater flexibility and modularity.**
- Initially deployed in **2012,** White Rabbit's application has extended beyond particle physics into various fields.
- It achieved a significant milestone in **2020 by being incorporated into the Precision Time Protocol (PTP), an international standard governed by the Institute of Electrical and Electronics Engineers (IEEE).**
- One of White Rabbit's notable features is its **open-source nature and adherence to standards,** enabling companies and institutions to customize it for their specific needs and integrate it into their products and systems.

- **White Rabbit is utilized not only in the field of finance but also in various research infrastructures.** It is currently being evaluated for potential use in the future quantum internet.

Discovery of Ozone on Jupiter's moon

- A study conducted by an international team of scientists, with contributions from researchers in India, has resulted in the **detection of ozone on Callisto.**
- **This discovery sheds light on the moon's atmospheric composition and potential habitability.**

Implications

Ozone as Indicator of Atmospheric Stability:

- **The presence of ozone on Callisto suggests the existence of stable atmospheric conditions on the moon.**
- Ozone formation requires **specific chemical processes and stable environmental conditions,** indicating potential habitable environments.

Fundamental Ingredient for Life:

- **Oxygen, a component of ozone, is essential for the formation of complex molecules necessary for life.**
- The discovery raises questions about the habitability of Callisto and other icy moons in our solar system.

Insights into Geological and Atmospheric Processes:

- The discovery provides valuable insights into the **geological and atmospheric processes occurring on Callisto and other icy moons.**
- It enhances our understanding of the formation and evolution of Jupiter's moons.

Comparative Planetary Science:

- Comparing the chemical compositions and processes on different celestial bodies helps scientists better understand the similarities and differences between these moons and their potential habitability.

Callisto:

- Callisto, the farthest of **Jupiter's Galilean moons**, stands out as one of the solar system's most heavily cratered objects.
- Its surface is **dominated by impact craters of varying sizes**, indicating a lack of substantial geological activity.
- Composed mainly of **water ice and rocky material**, Callisto is believed to possess a **subsurface ocean, though it is suspected to be in contact with a rocky core rather than being heated by tidal forces.**

Miscellaneous News

North Atlantic Right Whale

- A recent study has highlighted that **even minor tangles in fishing gear can significantly decrease the chances of female North Atlantic right whales reproducing.**
- These whales inhabit the **cold waters of the North Atlantic Ocean** and are considered **critical for conservation due to their struggle for survival.**

Habitat and Migration Patterns

- They are **migratory, moving between feeding and calving grounds.**
- In **summer**, they feed in **cooler waters near Canada and the northeastern US**, and in **winter**, they migrate south to **warmer waters off the coasts of Florida and Georgia for breeding.**

Unique Characteristics

- They have **rough, raised patches of skin on their heads called callosities**, which are used for identification.
- Right whales are **slower swimmers**, making them more prone to ship strikes.
- Unlike most whales, they lack a dorsal fin, making them easily distinguishable.

Role in Marine Ecosystem

- Right whales feed by filtering plankton from the water, which **helps cycle nutrients and promotes healthy phytoplankton growth.**

Threats to Survival

- Entanglement in fishing gear, **particularly lobster trap lines, is a major threat.**
- Collisions with ships are also significant due to their slow speed and shallow-water preference.
- Climate change impacts on ocean temperatures and currents could affect their food sources and migration patterns.

Protection Status

- The IUCN Red List categorizes them as **"critically endangered," with fewer than 360 individuals remaining.**
- Various **international agreements and laws aim to protect them, including regulations on fishing gear and designated shipping lanes.**

USSD

- The **Department of Telecom (DoT)** has issued a directive to telecom operators regarding the deactivation of **USSD-based call forwarding services, effective from April 15, to prevent fraud and online crimes.**

Key points:

- **USSD (Unstructured Supplementary Service Data)** is a protocol used by GSM cellular telephones to communicate with service provider computers.
- It allows users to interact with various services using short codes, initiating a session between the user's phone and the service provider's system.

Reasoning and Impact:

- The directive aims to prevent fraud and enhance security for subscribers by suspending USSD-based call forwarding services.
- Telecom operators can mitigate risks associated with fraudulent activities.

Tropical Cyclone

- In a recent research paper published in the Proceedings of the **National Academy of Sciences**, a proposal was made to **modify the Saffir-Simpson (SS) wind scale**.
- The suggested modification involves **linking category 5 to peak wind speeds ranging between 252 and 309 km/hour**, with the addition of a new **category 6 for wind speeds exceeding 309 km/hour**.

Key points:

- Tropical cyclones are also called hurricanes or typhoons, depending on the region.
- A tropical cyclone is a rapidly rotating storm that begins over tropical oceans, and they can vary in speed, size, and intensity.
- Tropical cyclones are the second-most dangerous natural hazards, after earthquakes.

Saffir-Simpson (SS) wind scale

- The Saffir-Simpson Hurricane Wind Scale is a **1 to 5** rating based only on a hurricane's maximum sustained wind speed.
- This scale does not take into account **other potentially deadly hazards such as storm surge, rainfall flooding, and tornadoes**.

Closing Ceremony of International Year of Millets

- The **Food and Agriculture Organization (FAO)** recently hosted the closing ceremony of the **International Year of Millets (IYM) 2023** at its headquarters in Rome.

Key points:

- Throughout the year, the celebration highlighted **millets' nutritional benefits, their adaptability to adverse climates**, and their role in creating **sustainable market opportunities**.
- Millets are **small-grained, annual, warm-weather cereals** belonging to the grass family.
- In India, **Jowar (Sorghum), Bajra (Pearl Millet), and Ragi (Finger millet)** are the important millets cultivated.
- These crops are particularly important in **semiarid tropics due to low rainfall and**

poor soil fertility. Compared to major cereal crops, millets have higher nutrient content and are tolerant to drought and extreme weather conditions.

International Year of Camelids

- **2024 is designated by the UN as the International Year of Camelids.**

Key points:

- These animals, including **camels, llamas, alpacas, vicuñas, and guanacos**, play a crucial role in the lives of millions of families, particularly pastoralists, living in **dryland and mountainous rangeland ecosystems worldwide**.
- The Year aims to **raise awareness among the public and policymakers about the vital role of camelids in ecosystem protection, biodiversity conservation, food security, and climate change adaptation**.
- The resolution for the International Year of Camelids was proposed by **Bolivia and presented by Ecuador**, the Country Chair of the Group of Latin American and Caribbean Countries (GRULAC), at the UN General Assembly on 17 October 2017.
- **The resolution was approved upon recommendation by the FAO (Food and Agriculture Organization of the UN)**.
- The visual identity of the IYC was unveiled at a side event titled "**Towards the International Year of Camelids: perspectives and challenges**" during the FAO Conference on Sustainable Livestock Transformation in September 2023.
- **FAO officially launched the IYC 2024 on 4 December 2023, in Rome, Italy.**
- The first international event of the IYC2024 was the International Workshop on **Camelid Pastoralism, held on 5–10 January 2024, in Sadri, Rajasthan, India**, hosted by Lokhit Pashu-Palak Sansthan (LPPS), the League for Pastoral Peoples (LPP), and the Godwar camel pastoralist milk producers.

Katchatheevu Island Dispute

- The controversy surrounding **Katchatheevu Island's transfer to Sri Lanka has resurfaced** with Prime Minister Narendra Modi's recent remarks on social media.

Background:

- The historical background of Katchatheevu, a **small, uninhabited island located in the Palk Strait, between India and Sri Lanka**, adds complexity to its political significance, particularly in Tamil Nadu.

About:

- **Katchatheevu, a 285-acre island**, has been a point of contention since the **early medieval period**, transitioning through control by various entities, including the **Jaffna kingdom, the Ramnad zamindari**, and eventually becoming part of the Madras Presidency during British rule.
- Disputes over its ownership persisted into the 20th century, with both India and Sri Lanka laying claim to it.
- In **1974, then-Prime Minister Indira Gandhi, as part of the Indo-Sri Lankan Maritime agreement, relinquished India's claim over Katchatheevu to Sri Lanka.**
- The decision, perceived by many as **unilateral and without consulting Tamil Nadu**, sparked protests.
- **Despite provisions allowing Indian fishermen access to the island, issues regarding fishing rights remained ambiguous, leading to ongoing tensions between Indian and Sri Lankan fishermen.**

Bridge fuel

- Natural gas has been termed a **'bridge fuel' for nations seeking to move away from coal and oil dependence towards renewables and electrification.**
- It is considered cleaner than other fossil fuels, especially coal, as it emits 50% less CO₂ into the atmosphere.

Key points:

- The **Intergovernmental Panel on Climate Change has stressed the urgency of phasing out coal over reducing gas usage** for the 1.5°C pathway, which is challenging for coal-dependent Global South countries.
- The aim of using a **bridge fuel is to replace current fossil fuel-dependent energy sources** as we move towards a cleaner, more

renewable energy economy without greenhouse gas emissions.

- The duration of this transition and the choice of energy source for the bridge are subjects of debate.
- Natural gas is a bridge fuel **because it produces fewer greenhouse gases during combustion. However, other factors to consider for a bridge fuel include its impact on national energy independence and its ability to reduce pollution-related costs.**

Read more about the Natural Gas and its properties.

Leap Second

- The **Earth's slowing rotation may lead to the first-ever negative leap second in Coordinated Universal Time (UTC), according to a recent study published in Nature.**
- This phenomenon is attributed to **climate change**, which is causing the melting of ice caps and rising sea levels, **resulting in a slower Earth rotation.**

Key points:

- **Leap seconds are added to UTC to keep it synchronized with Earth's rotational speed over millions of years.**
- If Earth continues to rotate slower, a **UTC minute might need to be 61 seconds long for the planet to catch up.**
- Initially scheduled for **2026, the need for a leap second has been postponed to 2029**, marking the first negative leap second.
- This adjustment **poses a challenge, as time meteorologists are uncertain how to cope with a missing second**, as stated by Felicitas Arias, former director of the Time Department at the International Bureau of Weights and Measures.

About:

- **Leap seconds have been used since 1972** to align official time with atomic clocks due to Earth's inconsistent rotation speed.
- However, a panel of scientists and government representatives **decided in 2022 to end leap**

seconds by 2035 due to complications in computing caused by leap seconds.

- The exact timing of a negative leap second is uncertain, contingent upon **Earth's current rotation rate.**
- The **International Earth Rotation and Reference Systems Service** will determine when a leap second will be introduced based on the **Earth's ongoing rotation speed.**
- Astrogeophysicist Christian Bizouard noted that the speculation regarding the need for a negative leap second hinges on the Earth's rotation continuing at its current rate.

VVPAT

- In recent developments, the **Supreme Court has announced its decision to consider a series of petitions aimed at directing the Election Commission of India to implement mandatory cross-verification procedures for Electronic Voting Machines (EVMs) prior to the upcoming Lok Sabha elections.**
- This process entails the **thorough counting of all Voter Verifiable Paper Audit Trail (VVPAT) slips alongside the electronic count.**

About:

- Introduced during the 2014 Lok Sabha elections, the **Voter Verifiable Paper Audit Trail (VVPAT) system** provides an additional layer of transparency and verification to the electoral process.
- Linked directly to the **EVM, the VVPAT produces a paper slip visible to the voter, displaying the selected party's name and symbol.**
- This allows voters **to confirm the accuracy of their vote, with a transparent window facilitating visual confirmation of the printed slip.**
- The securely stored paper slips serve as tangible evidence in the event of electoral disputes, ensuring the integrity of the voting process.

Fish otolith ornaments

- Ornamental jewelry made from **fish otoliths has recently entered the market, created by a group of enthusiastic fisherwomen in Vizhinjam.**

- These women were trained by scientists from the **Central Marine Fisheries Research Institute (CMFRI).**

Otoliths:

- Otoliths are **hard, calcium carbonate structures located behind the brain of bony fish.**
- They are **small, feather-like flakes** that can be fashioned into **jewelry.**
- Among fish, halibut otoliths are larger, making them more commonly used for this purpose.
- Otoliths have been historically regarded as **lucky stones by the Romans and Egyptians and are still utilized in countries like Brazil.**
- They have been worn as protective amulets and fashioned into jewelry.
- Otoliths can be stored in test tubes or vials, either dry or in a clarifying liquid.
- Another method is to affix them with transparent nail varnish to a slide or with two-sided sticky tape to a sheet of acetate.

Sannati Bhuddist site

- Discovered by the Archaeological Survey of India (ASI) in the 1990s, the Sannati Buddhist site, located near **Kanaganahalli in Karnataka's Kalaburagi district, underwent significant restoration in 2022.**

Key points:

- **Situated along the banks of the Bhima river, the site is also home to the revered Chandrala Parameshwari Temple, adding to its historical and cultural importance.**
- Evidence suggests that the **site saw significant development across three distinct phases - during the Maurya, Early Satavahana, and Later Satavahana periods, spanning from the 3rd century B.C. to the 3rd century A.D.**
- Notable findings include an inscription in the **elegant Prakrit language, inscribed using the Brahmi script.**
- Additionally, a stone sculpture portraying **Mauryan Emperor Ashoka, accompanied by his retinue, stands as a poignant testament to a bygone era. The inscription "Raya Asoko" unequivocally identifies the noble figure depicted.**

- The archaeological excavation has **unearthed approximately 60 dome slabs adorned with exquisite sculptural motifs.**
- These artifacts depict a **rich tapestry of narratives, including timeless Jataka stories,** episodes from the life of the **Buddha,** portraits of **Shatavahana monarchs,** and **representations of esteemed Buddhist missionaries dispatched by Emperor Ashoka.**

Educational Legacy:

- Adjacent to the Sannati site lies the ancient Nagavi Ghatikasthan, renowned as the Takshashila of the South.
- This esteemed educational center flourished during the illustrious reigns of the Rashtrakuta and Kalyana Chalukya dynasties, serving as a beacon of knowledge and enlightenment between the 10th and 12th centuries.

Pelagia noctiluca

- **Venomous jellyfish blooms** were recently observed along the Visakhapatnam coast in Andhra Pradesh.

Key points:

- **Pelagia noctiluca,** also known as the mauve stinger, **purple-striped jellyfish, or oceanic jelly, derives its name from Latin.**
- "Pelagia" means **"of the sea," "nocti" means "night," and "luca" means "light."**
- In German, it translates to "night light," referring to its reddish color and bioluminescence.
- Pelagia noctiluca is venomous and can cause varying degrees of illness such as diarrhoea, extreme pain, vomiting, and anaphylactic shock. Scars from its stings can remain for years.
- In **January 2024, a Pelagia noctiluca bloom was spotted in Phuket, Thailand,** prompting a safety warning. Previously, a bloom had damaged penned salmon at a fish farm in Ireland.

Kodaikanal Solar Observatory (KSO)

- The Indian Institute of Astrophysics (IIA) recently celebrated the **125th anniversary of the Kodaikanal Solar Observatory (KSO) on April 1st.**

Key points:

- Established in **1899 in Kodaikanal, Tamil Nadu,** the KSO stands as a testament to **India's commitment to solar studies and its impact on global weather patterns.**
- **The idea for such an observatory emerged in the late 19th century,** spurred by the Great Drought of 1875-1877, which underscored the need for understanding **solar dynamics to interpret weather phenomena accurately.**
- Recognizing India's geographical importance, the **Solar Physics Observatory was approved in August 1893,** with the foundation stone laid by Lord Wenlock in 1895. Formal observations commenced on March 14, 1901.

About:

- Positioned amidst the **Palani Hills of Tamil Nadu,** the KSO was strategically chosen for its **optimal atmospheric conditions and high-altitude, dust-free environment, facilitating precise solar observations.**
- Over time, the observatory's instrument arsenal evolved, from **early focus on sunspots and solar radiation to the incorporation of advanced tools like the H-alpha telescope and the White Light Active Region Monitor (WARM).**

Discoveries:

- Among its notable discoveries, the **KSO identified the Evershed Effect,** shedding light on sunspot dynamics.
- Moreover, it expanded its research scope beyond solar studies to encompass cosmic rays, radio astronomy, ionospheric physics, and stellar phenomena.

IIA

- The **Indian Institute of Astrophysics,** established in 1971 and headquartered in Bengaluru, oversees the Kodaikanal Solar Observatory.
- As an autonomous research institute fully funded by the **Department of Science and Technology,** it spearheads groundbreaking research in astronomy, astrophysics, and related disciplines, further enhancing India's stature in the realm of space science.

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