

Factly Monthly

Compilation

2025

**For UPSC CSE Prelims
Exam**

October 2025

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Interstellar Mapping and Acceleration Probe (IMAP)a

News: Recently, NASA launched Interstellar Mapping and Acceleration Probe (IMAP) with two co-launched missions on a Falcon 9 to study space weather and its impacts.

About Interstellar Mapping and Acceleration Probe (IMAP)



Figure 1. Source – NASA

- It is a pioneering **heliophysics mission** launched to **investigate the boundaries of the solar system** and the energetic processes shaping our local **space environment**.

- **Launched by :** NASA

- **Goal:** Its goal is to map the heliosphere's boundary, trace energetic particles, and

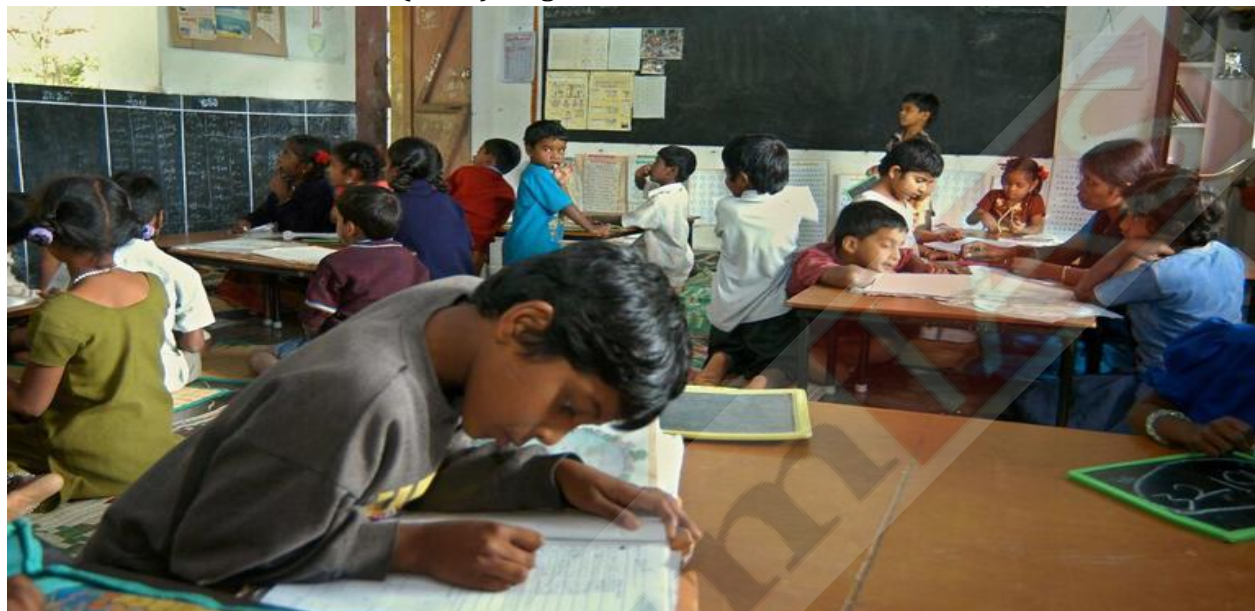
improve space weather forecasting.

- **Positioned at:** IMAP is **stationed at the Sun–Earth Lagrange point L1**, about one million miles from Earth toward the Sun.
- **Key features**
 - **Payload:** Ten instruments chart particles from the Sun, heliosphere boundary, and interstellar space.
 - **Real-time** solar wind and energetic particle observations with ~30-minute radiation warnings near Earth.
 - **IMAP Active Link for Real-Time** frequently broadcasts reliable data for improved forecasting.
 - **Takes 108 days to reach L1** and provides an unobstructed view of solar activity.
 - **Maps the heliosphere in greater detail than before**, across a wider energy range and more frequently than **Interstellar Boundary Explorer (IBEX)**.
 - It will **support Artemis II in 2026** and strengthens **long-term human exploration plans for Mars**.

Model Youth Gram Sabha (MYGS)

News: For the first time, India is preparing to bring the concept of Gram Sabhas into classrooms through the Model Youth Gram Sabha (MYGS) initiative.

About Model Youth Gram Sabha (MYGS) Programme



Source: Livemint

About	<ul style="list-style-type: none">● It is a school-based programme to bring the democratic process of Gram Sabhas into classrooms across India.● It is inspired by the concept of the Model United Nations (MUN).● It is the first structured attempt to directly involve children in governance processes at the grassroots level.
Launched by	<ul style="list-style-type: none">● It has been launched by the Ministry of Panchayati Raj.● The curriculum and modules for the sessions are being designed by the Ministry of Panchayati Raj, in collaboration with the Ministries of Education and Tribal Affairs.
Aim	To generate awareness about grassroots democracy in school children at an early age

Objective	<ul style="list-style-type: none">● It seeks to:<ul style="list-style-type: none">○ Help students understand the role and significance of Gram Sabhas in local governance.○ Shape a generation that perceives local government as a meaningful space for public service.○ Nurture leadership skills in young children, providing them with a strong ethical foundation that goes beyond classroom learning.○ Revive student and youth interest in Gram Sabhas, which in practice often witness low levels of participation.
Implementation	<ul style="list-style-type: none">● The programme will begin in 1,100-1,200 schools, including Jawahar Navodaya Vidyalayas, Eklavya Model Residential Schools in tribal regions, and government schools in rural areas of Maharashtra and Karnataka.● The launch will be phased:<ul style="list-style-type: none">○ Phase 1: Around 620 Jawahar Navodaya Vidyalayas and 200 Eklavya Model Residential Schools.○ Phase 2: More government schools, particularly in Maharashtra and Karnataka, will be included.

Features of the programme

- In identified schools, students from **classes 9-12** will take on roles such as **sarpanch, ward members, village secretary, Anganwadi worker, auxiliary nurse midwife (ANM), and junior engineers**.
- They will conduct **mock Gram Sabha sessions**, where they will:
 - Debate and discuss local governance issues.
 - Prepare **budgets and development plans** for villages.
 - Pass mock resolutions on matters affecting local life.
- The exercise **will simulate the functioning of real Gram Sabhas**, which are **local assemblies of all adults in a rural area**.

- Training will be imparted to teachers through **National Level Master Trainers (NLMTs)** to conduct simulations effectively.
- After mock Gram Sabha sessions, there will be **regional and national-level competitions** for JNVs and EMRSs.
- Winning schools will receive **prize money**. All participating schools will receive **certificates**, and each school will get **₹20,000 in support** from the Ministry to organize the sessions.

Sahyog portal

News: The Karnataka High Court has recently dismissed X Corp's petition against the Union government's Sahyog portal.

About Sahyog Portal



Source: sahyog.mha.gov.in

- It is a **centralised platform** which brings together **authorised agencies, such as the police, and intermediaries on a unified platform to facilitate the removal or disabling of access** to any information, data or communication link being used to commit an unlawful act.
- **Launched by:** Ministry of Home Affairs (MHA)
- **Maintained by:** It is maintained by the **Indian Cyber Crime Coordination Centre (I4C)**
- **Developed under:** **Section 79(3)(b)** of the IT Act, 2000
- **Mission:** To create an **effective framework and ecosystem for the prevention, detection, investigation, and prosecution of Cybercrime** in the country.
- **Aim:** It aims to:
 - Facilitate **real-time coordination** between government agencies and intermediaries.
 - Strengthen **law enforcement efforts** against unlawful online content.
 - Bring **greater accountability** in how notices under Section 79(3)(b) are served.
- **Function:** It **issues takedown notices** to internet intermediaries such as telecom operators, internet service providers (ISPs), social media platforms, and web-hosting services.

- **Purpose:** Its primary purpose is to enforce **Section 79(3)(b) of the Information Technology Act, 2000**, which outlines the conditions under which intermediaries enjoy “**safe harbour**” protection from liability for user-generated content.
 - However, **this immunity is conditional:** intermediaries must act promptly to **remove or disable access** to unlawful information once they receive “actual knowledge” from a government authority.
- **Operational data:** By April 2025, **a total of 65 online intermediaries, along with nodal officers from all states, union territories, and seven central agencies**, had been integrated into the Sahyog portal.
 - Between its launch in **October 2024 and April 2025**, **the government issued 130 content takedown notices** through the portal to platforms including Google, YouTube, Amazon, Microsoft, and others.

International Civil Aviation Organization (ICAO)

News: India was re-elected to Part II of the ICAO Council on 27 September 2025 during the 42nd Assembly in Montreal.

About International Civil Aviation Organization (ICAO)



Source – ICAO

- It is an **inter-governmental specialized agency** associated with **United Nation** .

- **Established:** It was established in **1947** by the **Convention on International Civil Aviation (1944)** known as **Chicago Convention**.
- **Headquarters:** It is headquartered in **Montreal, Canada**.
- **Members:** It has **193** members.
- **Function:** It provides expert **technical and diplomatic guidance** to build **safe, secure, sustainable, harmonized, and gender-inclusive international civil aviation**, and supports **standards, policies, and regulation**.
- **Working mechanism**
 - **ICAO Assembly:**
 - It is a **sovereign body of all 193 member States**.
 - It meets **every three years**,
 - It reviews the work of ICAO, sets policy for the coming years, and votes a triennial budget.
 - **ICAO Council:** ICAO Assembly elects a **36-member Council** for a **three-year term**.
 - It gives continuing direction to ICAO's work and adopts Standards and Recommended Practices (SARPs) as Annexes to the Chicago Convention.
 - **Secretariat:** It is headed by a **Secretary General**.
 - **Standards:** ICAO Standards **do not prevent States from adopting more stringent national standards** than those in an Annex.

ICAO and India

- **India** is a **founding member** of ICAO since **1944**.
- It has been **re-elected** to **Part II of the ICAO Council** (States contributing most to international air navigation facilities) for the **2025–2028 term**.

India-Bhutan Railway Link

News: Recently, the Government of India announced two major cross-border railway projects to link Bhutan with India's northeastern and eastern regions.

About the India-Bhutan Railway Link



Source: IndiaToday

- **Kokrajhar–Gelephu Line**
 - The Kokrajhar-Gelephu line will traverse Assam's Kokrajhar and Chirang districts into Bhutan's southern Sarpang region.
 - **Total Length: 69 km** (connecting Assam in India with Gelephu in Bhutan). The Gelephu line will cover 2.39 km on the Bhutanese side and 66.66 km on the Indian side.
 - **Features:** Six stations, two important bridges, 29 major bridges, 65 minor bridges, one flyover, two goodsheds and 39 underpasses.
 - **Timeline:** Estimated completion in **four years**.
- **Banarhat–Samtse Line**
 - The Banarhat-Samtse stretch links West Bengal's Jalpaiguri district to Bhutan's Samtse.
 - **Total Length: 20 km** (connecting West Bengal in India with Samtse in Bhutan). Samtse line will cover 2.13 km of the Bhutanese side and 17.42 km of the Indian side.
 - **Features:** Two stations, one major bridge, 24 minor bridges, one overpass, and 37 underpasses.
 - **Timeline:** Completion targeted in **three years**.
- Both railway lines will be **fully electrified**, equipped with **advanced signalling systems**, and **capable of running modern trains** such as the Vande Bharat Express.

Significance for India of the Cross-Border Rail Projects with Bhutan

- **Strategic and Geopolitical Interests**

- The projects **reinforce India's primacy in Bhutan's development partnership**, ensuring that **no third-country is involved in critical infrastructure** near India's sensitive northeastern borders.
- By anchoring **Bhutan's Gelephu Mindfulness City and Samtse industrial hub into Indian rail networks**, India secures long-term influence over Bhutan's economic orientation.

- **Economic and Trade Benefits**

- India already accounts for **~80% of Bhutan's total trade**; rail connectivity reduces transport costs and boosts bilateral commerce.
- It will also **facilitate cost-effective import of Bhutanese minerals** (dolomite, ferro-silicon, quartzite, stone chips) vital for Indian industries.
- Creates **new opportunities for Indian exports, services, and investment** in Bhutan's growing urban and industrial hubs.

- **Regional Growth and Integration: Assam and North Bengal stand to benefit** from spillover economic activity, better logistics, and expanded employment opportunities.

- **Diplomatic and Developmental Engagement**

- These projects are a **direct outcome of the 2024 India-Bhutan MoU** and form part of India's **₹10,000 crore commitment** under Bhutan's **13th Five-Year Plan (2024-29)**.
- India's **training of Bhutanese personnel in railway operations** fosters **institutional interdependence** and long-term goodwill.






Promotion of Research & Innovation in Pharma-MedTech Sector (PRIP) Scheme

News: The Department of Pharmaceuticals has invited applications for research and innovation projects under its Promotion of Research and Innovation in Pharma-MedTech Sector (PRIP) scheme.

About Promotion of Research & Innovation in Pharma-MedTech Sector (PRIP) Scheme

Promotion of Research & Innovation in Pharma MedTech Sector Scheme

Benefits:

-  | Development of Research Infrastructure
-  | Promote Industry-Academia Linkages
-  | Help India's Pharma Industry to Leapfrog
-  | Help in Launching of Commercially Viable Products
-  | Help in the Development of Solutions for Primary Area of Health Concern

Source: PIB

- It is an **initiative to transform the Indian Pharma MedTech sector into a globally competitive, innovation-driven sector** by strengthening the research infrastructure in the country.
- **Launched by:** Department of Pharmaceuticals, Ministry of Chemicals and Fertilizers.
- **Aim:** To promote industry-academia linkage for R & D in priority areas, inculcate a culture of quality research, and nurture pool of scientists.
- **Implementation:** An Empowered Committee under the chairmanship of the CEO, NITI Aayog, with Secretary level representation of Pharmaceuticals, Health, ICMR, DBT, CSIR, AYUSH, and DST will provide guidance for the implementation of this Scheme.
- **Features of the scheme**
 - **Industry-Academia Collaboration:** It encourages **industry and startups to collaborate with reputed Government, academic, and research institutions** ("Academia") for both Early Stage and later-stage projects.
 - **Component of the scheme:** The Scheme is **applicable for research and innovation for both human and animal health** and **has two components:**
 - **Component A:** Strengthening the research infrastructure by establishment of 7 CoEs at NIPERs-These CoEs would be set up in pre identified areas with a financial outlay of Rs 700 Crores.

- **Component B:** Promoting research in pharmaceutical sector by encouraging research in six priority areas wherein financial assistance will be provided for the Industries, MSME, SME, Startups working with government institutes and for both in-house and academic research.
- **Key focus areas of the scheme:** The six focus areas of the scheme are **new chemical entities**, including biological and phytopharmaceuticals; **complex generics and biosimilars**, **precision medicines** such as gene therapy and stem cells; **medical devices using artificial intelligence and machine learning**; **orphan drugs and anti-microbial resistance**.
- **Support for innovation from idea to market:** Early-stage projects with costs up to ₹9 crore can receive assistance of up to ₹5 crore, while later-stage projects with costs up to ₹285 crore are eligible for assistance of up to ₹100 crore.

National Pulses Mission

News: The Union Cabinet has recently approved the National Pulses Mission.

About National Pulses Mission



Figure 2. Source: Ministry of finance

- It promotes sustainable, climate-resilient, and soil health-friendly agricultural practices.

- It aims **to generate rural employment** through production and processing activities in both farming and post-harvest processing sectors.
- The Mission **will converge with the Soil Health Programme, Sub-Mission on Agricultural Mechanization, balanced fertilizer use, and plant protection initiatives**, supported by ICAR, KVKs, and State Departments.
- The Mission will also establish a **mechanism to monitor global pulse prices** to safeguard farmer confidence and prevent distress sales.
- **Features of the Mission**
 - A **cluster-based approach** will be adopted to tailor interventions according to the needs of each cluster to ensure effective resource allocation and geographic diversification.
 - **Assured procurement** of **Tur, Urad, and Masoor** will be carried out under the **Price Support Scheme (PSS)** of PM-AASHA, with **NAFED and NCCF undertaking 100% procurement** in participating states for the **next four years** from registered farmers.
 - The mission will adopt a **comprehensive strategy**, covering **research, seed systems, area expansion, procurement, and price stability**.
 - Research will focus on developing **high-yielding, pest-resistant, and climate-resilient varieties of pulses**, with multi-location trials across major pulse-growing states to ensure regional suitability.
 - States will prepare **five-year rolling seed production plans** and **ICAR** will supervise **breeder seed production**.
 - **Foundation and certified seed production** will be carried out by **state and central agencies**, and monitored through the **SATHI (Seed Authentication, Traceability & Holistic Inventory) portal**.
 - A total of **126 lakh quintals of certified seeds** will be distributed to farmers, covering **370 lakh hectares by 2030-31**.
 - The Mission will **expand** the area under pulses to **310 lakh hectares** by 2030-31, targeting **rice fallows** and diversifiable lands.
 - **88 lakh seed kits** will be distributed free of cost to farmers to promote intercropping and diversification
 - **Structured training programmes** will be conducted for farmers and seed growers.

- **1,000 post-harvest processing units** will be set up to reduce losses and improve value addition, with a **maximum subsidy of ₹25 lakh** available for establishing processing and packaging units.

Simplified and Automated Research Amplification and Learning (SARAL)

News: Anusandhan National Research Foundation (ANRF) has developed SARAL (Simplified and Automated Research Amplification and Learning) tool.

About SARAL



Figure 3. Source – BL

- SARAL stands for **Simplified and Automated Research Amplification and Learning**.
- It is a **tool** which helps to **generate lay person summaries of complex scientific research**.
- **Purpose:** To make **complex scientific research accessible** to the general public.
- **Objective:** To **translate** complex research into **understandable formats**, fostering greater public engagement with science.
- **Developed by:** It is being developed by the **IIIT Hyderabad** under guidance of the Anusandhan National Research Foundation (ANRF).
- It uses **Artificial Intelligence (AI)** to extract information from research publications and generates **layperson-friendly outputs** such as: Videos, Podcasts, Posters and presentations.
- It is part of ANRF's initiative to create an **AI Science and Engineering Open India Stack** that would accelerate research and innovation.
- **Vision Alignment:** It supports ANRF's broader focus on **harnessing deep science and engineering, building deep-tech products and start-ups, and enabling innovation in critical fields** such as drug and chemical discovery, aerospace, climate, weather, and advanced materials.

About Anusandhan National Research Foundation (ANRF)

- The Anusandhan National Research Foundation (ANRF) has been established by **Anusandhan National Research Foundation (ANRF) 2023 Act**.
- **Aim:** To seed, grow and promote **research and development (R&D)** and foster a culture of research and innovation throughout India's **universities**, colleges, research institutions, and R&D laboratories.

- It is envisaged as a **single-window clearance mechanism** for funding research and development for universities and academic institutions.
- It acts as an apex body to **provide high-level strategic direction of scientific research in the country** as per recommendations of the National Education Policy (NEP).

Lecanemab Drug

News: Recently, Australia's Therapeutic Goods Administration approved lecanemab (Leqembi) for early Alzheimer's disease.

About Lecanemab Drug



Figure 4. Source – STAT News

- It is a **disease-modifying immunotherapy** for early Alzheimer's disease.
- **Aim:** It aims to **address underlying disease processes** rather than only **relieve symptoms**.
- It may **slow progression** in some people with an early diagnosis.
- It is **not a cure** and **does not reverse** existing symptoms.
- It will **not benefit dementia** caused by other conditions or Alzheimer's that has progressed beyond early stages.
- **Working Mechanism**
 - Lecanemab is a monoclonal antibody produced in a lab that targets **amyloid-beta**, including its soluble protofibrils—the **protein build-ups that are a key sign of Alzheimer's disease**.
 - When lecanemab attaches to these proteins, it **acts like a marker that tells the body's immune cells to find and clear them**.
 - By helping remove this amyloid build-up, the **drug aims to limit ongoing damage to brain cells** and slow decline in the early stages of Alzheimer's.
- **Issues with Lecanemab Drug**
 - **Accessibility:** It costs about A\$40,000 per year, making access difficult for many.

- **Side-effects:** Reported risks include **brain swelling and small brain bleeds**, with symptoms such as headaches, dizziness, blurred vision, and balance problems in some.
- **Other Alternative Drugs: Donanemab** works in a similar way.

About Dementia

- **Dementia** is a **condition** that leads to **progressive memory or thinking problems** and is now the **most common cause of death** in **Australia**.
- **Causes:** There are **many causes** of dementia, but **Alzheimer's disease** accounts for around **60–80%** of all cases.

United Nations Troop Contributing Countries' (UNTCC) Chiefs Conclave 2025

News: The Indian Army will host the United Nations Troop Contributing Countries' (UNTCC) Chiefs Conclave in New Delhi from October 14–16, 2025.

About United Nations Troop Contributing Countries' (UNTCC) Chiefs Conclave 2025



Figure 5. Source – PIB

- It is a **unique forum** where the collective experience, wisdom, and commitment of militaries and nations will converge to **deliberate the shared responsibility** of the international community towards **maintenance of peace under the UN Charter**.
- **Organised at:** It will take place in **New Delhi**.
- **Aim:** It aims to **reinforce collective commitment to global peace and security**.
- **Representatives:**
 - Chiefs and **representatives from over 30 countries**.
 - **Pakistan and China have not been invited**
- **Focus:**
 - **Strengthening peacekeeping cooperation** through enhanced dialogue, interoperability and exchange of best practices.

- **Leveraging indigenous technology and Atmanirbhar innovations** to make peacekeeping missions more resilient, cost-effective and future-ready.
- **Championing inclusivity and equity** by advocating for a greater voice for troop contributing countries in UN decision-making structures.
- **Demonstrate India as a collaborative and a trusted partner** to build capacities and capabilities towards shared responsibility for maintaining international peace.
- **Key features**
 - **Plenary sessions and discussions** on the effectiveness of UN peacekeeping and building sustainable peace in today's complex operational environments.
 - **Leverage technology** for more responsive and effective peace-keeping.
 - **Special spouse programmes**, to build military resilience through family engagement.

Amazon's 'Flying Rivers'

News: Scientists warn that Amazon's "flying rivers" are weakening with tree loss, raising drought risks for regions that depend on this rainfall-driven moisture transport.

About Amazon's 'Flying Rivers'

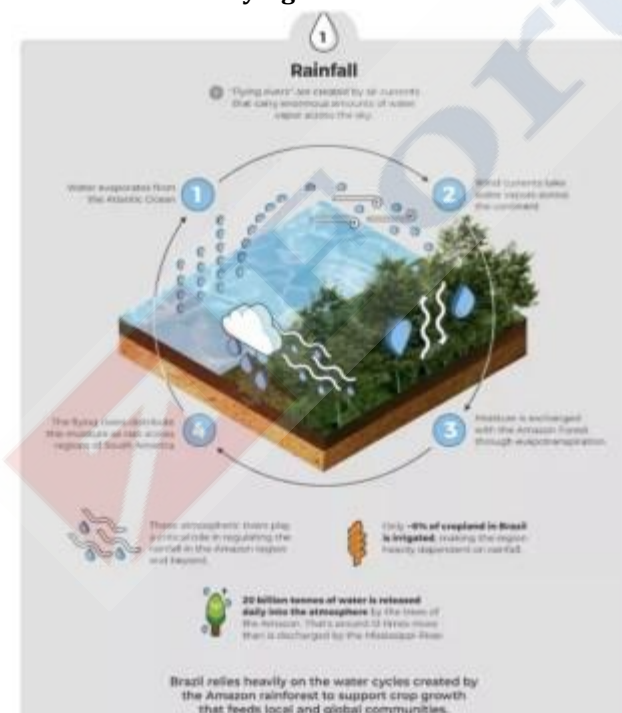


Figure 6. Source – Mongabay

- "Flying rivers" are **vast streams of water vapour** generated by the **rainforest** and **Atlantic evaporation** that **flow across the Amazon basin**.
- This natural phenomenon **spans eight Latin American countries** and largely stems from the **transpiration of the Amazon** and the **evaporation of the Atlantic Ocean**.
- **Mechanism:**
 - Flying rivers are **air currents** that bring **water vapour from Amazonia** in the **equatorial zone** of Northern South America, **down as far south as Northern Argentina**.

- The humidity carried by these “airborne rivers” is responsible for **much of the rain** that falls in the **Centre-West, Southeast and South of Brazil**.
- When coming into contact with **meteorological conditions** such as a **cold front**, this humidity can be **transformed into rain**.
- **Issue: Weakening flying rivers** threaten **regional water security, agriculture, wildlife, Indigenous livelihoods, and weather stability**.
- **Solutions:** Need to include **zero deforestation, stopping degradation and fires, restoration/reforestation** of deforested areas, **supporting Indigenous land rights, new conservation categories to protect flying rivers** (atmospheric flows), and **basin-wide cooperation**.
- **Importance of Amazon’s ‘flying rivers’**
 - **Sustaining water cycle:** They **move Atlantic moisture across the basin**, sustaining **Latin America’s water cycle and water availability**.
 - **Food Security:** Rain delivered by these aerial rivers **irrigates crops over vast areas**, including **Brazilian regions where most cropland is not irrigated**.
 - **Livelihoods:** **Indigenous ecological calendars** for **planting, fishing, and hunting** depend on **predictable rains** from flying rivers.
 - **Ecosystems Conservation:** Moisture carried to the **Andean highlands** sustains **sensitive ecosystems** and **protected areas** such as **Manu National Park**.
 - **Regional Climate:** Acting as a rainforest “**pump**,” flying rivers **stabilize rainfall patterns** and **help limit prolonged droughts**.

NATO Pipeline System (NPS)

News: Poland has announced that it will join NATO Pipeline System (NPS) amid rising tensions with Russia.

About NATO Pipeline System (NPS)



Figure 7. Source – NATO

- **Purpose:** The NPS is designed to **ensure** that **NATO’s requirements for petroleum products** and their distribution can be met **at all times**.

- **Origin:** It was **set up during** the **Cold War**.
- **Scale:** In total, it is approximately **10,000 kilometres** long.
- **Coverage:** It runs through **12 NATO countries** and It has a **storage capacity** of **4.1 million cubic metres**.
- It links together **storage depots, military air bases, civil airports, pumping stations, truck and rail loading stations, refineries** and **entry/discharge points**.
- **Funding:** This system are funded through the **NATO Security Investment Programme (NSIP)**.
- **Control:** The networks are **controlled by national organisations**, with the **exception of the Central Europe Pipeline System (CEPS)**, which is a multinational system managed by the CEPS Programme Office under the aegis of the **NATO Support and Procurement Agency**.
- **Structure**
 - **Oversight:** The **Petroleum Committee** (senior advisory on petroleum/consumer logistics) oversees NPS and **reports to the Logistics Committee** on fuels, lubricants, equipment, the NPS and other petroleum installations.
 - **Components:** **Ten systems** in total — **eight national pipeline systems** and **two multinational systems**.
 - **Use Policy:**
 - **Military primacy:** Facilities are used **primarily for military purposes**.
 - **Commercial use:** **Spare capacity** may be used for **commercial traffic, only if** it does not compromise military primacy.

PM-SETU Scheme

News: On October 4, the Prime Minister launched PM-SETU, a centrally sponsored scheme to upgrade 1,000 Government ITIs.

About PM-SETU Scheme



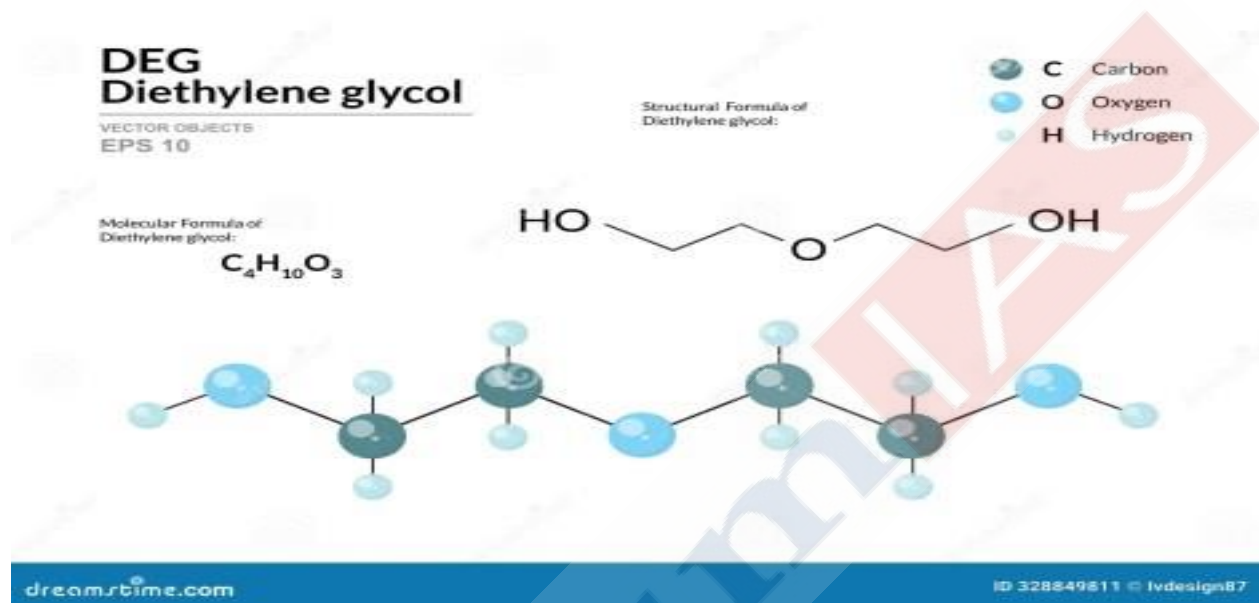
Source – FE

- **Full Form:** Pradhan Mantri Skilling and Employability Transformation through Upgraded ITIs.
- It **modernizes government ITIs through a hub-and-spoke model** to align skilling with market demand.
- **Type of Scheme:** Centrally sponsored scheme (government-owned but industry-managed through Anchor Industry Partners)
- **Finance:** Total investment of **Rs. 60,000 crore** with global co-financing support from the **World Bank and Asian Development Bank**.
- **Aim:** To deliver outcome-based skilling, strengthen employability, and connect youth with global skill demands.
- **First phase** focuses on **ITIs in Patna and Darbhanga**.
- **Key Features**
 - Under PM-SETU, 1,000 Government ITIs will be modernised **using a hub-and-spoke model**.
 - The network will **include 200 hub ITIs and 800 spoke ITIs** to cover a wide geographic area.
 - Hub ITIs will host innovation centres, training for trainers, production units, and dedicated placement services to support students.
 - Spoke ITIs will improve access by bringing quality training to regions that are farther from the hubs.
 - **Anchor Industry Partners** will manage these clusters so that training remains aligned with market demand and leads to better employment outcomes.
- **Significance:** It will redefine the ITI ecosystem, integrate education with the job market, ensure hands-on training, and open new opportunities across sectors as workshops of Aatmanirbhar Bharat.

Diethylene Glycol (DEG)/Ethylene Glycol (EG) and Leptospirosis

News: The Union Health Ministry recently confirmed that cough syrups linked to the recent deaths of children in Madhya Pradesh and Rajasthan did not contain contaminants.

About Diethylene Glycol (DEG)

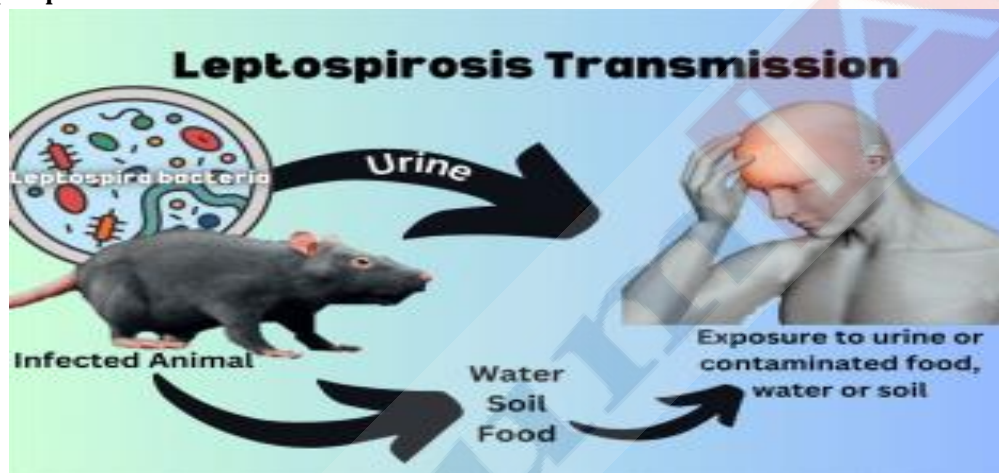


Source: dreamstime.com

- It is an **organic chemical** that is mainly used as a **chemical intermediate**.
- **Appearance:** It is a **clear, colourless, odourless and stable oily liquid**.
- **Group:** It belongs to the **ether and alcohol group**.
- **Chemical Formula:** $C_4H_{10}O_3$
- **Production Methods:** Diethylene glycol is **produced commercially** as a **by-product of ethylene glycol production**.
 - It can also be produced directly through a **reaction between ethylene glycol and ethylene oxide**.
- **Characteristics:** It is slightly **viscous, noncorrosive and nonvolatile**.
 - Diethylene glycol is **miscible with water, ethers, lower aliphatic alcohols, aldehydes and ketones**.
 - It is **partially soluble in benzene, carbon tetrachloride, monobenzene, orthodichlorobenzene and toluene**.
 - It **dissolves many dyes, resins, oils, nitrocellulose** and many organic substances.

- **Uses:** It is used in **textile lubricants**, cutting oils, dry cleaning soap, printing inks, steam-set inks, and nongrain wood stains.
 - **Solvent:** In the **textile industry** diethylene glycol is used as a conditioning agent for wool, rayon, and cotton. As a solvent for dyes it makes a valuable assistant in dyeing and printing.
 - **Humectant:** The high hygroscopicity of diethylene glycol makes it an efficient **softening agent** for tobacco, paper, synthetic sponges, glues and casein.
 - Diethylene glycol is **especially useful in the dehydration of natural gas**.

About Leptospirosis



Source: mfsa.govmu.org

About	<ul style="list-style-type: none">● Leptospirosis is an infectious bacterial disease caused by <i>Leptospira</i> species.● It affects both humans and animals (a zoonotic disease).● It is common in tropical and subtropical regions, especially during rainy and flood seasons.
Caused by	Leptospira interrogans , a spiral-shaped bacterium.

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Mode of Transmission	<ul style="list-style-type: none"> ● It spread through water, soil, or food contaminated with urine of infected animals (rats, cattle, dogs, pigs, etc.). ● Infection occurs when the bacteria enter the body through cuts or abrasions on the skin, mucous membranes (eyes, mouth, nose) and drinking or swimming in contaminated water.
Incubation Period	Usually 2 to 30 days , most commonly around 7-14 days .
Symptoms	<ul style="list-style-type: none"> ● In mild cases: High fever, chills, Headache and severe muscle pain (especially calf muscles), Nausea, vomiting, and diarrhoea, Red eyes (conjunctival suffusion) and Skin rash. ● In severe cases (Weil's disease): Jaundice (yellowing of skin and eyes), Kidney and liver failure, bleeding (especially from lungs or nose) and Meningitis or encephalitis in some cases.
High-Risk Groups	<ul style="list-style-type: none"> ● Farmers and agricultural workers ● Sewer and sanitation workers ● Veterinarians and slaughterhouse workers ● Children playing in floodwater ● People in flood-prone or poorly sanitized areas
Treatment	<ul style="list-style-type: none"> ● Early antibiotic therapy is essential. Common antibiotics: Doxycycline, Penicillin, or Azithromycin. ● Supportive care for complications (hydration, kidney/liver monitoring).

Prevention	<ul style="list-style-type: none">● Avoid swimming or wading in potentially contaminated water.● Wear protective clothing, boots, and gloves during farming or animal handling.● Control rodent population around homes and workplaces.● Maintain proper sanitation and dispose of waste properly.● Vaccination of animals (where available).
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Aspirational Agriculture Districts

News: Recently, the government has announced 100 Aspirational Agriculture Districts to be developed under the Prime Minister Dhan-Dhaanya Krishi Yojana (PMDDKY) across 29 states and UTs.

About Aspirational Agriculture Districts



Figure 8. Source: IE

The Aspirational Agriculture Districts are **100 districts identified** by under the **Prime Minister Dhan-Dhaanya Krishi Yojana (PMDDKY)**.

- The initiative is designed to **improve agricultural performance** in districts with **low productivity and limited access to resources**.

- **Goal:** To boost agricultural productivity,

improve infrastructure, enhance irrigation, promote crop diversification, and expand farmers' access to credit and markets.

- **Purpose:**

- To transform underperforming agricultural regions into **high-growth, sustainable, and resilient agricultural hubs**.
- To ensure **balanced regional development** in the agricultural sector across states and union territories.

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- **Criteria for Selection:** Districts have been identified based on **three** main factors:
 - Low crop productivity
 - Moderate crop intensity
 - Below-average access to institutional credit
- **Implementation Framework:**
 - Each district will prepare a **District Agriculture Development Plan (DADP)**.
 - The programme will operate through **convergence of 36 existing schemes** from **11 central departments**.
- **Monitoring: 100 Central Nodal Officers (CNOs)**, mainly Joint Secretaries have been appointed to **oversee and monitor** the progress of these districts.
- **Distribution:** A total of **100 districts** has been chosen across **29 states and union territories**.

States	No. of aspirational districts
Uttar Pradesh	12 Districts
Maharashtra	09 Districts
Madhya Pradesh and Rajasthan	08 Districts each
Bihar	07 Districts
Andhra Pradesh, Gujarat, Odisha, Tamil Nadu, Telangana and West Bengal	04 Districts each
Assam, Chhattisgarh and Kerala	03 Districts each
UT of J&K, Jharkhand and Uttarakhand	02 Districts each
Arunachal Pradesh, Goa, Haryana, Himachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Punjab, Sikkim and Tripura	01 Districts each

Note:

- To read about the **Prime Minister Dhan-Dhaanya Krishi Yojana**, please click [here](#).

Dhvani Missile

News: DRDO is preparing to test the Dhvani hypersonic missile, which is expected to significantly enhance India's strategic capabilities.

About Dhvani Missile



Figure 9. Source – Mint

- It is a **Hypersonic Glide Vehicle** that is **launched to extreme altitude** and then **glides at hypersonic speed** toward its target with high maneuverability.
- This glide profile makes the **missile very difficult to detect** and even harder to intercept for current defence systems.
- **Developed by:** The missile is being developed by India's Defence Research and Development Organisation (**DRDO**).
- **Speed:** The missile is designed to fly **faster than Mach 5**, which is over **7,400 km/h**.
- **Range:** The estimated range of the missile is between **6,000 and 10,000 km**.
 - This range potentially doubles the reach of India's current Agni-V.
- **Deployment timeline:** If the planned test succeeds, operational deployment is expected **by 2029-30**.
- **Technology used**
 - **Scramjet and thermal shielding:** The program builds on scramjet propulsion and thermal shielding proven in the Hypersonic Technology Demonstrator Vehicle.
 - **Heat protection system:** The missile uses ultra-high-temperature ceramic composites that withstand 2,000–3,000°C during reentry.
 - **Stealth shaping and glide stability:** Stealth-optimised geometry and a blended wing-body reduce radar cross-section and support stable hypersonic glide.
- **Significance**
 - **Strategic deterrent:** The missile provides a major **strategic deterrent** for India and can shift the security balance in South Asia and beyond.

- **Hypersonic club:** The capability places India alongside the **United States, Russia, and China** in hypersonic weapons.
- **Indigenous self-reliance:** The program highlights indigenous technology and self-reliance in critical defence sectors.

Exercise KONKAN-25

News: Exercise KONKAN-25 began on 05 Oct 2025 off India's western coast and will run in two phases from 05–12 Oct 2025.

About Exercise KONKAN-25



- It is an **annual bilateral naval** between **India and the United Kingdom**.
- **Origin:** First exercise was held in year **2004**.
- **2025 Venue:** The exercise is being conducted **off the western coast of India**.
- **Aim:** The exercise aims to ensure secure, open, and free seas, enhance interoperability, and advance the 'India-UK Vision 2035'.
- The exercise is **conducted alternately in Indian and UK waters**, making it a rotational venue exercise.
- Over the **past two decades**, it has grown to improve interoperability and mutual understanding.
- The 2025 exercise will be **conducted in two phases**
 - **Harbour phase:** This phase will feature **professional interactions** between naval personnel, cross-deck visits, sports fixtures, and cultural exchanges.
 - **Sea phase:** This will involve complex **maritime operational drills** focusing on anti-air, anti-surface, and anti-submarine warfare, flying operations, and other seamanship evolutions.
- **Significance**
 - The exercise consolidates strategic ties and contributes to regional maritime stability.

- The Indian side is led by the **indigenous aircraft carrier INS Vikrant** along with other surface, sub-surface, and air combatants.
- The UK Carrier Strike Group 25 is led by **HMS Prince of Wales**.

Baratang Island

News: India's only mud volcano at Baratang in the Andaman and Nicobar Islands erupted on October 2 after over two decades of dormancy.

About Baratang Island

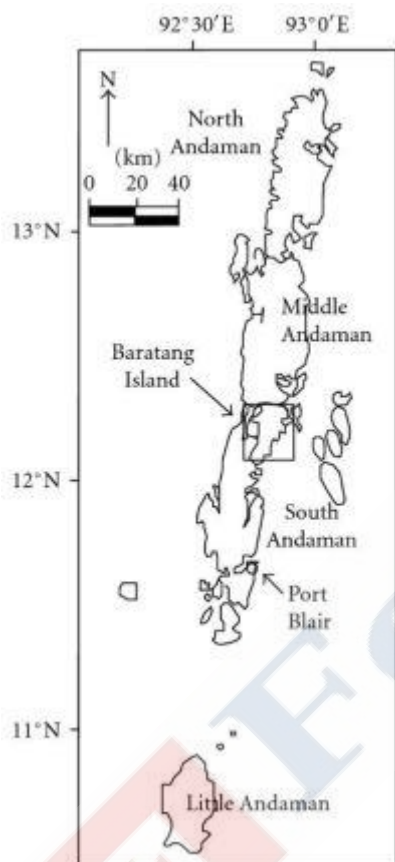


Figure 10. Source – Research Gate

- **Location:** It lies in the **North and Middle Andaman district**, nearly 150 km from Port Blair.
- **Ranchiwalas Island** is another name for Baratang Island.
- This island is **inhabited** mainly by the **migrated Chota Nagpuri tribes**.
- **Size:** The island covers about **242.6 sq. km**.
- **Cultural Heritage:** Baratang Island is also **home to the Jarawa tribe**, one of the indigenous tribes of the Andaman and Nicobar Islands.
- **Distinctive Features of Baratang Island:** It include the **limestone caves, the Mud Volcano, Parrot Island, and Baludera Beach**.
- **Baratang Mud Volcano**
 - Baratang's mud volcano, **locally called "jalki,"** is India's only mud volcano.
 - It releases a **mix of mud, decomposed organic matter, and gases** that forms a bubbling pool with small craters and striking surface features.

- **Previous eruption:** A violent eruption was last reported in **2005**.
- **Process of formation:** **Gases** generated deep inside the earth from **decaying organic matter** build **pressure** below the surface.

- This pressure **pushes mud and gas upward**, and as they **escape**, they create bubbles and craters that shape the **Baratang mud volcano**.

Net-Zero Banking Alliance

News: Net-Zero Banking Alliance (NZBA) announced that it will cease operation, bringing an end to the UN-supported banking coalition that worked to promote global net-zero goals through its financing activities.

About Net-Zero Banking Alliance



Source: unepfi

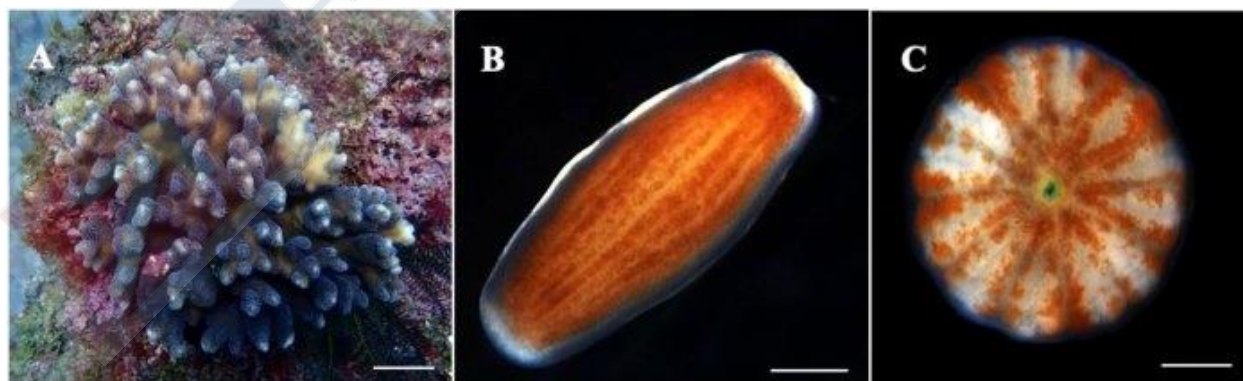
- It is **bank-led and UN convened alliance** of leading global banks committed to **aligning** their lending, investment, and capital markets activities with **net-zero greenhouse gas emissions by 2050**.
- It is a **flagship climate initiative** under the **Principles for Responsible Banking** to **accelerate science-based climate target setting and develop common practice**.
- **Formed in:** 2021
- It is a global alliance within the **Glasgow Finance Alliance for Net Zero (GFANZ)** and **is open to all banks globally**.
 - **No Indian Bank is part of the alliance.**
- It works **to provide a framework, guidance, and peer learning opportunities** to support members to design, set, and achieve credible science-based net zero targets for 2030 or sooner.
- **Governing body:** It involves a **Steering Group and a Chair**.
 - The Steering Group, composed of **representatives from member banks**.

- It represents the **alliance's 144 banks through 14 banks** each selected by member banks.
- It is **coordinated and supported by the UNEP FI Secretariat**, with the **United Nations also holding a seat** on the Steering Group.
- **All banks that have signed the commitment will:**
 - **Transition the operational and attributable GHG emissions from their lending and investment portfolios** to align with pathways to net-zero by 2050 or sooner.
 - **Within 18 months of joining, set 2030 targets (or sooner) and a 2050 target**, with intermediate targets to be set every 5 years from 2030 onwards.
 - **Bank's first 2030 targets will focus on priority sectors** where the bank can have the most significant impact
 - **Within 36 months of joining, banks will set a further round of sector-level targets** for all or a significant majority of specified carbon-intensive sectors.
 - **Annually publish emissions data and, within a year of target setting, disclose progress** on a board-approved transition strategy and sectoral climate policies.
 - Take a **robust approach to the role of offsets in transition plans**.

Coral Larvae Cryobank Project and Coral Triangle

News: Scientists at the University of the Philippines are establishing the nation's first cryobank to conserve coral genetic material and aid in reef restoration.

About the Coral Larvae Cryobank Project



Source: Frontiers

- **Coral Larvae Cryobank** is set up by the **University of the Philippines Marine Science Institute**.

- The project is **part of a wider regional initiative** that links research institutions in the Philippines, Taiwan, Indonesia, Malaysia, and Thailand to **create a network of cryobanks** across the Coral Triangle.
- **Aim:** To strengthen **resilience** and **secure the Coral Triangle's reefs for future**.
 - The project focusses on **freezing and preserving coral larvae**, which can **later be used to revive damaged reefs or for research**. This will protect genetic diversity that might otherwise be lost.
- The initial focus is on **pocilloporid corals** which is **known for their rapid growth and important role in reef recovery**, but vulnerable to climate stress.
- **Process of cryopreservation:**
 - **Vitrification:** Coral larvae are preserved safely using a method called vitrification, which **protects their delicate cells**.
 - The larvae are **first treated with special protective solutions** and then **rapidly frozen in liquid nitrogen at -196°C**, turning them **into a glass-like state** that prevents ice crystals from forming.
 - To bring them back to life, scientists **thaw the larvae very quickly using lasers**, avoiding damage from ice formation.
 - After thawing, **the larvae are gradually placed in seawater, checked for signs of life** like swimming and settling, and **then moved to tanks to grow**.
 - This technique **allows coral genetic material to be stored for years** and later used to help restore damaged reefs.
- **Challenges to Cryopreserving:** Cryopreserving many coral species is challenging as their larvae and reproductive cells are large, lipid-rich, sensitive to cold, and often contain algae that block cryoprotectants.

About Coral Triangle



Source: Asian Development Bank

- **Location:** The Coral Triangle spans 5.7 million sq. km covering six countries in Southeast Asia and the Pacific – Indonesia, Malaysia, the Philippines, Papua New Guinea, Solomon Islands, and Timor-Leste.
 - It is located between the Pacific and Indian oceans.
- **Biodiversity:** It is often referred to as the “Amazon of the seas.”
 - It holds the highest marine biodiversity in the world including around 76% of all known coral species and over 2,000 species of reef fish.
- **Marine Ecosystems:** It encompasses critical ecosystems like coral reefs, mangroves, and seagrass beds, supporting a vast array of marine life, including turtles, sharks, and various fish species.
- **Ecological Importance:** The Coral Triangle is crucial for maintaining global marine biodiversity and resilience, playing a vital role in marine and coastal ecosystems.
- **Human Dependency:** Over 120 million people live in the Coral Triangle area, depending on its resources for food, livelihood, and economic activities, particularly through fishing and tourism.
- **Threats:** Faces significant threats from overfishing, climate change, pollution, and habitat destruction, particularly coral bleaching due to rising sea temperatures.

Note: According to the **Status of Coral Reefs of the World 2020 report**, the planet lost 14% of its corals between 2009 and 2018.

Tiruppur Kumaran and Subramania Siva

News: PM paid tribute to Tiruppur Kumaran and Subramaniya Siva, praising their sacrifices, cultural pride, and patriotic inspiration for youth from Tamil Nadu.

About Tiruppur Kumaran

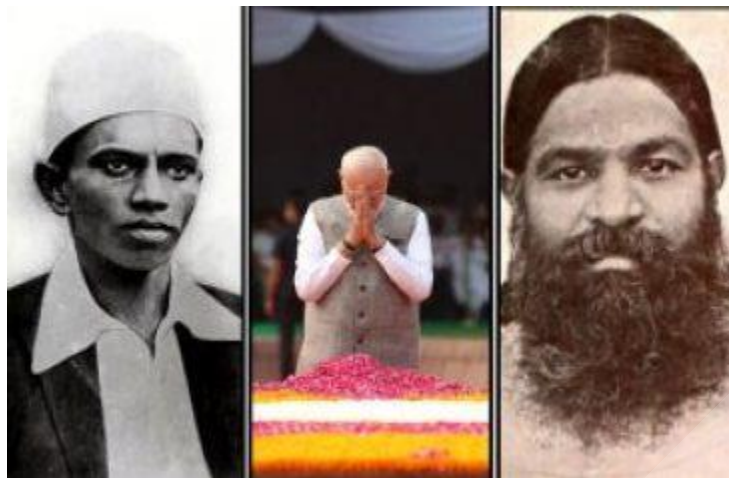


Figure 11. Source – Bharat Express

● **Birth:** He was born on **4 October 1904**, in **weaver family near Erode, Tamil Nadu**

● He is also known as ***Kodi Kaatha Kumaran***.

● **Death:** He died from **injuries** sustained during a police assault on the **banks of the Noyyal River in Tiruppur** on 11 January 1932, during a protest march.

● **Inspired by:** He was inspired by

Mahatma Gandhi.

- **Contributions:**

- He founded the **Desa Bandhu Youth Association**.
- At the **time of his death**, he was **holding the flag of the Indian nationalists**, which had been **banned** by the British, leading to the epithet ***Kodi Kaatha Kumaran*** ("Kumaran who protected the flag").
- A **commemorative stamp** was issued by India Post in **October 2004** on his **100th birth anniversary**.

About Subramania Siva

- **Birth:** He was born on **4 October 1884** in **Wattalakundi, Dindigul district, Tamil Nadu**.
- He is also known as ***Sivam* and *Siva***.
- He was **honoured** as '**Veeramurasu**'.
- He fought for freedom by **combining politics and spirituality**.
- **Inspired by:** He was close to freedom fighter **V. U. Chidambaranar** and **Mahakavi Bharathiyar**.
- **Contributions:**

- He formed the *Dharma Paripalana Samajam* in Thiruvananthapuram in 1906-07.
- He started a **monthly** magazine called *Gnanapanu*.
- In 1916 he started a **weekly** magazine called *Prabhanja Mithran*.
- He wrote articles under the **pen name** *Naradhar*.
- **Books written:** He wrote **Ramanuja Vijayam, Madhva Vijayam**.
- **Death:** He died on **23 July 1925**.

My Bharat-National Service Scheme Award (NSS)

News: Recently, the President of India presented the MY Bharat-National Service Scheme (NSS) Awards for the year 2022-23 at Rashtrapati Bhavan.

About My Bharat-National Service Scheme Award (NSS)



Source: PIB

- My Bharat-National Service Scheme (NSS) award is **to recognise and reward outstanding contributions** towards **voluntary community** service made by the **Programme Officers/NSS Units and NSS Volunteers**.
- **Introduced in:** 1969
- **Instituted by:** Ministry of Youth Affairs and Sports in 1993-94
- NSS Awards are conferred **every year**.

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- **2022-23 Award:** MY Bharat-NSS Award for the year 2022-23 is given in **two different categories** as under:

Categories	No. of Awards	Value of Award
NSS Units and their Programme Officers	10 + 10	<ul style="list-style-type: none">● Rs.2,00,000/- to each NSS Unit (For NSS Programme Development), along with Trophy● Rs. 1,50,000/- to each Programme Officer with a Certificate and a Silver Medal.
NSS Volunteers	30	<ul style="list-style-type: none">● Rs. 1,00,000/- to each Volunteer, with a Certificate and a Silver Medal.

About National Service Scheme (NSS)

- NSS is a **Central Sector Scheme** which was **launched in 1969**.
- **Objective:** To develop the personality and character of the student youth through voluntary community service.
- The ideological orientation of the NSS is **inspired by the ideals of Mahatma Gandhi**.
- **Motto of NSS:** "NOT ME, BUT YOU" ('स्वयं से पहले आप').
- At present, NSS has about **40 lakh volunteers on its rolls** across India.
- The NSS volunteers work on issues of social relevance, which keep evolving in response to the needs of the community, through regular and special camping activities. Such issues include
 - literacy and education
 - health, family welfare and nutrition,
 - environment conservation,
 - social service programmes,
 - programmes for empowerment of women,
 - programmes connected with economic development activities,
 - rescue and relief during calamities,
 - Swachhata activities, etc.

Danube River

News: Rescuers are searching for several missing individuals after a boat carrying ten Chinese nationals capsized on the Danube River along the Serbia–Croatia border.

About Danube River



Figure 12. Source – World of Maps

- The **Danube River** is the **second-longest river in Europe** after the **Volga**.
- The Danube is the **only major European river to flow from the west to the east**.
- **Origin:** It rises in the **Black Forest mountains of western Germany** (from the Breg and Brigach streams).
- It flows into the **Black Sea** via the **Danube Delta** in **Romania and Ukraine**. **Danube Delta** is a **UNESCO World Heritage site**.
- **Length:** Approximately **2,850 km**
- **Tributaries:** Its major tributaries are **Inn, Drava, Tisza, Sava, Morava and Olt river**.
- **Countries it flows through (10):** Germany, Austria, Slovakia, Hungary, Croatia, Serbia, Bulgaria, Romania, Moldova, and Ukraine.
- **Major Cities Along the Danube:** Vienna, Budapest, Belgrade, Bucharest and Regensburg, Passau, and Linz.
- **Major ports:** Regensburg, Vienna, Bratislava, Budapest, Belgrade, Ruse, Brăila, Galați, Izmayil.

Very Large Gas Carrier (VLGC) “Shivalik”

News: Union Minister of Ports received India’s third VLGC “Shivalik” under the Indian flag at Visakhapatnam Port, marking a national maritime milestone.

About Very Large Gas Carrier (VLGC) “Shivalik”



Figure 13. Source – BL

- **'Shivalik'** is a **Very Large Gas Carrier (VLGC)**, which is a **sub-class of gas carriers** designed to **transport a much higher volume of gas**.
- It joined **SCI's existing VLGCs, Sahyadri and Anandamayi**.
- **Owned by:** It was inducted into the

Shipping Corporation of India Ltd. (SCI) fleet.

- **Built in:** It was built in **South Korea**.
- **Named after:** It is named after the **Himalayan Shivalik Range**.
- **Size:** It has a length of **225 meters**.
- **Capacity:** It has a capacity of **82,000 CBM**.
- **Recent voyage:** It completed its maiden voyage by loading more than **46,000 metric tonnes of LPG** (propane and butane) **at Ruwais, UAE, and arrived at Visakhapatnam Port** for discharge operations for **Indian Oil Corporation Ltd. (IOCL)**.
- **Key features**
 - The vessel is **equipped with segregated tanks**, which enable safe carriage and efficient handling of liquefied petroleum gas.
 - It has **advanced temperature management systems**, which preserve cargo integrity during loading, transit, and discharge.
 - It **complies with global safety and efficiency standards**, which represents cutting-edge maritime engineering and operational reliability.
- **Significance**
 - **Self-Reliant India:** The inclusion of VLGCs reduces dependence on foreign carriers and strengthens national maritime capabilities. This supports Atmanirbharata in shipping under the Maritime Amrit Kaal Vision 2047 and the Maritime India Vision 2030.
 - **Energy Security:** The vessel **ensures secure, efficient, and reliable LPG transportation**, while **strengthening India's energy connectivity with the Arabian Gulf**.

- **Strategic Significance:** The arrival under the national flag signals India's maritime resurgence and supports the goal of becoming a top five maritime nation by 2047 with greater participation in global energy trade.

Tort of Alienation of Affection (AoA)

News: The Delhi High Court, in *Shelly Mahajan v. MS Bhanushree Bahl & Anr (2024)*, delivered a first-of-its-kind order allowing a spouse to seek civil damages from a third party accused of intentionally interfering in a marriage.

About Tort of Alienation of Affection (AoA)



Figure 14. Source – LiveLaw

- **AoA is a common law tort** (a “heart-balm” action) that allows a spouse to sue a **third person** for **willfully and maliciously interfering** in a marriage and causing **loss of affection, companionship, or consortium**.
- **Idea behind:** It is **based on the idea** that **marriage** carries **legal interests** such as consortium, intimacy, support and a shared life that can be **legally protected from wrongful interference**.
- It is **not codified** or expressly recognized in Indian law.
- It is **not prohibited either** but has been acknowledged in several judicial decisions.
- To establish a valid **AoA claim**, the plaintiff must prove:
 - **Intentional and wrongful conduct** by the third party directed at alienating the marriage.
 - **Causation** is that the conduct **directly caused a legal injury** or the **loss of marital affection**.
 - The **loss suffered** is **measurable and legally cognisable** (capable of rational assessment).
- **Jurisdiction:** **Civil courts** have the authority to hear AoA cases.

Judgement under Shelly Mahajan v. MS Bhanushree Bahl & Anr case (2025)

- In *Shelly Mahajan v. MS Bhanushree Bahl & Anr*, the **Delhi High Court (HC)**, in a **first-of-its-kind decision**, allowed a **civil damages suit** against a **third-party** accused of interfering in a marriage.
- The **wife (plaintiff)** sought compensation from her **husband's alleged affair partner**, claiming that the **third party's wrongful interference** caused the **breakdown of her marriage**.

- The HC clarified that while **Joseph Shine** case removed the **criminal aspect** of adultery, it **did not confer immunity** on third parties from **civil liability** for **malicious interference in a marriage**.
- **Matrimonial laws** (like the **Hindu Marriage Act, 1955**) provide **remedies between spouses**, such as **divorce or judicial separation**, but **not against third parties**.
- Therefore, in the **absence of a statutory bar**, a **civil tort claim** for **alienation of affection** is **legally maintainable**.
- The HC **overruled objections** about the **maintainability of the suit** and **issued summons**, allowing the case to proceed.
- **Legal Principle Affirmed:**
 - A spouse's right to marital consortium and affection is a protectable legal interest.
 - Correspondingly, third parties owe a duty not to intentionally and wrongfully interfere with that relationship.
 - Where such interference causes demonstrable harm, damages may be claimed under civil law.

Other Judicial References

- ***Pinakin Mahipatray Rawal v. State of Gujarat (2013)***: The Supreme Court observed that **alienation of affection by a stranger**, if proved, constitutes an **intentional tort**.
- ***Indra Sarma v. V.K.V. Sarma (2013)***: The Court noted that **children** may also have a potential cause of action if a **third party alienates their parents' affection**.
- In ***Joseph Shine v. Union of India (2018)***, **Section 497 of the Indian Penal Code** was struck down and thereby **decriminalised adultery**. The Court ruled that **consensual extramarital relationships** cannot attract criminal punishment, affirming that **adultery is a matter of personal privacy**.
 - The Court clarified that while adultery is **no longer a criminal offence**, it remains a **civil wrong** and a **valid ground for divorce**.

Securities Transaction Tax (STT)

News: On October 6, 2025, the Supreme Court decided to examine a plea challenging the constitutional validity of the Securities Transaction Tax under the Finance Act, 2004.

About Securities Transaction Tax (STT)

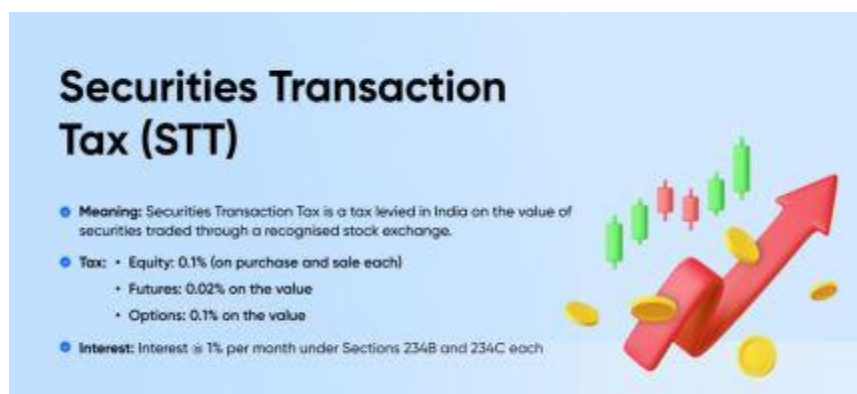


Figure 15. Source – ClearTax

- It is a **direct tax** on every purchase and sale of securities listed on recognised stock exchanges in India.
- **Introduced in:** It was introduced in **2004**.
- **Aim:** It was introduced to **combat tax evasion** in the stock

market.

- STT is **currently 0.1%** on **both buy and sell sides** for stock trades.
- Taxable securities include **equity, derivatives, and units of equity-oriented mutual funds**.
- It **also covers unlisted shares sold under an offer for sale in an IPO that are later listed**.
- **Legislative backup**
 - **Imposed under** the Finance Act, 2004.
 - **Governed by** the **Securities Transaction Tax Act**, which lists taxable transactions, valuation rules, and the liable party (buyer or seller).
- **Concerned with Securities Transaction Tax**
 - **Double taxation:** STT taxes the same transaction twice. A trader first pays STT on the transaction value and then pays Short-Term Capital Gain (**STCG**) or long-term capital gains (**LTCG**) on the profit from the same transaction.
 - **Constitutional concern:** STT taxes the act of trading rather than profits which violates **Articles 14, 21, and 19(1)(g)** of the Constitution.

Supermoon

News: An incredible supermoon was visible on October 7 and will appear again twice in November and December across India.

About Supermoon

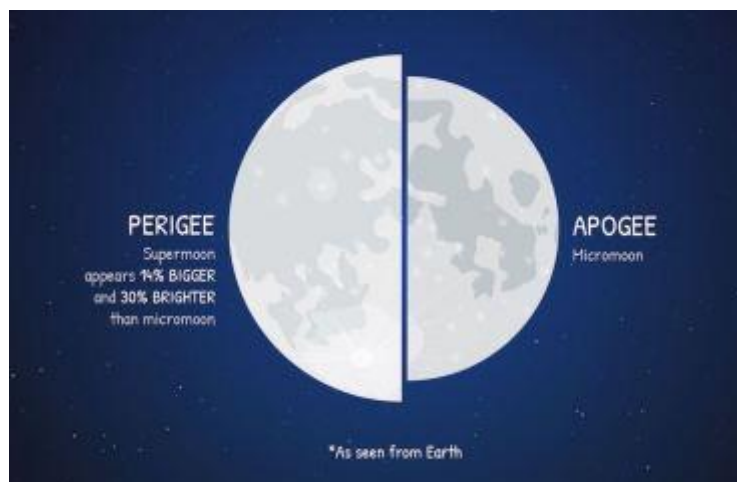


Figure 16. Source – The Sun

- A “supermoon” occurs when a **full Moon** coincides with the **Moon’s closest approach to Earth** in its elliptical orbit, a point known as **perigee**.
- **Term coined by:** The term “supermoon” was **popularised by astrologer Richard Nolle** in the 1970s.
 - The term is typically used for a **full moon within at least 90% of perigee**.
- **Frequency:** Supermoons **occur three to four times a year** and appear consecutively.
- **Feature:** When the **moon is near its perigee** and also **directly opposite the sun**, the **full moon** appears about **14% larger and 30% brighter** than when it is at its farthest point.
- **Impact of Supermoon**
 - **Tides:** Creates **perigean spring tides** that are slightly higher and lower than usual.
 - **Observation:** Brighter moonlight helps astronomers and photographers observe lunar surface details and tidal effects more clearly.
 - **Culture:** Supermoons inspire folklore and spiritual observances across civilisations.

Schedule M Norms

News: 18 States use the Online National Drugs Licensing System (ONDLS), but none has fully met the Corrective and Preventive Action (CAPA) requirements under the revised Schedule M norms.

About Schedule M Norms



Source – Apollo Hospitals

- Schedule M prescribes **Good Manufacturing Practices (GMPs)** to ensure medicines are **safe, effective, and of consistent quality**.
- **Legality:** It is a key part of the **Drugs and Cosmetics Act, 1940 (and Rules, 1945)**.
- **Origin:** It was first established in 2001.
- **Recent revision (2023–2024):** The revised Schedule M **updates India's Good Manufacturing Practices (GMP)** for pharmaceutical products and mandates stronger, system-based quality controls.
- **Compliance deadline:** Manufacturers must achieve full compliance with these revisions by **December 31, 2025**.
- **Scope:** Applies to **all pharmaceutical manufacturing** units in India for **both** domestic and export markets.
- **Key features of revised Schedule**
 - It mandates stronger **quality systems**, including a **Pharmaceutical Quality System (PQS)**, **Quality Risk Management (QRM)**, and **Product Quality Review (PQR)** to ensure consistent product quality.
 - It requires **qualification and validation of equipment** so that manufacturing processes remain reliable and controlled.
 - It asks manufacturers to set up **computerised storage systems for all drug products** to improve control, traceability, and record-keeping.
 - It introduces **regulatory tools** such as the **Online National Drugs Licensing System (ONDLS)** for licensing and **Corrective and Preventive Action (CAPA)** for continual improvement and issue prevention.
 - It aligns India's Good Manufacturing Practices with **international GMP guidelines**, bringing them closer to **WHO-GMP** and **PIC/S (Pharmaceutical Inspection Co-operation Scheme)** guidelines

Nobel Prize for Physics 2025

News: The 2025 Nobel Prize in Physics has been conferred upon three scientists for their groundbreaking experiments that turned quantum physics from a purely theoretical concept into practical, real-world technology.

About Nobel Prize for Physics 2025

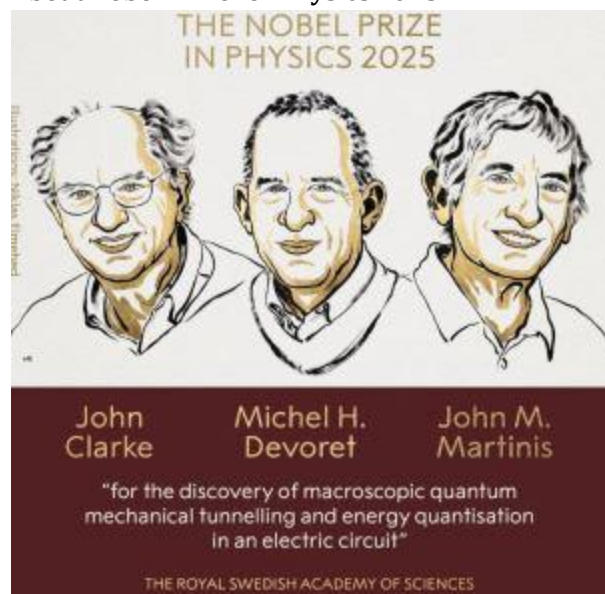


Figure 17. Source – Swedish Academy of Science

- **Nobel Prize for Physics 2025** was awarded to **John Clarke, Michel Devoret, and John Martinis**.
- They were honoured by the **Royal Swedish Academy of Sciences**.
- Their work explored **quantum mechanics**, the science of how very small particles behave.
- They studied **the strange phenomenon** called "**quantum tunnelling**", where particles can pass through barriers that should block them.
- Normally, **tunnelling cannot be seen in large (macroscopic) objects** — only in tiny particles.

- The **three scientists found a way to make many particles act together** so they could show tunnelling on a larger, observable scale.

Experiments Conducted

- They built an **electrical circuit** using **two superconductors** materials that let electricity flow with **no resistance**.
- Between these superconductors, they placed a **thin insulating layer** called a **Josephson junction**, which doesn't normally conduct electricity.
- Their experiments showed that the charged particles in the superconductors could act **together as one single "super-particle."**
- They demonstrated that this collective "particle" could behave like an electric current **even without voltage**.
- Together, they successfully demonstrated **macroscopic quantum tunnelling**.
- The discovery shows how **quantum mechanics**, even after 100 years, continues to offer **new surprises and great practical value**, forming the **basis of all digital technology**.

Kherson, Kharkiv and Poltava regions

News: Recently, the Russian forces carried out strikes on multiple Ukrainian military facilities and gas infrastructure, causing critical damage to sites in the Kherson, Kharkiv and Poltava regions.

About Kharkiv Region



Figure 18. Source – WP

- The **Kharkiv region** is located in the **northeastern part of Ukraine**, along the banks of the **Dnieper and Don rivers**.
- It covers an area of **31,418 km²**, making it the **fourth largest region** in the Ukraine.
- Kharkiv shares borders with **five Ukrainian regions**: Donetsk, Lugansk, Poltava, Sumy, and Dnepropetrovsk and also with the **Russian Belgorod region**.
- The **northeastern part** of the region lies on the **Central Russian Upland**, while the **southern part** extends into the **Donetsk Ridge**.

- The **Dnieper–Donbass Canal** is a major waterway which passes through the Kharkiv region.
- The **Don River** supplies about **75% of the region's water resources**, serving as its principal water source.

About Kherson Region

- Kherson Region is located **by the Black Sea and on the right bank of Dnieper River**.
- The region extends **180 km from north to south** and **258 km from west to east**.
- The **Dnieper River** divides the territory into two parts: the **right bank** and the **left bank** (also known as **Northern Tavria**).

About Poltava Region

- The **Poltava region** is located in **Left-Bank Ukraine**, in the **central part** of the country.
- It shares borders with **Sumy** and **Chernihiv** provinces to the **north**, **Kharkiv** to the **east**, **Dnipropetrovsk** and **Kirovohrad** to the **south**, and **Kyiv** and **Cherkasy** regions to the **west**.
- The region lies within the **Dnieper Lowland plains** and is characterized by **flat terrain**.

Draft National Labour & Employment Policy — Shram Shakti Niti 2025

News: The Ministry of Labour and Employment released the draft National Labour & Employment Policy – Shram Shakti Niti 2025 for public consultation.

About Draft National Labour & Employment Policy — Shram Shakti Niti 2025

Source – ET

- The draft presents a **renewed vision for a fair, inclusive, and future-ready world of work** aligned with the national aspiration of **Viksit Bharat @2047**.
- It emphasises **cooperative federalism, evidence-based policymaking, digital transparency, and coordinated action among the Centre, States, industry, and social partners**.
- **Released by:** Ministry of Labour and Employment, Government of India.
- **Inspired by:** India's civilisational ethos of **śrama dharma' – the dignity and moral value of work**.
- **Aim :** To build a balanced, inclusive, and future-ready labour and employment ecosystem that protects workers, boosts productivity, and supports sustainable enterprise-led livelihoods.
- **Phased implementation**
 - **Phase I (2025–27)** focuses on institutional setup and social-security integration.
 - **Phase II (2027–30)** completes the nationwide rollout of universal social security accounts, introduces skill-credit systems, and establishes district-level Employment Facilitation Cells.
 - **Phase III (beyond 2030)** brings paperless governance, predictive analytics, and continuous policy renewal.
- **Key Highlights**
 - **National Career Service (NCS)** as **India's Digital Public Infrastructure for Employment** with open APIs, multilingual access, credential verification, skill alignment, and AI-driven innovation reaching Tier-II/III cities, rural districts, and MSME clusters.
 - **Creation of a universal account** by integrating **Employees Provident Fund Organisation, Employees State Insurance Corporation, Pradhan Mantri Jan Arogya Yojana, e-SHRAM**, State welfare boards, and NCS into a unified Labour Stack.
 - Implementation of the **Occupational Safety and Health Code** with risk-based inspections and gender-sensitive standards; AI-enabled safety systems; near-zero workplace fatalities as an outcome.

- **Increase women's labour-force participation to 35% by 2030** and expand entrepreneurship and career guidance initiatives for youth.
- **Promotion of green jobs** and just-transition pathways; creation of millions of green and decent jobs.
- **MSME enablement:** Single-window digital compliance with self-certification and simplified returns for MSMEs; sharp reduction in informal jobs through digital compliance.
- Progress will be tracked through **real-time dashboards, the Labour & Employment Policy Evaluation Index (LPEI)** to benchmark States, an Annual National Labour Report to Parliament, and independent third-party reviews.

Electronic Bank Guarantees (e-BGs)

News: During the Global Fintech Fest 2025, the National e-Governance Division and National E-Governance Services Limited signed a MoU to link Entity Locker with the Digital Document Execution platform for electronic bank guarantees (e-BGs).

About Electronic Bank Guarantees (e-BGs)

Source – Moneycontrol

- **Paper BG:** The Paper BG in India are issued as **paper documents by banks**, on request from customers (Applicant) and in favour of beneficiaries.
 - The **paper BG** is stamped as **per stamp duty requirement**, signed by bank official(s) and then **delivered to beneficiary** through the customer or collected by beneficiary from the bank's branch.
- **e-BG:** An e-BG **eliminates the physical documentation** usually associated with issuance of BG.
- It **reduces the turn-around time** of the BG issuance and delivery to the beneficiary from an industry average of **3-4 working days** to a few minutes.
- It is a **fully digital bank guarantee issued with National E-Governance Services Limited (NeSL)**, using e-stamping and e-signing, and delivered instantly to the beneficiary.
- **Minister involved:** **Ministry of Electronics and Information Technology (MeitY)** and the **Ministry of Finance**.
- **Working mechanism**
 - NeGD's cloud-based **Entity Locker** (an extension of DigiLocker) integrates with **NeSL's Digital Document Execution (DDE)** platform.

- Banks issue, renew, amend, or invoke e-BGs **end-to-end digitally** with e-stamp and e-sign.
- The **e-BG PDF**, digitally signed by a bank official, is stored in **NeSL's e-BG repository**.
- **Beneficiary and applicant** securely access, view, and download the e-BG directly via **Entity Locker/NeSL**, receiving **notifications** on issuance or any status change.
- **Aim** : To enhance efficiency, reduce paperwork, and improve security in bank guarantees through instant, paperless, and legally enforceable digital workflows.
- **Key features**
 - The e-BG is **completely digital**, with e-stamping and a digitally signed BG PDF, and it supports issuance, amendment, invocation, and closure through an end-to-end online process.
 - It **allows flexible documentation**, so beneficiaries and applicants can continue using their existing BG templates without shifting to a standardized format.
 - It is **tamper-proof** because the BG is digitally signed by a bank official under the Information Technology Act, and any alteration would invalidate the signature.
 - **NeSL acts as the central repository**, storing every e-BG and recording subsequent events such as amendments, invocation, and closure after confirmation from the issuing bank.
 - The platform offers **24×7 availability with direct notifications from NeSL**, enabling easy search, verification, viewing, and downloading for all concerned parties.
 - **Stamp duty enforcement is streamlined** through online payment and the issuance of a digital stamp certificate.

Moscow Format

News: India has recently participated in the 7th Moscow Format Consultations in Moscow along with Russia, China, Iran and Central Asian countries.

About Moscow Format

Source – TH

- It is a **regional platform** where neighbouring and major regional countries coordinate practical **approaches to the Afghan peace settlement**.
- **Aim:** It aims to coordinate regional **approaches for an Afghan settlement**, support independence and peace, counter terrorism and drugs, promote economic integration, and keep international humanitarian assistance depoliticised.

- **Introduced in:** It was introduced in **2017**.
- **Origin :** It was formed on the basis of the **earlier six-party consultation mechanism**.
 - Prior to this, Russia hosted **six-party talks** in **February 2017** with Pakistan, Afghanistan, China, Iran, and India.
- **Members**
 - Regular participants include **Russia, Afghanistan, India, Iran, China, Pakistan**, and **five Central Asian countries: Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan**.
 - **Belarus** joined as a **guest** delegation (in 7th Moscow Format, 2025).
- **Significance**
 - **Formal inclusion of Taliban government:** At the 7th meeting, the forum formally included a representative of the **Taliban-led government for the first time**.
 - **Security consensus and coordination:** Participants opposed any **foreign military infrastructure** in Afghanistan.
 - **Economic and humanitarian alignment:** The forum backed Afghanistan's **integration into regional economic systems**.

Humpback Mahseer Fish and Lion-Tailed Macaque

News: Tamil Nadu government has sanctioned Rs. 1 crore for a new conservation programme aimed at protecting four lesser-known endangered species including the lion-tailed macaque, Madras hedgehog, striped hyena, and hump-headed mahseer fish.

About Humpback Mahseer Fish

- The **Humpback Mahseer (*Hypselobarbus mussullah*)** is a **large and striking freshwater fish**.
- **Family:** *Cyprinidae*.
- It is **endemic to the Cauvery river system** including Kerala's Pambar, Kabini and Bhavani rivers.
- It is popularly known as the **"Tiger of the Cauvery river"**.
- **Habitat:** It **thrives in pristine mountain streams and clear, oxygen-rich waters** with swift currents, rocky substrates, and abundant aquatic vegetation.
- It is **one of the largest freshwater fish in India** and can **grow up to 1.5 meters** in length.
- **Physical features**

- The **most distinguishing feature is its high-backed body**, which sets it apart from other mahseer species.
- It has a **stout, elongated form** with a noticeable **hump behind the head** and a **tall dorsal fin**.
- Its **broad pectoral and pelvic fins** help it navigate fast-flowing waters.
- The fish's **color ranges from silver and greenish brown to golden tones**, with a darker back and lighter flanks.
- It has a **terminal mouth with thick lips** suited for grazing, along with **two pairs of barbels** that act as **sensory organs for detecting food along the riverbed**.
- **Diet:** Its diet includes algae, aquatic insects, and crustaceans
- **Ecological Significance:** Ecologically, the Humpback Mahseer plays an essential role as a **keystone species in river ecosystems**.
- **Conservation Status:**
 - **IUCN: Endangered species.**
- **Threat:** Habitat loss, river damming, pollution, and overfishing.

About Lion-Tailed Macaque

Source: zoochat

- The lion-tailed macaque is a **species of Old World monkey**.
- **Family:** Cercopithecidae.
- **Scientific name:** Macaca silenus
- It is **native to the mountainous regions in southwest India**.
- It is **one of the smallest among macaque species**.
- **Distribution:** These monkeys are **exclusively found in the Western Ghats**.
- **Physical Feature:** The most **distinguishing feature is its silver-white mane**. It surrounds the macaque's head and comes down along its cheeks to the chin, making it look like a 'bearded ape'.
- **Habitat:** They inhabit the **upper canopy of monsoon forests and tropical evergreen forests**.
- **Diet:** It is an **omnivorous animal** and consumes a wide variety of foods.
- **Behavior:** They are an **arboreal and diurnal creature**.
 - They **use 17 different sounds and calls to communicate**, including a loud cry **to indicate territorial boundaries**.

- One of the **distinguishing features** of this species is that the males mark or establish the boundaries of their territories through vocal calls.
- **Conservation Status:**
 - **IUCN:** Endangered
 - **CITES:** Appendix I
 - **The Wildlife (Protection) Act, 1972:** Schedule I
- **Threat:** Habitat loss, fragmentation, and human encroachment

Foreign Currency Settlement System (FCSS)

News: Recently, Finance Minister Nirmala Sitharaman launched the foreign currency settlement system in GIFT City.

About Foreign currency settlement system (FCSS)

Source: Fintechbiz

- **Launched by:** The International Financial Services Centres Authority (IFSCA)
- The **IFSCA has authorised CCIL IFSC Limited (CIL)** to operate the FCSS under the relevant provisions of the **Payment and Settlement Systems Act, 2007**.
- **Standard Chartered Bank, IBU (SCB)**, will act as the **designated Settlement Bank**.
- **Objective:** To boost international trade, investment, and ease of doing business.
- The system will be starting **initially with the United States Dollar (USD)** and **operates on a gross settlement procedure** during its business hours on all business days.
- **Role:** Foreign currency settlement system (FCSS) **facilitates seamless and efficient settlement of foreign currency transactions** within IFSC on a **real-time basis**.
 - **This is to enhance liquidity management and operational resilience** and **ensure compliance with regulatory oversight** under PSS Act.
 - The FCSS platform is **built to comply** with the **ISO 20022 messaging standards**, ensuring compatibility and standardisation in communication formats.

PM-KUSUM

News: India will scale up PM-KUSUM and showcase it across developing nations through the International Solar Alliance to expand irrigation access, energy security, and clean power.

About PM-KUSUM

Created with love ❤ by ForumIAS- the knowledge network for civil services.
Visit academy.forumias.com for our mentor based courses.

Source – PIB

- **Full form:** Pradhan Mantri Kisan Urja Suraksha evam Utthaan Mahabhiyan
- It is a government scheme for farmers to **install solar pumps** and **grid-connected solar and other renewable power plants** in India.
- **Launched in:** It was launched in 2019.
- **Nodal Ministry:** Ministry of New and Renewable Energy (MNRE)
- **Aim:** It is aimed at ensuring **energy security for farmers** in India, along with honouring India's commitment to **increase the share of installed capacity of electric power from non-fossil-fuel sources to 40% by 2030** as part of Intended Nationally Determined Contributions (INDCs).
- **It has 3 components:**
 - **Component-A: For Setting up of 10,000 MW of Decentralized Grid Connected Renewable Energy Power Plants** on barren land.
 - Under this component, renewable energy based power plants (REPP) of capacity 500 kW to 2 MW will be setup by individual farmers/ group of farmers/ cooperatives/ panchayats/ Farmer Producer Organisations (FPO)/Water User associations (WUA) on barren/fallow land.
 - These power plants can also be installed on cultivable land on stilts where crops can also be grown below the solar panels.
 - The renewable energy power project will be installed **within five km radius of the sub-stations** in order to avoid high cost of sub-transmission lines and to reduce transmission losses.
 - The power generated will be **purchased by local DISCOM at pre-fixed tariff.**
 - **Component-B: For Installation of 17.50 Lakh stand-alone solar agriculture pumps.**
 - Under this Component, individual farmers will be supported to install standalone solar agriculture pumps of capacity **up to 7.5 HP** for replacement of existing diesel Agriculture pumps / irrigation systems in off-grid areas, where grid supply is not available.
 - Pumps of capacity higher than 7.5 HP can also be installed, however, the financial support will be limited to 7.5 HP capacity
 - **Component-C: For Solarisation of 10 Lakh Grid Connected Agriculture Pumps.**

- Under this Component, individual farmers having grid connected agriculture pump will be **supported to solarise pumps**.
- The farmer will be able to use the generated solar power to meet the **irrigation needs** and the **excess** solar power will be **sold** to DISCOMs at pre-fixed tariff
- **Eligibility for the Scheme**
 - Individual farmer.
 - Group of farmers.
 - Farmer Producer Organisation (FPO)
 - Water User Associations.

Plutonium Management and Disposition Agreement (PMDA)

News: In October 2025, Russia's State Duma voted to withdraw from the PMDA, ending the long-suspended U.S.–Russia pact on disposing weapons-grade plutonium.

About Plutonium Management and Disposition Agreement (PMDA)

Source – NDTV

- It is a **bilateral arms control accord** between the **United States and Russia**, to **eliminate significant amounts of surplus weapons-grade plutonium** from their military stockpiles.
- It was **signed in 2000 and came into force in 2011** after a **2010 protocol**.
- **Objective:** To **eliminate excess weapons-grade plutonium** and **reduce proliferation risk** by **converting it into proliferation-resistant forms** so it **cannot return to nuclear weapons use**.
- **Commitment:**
 - Both countries committed to **dispose of 34 metric tons each** of weapons-grade plutonium.
 - Both countries agreed to **turn weapons-grade plutonium into mixed-oxide (MOX) fuel** and then **burn (irradiate) it in power reactors** so it **could not be easily used again for weapons**.
 - **Verification:** **Bilateral monitoring and inspection**, with **International Atomic Energy Agency (IAEA) verification** once appropriate agreements are concluded; the **2010 protocol** called for **early consultations with the IAEA**.
- **Concern with PMDA**

- The **US began constructing its MOX Fuel Fabrication Facility** as part of its obligations, but later (**2016**) **shifted to a dilution-and-disposal approach due to cost**, which was **criticized by Russia for potential reversibility**.
- In **2016**, **Russia suspended its participation**, citing **US non-compliance and policy disagreements**.
- In **October 2025**, **Russia officially withdrew from the agreement**, further **deteriorating bilateral nuclear arms control and increasing proliferation concerns**

Paramparogat Krishi Vikas Yojana (PKVY)

News: As of January 30, 2025, the Government of India has released ₹2,265.86 crore under Paramparogat Krishi Vikas Yojana (PKVY), highlighting its significant contribution to sustainable agriculture, rural digitization, and inclusive market access.

About Paramparogat Krishi Vikas Yojana (PKVY)

- **Launched in:** **2015** under the **National Mission for Sustainable Agriculture (NMSA)**
- **Aim:** To promote and support organic farming, thereby contributing to the enhancement of soil health.
- **Objectives:** To advance a scalable model of eco-agriculture that integrates low-cost, chemical-free techniques with farmer-led collectives, enhancing food safety, income generation, and environmental sustainability.
- PKVY provides farmers with a **structured system for training, certification, and market linkage** and supports the vision of **resilient and sustainable agriculture**.
- It is **open to all farmers and institutions**, subject to a **maximum landholding limit of two hectares**.
- **Financial Assistance Structure:** Farmers receive **₹31,500 per hectare for a three-year period**.

Cluster-Based Organic Farming Model

- The foundation of PKVY lies in the **cluster approach**, where farmers are grouped into **clusters of 20 hectares** each.
- It encourages **collective adoption** of organic practices to ensure **uniform standards** and **cost efficiency**.
- It promotes **resource-sharing** among farmers for composting, input preparation, and seed exchange.
- It enables farmers to reduce chemical dependency, improve soil health, and adopt **diversified, sustainable cropping systems**.

- It includes **training, capacity building, and exposure visits** to equip farmers with practical organic farming skills and confidence for transition.
- It builds a **scalable model of eco-agriculture** integrating **low-cost, chemical-free techniques** with **farmer-led initiatives**.

Organic Certification Systems

PKVY has established **two primary certification systems**, along with a special fast-track program:

Third-Party Certification (NPOP)	<ul style="list-style-type: none">● It is implemented under the National Programme for Organic Production (NPOP) by the Ministry of Commerce & Industry and conducted by Accredited Certification Agencies to ensure international standard compliance.● Covers the entire organic value chain — production, processing, trading, and exports.● Enables farmers to access global organic markets and export certified produce.
Participatory Guarantee System for India (PGS-India)	<ul style="list-style-type: none">● It is managed by the Ministry of Agriculture & Farmers Welfare.● It is a farmer-centric, community-based certification system emphasizing peer verification and collective responsibility.● It provides low-cost and inclusive certification for small and marginal farmers and primarily serves the domestic organic market

Seneca Lake

News: Residents near Seneca Lake in New York continue to report mysterious loud booms, known as the “Seneca Guns,” echoing from the lake. Scientists are actively investigating the cause behind these unexplained sounds.

About Seneca Lake

Source: Fingerlakes.com

- Seneca Lake is located in **upstate New York**, known as the **Finger Lakes**.
- **Water Sources:** It is fed by **Catharine Creek** and the **Keuka Lake Outlet**, with its outflow leading to the **Seneca River** and **Cayuga Seneca Canal**.

- It is the **largest and deepest** of New York's Finger Lakes.
- The lake is bordered by **Geneva** to the north, **Lodi**, **Romulus**, and **Hector** along its shores, and **Watkins Glen** at the southern tip.
- **Size:** It is **38 miles long** and **about 3 miles wide** at its widest point.
- It is **famous for its world-class wineries, scenic hiking trails**, and a wide range of outdoor activities.
- **Unique phenomenon:** There are "**Seneca Guns**" and "**Seneca Drums**" heard occasionally since centuries.
 - These are **intermittent and inexplicable booms** with reaction of the displaced water.
- **Flora:** The region also features rich **woody vegetation**, including **northern hardwoods** such as *Fagus grandifolia* (American beech) and *Acer saccharum* (sugar maple).
- **Fauna:** **White-tailed deer** and more elusive species like **black bears** and **river otters** can sometimes be spotted in secluded areas.

'SAKSHAM' Anti-Drone Grid

News: Recently, the Indian Army has initiated procurement of the indigenous 'SAKSHAM' Anti-drone Grid.

About SAKSHAM

Source: The week

About	<ul style="list-style-type: none">● SAKSHAM stands for Situational Awareness for Kinetic Soft and Hard Kill Assets Management.● It is a cutting-edge command and control network designed to detect, track, identify, and neutralise enemy drones in real time.● This initiative aligns with the Indian Army's Decade of Transformation (2023-2032).
Developed by	Indian Army in partnership with Bharat Electronics Limited (BEL) .
Purpose	To provides real-time airspace awareness and counter-UAS (unmanned aerial systems) capabilities across Army formations.

<p>Features</p>	<ul style="list-style-type: none"> ● It effectively connects radar, optical, acoustic, and radio-frequency sensors onto a unified network, giving commanders a seamless view of the tactical airspace. ● It uses the secure Army Data Network (ADN) to provide a single “Recognised UAS Picture” over the recently established Tactical Battlefield Space (TBS) <ul style="list-style-type: none"> ○ TBS is a region up to 3,000 meters (10,000 feet) above the ground. ○ This expanded domain ensures that ground forces maintain control over low-altitude airspace, allowing for both defensive and offensive operations involving friendly drones and aerial platforms. ● Functions as a modular Command and Control (C2) system, offering situational awareness for Counter-UAS (CUAS) management.
<p>System Capabilities And Functionality</p>	<ul style="list-style-type: none"> ● It features AI-driven decision-support tools to optimise operator response time. ● It integrates both soft-kill (jamming and spoofing) and hard-kill (destruction using kinetic weapons) measures, depending on the threat type and proximity. ● The system’s automated response algorithms assess multiple parameters including drone altitude, flight path, and payload signature to select the appropriate countermeasure.
<p>Integration and Coordination</p>	<ul style="list-style-type: none"> ● SAKSHAM’s data will also be fed into the Army’s overarching Sudarshan Chakra command architecture. ● Works in tandem with Akashteer to map friendly, neutral, and hostile airspace users within the combat zone.

Sa-Dhan Bharat Microfinance Report 2025

News: Sa-Dhan's Bharat Microfinance Report 2025, highlights rising delinquencies in FY2024–25 and a temporary slowdown.

About Sa-Dhan Bharat Microfinance Report 2025

Source – TH

- **Prepared by:** The **Bharat Microfinance Report 2025** has been prepared by **Sa-Dhan**, in partnership with **NABARD**, using data from over **200 micro-lending institutions** that cover **98% of industry** operations.
- It brings together **information from credit information companies and industry sources** to present a clear picture of **client outreach, portfolio size, regional trends**, and the role of different institution types..
- **Key findings**
 - **Delinquencies increased:**
 - The share of loans overdue by more than 30 days (PAR 30+) rose to 6.2 percent from 2.1 percent in 2023–24.
 - **Rising NPA:** The share overdue by more than 90 days rose to 4.8 percent from 1.6 percent.
 - **Bihar** showing 7.2 percent loans overdue by more than 30 days and 4.6 percent loans overdue by more than 90 days.
 - **Rural stress:** Rural borrowers show the highest stress: **6.4%** overdue (30+ dpd) versus **6.1%** in semi-urban and **6.0%** in urban areas.
 - **Top microfinance states:** Bihar, Tamil Nadu, Uttar Pradesh, West Bengal, Karnataka.
 - **Support livelihoods :** **91%** of loans were used for income generation.
 - **Inclusion:** **The Self-Help Group Bank Linkage programme** also expanded, with total outstanding loans reaching ₹3.04 lakh crore across 84.9 lakh SHGs, connecting 17.1 crore households to formal credit.
 - **Industry structure:** **NBFC-MFIs and NBFCs** serve **86%** of clients and hold **84%** of the portfolio.
 - **Slowdown:** Loan accounts fell **13%** to **13.99 crore**; loan outstanding fell **14%** to **₹3,81,225 crore**; FY25 disbursements dipped **26%** to **₹2,84,130 crore**.

- **Reasons for slowdown:** The fall in disbursement and portfolio growth was driven by a liquidity crunch, deteriorating asset quality, tighter regulatory measures, and a cautious lending approach after rapid expansion and rising defaults.

About Sa-Dhan

- Sa-Dhan is an **association of Impact Finance Institutions** and an RBI appointed **Self-Regulatory Organization (SRO)** for Microfinance Institutions.
- It is the **first and largest association** of community development finance institutions in India formed over two decades ago for supporting and **strengthening the agenda of fostering Inclusive Impact Finance in India**.
- It strives for **creating a better understanding of the microfinance sector** among policymakers, funders, banks, governments, researchers, and practitioners.
- It is also **recognized as a National Support Organization (NSO) by National Rural Livelihood Mission (NRLM)**.

Sawalkote Hydel Project

News: The Indian government has now recommended environmental clearance for the 1,856-MW Chenab project in Jammu and Kashmir.

About Sawalkote Hydel Project

Source – IE

- **Location :** The project is located in **Jammu and Kashmir, (Ramban district)**
- **River:** The project is on the **Chenab River**.
- **Build by:** The project will be built by **National Hydroelectric Power Corporation (NHPC) Limited**.
- **Key features**
 - Planned installed capacity is distributed across two stages: **Stage I of 1,406 MW and Stage II of 450 MW**.
 - The scheme proposes a **5-metre-high** concrete gravity dam, creating a reservoir of about 530 million cubic metres over roughly 1,159 hectares.
 - Although substantial storage is envisaged, the project is officially categorised as a **run-of-river** hydropower development.
 - The Sawalkote Hydroelectric Power Project is poised to become **Jammu and Kashmir's largest hydropower** initiative.

- **Other projects on Chenab River**

- Operational projects include **390-MW Dulhasti (Kishtwar)**, **890-MW Baglihar (Ramban)**, and **690-MW Salal (Reasi)**.

Some Important Project on Indus River System

Project	River
Kishanganga HEP (330 MW)	Kishanganga/Neelum (Jhelum tributary)
Ratle HEP (850 MW)	Chenab
Pakal Dul HEP (1,000 MW)	Marusudar (Chenab tributary)
Baglihar HEP (900 MW)	Chenab
Salal HEP (690 MW)	Chenab
Pandoh project	Beas
Uri project	Jhelum in Jammu & Kashmir
Thein project	On Ravi in Punjab
Pong project	On river Beas Reservoir- Maharana Pratap Sagar
Bhakra Nangal project	On river Satluj India's largest multipurpose project Reservoir- Gobind Sagar

National Red List Assessment (NRLA) Initiative

News: India launched its National Red List Roadmap at the IUCN World Conservation Congress in Abu Dhabi, unveiling Vision 2025–2030 for the National Red List Assessment (NRLA).

About National Red List Assessment (NRLA) Initiative

Source – PIB

- The NRLA is a **nationally** coordinated, inclusive, and science-based framework to assess and monitor the **conservation status of Indian species**, aligned with IUCN global standards.
- **Prepared by:** Zoological Survey of India (**ZSI**) and Botanical Survey of India (**BSI**), in close collaboration with **IUCN-India** and the **Centre for Species Survival, India**.

- **Lead by:** NRLA is lead by the Ministry of Environment, Forest and Climate Change (**MoEFCC**), **Government of India, with ZSI and BSI as nodal agencies.**
- **Funding:** Entirely from public funds; **estimated ₹95 crore**, mobilized by BSI, ZSI, IUCN-India, and Centre for Species Survival: India – Wildlife Trust of India (CSS: India – WTI).
- **Aim:** To establish a nationally coordinated red-listing system that provides a tool for accurate assessment, conservation planning, threat mitigation, and evidence-based policy.
- **Goal:** To **publish National Red Data Books for both flora and fauna by 2030** and accomplish a comprehensive threat assessment of native species under IUCN guidelines.
- **International cooperation:** Anchored in commitments under the Convention on Biological Diversity (CBD) and the Kunming–Montreal Global Biodiversity Framework (KM-GBF).
- **Significance:** The Red List **strengthens India's National Biodiversity Mission** by helping policymakers set conservation priorities, guide funding allocations, and enforce wildlife protection measures under the updated **National Wildlife Action Plan (2023–2032)**.
- **India's ecological status**
 - **India is one of 17 megadiverse countries** and hosts **four biodiversity hotspots: Himalayas, Western Ghats, Indo-Burma, and Sundaland.**
 - With **2.4% of global land**, India harbours **~8% of global flora and 7.5% of fauna; 28% plants and over 30% animals are endemic.**
 - Strong legal protection under the **Wild Life (Protection) Act, 1972, amended in 2022** to extend protection to species listed under CITES appendices.

National Tele Mental Health Programme (Tele MANAS) and Tele MANAS App

News: Recently, on the occasion of the World Mental Health Day 2025, Union Minister of Health and Family Welfare launched several new initiatives for the National Tele Mental Health Programme (Tele MANAS) and Tele MANAS App.

About Tele MANAS Programme

- **Launched in:** 2022
- The programme was **introduced as a toll-free helpline (14416) available nationwide**, offering a **wide range of mental health services.**

- **Aim:** To provide **universal access to equitable, affordable, and quality mental health care** through a 24×7 tele-mental health service.
- It forms a key digital component of the **National Mental Health Programme (NMHP)**.
- **Key objectives include:**
 - **Expanding Access:** Provide 24×7 tele-mental health services across all States and UTs for universal reach.
 - **Building a Comprehensive Mental Health Network:** Offer counseling, medical and psychosocial support, e-prescriptions, and specialist consultations.
 - **Inclusive Care:** Focus on vulnerable and hard-to-reach populations to ensure no one is left without support.
- It offers guidance on issues like **sleep disturbances, technology overuse, substance misuse, and more.**
- It extends support **to parents and caregivers of children and adolescents with developmental disorders** such as intellectual disabilities, autism, and ADHD.
- Tele MANAS strives **to empower individuals to take control of their mental health** and break through the barriers of stigma, by **offering promotive, preventive, and curative mental health services.**
- It ensures that everyone has the **right to access affordable, high-quality mental health care.**
- The service under the programme is structured in a **two-tier system to optimize care delivery** and enhance support:
 - **Tier 1** comprises **state Tele MANAS cells staffed with trained counsellors and mental health specialists.** These professionals provide immediate support through: **Tele-Counseling and Tele-Consultation**
 - **Tier 2** includes **specialists from DMHP facilities and medical colleges** who provide both in-person and audiovisual consultations through e-Sanjeevani.

About Tele MANAS mobile app

- Tele MANAS mobile app **serves as a comprehensive platform** offering mental health resources, including self-care tips, stress management strategies, and tools to recognize early distress signals.
- It **engages users through interactive activities** like mind challenges, games, and mindfulness practices, ensuring a user-friendly experience.

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- The app provides **free, confidential counseling 24/7**, connecting users to trained mental health professionals across India.
- Video consultations add another layer to the existing audio call services, **allowing mental health professionals to conduct more thorough assessments by observing the caller directly.**
 - This feature supports **history taking, clarifying concerns, and enables brief physical or Mental State Examinations (MSE)** when necessary.
- The app has **new feature of Tele MANAS App Enhancements** (Multi-lingual UI, Chatbot, Accessibility, Emergency Module).
- Tele MANAS App is now available in **10 regional languages**, in addition to the **English and Hindi languages.**
- The app now includes accessibility features **to make the interface more user-friendly for visually impaired users.**
- The app has a feature of **chatbot feature ('Asmi')** allowing users **to engage with the app and seek information or help regarding mental health.**
- Emergency response content has been incorporated **to ensure timely guidance and support during emergencies.**

Nobel Prize for Literature 2025

News: The Nobel Prize for Literature 2025 has been awarded to Hungarian author László Krasznahorkai.

About Nobel Prize for Literature 2025

Source – AIR

- **Winner:** It has been awarded to **Hungarian author László Krasznahorkai.**
- The Swedish Academy gives the award.
- It carries a monetary reward of **11 million Swedish crowns (approximately USD 1.2 million)**
- Krasznahorkai is regarded as a **great epic writer** in the **Central European tradition.**
- He is known for postmodern and apocalyptic novels and novellas like *Satantango* and *The Melancholy of Resistance*.
- His work is marked by **absurdism, philosophical depth, and grotesque excess**, portraying the chaos and despair of modern existence.

- His writings often blend **existential anxiety, apocalyptic vision, and surrealism**, capturing the **human condition amidst chaos and uncertainty**.

G20 Energy Transitions Ministerial Meeting

News: Recently, the Union Power Minister attended the G20 Energy Transitions Ministerial Meeting (ETMM), which was held in South Africa.

G20 Energy Transitions Ministerial Meeting

Source: PIB

- It is a **major annual meeting** under the **G20 framework** that brings together **energy ministers** and leaders from the world's largest economies to **accelerate the global transition** toward clean, secure, and equitable energy systems.
- **Aim:** It aims to facilitate **cooperation, share best practices, and coordinate policy** on the core pillars of energy security, affordability, technology transfer, energy transition, and climate change.
- **2025 ETMM:** It was held in **KwaZulu-Natal, South Africa**, under South Africa's G20 Presidency.

Key Highlights of the Meeting

- **Focus on Energy Security:** It was emphasised that **energy security** is a major global challenge, especially for the **Global South**.
 - It was also urged for stronger **G20 cooperation** for economic stability, sustainability, and equitable access to energy.
- **India's Leadership in Clean Energy:**
 - India's achievement of its **NDC target**, reaching **50% non-fossil fuel capacity** by 2025, five years ahead of schedule was highlighted.
 - India's vision to become a **global hub for green hydrogen production** was outlined.
 - India's target of achieving **100 GW of nuclear power capacity by 2047** was announced.
- **Success of India's Biofuels Programme:**
 - India's achievement of **20% ethanol blending** in fuel was noted.
 - India's leadership in the **Global Biofuels Alliance**, now comprising **32 countries and 14 international organizations** was also highlighted.

- **Climate Justice & Finance:** The need for **climate justice** and **support for developing nations** was stressed. The importance of **climate finance** and **technology transfer** under the **Paris Agreement** was also reiterated.
- **Support for Africa's Mission 300:** India's commitment to **Mission 300**, aimed at **electrifying 300 million Africans by 2030** was also reaffirmed.
- **Call for Global Cooperation:** It was urged all nations to work together to build **resilient, sustainable, and equitable energy systems**.

Sugamya Bharat App

News: Recently, the Department of Empowerment of Persons with Disabilities (DEPwD) launched the revamped 'Sugamya Bharat App' at the Purple Fest in Goa. The revamped version builds upon the original app launched under the Accessible India Campaign (Sugamya Bharat Abhiyan).

About Sugamya Bharat App

Source: PIB

- It is a **means for sensitising and enhancing accessibility** in the built environment, transportation sector and ICT ecosystem in India.
- **Launched by:** Department of Empowerment of Persons with Disabilities (DEPwD)
- **Purpose:** To create a **digitally inclusive India** by making accessibility information and services easily available to persons with disabilities (PwDs).
- **Vision:** Serves as **India's digital accessibility hub** under the **Accessible India Campaign (Sugamya Bharat Abhiyan)**.
- **Developed by:** The app has been developed with the support of the SBI Foundation and in technical partnership with NAB Delhi, ISTEM, and Mission Accessibility.
- **Features:**
 - The **Sugamya Bharat App** has been redesigned with a **user-first and accessibility-first approach** to serve as **India's digital accessibility hub**.
 - It is available in 23 languages.
 - It **provides persons with disabilities easy access to information, government schemes, and services**, thereby promoting digital inclusion and empowerment.
 - The app also features **curated job and education listings** from **both government and private sectors**, specifically tailored for persons with disabilities.

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- The app is **screen reader compatible**, supports **voice navigation**, and offers **multi-language options** to ensure accessibility for all users.
- It is fully compatible with **assistive technologies** and available for download on both **Android and iOS platforms**.
- The app includes an **accessibility mapping feature** that allows users **to locate and rate public places based on accessibility standards**, encouraging community-driven data collection.
- It offers a **comprehensive directory of government schemes, scholarships, benefits, and employment opportunities**, eliminating the need to visit multiple websites or portals.
- Through its **grievance redressal module**, users can directly report issues related to inaccessible public infrastructure or services, promoting accountability and improvement.

Exercise AUSTRAHIND 2025

News: Exercise AUSTRAHIND 2025 has been scheduled to be conducted from 13th to 26th October 2025.

About Exercise AUSTRAHIND 2025

Source: PIB

- It is the **annual joint military** exercise between **India- Australia**.
- **Started in: 2022**
- **Host for 2025 edition:** Perth, **Australia**
- The Indian Army contingent is being led by a **Battalion of Gorkha Rifles** along with troops from other arms and services.
- **Aim:** To enhance **military cooperation, improving interoperability** and providing a platform for participating armies to exchange tactics, techniques and procedures in the domains of sub conventional warfare in urban/ semi urban terrain.
- The exercise will **involve joint company-level operations** in **open and semi-desert terrain**.
- Troops will carry out missions such as **joint planning, tactical drills, and specialized training**.
- It will **help improve operational skills, use new technologies, and enhance joint combat readiness**.
- The exercise will **also strengthen defence cooperation and friendship** between the Indian and Australian armies, promoting teamwork and mutual trust.

Greenhouse Gas Emission Intensity (GEI) Target Rules, 2025

News: Recently, the Environment Ministry notified India's first legally binding Greenhouse Gas Emission Intensity (GEI) Target Rules, 2025.

About Greenhouse Gas Emission Intensity (GEI) Target Rules, 2025

- The Rules **set targets for how much greenhouse gas can be emitted to make one unit of product**, measured in tonnes of CO₂-equivalent (tCO₂e) per unit of output.
- **Enforced by**
 - **Notified by** the Ministry of **Environment, Forest and Climate Change**.
 - The **Bureau of Energy Efficiency** issues the **carbon credit certificates** and determines the **average trading price** used for compliance calculations.
 - The **Central Pollution Control Board** imposes the **environmental compensation** on non-compliant facilities and is **responsible for recovering these**.
- **Objective:** To promote the **adoption of sustainable, cutting-edge technologies** across traditionally high-emission industries, for addressing climate change.
- **Linked with:**
 - **Carbon Credit Trading Scheme (CCTS):** GEI Rules are directly linked to the **CCTS 2023**, because they **create the emission-intensity targets** that will **generate tradable carbon credits** in India's domestic carbon market.
 - **Paris Climate Agreement, 2015:** It is also align with the Paris Climate Agreement, 2015, by supporting India's nationally determined targets to reduce the emission intensity of GDP by **45% by 2030** from 2005 levels and to achieve **net zero by 2070**.
 - **Perform, Achieve and Trade (PAT) scheme :** The Rules build on the PAT scheme (energy efficiency without direct carbon limits)
 - **Carbon Border Adjustment Mechanism (CBAM):** In addition, they **help Indian exporters** prepare for mechanisms like the European Union's CBAM, which affects carbon-intensive exports such as cement, steel, and aluminium.
- **Key feature**
 - **First legally binding emission** intensity targets for **four high-emission sectors (aluminium, cement, chlor-alkali, and pulp and paper)**.
 - It cover **282 units for 2025–26 and 2026–27**.

- **Sectoral** reduction ranges over **two years**:
 - 3.4% (cement)
 - 5.8% (aluminium)
 - 7.5% (chlor-alkali)
 - 7.1% (pulp and paper).
- Each facility is assigned a **GEI target using a 2023–24 baseline**, and the target is measured as **tonnes of carbon dioxide equivalent (tCO₂e) per unit of product**.
- If a facility performs better than its target, it **earns tradable carbon credit certificates**.
- If it fails to meet the target, it must **purchase equivalent carbon credits** or **pay environmental compensation** set at **twice the average trading price** for that year.
- Any environmental compensation that becomes due **must be paid within 90 days**.

Siddi Tribal Community

News: Recently , President Droupadi Murmu expressed happiness that the Siddi tribal community, a Particularly Vulnerable Tribal Group, has achieved a literacy rate of over 72 per cent.

About Siddi Tribal Community

Source – History TV

- The Siddi are an ethnic group in India and Pakistan with **African roots from the Bantu community**.
- They are also called **Sheedi, Sidi, Siddhi, Habshi, and Badsha**.
- **History:** They are believed to have **first come to India in the 7th century with Arab merchants**.
 - In the **16th century, they arrived with the Portuguese and the British**, largely as slaves.
- **Geographic distribution:** They are scattered across **Karnataka, Gujarat, Maharashtra, Andhra Pradesh, Goa and Tamil Nadu, often in isolated villages and interior forests**,
- **Status in India**
 - In 2003, the Union government classified Siddis under the list of **Scheduled Tribes**.
 - They are included in the **Centre’s list of Particularly Vulnerable Tribal Groups (PVTGs)**.
- **Cultural contribution**
 - The Siddis are known for **folk music and dances** such as **Dhamal and Rasda**, with men performing the Dhamal dance.

- Percussive instruments like the **dammam, duf, and gumte** are popular among men and women.
- **Religion:**
 - They practise different religions, such as **Christianity, Hinduism and Islam**, but some cultural practices and rituals are shared.
 - Irrespective of religion, almost all are **devotees of the deity Yallamma** and may worship pu or at home.
- **Language used:** This tribe speak either **Konkani, Urdu or Marathi** as their main language

Nobel Prize in Economic Sciences 2025

News: The Royal Swedish Academy of Sciences awarded the 2025 Economics Nobel to Joel Mokyr, Philippe Aghion, and Peter Howitt for innovation-driven growth.

About Nobel Prize in Economic Sciences 2025

Source – Nobel Prize Committee

- It is the “**Sveriges Riksbank Prize**” in Economic Sciences in Memory of Alfred Nobel 2025,” **popularly called the Nobel prize for economics.**
- **Winners of 2025 Prize**
 - **Joel Mokyr** – Northwestern University, **US**.
 - **Philippe Aghion** – Collège de France, INSEAD, and LSE.
 - **Peter Howitt** – Brown University, **US**.
- Prize money is **11 million Swedish kronor (Rs 10.25 crore)**; **half** goes to Mokyr, and the **other half is shared** between Aghion and Howitt.
- **Recognized work:** It recognizes their **explanation of innovation-driven economic growth** and why **sustained growth emerged in the last two centuries** when stagnation dominated most of human history.
- **Key contribution by winners**
 - **Joel Mokyr (economic historian)**
 - Joel Mokyr **used historical sources** as one means to **uncover the causes of sustained growth becoming the new normal.**

- He demonstrated that **if innovations are to succeed** one another in a self-generating process, we not only need to know that something works, but we also need to have scientific explanations for why.
- The **latter was often lacking prior to the industrial revolution**, which made it difficult to build upon new discoveries and inventions.
- He also emphasised the **importance of society** being open to new ideas and allowing change.
- **Philippe Aghion & Peter Howitt**
 - Both also studied the **mechanisms behind sustained growth**.
 - They constructed a **mathematical model** for what is called **creative destruction**: when a new and better product enters the market, the companies selling the older products lose out.
 - The innovation represents something new and is thus creative.
 - However, it is also destructive, as the company whose technology becomes passé is outcompeted.

Virtual Museum of Stolen Cultural Objects

News: UNESCO launched the Virtual Museum of Stolen Cultural Objects to confront illicit trafficking and reconnect communities with stolen heritage.

About Virtual Museum of Stolen Cultural Objects

Source – UNESCO

- It is an **online museum** that helps **communities reconnect with their stolen cultural treasures** and works to **stop the illegal trade** of heritage items, including those taken during colonial times.
- **Aim:** To **protect shared heritage** by stopping illicit trafficking and reconnecting communities with stolen objects.
 - It **also aims** to help recover these items and return them to their countries of origin, restoring public access and recognition.
- **Launched by:** It is launched by **UNESCO**.
- **Launching:** It is launched at **UNESCO's World Conference on Cultural Policies and Sustainable Development in Barcelona**.

- **Designed by:** It is designed by Pritzker Architecture Prize-winner **Francis Kéré**.
- **Financial support:** is financially supported by the **Kingdom of Saudi Arabia**, and the project was **developed in collaboration with the INTERPOL**.
- It was **developed in response to the call of UN member states** for a coordinated strategy to raise awareness on illicit trafficking.
- **UNESCO's 1970 Convention calls on signatory states** to combat the illicit trade in cultural property—a market that Interpol warns is increasingly dominated by organized criminal networks.
- **Key feature**
 - The visual structure of the website in the form of a baobab tree, which is a noted **symbol of strength in the African continent**.
 - The website also **features testimonies from affected communities, and points to locations on a map** from where the objects were stolen.
 - It **offers 3D, spinnable digital reconstructions (including AI-assisted models)**, interactive tools, searchable attributes, community testimonies, and maps of theft locations.
 - The museum currently **displays almost 240 missing objects from 46 countries**.
- **About Sculptures from Indian temple**
 - The museum shows **two ninth-century sandstone sculptures** from the **Mahadev Temple in Pali, Chhattisgarh**: a Nataraja of Shiva and a seated Brahma.

Logistics Excellence, Advancement, and Performance Shield (LEAPS) 2025

News: Union Minister Piyush Goyal launched LEAPS 2025 during the 4th Anniversary of PM GatiShakti at Bharat Mandapam, New Delhi.

About Logistics Excellence, Advancement, and Performance Shield (LEAPS) 2025

Source – DPIIT

- It is a **flagship initiative** to benchmark **logistics excellence** and to **acknowledge and reward best practices, innovation, and leadership** across India's logistics ecosystem.
- **Nodal Ministry:** Ministry of Commerce and Industry
- **Implemented by:** It is implemented by the **Department for Promotion of Industry and Internal Trade (DPIIT)**.

- **Aim:** The initiative **aims** to benchmark logistics performance, recognize excellence and innovation, and promote a sustainable, efficient, and resilient logistics ecosystem **aligned with PM GatiShakti and NLP 2022**.
- **Key features**
 - It **covers a wide spectrum of logistics players**, including air, road, sea, and rail freight operators; warehousing; multimodal transporters; MSMEs; startups; and academia.
 - It **emphasizes sustainability**, ESG (Environmental, Social, and Governance) practices, and Green Logistics to guide responsible and efficient operations.
 - It **encourages collaboration** between government, industry, and academia to enhance efficiency, transparency, and resilience in the logistics ecosystem.
 - The awards cover **13 categories**, including Green Logistics Champion, Digital Transformation Leader, and Regional Infrastructure Performer.

Alliance Air's "Fare se Fursat" Fixed Airfare Scheme

News: Minister of Civil Aviation inaugurated Alliance Air's "Fare se Fursat" Fixed Airfare Scheme to promote ease of flying in the country.

About Alliance Air's "Fare se Fursat" Fixed Airfare Scheme

Source – NDTV

- **Initiative by:** Alliance Air, an Indian government-owned regional carrier.
 - Alliance Air connects **Tier-2 and Tier-3 cities** to the national aviation network.
- **Aim:** To give passengers freedom from the **stress of fluctuating airfares and promote ease of flying** in the country.
- **Objective:** To address this long-standing challenge by introducing **transparency and stability in pricing**.
- **Implementation:** The initiative will be implemented on a **pilot basis** from October 13 to December 31, 2025 across **select routes**.
- Under this scheme, the airline will offer a single, **fixed fare that remains constant regardless of the booking date**, even on the day of departure.
 - The **static fare system** eliminates uncertainty and stress associated with fluctuating airfares, ensuring predictability of costs, even for last-minute bookings.

- The initiative is expected to **encourage first-time flyers from smaller towns** to opt for air travel making air travel available, accessible and affordable.

India's 2023 Vital Statistics Report

News: Recently, India's 2023 Vital Statistics Report was published by the Office of the Registrar General of India (ORGI), which works under the Ministry of Home Affairs.

About India's 2023 Vital Statistics Report

Source: TH

- The **Vital Statistics of India** based on **Civil Registration System (CRS) 2023** provides a nationwide picture of the **country's birth and death registrations, institutional births, and sex ratio at birth.**
- **Released by: Registrar General of India (RGI)** under the Office of the Registrar General and Census Commissioner.
- **Legal Context:** The Civil Registration System (CRS) operates under the **Registration of Births and Deaths Act, 1969**, mandating compulsory registration of every birth and death in India.
 - The recently **proposed amendments** to the Registration of Births and Deaths Act (effective from 2024) further emphasize **digitization and integration** of CRS data with other national databases to enhance real-time demographic tracking.

Findings of the report

Birth Statistics	<ul style="list-style-type: none">● Total Births Registered (2023): 2.52 crore (25.2 million)● Comparison with 2022: Decline of 2.32 lakh births (2022 recorded approximately 2.54 crore births).● Registration Coverage: 98.4% of births were registered in 2023.● Institutional Births: Accounted for 74.7% of all registered births, indicating a continued trend toward hospital deliveries, though data from Sikkim was not included.
State-wise Registration Efficiency	<ul style="list-style-type: none">● 11 States/UTs achieved more than 90% registration within 21 days of birth.● Five States reported 80-90% timely registration

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	<ul style="list-style-type: none">● Fourteen States showed 50–80% registration within the prescribed time.
Death Statistics	<ul style="list-style-type: none">● Total Deaths Registered (2023): 8.66 million (86.6 lakh)● 2022 Figures: 8.65 million (86.5 lakh), a marginal increase of 0.1 lakh deaths, suggesting a relatively stable mortality rate post-pandemic.● Pandemic Context: The CRS data shows no significant spike in deaths during 2022 and 2023, contrasting with earlier pandemic years.<ul style="list-style-type: none">○ This demonstrates that the impact of COVID-19 on overall mortality had largely stabilized by 2023.
Sex Ratio at Birth	<ul style="list-style-type: none">● Lowest SRB States: Jharkhand has the lowest SRB.<ul style="list-style-type: none">○ Other states with lowest SRB states: Bihar, Telangana, Maharashtra, Gujarat, Haryana and Mizoram.○ Notably, Bihar has consistently reported the lowest SRB since 2020.● Highest SRB States: Arunachal Pradesh has the highest SRB.<ul style="list-style-type: none">○ Other states with lowest SRB are Nagaland, Goa, Ladakh and Tripura and Kerala.
Institutional Births and Health Infrastructure	<ul style="list-style-type: none">● Institutional births accounted for 74.7% of total registered births in 2023.● However, the remaining 25.3% non-institutional births suggest continued gaps in healthcare accessibility, particularly in rural and marginalized regions.

Twinning Rate

News: New analyses on twinning rates and twin mortality, including projections for India and a call to establish a twin registry, have refreshed policy attention.

About Twinning Rate

Source – The Guardian

- The twinning rate is the **number of twin births per 1,000 deliveries**.
- **Indicator of:** It indicates **how common twin pregnancies are** and helps public health systems plan for **higher-risk care** and understand **fertility patterns**.
- **Study of Twinning Rates**
 - Recent studies analyzed 3 million+ births across 39 low-income countries, projecting **future twinning with UN population data**.
 - A separate **India study** used all **five NFHS rounds (1993–2021)** to track twin births and deaths.

Key Findings of Studies

India

- **Rising twinning:** The proportion of twin births increased from 0.9% in 1993 to 1.5% in 2021.
- **Mortality burden:** Twins formed 7.7% of all under-five deaths; mortality declined over time but remained high at 179.8 per 1,000 live births in 2021.
- **Excess risk vs singletons:** Death risk was 7.5 times higher in the early neonatal phase and 10 times higher in the late neonatal phase.
- **Wealth gradient:** Twin survival varied sharply by household wealth, identifying twins as a vulnerable group needing targeted interventions.
- **Birth-order nuance:** Twins are more often born in later pregnancies, yet twins born in the first or second pregnancy face higher death risk.
- **India projections:** Twin births are projected to **decline by about 10.5% by 2100**, but India may still hold the **largest share (23.4%)** among studied countries; projections may underestimate future twinning because growing use of medically assisted reproduction was not included.

Global

- The absolute number of twin births will **rise** in many countries due to population growth.
- **South Asia, including India and Bangladesh**, is projected to see **declines** in the number of twin births because fertility is below replacement and fewer women will give birth.

Recommendations

- **Train frontline health workers** to monitor and care for twins to improve local birth outcomes.
- **Establish a twin registry** to track health and development, support policy, and advance research on survival and biological aspects of twinning.

Madagascar

News: In Madagascar, after lawmakers impeached President Andry Rajoelina, army seized control.

About Madagascar

Source – Britannica

- It is the **world's fourth-largest island** and the **second-largest island country**.
- **Capital:** Its capital is **Antananarivo**.
- **Location:** It lies about **250 miles east of Mozambique** in the **southwestern Indian Ocean**.
- **Boundaries:** It is bordered by the Indian Ocean, with the west along the **Mozambique Channel**; nearby Islands are **Comoros, Réunion, and Mauritius**.
- **Government:**
 - It is a **semi-presidential republic**.
 - Voters elect a president who appoints a prime minister to form a cabinet.
- **Major rivers:** It includes **Mangoky, Onilahy, Betsiboka, and Sofia**.
- **Major lakes:** It includes **Lake Alaotra** is the largest lake on the island, and others include **Lake Itasy** and **Lake Kinkony**.
- **Highest peak:** The **Mount Maromokotro** is the highest point.
- **Soil:** The Central Highlands are dominated by red lateritic soils, giving the country its nickname, "**the Great Red Island**."
- **Signature flora:** The **baobab** is the national tree.
 - Its trunk stores rainwater.

Crew Escape System (CES) of Gaganyaan

News: In October 2023, ISRO tested the Crew Escape System, which is crucial for astronaut safety in the Gaganyaan mission.

About Crew Escape System (CES) of Gaganyaan

- The CES is an **emergency escape measure** designed to **quickly pull the crew module** along with the **astronauts** to a safe distance from the launch vehicle in the event of a launch abort.
- **Developed by:** It is developed by the Indian Space Research Organisation (**ISRO**).
- **Aim:** To ensure astronaut safety by extracting the crew module, with the crew inside, to a safe distance **in the least possible time if something goes wrong during the mission.**
- **Types**
 - **Puller type:** The CES pulls the crew module away from the launch vehicle.
 - Example – This one is used in Gaganyaan.
 - **Pusher type:** The crew module is pushed away using compact, high-thrust liquid-fuel engines.
 - The **choice depends on propulsion technology and system integration aspects.**
 - Example – vehicles like SpaceX's Falcon 9)
- **Working mechanism**
 - **The CES operates during** the ascent's atmospheric phase, when the Human-rated Launch Vehicle Mark-3 (**HLVM3**) **accelerates** to hypersonic speeds and faces very high structural loads.
 - **Speed matters:** HLVM3 lifts off using **two S200 solid-fuel boosters** that cannot be shut down after ignition. So, if there is a problem, the CES must act faster than the rocket and pull the crew module away immediately.
 - **Escape action:** CES pulls the crew module away with very **high acceleration, up to ten times gravity.**
 - **Crew safety posture:** Astronauts sit in a “**child-in-cradle**” **position** so the brief high force is tolerable.
 - **After separation:** CES releases the module at a safe distance.
 - **Descent control:** A multistage parachute system slows the module step by step.
 - **Landing:** The module splashes down in the sea within safe impact limits.
 - **Trigger decision:** An **Integrated Vehicle Health Management system** monitors everything in real time and activates CES if needed.

All-India Synchronous Elephant Estimation 2025

News: Recently, the Synchronous All India Elephant Estimation (SAIEE) 2021–25 was released by Wildlife Institute of India (WII).

About All-India Synchronous Elephant Estimation 2025

Source: IE

- The **SAIEE 2021–25** is India's **latest** national census for **Asian elephants (*Elephas maximus indicus*)**.
- It provides a **new population baseline** due to a shift in methodology from earlier estimation techniques.
- **Conducted by:** Union Ministry of Environment, Forest and Climate Change (MoEFCC) in coordination with **state forest departments**, the **Wildlife Institute of India (WII)**, and various research institutions.
- **Released by:** Wildlife Institute of India (WII)
- The SAIEE 2021–25 adopted a **new survey design**. For the first time, the estimation used a **genetic mark-recapture model** to identify individual elephants.

Key Findings of the Survey

- **Total population:** The total population of elephants in India has been estimated at **22,446 individuals** in 2025.
 - Compared to the 2017 estimate of 27,312 elephants, this shows a decrease of about **17.81 percent** (or 4,065 elephants).
 - The figures are **not directly comparable** because of the **adoption of a new scientific method**, and the current number should be treated as a **new population baseline**.
- **Regional Distribution**
 - The highest number of elephants, **11,934**, are found in the **Western Ghats** region.
 - The **North Eastern Hills and Brahmaputra floodplains** host around **6,559 elephants**.
 - The **Shivalik Hills and Gangetic plains** support approximately **2,062 elephants**.
 - The **Central India and Eastern Ghats** region has an estimated **1,891 elephants**.
- **State-wise Distribution:**
 - **Karnataka** continues to have the largest elephant population in India, with **6,013 elephants**.
 - **Assam** ranks second with **4,159 elephants**, followed by **Tamil Nadu** with **3,136 elephants**.

- Kerala has 2,785 elephants, Uttarakhand has 1,792, and Odisha has 912 elephants.
- Together, these states account for the majority of India's wild elephant population.
- **Conservation Challenges Identified:**
 - The report highlights serious **habitat fragmentation** and the loss of traditional elephant corridors due to urbanization and agricultural expansion.
 - It notes that **railway lines, highways, and power infrastructure** have disrupted elephant movement and caused rising cases of accidents and conflicts.
 - **Encroachments, fencing of farmlands, and plantation expansion** in the Western Ghats have further isolated elephant populations.
 - In **Central India**, mining operations pose a major threat to elephant habitats.
 - The **Northeastern states** faced challenges in data collection due to difficult terrain and limited field coverage.
- **Recommendations:**
 - The report recommends that the 2025 estimation be treated as a **new baseline** for all future monitoring exercises.
 - It calls for enhanced **connectivity between fragmented elephant habitats** through corridor restoration.
 - It suggests improving **coordination among states** that share elephant ranges to ensure migratory safety.
 - The use of **genetic monitoring** should be made a standard component of wildlife population surveys.
 - Greater **community participation** and **conflict mitigation programs** are required to reduce human–elephant clashes.
 - The report emphasizes that conservation success depends on **scientific management, law enforcement, and cooperative governance** across all elephant landscapes in India.

Project Seabird of Indian Navy

News: Under the Project Seabird of the Indian Navy, new residential accommodation for Senior Sailors and Defence Civilians of the Indian Navy has been inaugurated by Chief of the Naval Staff.

About Project Seabird of Indian Navy

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Source – Indian Navy

- Project Seabird is a **strategic naval infrastructure project** of the **Indian Navy**.
- **Location:** **Karwar, Karnataka**, on the western coast of India.
- **Aim:** To establish a **state-of-the-art naval base** to support India's maritime security and operational readiness.
- It is the **largest naval infrastructure project for India**.
- Upon completion, it will be the **largest naval base on the west coast** and **also the largest naval base east of the Suez Canal**.
- The project conforms to **extant norms of the Ministry of Environment, Forest & Climate Change (MoEF) and the Indian Green Building Council (IGBC)**.
- The project aligns with the concept of '**Aatmanirbhar Bharat**', sourcing **over 90%** of materials and equipment domestically.
- **Phases of Development: It has been developed in two phases:**
 - **Phase I** focused on creation of berthing, docking, and basic logistic facilities for naval ships.
 - **Phase IIA (Ongoing)** focuses on expanding base capacity to accommodate a **large fleet of ships, submarines, and aircraft**.
- **Features:**
 - The base will have a **specialized dockyard** for repair and maintenance of ships and submarines.
 - A **Naval Air Station** will also be built, with **multiple runways, hangars, housing areas, and ordnance handling zones**.
 - There will also be **housing and residential complexes** built at different locations for naval personnel and their families.
 - It will accommodate about **10,000 naval and civilian personnel** with families.
- **Strategic Importance**
 - Strengthens India's **maritime security posture** in the **Arabian Sea**.
 - Provides strategic depth to the **Western Naval Command**.
 - Reduces **congestion at Mumbai** naval dockyard and enhances **fleet dispersal and survivability**.

National Energy Conservation Awards (NECA) 2025

News: BEE invited applications for the 35th National Energy Conservation Awards 2025; awards to be presented on 14 December 2025 at Vigyan Bhawan, New Delhi.

About National Energy Conservation Awards (NECA) 2025

Bureau of Energy Efficiency Introduces NECA 2025 Awards



Figure 19. Source – BEE

- It is a **prestigious national platform** that recognizes **excellence, innovation, and leadership in energy efficiency and conservation**.
- It was **instituted in 1991** by the **Bureau of Energy Efficiency (BEE)** and now in its **35th edition** (in 2025).
- **Aim:** To recognize and **honour entities that reduce energy consumption** while maintaining or enhancing operational **efficiency**.
- **Administering Body:** The **Bureau of Energy Efficiency (BEE)**, under the **Ministry of Power**.
- **Frequency:** The awards are presented **every year on December 14**, observed as **National Energy Conservation Day**.
- **Award Categories**
 - It **includes**– Industries; Transport; Buildings; Institutions; Energy-Efficient Appliances; Energy

Efficiency Innovation.

- **New category: Digital Content Creators and Influencers** aligned with **Mission LiFE**.

- **Purpose :** To inspire wider **adoption of energy-efficient technologies** and practices through recognition and competitive spirit.

About Bureau of Energy Efficiency (BEE)

- The Government of India established BEE on **March 1, 2002** under the **Energy Conservation Act, 2001**.
- **Mission:** Its mission is to **assist in policies and strategies** rooted in **self-regulation and market principles** to **reduce the energy intensity** of the economy.
- BEE coordinates with designated consumers, designated agencies, and other organizations, recognizing and utilizing existing resources to perform its functions.
- The Act provides **both regulatory and promotional roles** for BEE.

Exercise Samudra Shakti 2025

News: The Indian Navy is hosting the **fifth edition** of the Indo-Indonesian maritime exercise 'Samudra Shakti – 2025' at Visakhapatnam from 14–17 October 2025.

About Exercise Samudra Shakti 2025



Source – PIB

- It is a **Bilateral Joint Maritime Exercise** between **Indo-Indonesia**.
- It is the **fifth edition** of the Exercise in 2025.
- **Aim:** It aims to **enhance interoperability, strengthen mutual understanding, and share best practices** between the two navies for Indo-Pacific stability and peace.
- **Phases:** It is conducted in **two phases** – harbour phase and sea phase – to deepen naval cooperation.
- **Hosted by:** The exercise was launched and hosted by the **Indian Navy** under the aegis of the Eastern Naval Command.
- **Held at:** The exercise is being held at **Visakhapatnam** under the Eastern Naval Command.
- **Participating units:**
 - **INS Kavaratti:** An **Anti-Submarine Warfare Corvette** of the Eastern Fleet under the Eastern Naval Command.
 - **KRI John Lie:** An **Indonesian Navy corvette** with an integral helicopter, which arrived at Visakhapatnam to a warm welcome by the Eastern Naval Command.

Forest Declaration Assessment 2025

News: The 2025 Forest Declaration Assessment warns 2024 losses keep the world far off halting deforestation and restoring ecosystems by 2030.

About Forest Declaration Assessment 2025



Source – FDA

- **Forest Declaration Assessment** is an **annual**, researched and peer-reviewed progress assessment on **global forests, covering deforestation, degradation, restoration, biodiversity, finance, rights, and governance**.
- **Published by:** Forest Declaration Assessment (coordinated by Climate Focus)
- **Established as:** New York Declaration on Forests (NYDF) Progress Assessment
- **Launched at:** It was launched to track progress toward the NYDF's 10 voluntary goals **adopted at the 2014 UN Climate Summit**.
- **Established in:** It was established in **2015**.
- **Present name:** In 2022, the name changed to **Forest Declaration Assessment**.
- **Endorsements:** **Russia, China, India and South Africa** has **not** yet endorsed the NYDF.

Key Findings

- **Scale and trajectory**
 - 8.1 million hectares of forest were lost in 2024; the world is **63% off track** to halt deforestation by 2030.
 - Tropical forests were worst hit, with **6.73 million hectares** lost in 2024.
- **Degradation and restoration**
 - Forest degradation affected **8.8 million hectares** in 2024.
 - Restoration projects cover **10.6 million hectares** (about **5.4%** of global reforestation potential and **0.3%** of global biophysical forest restoration potential); data remain fragmented.
- **Finance action**
 - International public finance for forests has increased to about **\$5.7–\$5.9 billion per year**,
 - To meet the **2030 goals**, the report estimates that the **world needs between \$117 billion and \$299 billion in financing**.

- **Drivers of forest loss:**

- **Permanent agriculture:** It accounts for about **86%** of global deforestation over the last decade.
- **Fire:** It is a major cause of loss in 2024 (linked to **land clearing, climate-change-induced drought, and limited law enforcement**).
- **Commodity demand:** Rising demand for **soy, beef, timber, coal, and metals** drives clearance.
- **Mining expansion:** **Gold and coal mining** are growing sources of deforestation.
- **Logging and monocrops:** Expansion supported by subsidies contributes to forest clearance.
- **Misaligned incentives:** Large **agricultural subsidies** (~\$409 billion annually) outweigh limited forest finance (~\$5.7–\$5.9 billion), encouraging deforestation.
- **Weak enforcement:** Limited law enforcement enables illegal burning and clearing.
- **Limited rights and participation:** Restricted roles for **Indigenous Peoples, local communities, women, and civil society** undermine conservation.
- **Industry dominance:** Political and economic power of industry in many countries leads to policies that allow deforestation and degradation.

Google's Artificial Intelligence (AI) Hub

News: **Google** has announced a **\$15 billion investment** over the next **five years (2026–2030)** to establish an **Artificial Intelligence (AI) Data Centre** in **Visakhapatnam, Andhra Pradesh**. This marks **Google's biggest investment in India** to date.

About Google's Artificial Intelligence (AI) Hub



Figure 20. Source – NDTV

- **Developed by:** **Google** in partnership with the **Adani Group** and **Airtel**
- **Location:** **Visakhapatnam**, a port city on **India's eastern coast**.
- **Aim:** To create **state-of-the-art data centres**, renewable energy systems, and high-speed fibre networks that will power next-generation AI applications.
- It will be a part of **Google's global network of AI data centres** operating across **12 countries**.
- **Features of the Artificial Intelligence**

(AI)Hub:

- The AI hub will **serve as a central ecosystem for developing, training, and managing advanced AI models**.
- It will **support innovations across multiple industries**, from cloud computing and automation to education and healthcare.
- At the core of the AI hub will be **large-scale data centres** which are advanced facilities designed to **store and process enormous volumes of data at high speed**.
- **These data centres** are designed to handle **massive data processing** using **GPU-powered servers**, enabling **AI training, image/video generation, and generative AI models**.

- It includes the **construction of a new international subsea gateway** and **multiple undersea cables** landing in Visakhapatnam, linking to **Google's global network (over 2 million miles of terrestrial and subsea cables)**.
- AI centres are **more energy-intensive**, requiring **advanced cooling systems and stronger power infrastructure**.
- **Economic Impact:** The AI Hub will-
 - Generate at least **\$15 billion in new economic activity** over five years (2026–2030).
 - Contribute significantly to **U.S. GDP** through collaboration and innovation.
 - Create **economic and societal opportunities** for both **India and the U.S.**
 - The project will **create around 1.88 lakh (188,000) direct and indirect jobs** in the state.

Mini Warm Pool (MWP)

News: A new study has revealed how a small warm patch of water in the southeastern Arabian Sea, known as the Mini Warm Pool (MWP), helps the Indian Summer Monsoon (ISM) recover from the disruptive effects of El Niño.

About Mini Warm Pool (MWP)



Figure 21. Source – DTE

- It is a **small region of unusually warm sea surface water** in the **southeastern Arabian Sea**, near the **Kerala coast**.
- It forms **every year in April–May**, just before the onset of the **Indian Summer Monsoon (ISM)**.
- **Temperature:** The **sea surface temperature (SST)** in the MWP area often exceeds **30°C**, making it the **warmest region** in the Arabian Sea during pre-monsoon months.
- **Year-to-Year Variability:** The **strength and extent** of the MWP vary annually, sometimes **strong and widespread**, other times **weak or absent**. Its variability is influenced by **large-scale climate patterns**, especially **El Niño**.
- **Role in Monsoon Onset:** The MWP induces **local atmospheric convection**, helping to **draw southwesterly monsoon winds** toward the Kerala coast. It acts as a **precursor** that helps **initiate** the Indian Summer Monsoon.
- **Link with El Niño and the Indian Ocean Capacitor Effect**
 - **El Niño** peaks in the **Pacific Ocean (Nov–Jan)** but impacts the **Indian Ocean** after a **delay of 4–5 months**. This delayed influence is known as the **Indian Ocean Capacitor Effect** where the Indian Ocean “stores” El Niño’s energy and “releases” it later.
 - The **anomalous easterly winds** generated by this effect reduce surface cooling in the southeastern Arabian Sea, **intensifying the MWP**.
 - These **easterly winds** tend to **delay** the overall monsoon onset.
 - However, the **stronger MWP** generated by the same winds creates **local low pressure**, pulling moisture-laden air toward Kerala and **helping restore the monsoon’s timing**.

- The MWP acts as a “self-correcting” system. It mitigates El Niño’s delaying impact on the Indian monsoon
- **Importance for Forecasting**
 - **Monitoring the MWP** can **reduce uncertainty** in monsoon prediction and **improve seasonal forecasts**.
 - Better forecasts benefit **farmers, policymakers, and water resource managers**.
 - The MWP demonstrates the **tight coupling** between the **Pacific and Indian Oceans**.
 - It highlights how **small oceanic features** can influence **continental-scale weather** and **livelihoods of over a billion people**.

Prussian Blue Capsules

News: India delivered Prussian Blue capsules to Indonesia after authorities detected Cesium-137 contamination in exports and facilities, following a request from Indonesia’s Health Ministry.

About Prussian Blue Capsules



Figure 22. Source – CDC

- Prussian (or potassium ferric hexacyanoferrate) blue is a **pill** that may be used in a radiation emergency to **help remove radioactive cesium (Cs) and thallium (Tl) from inside a person’s body**.
- Prussian blue **traps radioactive cesium and thallium in the intestines** and keeps them from **being reabsorbed by the body**.
- The radioactive materials then **move through the intestines** and are passed (excreted) in bowel movements.
- Because Prussian blue reduces the time that radioactive cesium and thallium stay in the body, it **helps limit the amount of time the body is exposed to radiation**.
- It is one of the critical medicines listed by the World Health Organisation (**WHO**) for radiological and nuclear emergencies.
- In India, this drug has been developed by the industry based on the technology of **Institute of Nuclear Medicine & Allied Sciences (INMAS), Delhi**, a laboratory of Defence Research & Development Organisation (DRDO).

About Cesium-137

- Cesium-137 is a **radioactive isotope** produced during **nuclear reactions** and used in **industrial, medical, and research applications**.
- The **long-term exposure** to Cesium-137, even at **low levels**, can **increase the risk of cancer**.

State Mining Readiness Index

News: The Ministry of Mines released the State Mining Readiness Index and State rankings, fulfilling a Union Budget 2025–26 announcement to promote State-level mining reforms.



About State Mining Readiness Index (SMRI)

- The State Mining Readiness Index (SMRI) is a **benchmarking tool** that evaluates **States' readiness and efficiency** in facilitating **non-coal mineral mining reforms**.

- **Released by:** It is published by the **Ministry of Mines**.

- **Performance indicators:** The index comprises indicators that **reflect State performance in the mining sector**, including:

- Auction performance
- Early mine operationalization
- Thrust on exploration.
- Sustainable mining practices pertaining to non-coal minerals.

- **Aim:** The SMRI **aims** to benchmark State performance and encourage healthy competition to accelerate mining reforms and

sustainable resource management.

- **Key feature**

- It serves as a **tool for benchmarking readiness and efficiency** at the State level.
- It **encourages healthy competition** among States to improve mining governance and outcomes.
- States were grouped into three categories on the basis of their mineral endowment.

State Rankings

Category	Top three States
Category A	Madhya Pradesh, Rajasthan, Gujarat
Category B	Goa, Uttar Pradesh, Assam
Category C	Punjab, Uttarakhand, Tripura

Prime Minister Internship Scheme (PMIS)

News: On 15 October 2025 at Hampi, Karnataka, Finance Minister Nirmala Sitharaman interacted with interns of the Prime Minister Internship Scheme.

About Prime Minister Internship Scheme (PMIS)



Source – MoCA

- It provides **12-month internships** in India's **top 500 companies** to bridge academic learning and real-world experience and enhance youth employability.
- **Nodal Ministry:** It is implemented by the Ministry of Corporate Affairs.
- **Aim:** It aims to provide **12-month internship** opportunities to **one crore youth aged 21–24 years** in the **country's top 500 companies over five years**.
- **Purpose:** It seeks to bridge the gap between academic learning and industry needs by **enabling 12-month exposure** to real business environments, training, and skill development that enhances employability.
- **Eligibility**
 - Applicants must be Indian citizens **aged 21–24 years**.
 - They must have at least secondary education; ITI certificates, polytechnic diplomas, or graduation degrees are acceptable.
 - The scheme targets youth from low-income households (family's annual income should be less than Rs. 8 lakh.)
 - Individuals not eligible for this scheme including
 - Graduates from IITs, IIMs, National Law Universities, IISERs, NID, and IIIT, as well as degree holders like CA, CMA, CS, MBBS, BDS, MBA, or master's degree holders.
 - Candidates who have already participated in a government internship or apprenticeship or
 - Whose parents are permanent employees of the government also cannot benefit from this scheme.
- **Key feature**
 - The Scheme is **separate from all the existing schemes** related to skill development, apprenticeships, internship and student training programmes, etc. being implemented across all the States & UTs of India, and will run independently of all such Central/State schemes.
 - **Monthly stipend is ₹5,000: ₹4,500 via Direct Benefit Transfer** from the government and ₹500 from participating companies **through CSR funds**.
 - **A one-time joining grant of ₹6,000** is provided to each intern.
 - These internships span **24 sectors**, including oil, gas, energy, travel, hospitality, automotive, banking, and financial services.
 - All interns are covered under government insurance schemes, including **Pradhan Mantri Jeevan Jyoti Bima Yojana and Pradhan Mantri Suraksha Bima Yojana**.

Venezuela

News: Recently, U.S. President Donald Trump indicated that he had authorised covert CIA action against Venezuela.

About Venezuela



Figure 23. Source: World Atlas

- **Location:** Venezuela is situated at the northern tip of South America.
- **Borders:** It is bordered by the Caribbean Sea and Atlantic Ocean to the north, Guyana to the east, Brazil to the south, and Colombia to the southwest and west.
- **Capital:** Its capital is Caracas.
- **Geography:** Venezuela has diverse regions such as coastal plains, the Andean highlands, Llanos, and the Guiana Highlands.
 - It includes the Andes Mountains, Llanos (plains), Lake Maracaibo, and Angel Falls (the world's highest waterfall).
- **Natural Features:** The Guiana Highlands are home to tepuis (tabletop mountains), including Mount Roraima, while the Orinoco River and Lake Maracaibo dominate the country's drainage system.
- **Economy:** Venezuela possesses the world's largest known oil reserves, which has been a major driver of its economy.
- **Flora:** Venezuela's flora includes tropical and semideciduous forests, with distinct vegetation types and tropical rainforest in the Maracaibo basin.
- **Conservation:** Venezuela has numerous national parks, including Canaima National Park (UNESCO World Heritage site) and Los Roques National Park.

Google's Cell2Sentence-Scale 27B (C2S-Scale)

Context: Google DeepMind and Google Research unveiled a new AI foundation model, named Cell2Sentence-Scale 27B (C2S-Scale).

About Google's Cell2Sentence-Scale 27B (C2S-Scale)



Source – IE

- **Developed by:** The C2S-Scale is an advanced **artificial intelligence (AI) model** developed by **Google DeepMind** and **Google Research** in collaboration with **Yale University** and based on the **Gemma** framework.
- It is a **27-billion-parameter foundation model** that is specifically designed to **understand the “language” of individual cells within the body**.
 - This enables it to **simulate and predict cellular behavior** under various conditions, such as in diseases like cancer.
- **C2S-Scale can generate insights that were previously unrecognized by understanding how individual cells react and interact.**
 - This allows researchers to **explore new pathways in drug discovery and disease treatment**.
- **Working mechanism**
 - The model was trained using **large data sets to identify patterns in cell behavior**, especially under conditions **where immune system responses are low (low levels of interferons)**, such as in early-stage cancer.
 - By analyzing this data, **C2S-Scale can generate hypotheses about cellular behavior and suggest potential drug combinations** that could trigger immune responses in tumors that are typically hidden from the immune system.
 - This development marks a significant milestone in medical research **by generating new scientific hypotheses, bridging computational predictions with experimental validation**.

The Arctic Circle Assembly (ACA) 2025

News: India’s Ministry of Ayush delegation participated in the 2025 Arctic Circle Assembly in Reykjavík, where Prof. R.N. Acharya presented India’s Arctic Policy and Ayush relevance.

About The Arctic Circle Assembly (ACA)



Source – PIB

- The Arctic Circle Assembly is the **largest gathering on Arctic affairs**.
- It focuses on the future of the Arctic and our planet.
- The **annual** Arctic Circle Assembly convenes every October.
- It **brings together** governments, the private sector, civil society, academia, and other stakeholders to foster international engagement, cooperation, and celebration of the Arctic.

About The Arctic Circle Assembly (ACA) 2025

- It is organized by **Arctic Circle**
- It was held on **October 16–18, 2025**
- **Venue** : in **Reykjavík, Iceland**.
- **Aim**: Its aim is to provide the **world's largest open forum for dialogue and cooperation on Arctic affairs**, bringing together governments, Indigenous leaders, researchers, business, and civil society.
- The **2025 edition** continues the **Assembly's "open tent" dialogue** format to share knowledge and shape cooperation on climate, development, and security in the High North.

About Arctic Circle

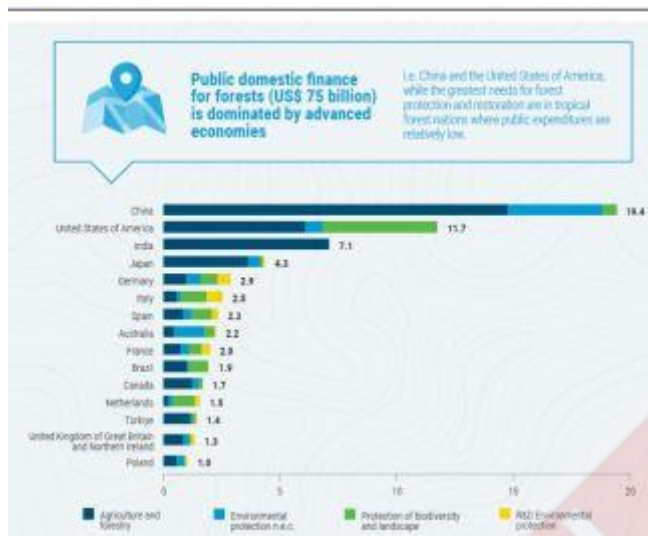
- **Location**: The Arctic Circle is the latitude **66°33' N that encircles the Arctic Ocean**.
- It spans **eight "Arctic states": Canada, the United States (Alaska), Russia, Norway, Sweden, Finland, Iceland, and Denmark** (via Greenland).
- Key governance is coordinated by the **Arctic Council** (with Indigenous Permanent Participants), which addresses environment, sustainable development, and cooperation (not military issues).
- Its significance is rising due to **rapid warming (Arctic amplification), sea-ice loss, permafrost thaw, biodiversity change, and community risks**.
- It also draws interest for **new shipping routes, critical minerals, fisheries, and geopolitics**, prompting more science, diplomacy, and regulation.

State of Finance for Forests (SFF) 2025

News: UNEP's State of Finance for Forests 2025 sets a new 2023 finance baseline and urges a rapid scaling of funds to meet 2030 and 2050 targets.

About State of Finance for Forests (SFF) 2025

Figure 2.2. Countries with highest public domestic expenditure on forests in 2023 (2024 US\$ billion)



Source – UNEP

- It presents a **global overview of 2023 public and private finance for forests**, quantifies investment needs to **2030 and 2050**, and highlights the **finance gap and harmful flows**.
- It ties forest finance to **Rio Convention-aligned climate, biodiversity, and restoration goals**.
- **Launched by:** United Nations Environment Programme (UNEP)

Key findings in SFF 2025

- **Major trends**
 - Forest finance in 2023 totaled **US\$84 billion**: **91% public (US\$77b)** and **9% private (US\$7.5b)**; domestic public spending (~US\$75b) dominates.
 - Investment needs rise to **US\$300b by 2030** and **US\$498b by 2050**; the **gap is ~US\$216b/year to 2030**.
 - Expanding nature-based solutions (NbS) by nearly 1 billion hectares by 2030 will be essential to meeting the Rio Convention goals.
- **Positive outlook**
 - **Private financing is growing steadily through:** Certified commodity supply chains (39 %), Impact investing (23 %).
 - Meanwhile, carbon markets and emerging biodiversity credit/offset systems are establishing themselves as key investable asset classes.
 - On the public side, **roughly 80 % of international forest funding still comes as concessional Official Development Assistance (ODA)**, aligned with hybrid climate-biodiversity strategies and supporting the **Kunming-Montreal Global Biodiversity Framework (GBF) “30 by 30” target — protecting 30 % of land and sea by 2030**.
- **Challenges**
 - **Environmentally harmful subsidies and finance:** around USD 406 billion in agricultural subsidies and USD 8.9 trillion (2024) in private credit to high-deforestation-risk firms.
 - **Geographic inequality:** Of the USD 75 billion in domestic public spending, only USD 12.9 billion (17 %) occurred across 31 tropical forest countries, even though they house most remaining global forest reserves.

- **Inclusion shortfalls:** Indigenous Peoples and Local Communities (IPs/LCs) received just USD 362 million in international public forest finance (2023), with minimal direct channeling to IP/LC-led initiatives.

INDIA Specific Findings

- **High domestic commitment:** India's **public domestic expenditure is ~US\$7.1b (2023)**, placing it among the **highest-spending countries**.
- **International inflows:** India is listed among recipients of **public international forest finance (~US\$81m in 2023)** within Asia's allocation.
- **Tropical context:** In 2023, governments worldwide spent about **US\$75 billion** of domestic public money on forests, but **31 tropical forest countries** together managed only **US\$12.9 billion (17%)**. **India alone spent around US\$7.1 billion**, showing strong domestic commitment.

Major Recommendations

- **Scale total investments fast** to close the **~US\$216b/year** gap to 2030 and expand forest Nature-based Solutions toward the **1 billion ha** 2030 need.
- **Mobilize and de-risk private capital:** Strengthen enabling conditions — land tenure security, financial access, safeguards, and Free Prior and Informed Consent (FPIC) — to support JREDD+ and related pipelines.
- **Diversify financial instruments:** Deploy green/blended finance, high-integrity carbon markets (including Article 6 mechanisms), and biodiversity credit systems. Leverage IDA, IBRD, EU Institutions, GCF, and GEF channels.
- **Redirect harmful flows** by reforming **agricultural subsidies** and tightening regulation of **deforestation-risk finance**.
- **Promote inclusive, gender-responsive finance** with **direct channels to IPs/LCs**, strengthening equity and local capacity.

Key Fact about Sri Lanka

News: NITI Aayog hosted the Hon'ble Prime Minister of Sri Lanka, Dr. Harini Nireka Amarasuriya, in New Delhi.

Key Fact about Sri Lanka



Figure 24. Source: Britannica

- **Location:** Sri Lanka is an island nation located in the **Indian Ocean**.
- It is **separated from the Indian subcontinent** by the **Palk Strait**.
- **Capital cities:** **Colombo** and **Sri Jaywardenepura Kotte**
- **Major ethnic groups:** Sinhalese, Sri Lankan Tamils, Indian Tamils, and Muslims.
- **Official languages:** Sinhala and Tamil
- **Geography:** The highest mountains in Sri Lanka, including **Pidurutalagala** (2,524 meters), **Kirigalpotta** (2,396 meters), and **Adam's Peak** (2,300 meters), are located in the **Central Highlands**.

- **Climate:** Sri Lanka has a **tropical climate** with **high temperatures** year-round
- **Economy:** The economy of Sri Lanka was historically based on **plantation agriculture**, with **tea**, **rubber**, and **coconut** being the major export crops. **Tourism** has also become an important sector.
- **Resources:** **Graphite**, **gemstones**, and **ilmenite** are some of the key mineral exports.
- **Vegetation:** **One-third of Sri Lanka's land area** is covered by natural vegetation, mainly **forests**. The **Wet Zone** is home to **tropical wet evergreen forests**, while the **Dry Zone** has **dry evergreen** and **deciduous forests**.
- **Fauna:** Sri Lanka hosts approximately **123 mammal species**, including **endangered ones** like the **Sri Lankan elephant**, **leopard**, and **purple-faced langur**. Other notable species include the **toque macaque**, **sloth bear**, and **red slender loris**.

Motion 042

News: Recently, International Union for Conservation of Nature (IUCN) has adopted Motion 042, becoming the first multilateral organisation to directly recognise fossil fuel production as a threat to nature.

About Motion 042



Figure 25. Source: DTE

- **Adopted by:** International Union for Conservation of Nature (IUCN) on October 16
- The motion was passed during the **IUCN World Conservation Congress**.
- **Tabled by:** World Wide Fund for Nature (WWF)
- **Co-sponsored by:** BirdLife International, the Coordinadora de la Organizaciones Indígenas de la Cuenca Amazónica (COICA), and the Natural Resources Defense Council (NRDC).
- IUCN became the **first multilateral body** to **explicitly recognize fossil fuel production as a threat to nature**.
- It urges governments and civil society **to address the root causes of the interconnected climate and biodiversity crises by focusing on supply-side measures**.
- Motion 042 urges states to **phase out coal, oil, and gas; halt new extraction projects; and ensure a just transition for workers and communities**.
- It also encourages exploration of new international instruments **to address critical gap in global governance on fossil fuel supply**. (including potential Fossil Fuel Non-Proliferation Treaty)
- It **prioritise ecosystem protection** at the source of extraction and opposing new fossil fuel expansion.
- **Linked Motions:**
 - **Motion 038:** Calls for implementation of the Paris Agreement's goals and a **"just, orderly and equitable"** fossil fuel transition.
 - **Motion 141:** Welcomes the **ICJ advisory opinion** affirming states' **legal obligations to prevent climate harm and protect intergenerational rights**.

Scheme for Innovation and Technology Association with Aadhaar (SITAA)

News: The Unique Identification Authority of India (UIDAI) has launched the Scheme for Innovation and Technology Association with Aadhaar (SITAA) to foster innovation and collaboration in the digital identity domain.

About Scheme for Innovation and Technology Association with Aadhaar (SITAA)



Source – BT

About	<ul style="list-style-type: none">It is designed to advance India's digital identity ecosystem through collaboration with startups, academia, and industry.It aligns with achieving national priorities of Atmanirbhar Bharat and Digital Public Infrastructure, ensuring a pipeline of secure, scalable, and future-ready identity solutions.
Launched by	Unique Identification Authority of India (UIDAI)
Collaboration by	<ul style="list-style-type: none">MeitY Startup Hub (MSH): Provides technical mentoring, incubation, and accelerator support.NASSCOM: Offers industry connections, global outreach, and entrepreneurial support.
Aim	To promote indigenous, AI-driven solutions that enhance the security, scalability, and resilience of Aadhaar authentication.

Features	<ul style="list-style-type: none"> SITAA focuses on developing advanced technologies such as real-time deepfake detection, AI-powered face liveness systems, and contactless fingerprint authentication. Focus area: The key focus areas, among others, encompass biometric technologies, authentication frameworks, data privacy and protection, artificial intelligence, and secure digital identity applications. The program will launch with a pilot featuring initial challenges for startups, academia, and industry partners. <ul style="list-style-type: none"> The three core challenges are: Face Liveness Detection, Presentation Attack Detection and Contactless Fingerprint Authentication Eligible entities with innovative solutions are invited to apply by 15th November 2025.
Significance	<ul style="list-style-type: none"> The SITAA pilot will enable innovators to translate ideas into practical, scalable solutions that enhance the security, reliability, and efficiency of India's digital identity framework. By encouraging cutting-edge research and technology development, the program positions India at the forefront of global digital identity innovation. It empowers startups, academia, and industry to contribute towards a future-ready, self-reliant, and secure digital identity ecosystem.

Operation Fire Trail

News: Directorate of Revenue Intelligence (DRI), under ongoing "Operation Fire Trail," intercepted Chinese-origin firecrackers at Nhava Sheva and Tuticorin, seizing contraband worth over ₹9.8 crore and making arrests.

About Operation Fire Trail



Figure 26. Source – PIB

- It is an ongoing **DRI nationwide anti-smuggling initiative** to detect and **stop illegal import of fireworks and firecrackers** concealed or mis-declared in cargo.
- Launched by:** It is conducted by the **Directorate of Revenue Intelligence (DRI).**
 - It is India's premier enforcement agency under the **Central Board of Indirect Taxes and Customs (CBIC).**
- Ministry involved:** The operations are supported through an official release from the **Ministry of Finance.**

- **Aim:** It aims to safeguard the public and the trade ecosystem by detecting and dismantling organized smuggling networks of hazardous contraband.
- **Legality:** Import of firecrackers is '**Restricted**' under the ITC (HS) of the Foreign Trade Policy and needs valid licenses from DGFT and PESO under the Explosives Rules, 2008.

Zombie Deer Disease

News: Health officials in Florida have confirmed cases of Chronic Wasting Disease, commonly known as "Zombie Deer Disease."

About Zombie Deer Disease

Source – CDC

- It is a fatal **neurological illness of cervids** caused by **abnormal prion proteins** that damage the **brain and nervous system**.
- **Other name:** It is also known as **Chronic Wasting Disease (CWD)**.
- **Cause:** It is caused by **abnormal prion proteins** that **damage the brain and nervous system** of infected animals.
 - A **prion** is a **misfolded protein** that induces misfolding in normal variants of the same protein, leading to cellular death.
 - Unlike other infectious agents such as viruses, bacteria, and fungi, prions do not contain **nucleic acids (DNA or RNA)**. Prions are mainly twisted **isoforms** of the **major prion protein (PrP)**, a naturally occurring protein with an uncertain function.
- **Symptoms:** Infected animals exhibit symptoms like weight loss, stumbling, a lack of coordination, drooling, and aggression.
- **Transmission:** Deer, elk, and moose can contract CWD from one another directly or by interaction with prions-contaminated surroundings.
 - Infection would likely occur through: food, other consumable products harvested from deer, moose, elk, caribou or reindeer (for example elk antler velvet)
 - Soil and vegetation can be contaminated by urine, feces, or carcasses.
 - Prions can remain infectious in the environment for years.
- **Human risk:** There has been **no known transmission of CWD to humans**.
- **Treatment:** **No treatment or vaccine exists**; researchers are working on better detection, vaccines, and environmental controls.
- **Diagnosis:** CWD can be confirmed **only by testing specific tissues from an animal after it has died**.
 - Detecting the disease is **unreliable** in animals that are younger than 12 months.
 - There is **no test** that can certify food or other animal products as completely free of CWD prions.
- **Prevention:**
 - Wear gloves when handling ill or dead animals; avoid meat from animals confirmed with CWD.
 - Use strong on-farm biosecurity to prevent introduction and spread.
 - Apply surveillance, testing, movement restrictions, and do not allow positive animals into the food chain.
 - Follow herd certification programs focused on prevention and risk management.

Rakchham-Chitkul Wildlife Sanctuary

News: An international bird-watching programme was organised at Rakchham in the Rakchham-Chitkul Wildlife Sanctuary by local administration and partners, with delegates from 15 countries.

About Rakchham-Chitkul Wildlife Sanctuary

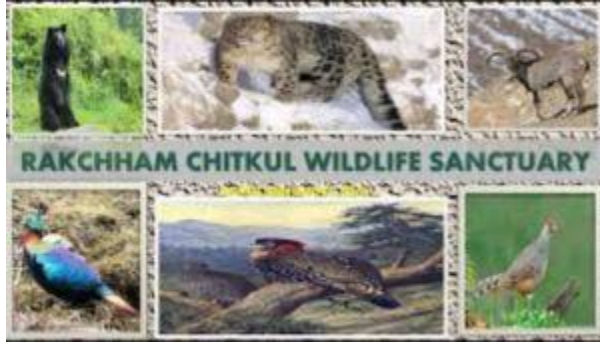


Figure 27. Source – Himachal Forest Deptt.

- **Location:** It is in **Kinnaur district, Himachal Pradesh**, situated between Sangla Valley and Chhitkul.
 - It is a part of **western Himalaya range**.
 - It lies in a **dry zone and does not experience the monsoon** much, allowing year-round exploration.
- **Other name:** It is also known as **Sangla Valley (Rakcham Chitkul) Wildlife Sanctuary**.
- **Area:** The reserve forest spreads over an area of about **304 square kilometres**.
- **Altitude:** It is located around **5,500 m** in elevation.
- **River:** The **Baspa River** flows through the Baspa (Sangla) Valley, the corridor where Rakchham and Chitkul are situated.
- **Key Pass:** The **Lamkhanga Pass route** passes through the sanctuary and **connects Kinnaur with the Gangotri Glacier** of Himachal Pradesh..
- **Fauna:** It is habitat of black bear, brown bear, musk deer, leopard, snow leopard, monal, chakor.
- **Flora:** Vegetation features **rhododendron thickets, oak-pine woodlands**, patches of juniper, and diverse alpine herbs valued for medicine.

Global Forest Resources Assessment (GFRA) 2025

News: Recently, the Global Forest Resources Assessment (GFRA) 2025 was released by the Food and Agriculture Organisation (FAO) in Bali.

About Global Forest Resources Assessment (GFRA) 2025



Figure 28. Source – FAO

- **Released by:** Food and Agriculture Organisation (FAO) of the United Nations
- **Aim:** To provide reliable data on **forest area, condition, management, and use** to guide global forest policy, sustainable management, and conservation efforts.
- It evaluates **the status and trends of the world's forests**.

Key Findings

- **Over 90 percent** of the world's forests are naturally regenerating.
- The **global rate of deforestation continues to decline**.
- The **net loss of forest area has dropped** by more than half compared to the 1990s.

- **Forests span more than 4 billion hectares worldwide**, with nearly half located in tropical regions.
- Naturally regenerating forests occupy **3.83 billion hectares**, accounting for **about 92% of the total global forest area**.
- **Primary forests constitute nearly one-third of the total global forest area**.
- **The rate of expansion of planted forest areas has slowed down globally**.
- **The world's total forest growing stock, biomass, and carbon reserves have shown an overall increase**.

Key Findings related to India

- **India's Global Ranking:** India has **climbed to the 9th position globally** in **total forest area**, improving from the **10th position** in the previous assessment. This reflects India's consistent efforts in afforestation and sustainable forest management.
- **Annual Forest Area Gain:** India has **retained its 3rd position worldwide** in **annual forest area gain**, demonstrating the country's steady progress in expanding green cover.
- **Government Initiatives Recognized:** The improvement in ranking is attributed to several national initiatives and programmes focused on **forest protection, afforestation, and community participation**.
- **Key Contributing Campaigns:** The "Ek Ped Ma Ke Naam" campaign has played a major role by inspiring citizens across India to actively participate in **tree plantation and conservation efforts**.
- **Community Participation:** The GFRA 2025 acknowledges **growing public involvement** in forest conservation, emphasizing that **people's participation** is crucial for achieving a greener and more sustainable future.
- The improved ranking reinforces India's **commitment to the UN Sustainable Development Goals (SDG-13 and SDG-15)** related to climate action and life on land. It also strengthens India's position as a **global leader in sustainable forest management** and climate resilience.

'We Rise' Initiative

News: Recently 'We Rise – Women Entrepreneurs Reimagining Inclusive and Sustainable Enterprises' initiative was launched by NITI Aayog.

About 'We Rise' Initiative



Figure 29. Source – PIB

- **Aim:** It aims to identify, mentor, and support **high-growth-potential women-led MSMEs** across India.

- **Launched by:** NITI Aayog's **Women Entrepreneurship Platform (WEP)** in collaboration with **DP World**.
- The initiative operates under WEP's **"Award to Reward (ATR)" programme**.
 - The **Award to Reward (ATR) initiative** was launched in 2023.
 - It is a **framework under WEP that unites ecosystem partners** to support women entrepreneurs **through targeted collaborations** while recognizing and celebrating their success

- **Objective:** To empower **women-led enterprises** in India by enabling their access to **global markets** and helping them **scale their businesses internationally**.
- **Scope:** The initiative will focus on **100 women entrepreneurs** with product-based businesses. These entrepreneurs will receive **customized mentorship** and **export-readiness support** to meet international trade standards.
- **Focus Areas of Empowerment:** The partnership aims to **empower product-centric women entrepreneurs** through access to trade opportunities, mentorship, and business visibility.
 - It supports **inclusive trade**, ensuring that women-led businesses contribute to **India's export growth** and **global value chains**.
 - The **Women Entrepreneurship Platform (WEP)** already engages with over **90,000 women entrepreneurs**.
- **Global Exposure and Trade Opportunities:** Under ATR Programme, selected entrepreneurs will get the opportunity to **showcase their products at Bharat Mart in Dubai**, located in the **Jebel Ali Free Zone (Jafza)**.

About the Women Entrepreneurship Platform (WEP)

- **Established:** 2018 by NITI Aayog as an **aggregator platform** for women entrepreneurs. It became a **public-private partnership (PPP)** in 2022.
- It has over 47 partners from the **public and private sectors**.
- It serves as a **national aggregator** to strengthen the women entrepreneurship ecosystem in India.
- It functions as an enabler, **addressing six key ecosystem needs** — access to finance, market linkages, training and skilling, mentoring and networking, compliance and legal assistance, and business development services.

Iceland

News: Iceland, long free of mosquitoes, has now detected *Culiseta annulata* mosquitoes.

About Iceland



Figure 30. Source – Britannica

- It is a **Nordic island country** in the **North Atlantic Ocean** and the **most sparsely populated country in Europe**.
- **Location:** Iceland lies **between the North Atlantic and Arctic Oceans**, east of Greenland and just **south of the Arctic Circle**, on the **northern Mid-Atlantic Ridge**.
- **Area:** Iceland has a total area of **102,775 square km**.
- **Capital:** The capital and largest city is **Reykjavik**.
- **Geographical feature**
 - It is the **only part of the Mid-Atlantic Ridge above sea level**, with frequent volcanic and geothermal activity.
 - The **interior** is a **mountainous lava plateau** with sand fields, glaciers, and rivers that reach the sea through lowlands.

- **Rivers:** The longest river is Þjórsá.
- **Climate**
 - The climate is **subarctic**.
 - The **Gulf Stream warms the country**, giving a temperate climate with chilly summers and high precipitation.
- **EU membership Bid:** In 2013, it **ended its EU membership bid** because of the EU's **fisheries policy**.
- **High human development:** Iceland consistently ranks among the **top countries on the Human Development Index (HDI)**, reflecting a high quality of life.
- **Fauna:** The **Arctic fox is the only native land mammal** in Iceland.
 - **Walrus** were **once native to Iceland but disappeared** after human settlement.
- **National Parks:** Iceland has **three national parks** – Vatnajökull, Snæfellsjökull, and Þingvellir.

Kolam Tribe

News: In Telangana's Adilabad district, the Green India Challenge launched a pilot bamboo plantation to help restore the livelihoods of Kolam tribal communities.

About Kolam Tribe



Figure 31. Source – MoTA

- They are also called **Kolamboli, Kulme, or Kolmi**.
- **Location:** They mainly live in **Madhya Pradesh** and parts of **Maharashtra, Andhra Pradesh, and Telangana**.
- **Type vulnerability:** They are recognized as a **Particularly Vulnerable Tribal Group (PVTG)** and are also listed as a **Scheduled Tribe**.
- **Livelihood:** They depend on **agriculture, forest work, and food gathering**, and also engage in hunting, animal husbandry, making wooden articles, wage labour, and shifting cultivation.
- **Social Structure**
 - Their society is **patrilineal and divided into exogamous clans**.
 - **Marriages** within the **same clan are not allowed**, and clan names are used as surnames.
 - **Villages, called "pod,"** are well **planned with a Chavdi at the centre** and a village goddess in front.
 - A **council of village** family chiefs, chosen **for five years**, maintains social order.
 - There is a **rising trend toward nuclear families**, with dowry practices and increasing instances of bride price.
- **Language used:** They speak **Kolami (a Dravidian language)** and write in Devanagari; many also speak Marathi, Telugu, or Gondi.
- **Cultural beliefs:** They follow **animism and nature worship** alongside **Hindu practices**, revering ancestors and deities such as Renuka, Jaitur, Maroti, Bhairum, SanSurayak, and Jelayak.

- Some of them also consider themselves as the descendants of Pandavas of **Mahabharata**.
- **Rituals and festival celebrations:** The Kolam people celebrate different rituals that include **Matya** or **Churaghali**, **Bai-Baki**, **Sati**, **Jaitur Pooja**, **Waghai Pooja**, **Chait**, **Mohdombari**, **Bhimayak**, **Korod**, **Morang Dev pooja** etc.
 - Their festivals include **Kargul**, **Dussehra**, **Nag Panchami**, **Akharpakha**, **Atari**, **Pola**, **Fulzadni**, **Holi**, **Diwali**, **Aaichi**, **Pettadiyam**, **Metti-Diyam** etc.
- **Art:** Kolam women create intricate geometric floor designs known as “**adivasi kolam**,” .
 - It is expressive floor art and a way of welcoming Goddess Lakshmi by putting them at the house's entrance.

Sevilla Forum on Debt

News: The Sevilla Forum on Debt was launched at the 16th United Nations Conference on Trade and Development (UNCTAD16) in Geneva.

About Sevilla Forum on Debt



Figure 32. Source: unctad.org

- It is a **new global platform** to address the **escalating crisis of sovereign debt** faced especially by developing countries.
- **Launched on:** The **Sevilla Forum on Debt** was launched on **October 22, 2025**, during the **16th United Nations Conference on Trade and Development (UNCTAD16)** held in **Geneva**.
- It is one of the **first concrete outcomes** of the **Fourth International Conference on Financing for**

Development (FfD4).

- **Supported by:** It is a **Spanish-led initiative**, supported by both the **United Nations Conference on Trade and Development (UNCTAD)** and the **UN Department of Economic and Social Affairs (DESA)**.
- **Aim:** To **promote responsible borrowing and lending practices** and **drive reform of the global debt architecture**, which has long been overdue.
- **Objective:** It seeks to maintain **political momentum** on debt reform and promote **tangible progress toward a more equitable global financial system** by bringing together **governments, creditors, and international financial institutions**.
- **Functions:** The Forum is designed to function as an **open and inclusive space for dialogue and coordinated action on sovereign debt reform**.
 - The Forum is a key component of the **Sevilla Platform for Action** and complements the **Sevilla Commitment**, the principal outcome document adopted at FfD4.
 - The Forum will also **monitor and support the implementation** of the debt-related initiatives transforming **political commitments into institutional frameworks** for **fairer, more predictable debt governance**.

- The Forum also provides a **comprehensive platform for dialogue** among **borrowers, lenders, academics, civil society, and experts**, enabling them to **exchange knowledge, collaborate, and develop innovative solutions** to global debt challenges.

Financial Action Task Force (FATF)

News: The Financial Action Task Force (FATF) week commenced on October 20, 2025. The meetings are being attended by representatives from more than 200 jurisdictions, along with various observers.

About Financial Action Task Force (FATF)



Figure 33. Source: Tehran times

About	The FATF is the global watchdog for money laundering and terror financing .
Establishment	It was formed in 1989 during the G7 Summit in Paris as an inter-governmental body .
Mandate	To set global standards and promotes effective implementation of legal, regulatory, and operational measures to combat: Money laundering, Terrorist financing, Proliferation financing and other threats to the integrity of the international financial system .
Membership	<ul style="list-style-type: none">● It has 39 members (Russia membership was suspended in 2023) including U.S.A, India, China, Saudi Arabia, the UK, Germany, France, and the EU.● India became a member in 2010.● Over 180 countries are connected through FATF-style regional bodies (FSRBs).
Headquarters	Paris, France

Functions	<ul style="list-style-type: none">● Monitoring & Informing: Tracks how criminals and terrorists raise, use, and move funds and raises awareness on emerging money laundering, terrorist financing, and proliferation financing techniques.● Setting Standards: Issues global recommendations to coordinate action against organised crime, corruption, and terrorism and encourages countries to adopt best practices for preventing illicit financial activities.● Assessing Compliance: Evaluates whether member countries are taking effective legal and operational measures.
Non-Compliance Measures	<ul style="list-style-type: none">● Members must endorse FATF recommendations and undergo mutual evaluations.● Non-compliant countries may be placed on the Grey List (increased monitoring) or the Black List (high-risk jurisdictions).● FATF member countries and other international organizations are likely to impose economic sanctions and various restrictive measures on nations placed on the blacklist.

About FATF's Black and Grey List

- **Black List:** The FATF blacklist identifies nations with severely deficient **anti-money laundering (AML) and counter-terrorist financing (CFT) frameworks**.
 - These jurisdictions are **considered non-cooperative** in the global effort to combat money laundering and terrorism financing.
 - As a result, **FATF member states and international bodies may impose economic sanctions** and other restrictive measures against them.
- **Grey List:** The FATF grey list, officially termed “**Jurisdictions under Increased Monitoring**,” includes countries that **have strategic weaknesses in their AML/CFT systems** but **have formally committed to addressing them** through agreed action plans.
 - Grey-listing indicates a **higher risk of money laundering and terrorist financing** and can serve as a warning or precursor to potential sanctions.

Japan-India Maritime Exercise (JAIMEX) – 2025

News: Recently, Indian Naval Ship (INS) Sahyadri participated in the Sea phase of JAIMEX-25 (Japan India Maritime Exercise) from 16 to 18 Oct 2025.

About Japan-India Maritime Exercise (JAIMEX) – 2025



Figure 34. Source: ET

assets included **JS Asahi**, **JS Oumi**, and **Submarine Jinryu**.

- **Phases:** Sea Phase and Harbour Phase
- **Strategic Significance:**
 - JAIMEX-25 highlights the **Special Strategic and Global Partnership** between India and Japan, established in 2014.
 - It reinforces both nations' commitment to a **Free, Open, and Inclusive Indo-Pacific**.
 - It also enhances **naval cooperation, maritime security, and regional stability** in the Indo-Pacific domain.

About INS Sahyadri

- INS Sahyadri is a **Shivalik-class Guided Missile Stealth Frigate** of the Indian Navy.
- It is the **third ship** of the class, designed for **multi-role operations** including surface, air, and sub-surface warfare.
- **It is indigenously designed and built** in India, representing the nation's growing **defence self-reliance**.
- It was commissioned in **2012**.
- It features **stealth technology** to reduce radar and infrared signatures.
- It is equipped with **advanced weapon systems, sensors, and integrated combat suites** for multi-dimensional warfare.

Kali Tiger Reserve

News: Forest officials recorded a rare striped hyena sighting inside the Kali Tiger Reserve safari zone near Dandeli, Uttara Kannada, Karnataka.

About Kali Tiger Reserve

- **Participants:** Indian Navy and Japan Maritime Self-Defense Force (JMSDF)

- **First Edition:** 2012

- **Indian Naval Representation:** INS Sahyadri – an indigenously built **Shivalik-class Guided Missile Stealth Frigate**.

- **Japanese Participation:** JMSDF



Figure 35. Source – TH

● **Location:** It is located in **Uttara Kannada district of Karnataka** in the Western Ghats.

● **Kali Tiger Reserve** is a **protected area in the Western Ghats**.

● **Former name:** It was earlier known as the **Dandeli-Anshi Tiger Reserve**.

● **Composition:** It is composed of **Dandeli Wildlife Sanctuary** and **Anshi National Park** forming a contiguous **834.16 sq km** tract.

● **River:** The **Kali River** flows through the reserve and serves as a major water source for Uttara Kannada.

● **Vegetation:** The reserve contains **moist deciduous and semi-evergreen forests** that are interspersed with patches of **bamboo and grasslands**.

● **Flora:** The reserve includes **teak (Tectona grandis)**, eucalyptus, silver oak (*Grevillea robusta*), *T. bellerica*, *Adina cordifolia*, *Mitragyna parviflora*, *Acacia*, and various medicinal plants.

- **Fauna:** The fauna includes tiger, leopard, elephant, wild dog, gaur (bison), sambar, spotted deer etc.

Indian Scops Owl

News: First-ever Indian Scops Owl sighting near Daroji Sloth Bear Sanctuary, Vijayanagara, Karnataka.

About Indian Scops Owl



Figure 36. Source – TNIE

- The Indian Scops Owl is a **small nocturnal owl**.
- It is known for **ear-like tufts** and **excellent camouflage**.
- **Scientific name:** Scops Owl scientific name is **Otus bakkamoena**.

● Habitat

- It lives in forests, woodlands, and riverine forests.
- It is also found in cultivated areas, plantations, orchards with trees, and gardens with trees.
- It is a **non-migratory species**.

● **Distribution:** It is found mainly in **India, Nepal, Pakistan, Sri Lanka, and Iran**.

● Features

- **Size:** It measures about **20–25 cm** in length.
- It has small **ear-like tufts** with a **clear facial disc** that aids hearing.
- **Color:** It occurs in **two colour morphs**: grey-brown and rufous.
- **Diet:** It feeds on beetles, grasshoppers larvae, as well as small rodents, small birds and geckos.
- It lays its **eggs in holes or hollows of trees**.

- **Threats:** The species faces threats from **habitat loss** and from the **use of pesticides**.
- **IUCN status:** It is classified as **Least Concern**.

Skilling for AI Readiness (SOAR) Program

News: The **Ministry of Skill Development and Entrepreneurship (MSDE)** has launched the **Skilling for AI Readiness (SOAR)** program to integrate artificial intelligence competencies into India's educational framework.

About Skilling for AI Readiness (SOAR) Program



Source – PIB

- **Introduced:** It was introduced in **July 2025** by the **Ministry of Skill Development and Entrepreneurship (MSDE)**.
- **Aim:** To **ignite curiosity and ambition among young learners** while preparing them for a technology-driven future.
- **Core Focus:** Integration of **artificial intelligence (AI)** competencies within India's educational ecosystem.
- **Alignment:** The initiative supports national priorities under flagship schemes such as **PMKVY 4.0**, emphasizing skilling in emerging technologies to boost **employability** and **entrepreneurship**.
- **Implementation:** Through collaborations and digital platforms like the **Skill India Digital Hub**, ensuring accessibility for diverse socio-economic groups to empower youth and drive India's technological and economic growth.
- The initiative **promotes economic independence and strengthens India's digital economy** by equipping the workforce to meet the needs of emerging technological sectors **through targeted skill development**.
- **Key Features of SOAR:**
 - **Fostering AI Awareness:** The SOAR initiative **focuses on building AI literacy among students and educators** across the country. It **introduces foundational concepts of artificial intelligence**, including the basics of machine learning (ML) and the principles of ethical AI usage.
 - **Specialised training for educators:** The program also provides specialised training for educators **to help them integrate AI modules into existing curricula**, ensuring that the teaching process aligns with current industry standards and promotes effective classroom delivery.

- **Supporting Economic Self-Reliance:** SOAR contributes to the vision of **Atmanirbhar Bharat** by preparing young learners with the necessary skills to succeed in high-demand sectors such as information technology (IT), digital innovation, and AI-driven industries.
- **Building a Tech-Driven India:** The program envisions positioning India as a global leader in artificial intelligence by building a **Sustainable AI Ecosystem** and preparing the next generation for AI-focused careers and entrepreneurial opportunities.
- **Relevance and Expected Outcomes:** The SOAR program **strengthens India's Skill India and Viksit Bharat visions** by promoting AI education, digital inclusion, and employability. It builds an **ethically aware, tech-savvy workforce while narrowing digital and skill gaps across diverse communities.**

Central Asian Mammals Initiative (CAMI)

News: In October 2025, representatives from several Central Asian countries endorsed a **six-year work programme** under the **Central Asian Mammals Initiative (CAMI)** to strengthen **transboundary conservation** efforts for **17 iconic mammal species**.

About Central Asian Mammals Initiative (CAMI)



Figure 37. Source – CMS

Asiatic Wild Ass, Gobi Bear, Goitered Gazelle, Kiang, Mongolian Gazelle, Pallas's Cat, Przewalski's Horse, Urial, Wild Camel, Wild Yak and Eurasian Lynx.

- **Key Focus Areas:**
 - **Strengthening transboundary cooperation** among range states.
 - **Mitigating threats** from illegal hunting and habitat degradation.
 - **Promoting coordinated research**, monitoring, and habitat connectivity.
 - **Enhancing awareness** and engagement of local communities and stakeholders.
- **Significance:** CAMI underscores the idea that **wildlife conservation transcends borders**, promoting a **unified regional approach** to protect Central Asia's shared natural heritage and migratory mammals.

- **Launch:** CAMI was launched in **2014** during the **11th Meeting of the Conference of the Parties (COP11)** to the **Convention on the Conservation of Migratory Species of Wild Animals (CMS)**.

- **Aim:** To provide a **common regional framework** for conserving **migratory mammal species** across **Central Asia**, addressing key threats such as **poaching, habitat fragmentation, climate change, and barriers to migration.**

- **Species Covered:** CAMI focuses on **17 key mammal species**, including: **Saiga Antelope, Bukhara Deer, Asiatic Cheetah, Snow Leopard, Persian Leopard, Argali Sheep,**

Storm Shadow Missile

News: As Russia continued its assaults on Ukraine amid uncertainty over the upcoming Donald Trump–Vladimir Putin summit, Kyiv launched a counterattack using its Storm Shadow missiles.

About Storm Shadow Missile

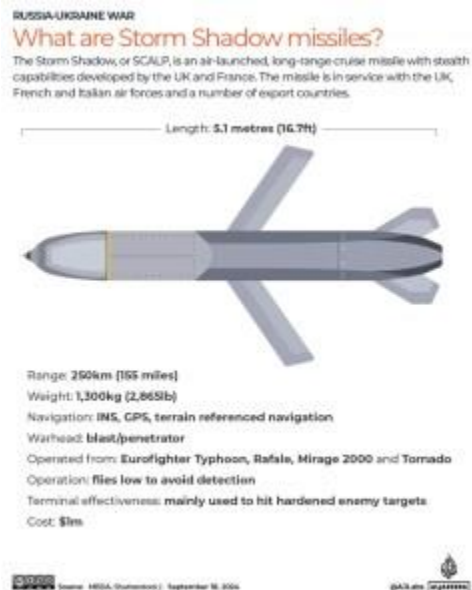


Figure 38. Source – Al Jazeera

- The **Storm Shadow** is **Anglo-French, long-range cruise missile** developed by **MBDA** (a defence manufacturer from France).
- It is also called the **SCALP missile**.
- It is an **air-launched precision strike weapon** designed to destroy **hardened and high-value targets** such as bunkers, command centres, and ammunition depots.
- **Features:**
 - It can be launched from aircraft such as **fighter jets**.
 - They are powered by a **Microturbo TRI 60-30 turbojet engine**, enabling them to reach speeds of **up to Mach 0.95**.
 - It is equipped with a **multi-stage BROACH (Bomb Royal Ordnance Augmented Charge)** warhead, designed for maximum penetration.
 - As the missile nears its target, it uses **GPS and infrared guidance** for precise targeting.
 - It follows a **semi-autonomous flight path**, flying **low to avoid radar** and then rising to identify the target. A **thermographic camera** confirms the target before the missile **dives to strike**.
- In situations where the **missile cannot locate** its target, it is **programmed to divert to a crash point** to prevent collateral damage.
- **Range and Speed:** The missile has a **maximum range of around 250 km** and travels at nearly the **speed of sound**, making it suitable for deep-strike missions.
- The **nose-mounted camera** identifies the target before **detonating its high-explosive warhead** with pinpoint accuracy.
- **Warhead:** Equipped with a **450 kg high-explosive warhead**, it is capable of penetrating fortified military structures and underground storage facilities.
- **Operational Strategy:** It is often deployed **after waves of cheaper drones** to exhaust enemy air defences before the Storm Shadow strikes precise targets.

Cassava/Tapioca Crop

News: South India's tapioca (cassava) crop has recovered from a severe infestation of cassava mealybug following the successful release of a biological control agent, the parasitic wasp **Anagyrus lopezi**, by ICAR–NB AIR.

About Cassava/Tapioca Crop



Source: Fityclub

- Cassava is a **starchy root crop** from the **Euphorbiaceae** family. It is also known as **yuca, mandioca, manioc, or tapioca**.
- **Conditions required:**
 - **Soil:** Well drained soil preferably red lateritic loam with a pH range of 5.5 -7.0 is best suited for tapioca cultivation.
 - **Climate:** It thrives best in **tropical, warm humid climate with well distributed rainfall** of over 100 cm per annum.
 - **Elevation:** This crop can be **cultivated upto an elevation of 1000 m**.
 - **Season and planting:** Planting can be done throughout the year under irrigated condition. For rainfed cultivation, planting can be taken up during April.
- **Introduction into India:** It was **brought to India by the Portuguese in the 17th century** in the **Malabar region** of present-day Kerala.
- **Production in India:** In India, cassava is **grown on about 1.73–2.28 lakh hectares, primarily in Tamil Nadu and Kerala**, which together **account for more than 90 percent of national output**.
 - It is also cultivated in **Andhra Pradesh, Nagaland, Meghalaya, Assam, etc.**
 - India has historically achieved **high yield levels of about 35 tonnes per hectare**, significantly above the **global average of 10.76 tonnes**.
- **Export from India:** India exports cassava and its products such as **raw tubers, flour, meal of sago, starch of manioc and sago and tapioca** and its substitutes to countries like **U.A.E., Saudi Arabia, Oman, European nations, Kuwait and the United States of America**.
 - India exports **value-added tapioca products** worth nearly ₹200 million annually.
- **Global Producer and Exporter:** **Nigeria is the world's biggest and most consistent cassava producer** worldwide.
 - However, **Thailand is the world's largest supplier of cassava**, as it is currently responsible for **roughly 70 percent of total world exports**.

Exercise Ocean Sky 2025

News: Recently, Indian Air Force participated in multinational exercise Ocean Sky 2025 in Spain to enhance interoperability and defence cooperation.

About Exercise Ocean Sky 2025



Figure 39. Source: X

- **Hosted by:** It is a multinational air combat exercise hosted by the Spanish Air Force at Gando Air Base, Spain, from October 20 to 31.

- **Aim:** To foster mutual learning, enhance interoperability, sharpen air combat skills, and strengthen defence cooperation with friendly nations.

- **Objective:** To train missions for air superiority in defensive counter-air (DCA) and offensive counter-air (OCA), simulating engagements between large combined air forces.

- **Key Focus:** Knowledge exchange, tactical refinement, interoperability enhancement
- **Training and Tactical Objectives:** It provide a highly dynamic and interactive environment for sharing operational doctrines and enhance proficiency through realistic combat simulations, network-centric warfare training and multi-domain air operations.
- **Indian participation**
 - **Indian Air force is one of the participants** among others. This participation follows a recent boost in the IAF's airlift capabilities with the induction of 16 Airbus C-295 transport aircraft.
 - The Indian contingent consists of fighter aircraft, flight crews, technical specialists, and mission analysts.
 - They will undertake tasks involving air combat, strike coordination, aerial refuelling, and electronic warfare practices.
 - **Other Participants:** The exercise involves more than fifty aircraft from Germany, Greece, Portugal, the United States, and India, including F-18M, Eurofighter, F-16 variants, F-15E, and Su-30MKI fighters.

Note – To know more about Airbus C-295, [click here](#).

International Convention against Doping in Sport

News: India has been re-elected as the Vice-Chairperson of the Bureau for the Asia-Pacific (Group IV) at the 10th Session of the Conference of Parties (COP10) to the International Convention against Doping in Sport.

About the International Convention against Doping in Sport



Figure 40. Source: PIB

- It is a multilateral treaty through which States agree to adopt national and international measures designed to prevent and eliminate doping in sport.
- It serves as the only international legal instrument that commits governments to align their policies with the principles of the World Anti-Doping Code.
- **Objective:** To harmonize anti-doping legislation, guidelines, regulations, and rules at the global level in order

to ensure a fair and safe competitive environment for all athletes.

- **Adoption:** UNESCO's General Conference **adopted the Convention on 19 October 2005 during its 33rd session**, and it entered into **force on 1 February 2007**.
- **Parties to convention:** There are presently **192 States Parties to the Convention**, making it the second most widely ratified treaty under UNESCO.
- It **offers a global platform for collaboration among public and private stakeholders** within the sport integrity ecosystem.
- **Mission of the Convention:**
 - The Convention provides **States Parties with a legal framework** intended **to encourage international cooperation** to safeguard athletes and uphold sporting ethics.
 - It **aims to limit the availability of prohibited substances and methods** while combating trafficking activities.
 - It **assists in facilitating doping controls and supports national testing programmes**.
 - It **encourages producers and distributors of nutritional supplements** to adopt best practices in labelling, marketing, and distribution of products that might contain prohibited substances.
 - It **supports the implementation of anti-doping education programmes**.
 - It **promotes research related to anti-doping measures**.
- **Implementation Approach:** The Convention functions through a **positive implementation approach** that **involves providing guidance, financial support, skill development, and capacity-building** to strengthen compliance efforts by States Parties.
- **Governance Structure:** The Conference of Parties (COP) acts as the **sovereign body of the Convention and convenes in ordinary session every two years**.
- **Function:** COP functions include **promoting the Convention's purpose**, addressing its relationship with the World Anti-Doping Agency, adopting plans concerning the Fund for the Elimination of Doping in Sport, **evaluating States Parties' compliance efforts**, and examining or adopting necessary amendments to the Convention.
- **Monitoring Mechanism:** The Convention supports governments in **enhancing national frameworks that protect sport values, ethics, and integrity**.
 - Its monitoring mechanism **assists States Parties in identifying implementation gaps and developing targeted remedial actions**.
 - Monitoring is facilitated through key tools and frameworks, including the **Operational Guidelines and Framework for the Strengthening of the Implementation of the Convention (OG/FSIC)**, the **Model Strategic Framework (MSF)**, and specialized capacity-building programmes provided by the Secretariat.

'MAHE' – First Anti-Submarine Warfare Shallow Water Craft

News: Cochin Shipyard Limited delivered Mahe', the first ASW Shallow Water Craft, to the Indian Navy on 23 October 2025.

About 'MAHE' – First Anti-Submarine Warfare Shallow Water Craft



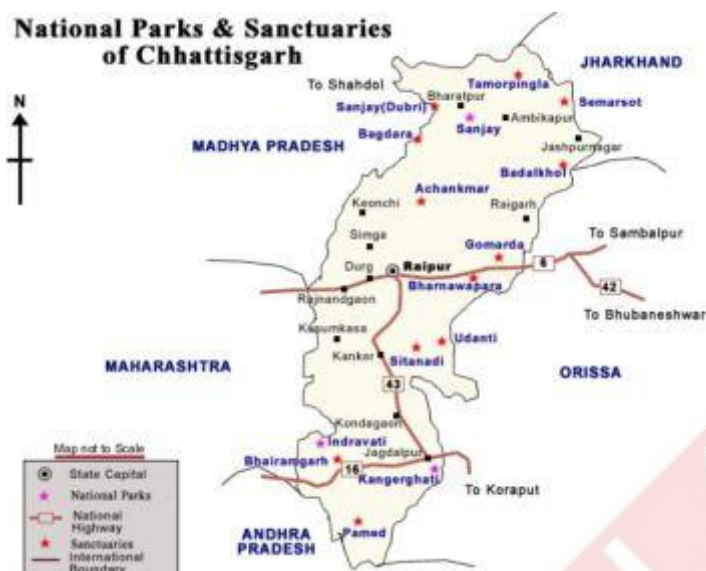
Figure 41. Source – PIB

- **'Mahe'** is the the **first of eight Anti-Submarine Warfare Shallow Water Craft**.
- **Named after:** It is named after the historic **port town of Mahe** in the Union Territory of **Puducherry**.
- **Built by:** It is build by **Cochin Shipyard Limited (CSL)**.
- **Purpose:** It is designed for **underwater surveillance**, **Anti-Submarine Warfare** in coastal waters, **Low Intensity Maritime Operations**, **search and rescue**, and **advanced mine-laying**.
- **Indigenous content:** It has **more than 80% indigenous content**, reaffirming the vision of **Aatmanirbhar Bharat**.
- **Key features**
 - It is the **largest Indian Naval warship** propelled by a **Diesel Engine–Waterjet** combination.
 - It has been designed and constructed as per the **Classification Rules of Det Norske Veritas (DNV)**.
 - **Physical characteristics** include a **length of 78 m** and a **maximum speed of 25 knots**.
 - It carries **lightweight torpedoes, anti-submarine rockets, and guns**, and is equipped for **advanced mine-laying**.
 - It's Sensors include **advanced radars and sonars**, such as a **Hull-Mounted Sonar and Low Frequency Variable Depth Sonar**.

Barnawapara Wildlife Sanctuary

News: After 50 years of local extinction, blackbucks have returned to Chhattisgarh's Barnawapara Wildlife Sanctuary.

About Barnawapara Wildlife Sanctuary



Source – ResearchGate

- **Location:** It is located in Raipur district of Chhattisgarh.
- **Named after:** It is named after the **Bar and Nawapara forest villages** situated in the sanctuary.
- **Area covered:** The total area of sanctuary covers 244.66 Sq. km.
- **Rivers:** Three rivers – **Balmedhi, Jonk, and Mahanadi** – flow through this Sanctuary.
 - The **Balamdehi River** forms the **western boundary** and **Jonk River** forms the **north-eastern boundary** of the Sanctuary.
- **Water sources:** The **Balar reservoir** situated inside the sanctuary supports number of wetland birds and fishes.
- **Flora:** The sanctuary contains **Teak, Sal, Bamboo, and Terminalia** as prominent trees, and also includes Semal, Mahua, Ber, and Tendu.
- **Fauna:** The sanctuary is home to **leopards, tigers, Indian bison, nilgai, wild boar, chital (cheetal)** etc.
 - It supports about **150 bird species** such as parrots, herons, egrets, and peafowl.
- **Significance:** It is a **successful reintroduction site** showcasing **blackbuck revival** and grassland restoration potential.

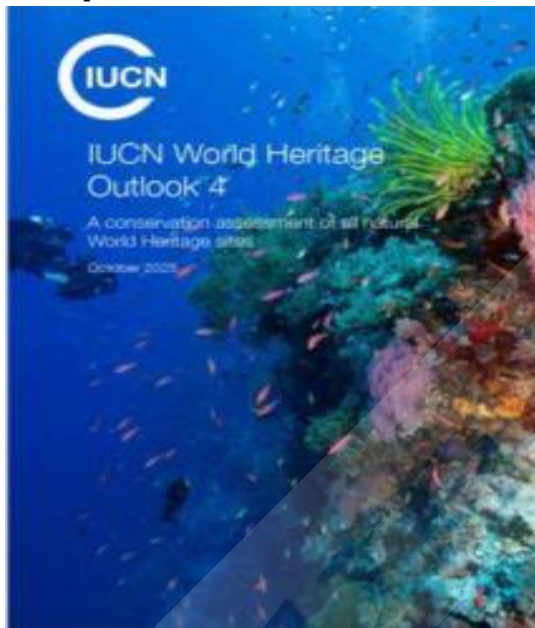
About Blackbuck (*Antelope cervicapra*)

- It is a **diurnal antelope** of **open grasslands** in India and Nepal.
- It is a **flagship species** of grassland ecosystems.
- **Protection level:**
 - The blackbuck is listed in **Schedule I** of the Wildlife (Protection) Act, 1972.
 - It is classified as **Least Concern** on the IUCN Red List; and
 - It is included in **Appendix III** of CITES.
- **Revival Program:** Under the **five-year Blackbuck Revival Program (2021–2026)** approved by the **Chhattisgarh State Wildlife Board**, the program aims to **re-establishing a self-sustaining blackbuck population** in the region.

World Heritage Outlook 4 Report

News: The IUCN's World Heritage Outlook 4 report released earlier this month attributes four biggest threats to the loss of habitats and species in South Asia: climate change, tourism activities, invasive alien species, and roads.

About World Heritage Outlook 4 Report



Source – IUCN

- It assesses the **status and conservation trends of natural and mixed World Heritage sites globally**, including India's seven natural and one mixed sites.
- **Published by:** International Union for Conservation of Nature (IUCN), the report is the **fourth edition** of a periodic evaluation **started in 2014**.
- **Key Findings of Report**
 - **Threats:** The Report attributes **four biggest threats** to the loss of habitats and species in South Asia: **climate change, tourism activities, invasive alien species, and roads**.
 - **Categorization of sites:** The report categorises the natural sites as “good”, “good with some concerns”, “significant concern”, and “critical”.
 - Almost **40% of sites** face conservation **concerns**, with **climate change** continuing to be the **most prevalent threat**.
 - The percentage of sites with “**a positive conservation outlook** has **decreased** significantly.
 - Only **57%** of these sites have a **positive conservation outlook**. (from 63% in 2014)
 - **About India**
 - **Four sites** have been categorized as “**good with some concerns**” in India:
 - The Great Himalayan National Park Conservation Area, Kaziranga National Park, Keoladeo National Park, and Nanda Devi and Valley of Flowers National Parks.
 - **Khangchendzonga National Park** in Sikkim has been rated “**good**” in its conservation outlook.

- The **expansive Western Ghats** and **two** national parks in India – **Assam's Manas national park** and **West Bengal's Sundarbans national park** – have been categorised as being of “**significant concern**” in the report.

Duty-Free Tariff Preference (DFTP) Scheme

News: According to a recent WTO report, India is now a top developing economy partner for Least Developed Countries, offering more extensive duty-free market access than China or the EU.

About Duty-Free Tariff Preference (DFTP) Scheme

- **India launched the DFTP Scheme in 2008.**
- **Objective:** To provide **preferential market access to Least Developed Countries (LDCs).**
- The decision was prompted by the **outcome of the WTO Hong Kong Ministerial Declaration (December 2005).**
- Under the scheme, **India became the first developing country to introduce a preferential tariff programme for LDCs.**
- **Key Features**
 - **Duty-Free Access to Indian Market:** India provides **duty-free access for products originating from LDCs, covering approximately 98.2 % of tariff lines;** only about 1.8 % of product categories face regular duties.
 - The scheme **applies to exports from eligible LDCs to the Indian market.**
 - **Eligible Countries:** The scheme **applies to all nations designated as Least Developed Countries by the United Nations.** India extends this preferential market access to approximately **48 such countries spanning Africa, Asia, and the Pacific regions.**
 - **Eligible Products:** These include **agricultural products, textiles and garments, handicrafts and traditional goods, leather goods and minerals and metals.**
 - **Technical assistance and training are offered to LDCs to help improve export quality and standards.**
 - LDCs under the scheme benefit from **increased market access, export growth, and potential foreign investment.**
- **Benefits to LDCs through this scheme:**
 - **Export opportunities:** Duty-free access helps LDCs increase export volumes to India and thereby raise trade revenues.
 - **Economic growth:** With enhanced exports, LDCs may generate employment, raise incomes and support poverty reduction.
 - **Diversification:** The scheme encourages LDCs to broaden their export base and develop comparative advantages across sectors.
 - **Technology and capacity-building:** Technical assistance under the scheme helps LDC exporters improve product quality, increasing competitiveness.

SWAMIH Fund

News: The RBI has designated **SWAMIH Fund-I** under the “**specified exemption category**” in its “**Investment in AIF (Alternate Investment Fund) Directions, 2025**”. As a result of this exemption, regulated entities (REs) such as banks and NBFCs investing in SWAMIH Fund-I will **not be subject to the usual caps and provisioning rules applicable to AIF investments.**

About SWAMIH Fund (Special Window for Affordable and Mid-Income Housing Fund)



Figure 42. Source: ramkyestates.com

- It is **India's largest social impact fund** specifically formed for completing stressed and stalled residential projects.
- **Launched on:** 6 November 2019
- **Objective:** To provide priority debt financing for stalled residential projects in the affordable and mid-

income housing segment.

- **Nodal Ministry:** Ministry of Finance, Government of India.
- **Managed by:** SBICAP Ventures Ltd (a subsidiary of the State Bank Group).
- **Corpus raised:** approximately ₹ 15,530 crore.
- **Achievements:** Over 50,000 housing units completed under the scheme (as of early 2025).
- **Key feature:** acts as a “lender of last resort” for projects that conventional lenders may avoid due to risk.
- The project identifies established developers with poor track record of stalled projects, NPA accounts, customer complaints even projects with litigation issues along with first-time developers as lenders.
- It has one of the largest domestic real estate private equity teams that are focused on monitoring and funding the completion of stressed residential properties

About SWAMIH Fund 2

- Announced in the **Union Budget 2025-26 (1 February 2025)**
- **Allocation:** ₹ 15,000 crore corpus.
- **Target:** Expedite completion of **1 lakh (100,000) additional housing units** in stressed projects.
- **Model:** A **blended finance facility**, combining contributions from the government, banks and private investors.
- **Specific benefit for middle-class homebuyers:** assists families who are *both* paying EMIs on home-loan for their apartment *and* paying rent for their current dwelling because the apartment was delayed.
- **Intended sectoral effect:** inject liquidity, restore trust in the housing market, assist completion of delayed projects, thereby stabilising the real-estate segment.

Kunar River

News: A few days after recent border clashes with Pakistan, Afghanistan's Taliban government announced plans to build dams on the Kunar River.

About Kunar River

Source: ReseachGate

- **Location:** The Kunar River system spans Khyber Pakhtunkhwa in Pakistan and the Afghan provinces of Nuristan, Kunar, and Nangarhar.

- **Origin and Mouth:** Its headwaters arise in the **Hindu Kush Mountains**, and it discharges into the **Kabul River** at Jalalabad.
- **Watershed:** As part of the Indus basin, **the Kunar River contributes to the broader hydrology** that ultimately connects to the Indian subcontinent.
- **Dimensions:** The river extends **approximately 480 km (298 miles)** and drains a basin area of **about 2,600 km² (1,004 square miles)**.
- **Water Source:** Glacial melt and seasonal snowmelt from the **Hindu Kush** constitute its primary sources of flow.
- **Tributaries:** Its principal **left-side tributary** is the **Shishi River**, while the major **right-side tributaries** include **the Pech, Lutkho, and Landai Sin Rivers**.
- **Course:** The river begins in the glaciated **highlands of Chitral, Khyber Pakhtunkhwa**, where it is first known as the **Mastuj River**.
 - **After merging with the Lutkho River** north of Chitral, it **becomes the Chitral River**, continuing south into Afghanistan's upper Kunar Valley.
 - **At Asadabad (Chaga Sarai)** it merges with the **Pech River**, and then proceeds toward Jalalabad where it **joins the Kabul River**.
 - **The combined flow re-enters Pakistan**, generally following the Khyber Pass corridor before meeting the Indus River near Attock.
- **Historical Trade Route:** Prior to the establishment of the Afghanistan–Pakistan border, the Kunar River valley constituted an **essential trade corridor connecting the Pamir highlands with the lowland markets** of the Indian subcontinent.
- **Development:** Hydropower utilization is exemplified by the **Golen Gol Power Project**, which harnesses the river's flow to generate economical electricity.

Rashtriya Vigyan Puraskar 2025

News– The Government of India has announced the Rashtriya Vigyan Puraskar (RVP) 2025. It includes 24 individual and one team award.

Source- Newsonair

About Rashtriya Vigyan Puraskar

Modelled on the Padma Awards, it is among the highest scientific recognitions in India, honouring excellence in science, technology, and innovation.

Objective: To celebrate and acknowledge outstanding contributions by scientists, technologists, and innovators—individually or in teams—across diverse scientific domains.

Eligibility: Open to *individuals from both government and private sectors*, as well as independent contributors, for breakthroughs in science or technology-led innovation.

- Persons of Indian Origin abroad, whose work benefits Indian society, are also eligible.

Award Categories:

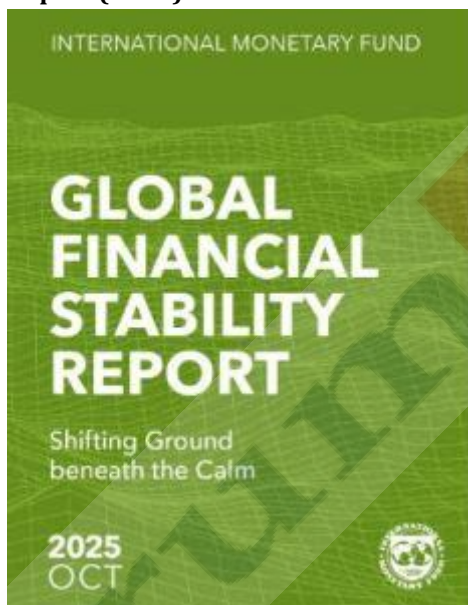
- **Vigyan Ratna (VR):** Lifetime achievement in science and technology.
- **Vigyan Shri (VS):** Distinguished contributions in any scientific field.
- **Vigyan Yuva-Shanti Swarup Bhatnagar (VY-SSB):** For scientists under 45 years with exceptional work.
- **Vigyan Team (VT):** For teams (three or more members) with remarkable collaborative contributions.

Domains Covered: Awards *span 13 fields* — Physics, Chemistry, Biological Sciences, Mathematics & Computer Science, Earth Science, Medicine, Engineering, Agricultural Science, Environmental Science, Technology & Innovation, Atomic Energy, Space Science & Technology, and Others — ensuring fair domain and gender representation.

Global Financial Stability Report (GFSR)

News: The International Monetary Fund (IMF) has released the October edition of the twice a year, Global Financial Stability Report (GFSR) recently.

About Global Financial Stability Report (GFSR)



Source – IMF

- It provides a **comprehensive assessment of the global financial system**, highlighting vulnerabilities, and giving policy recommendations to bolster resilience.
- **Published by:** International Monetary Fund (IMF)
- **Frequency:** Twice a year (In April and October)
- It focuses on **current market conditions**, highlighting **systemic issues** that could **pose a risk to financial stability and sustained market access** by emerging market borrowers.
- The Report **draws out** the financial ramifications of economic imbalances highlighted by the **IMF's World Economic Outlook**.

Key Highlights of GFSR October 2025 Edition: "Shifting Ground beneath the Calm"

- **Risks remain elevated:** The report warns that, despite calm surface conditions, financial stability risks are high due to "stretched" asset valuations, rising government debt, and the growing share of credit delivered by NBFIs, which are less regulated.
- **Asset price risks:** Global risk asset prices (like equities) are above fundamental values, raising the danger of sudden corrections with broader market impact.
- **Role of NBFIs:** The expansion of non-bank credit (private equity funds, hedge funds, fintech lending, crypto markets) is seen as the "biggest systemic risk" now. NBFIs are more vulnerable in volatile conditions and transmit shocks to the banking sector.

- **Sovereign bond market pressures:** High debt and fiscal deficits are pushing longer-term bond yields higher. These pressures could interact with banks or NBFIs to trigger spillovers, especially where governments rely on narrow investor bases.
- **Emerging markets:** Local currency bond issuance and domestic investors have helped EMs be more resilient, but risks remain from global shocks and reversal of capital flows.
- **Geopolitical risks and fragmentation:** Tensions and decoupling increase financial market volatility and could reverse capital flows, impacting financial stability worldwide.

CMS-03 Satellite

News: Indian Space Research Organisation (ISRO) will launch military communications satellite CMS-03 from the Satish Dhawan Space Centre, Sriharikota.

About CMS-03 Satellite



Figure 43. Source: The Hindu

- CMS-03 is a **multi-band communication satellite** that will provide services over a wide oceanic region including the Indian landmass. It is also known as **GSAT-7R**.
- **Launched by:** Launch Vehicle Mark 3 (LVM3)
- The launch of the **CMS-03 will be the first by the LVM3 rocket** in over two years.
- It will be the **heaviest communication satellite to be launched to Geosynchronous Transfer Orbit (GTO)** from Indian soil.
- **Mission Purpose**
 - Strengthens India's **space-based communication infrastructure**.
 - **Enhances maritime security** by supporting naval communication networks.
 - **Expands high-quality telecommunication coverage** across India and adjacent oceanic regions
- **Payload:** Its payload includes **transponders capable of supporting voice, data, and video links over C, extended C, and Ku communication bands**.
 - It is **equipped with multi-band transponders** which supports communication across C, Extended-C, and Ku bands.
 - It also **enables voice, data, and video connectivity** for diverse applications.
- **Weight:** 4,400 kilograms
- **Strategic and Civil Applications**
 - **Provides secure communication** links for Indian Navy ships, submarines, and aircraft.
 - **Improves bandwidth capacity for civilian digital services** in remote and underserved areas.
 - **Contributes to national security** through reliable, high-fidelity communication channels.

Cyclone Montha

News: Cyclone *Montha* has intensified over the southeast Bay of Bengal and is expected to make landfall along the Andhra Pradesh coast.

About Cyclone Montha



Figure 44. Source: Kalingatv

- Cyclone Montha is a **tropical cyclone** forming over the **Bay of Bengal** as a **low-pressure system**.
- **Named after:** The cyclone, whose name meaning **“fragrant flower”** was provided by **Thailand**. The word “Montha” means **“a fragrant flower”** or **“beautiful flower”** in the Thai language.
- **Impacted region:** The cyclone had impacts in **Tamil Nadu, Odisha, and coastal Telangana with widespread rainfall and gusty winds**.
- These areas are at **high risk of**

flooding, strong winds, and damage to homes and crops.

- The system intensified into a deep depression by 26 October and later strengthened into a cyclonic storm.
- **Favourable conditions:** Its intensification was supported by **warm sea surface temperatures above 28 °C, low vertical wind shear, and adequate moisture inflow**.
- The IMD has indicated that the storm may intensify into a Severe Cyclonic Storm before landfall.

MAHA-MedTech Mission

News: Recently, Maha MedTech Mission was launched to strengthen India’s Medical Technology Ecosystem.

About MAHA-MedTech Mission



Source: Silicon India

- MAHA Medtech stands for **Mission for Advancement in High-Impact Areas (MAHA) – Medical Technology (महा MedTech)**

- **Launched by:** The Anusandhan National Research Foundation (ANRF), in collaboration with the Indian Council of Medical Research (ICMR) and the Gates Foundation
- **Aim:** To **accelerate innovation in India's medical technology sector**, reduce dependence on costly imports, and enhance equitable access to high-quality and affordable MedTech solutions.
- Focuses on: **Advancing projects that can deliver transformative medical technologies to the market.**
- The Mission will **offer financial support to diverse stakeholders including academic and R&D institutions, hospitals, startups, MSMEs, the MedTech industry, and multi-stakeholder collaborations.**
- **Core Objectives**
 - **Advance public health outcomes** by supporting technologies that address priority diseases and improve access to safe, quality healthcare.
 - **Promote affordability and accessibility** through cost-reducing solutions.
 - **Boost self-reliance and competitiveness** by encouraging indigenous MedTech innovation, manufacturing, and strong industry-academia partnerships.
- **Scope:** The Mission will encompass **a broad array of innovative medical devices and in-vitro diagnostics.**
 - It includes **equipment, essential subcomponents, implants, surgical and assistive devices, consumables, and software-based medical technologies.**
 - This may include **advanced imaging, minimally invasive interventions, point-of-care molecular diagnostics, AI and machine-learning platforms, robotics, and other emerging fields.**
 - Proposals that **align with national health priorities such as tuberculosis, cancer, neonatal care, and primary healthcare** will be prioritized.
- Along with funding, the Mission will extend facilitation support through national initiatives including:
 - **Patent Mitra for intellectual property protection** and technology transfer
 - **MedTech Mitra for regulatory assistance and approvals**
 - **A Clinical Trial Network for clinical validation** and evidence development
 - **Expert mentorship** from industry leaders

Survey Vessel Ikshak

News- The Indian Navy's indigenously built Survey Vessel (Large), Ikshak, is set to be commissioned at Naval Base Kochi.



Source- PIB

About Survey Vessel Ikshak

- **Constructed by**– Garden Reach Shipbuilders & Engineers (GRSE) Ltd., Kolkata, under the supervision of the Directorate of Ship Production and the Warship Overseeing Team (Kolkata).
- **Indigenization**: The vessel incorporates over *80% indigenous content*.
- **Class and Role**: Ikshak is the third ship in the Survey Vessel (Large) class, designed for hydrographic survey operations to map coastal and oceanic waters, ensuring safe navigation and supporting maritime domain awareness.
- **Dual-Role Capability**: Besides its primary role, the ship can operate as a Humanitarian Assistance and Disaster Relief (HADR) platform and serve as a Hospital Ship during emergencies.
- **Inclusivity Feature**: Ikshak is the first SVL ship to include dedicated accommodation for women officers and sailors, reflecting the Navy's commitment to gender inclusivity and modernization.

'Panda Diplomacy'

News: China's golden snub-nosed monkey debuted at European zoos on 10-year loans, signalling a potential successor to "panda diplomacy."

About 'Panda Diplomacy'



Figure 45. Source – ABC News

- **China's use of giant pandas** as a diplomatic tool, gifting or loaning them to other countries to foster goodwill and enhance its global image.
- **Historical roots**: The practice dates back to the **Tang Dynasty** (7th-10th centuries CE) but was **revitalized in the 20th century**.
- **Modern origin**: **1972** is considered the **start** of modern panda diplomacy, when **China gifted pandas** to the US after **President Nixon's visit**.

- **Shift from gifting to loaning:**
 - In **1984**, China switched **from gifting pandas to loaning them**.
 - In this arrangement through the **China Wildlife Conservation Association**, part of the money that an overseas zoo pays annually to China must be earmarked for habitat conservation or scientific research to benefit the species.
- **Beyond soft diplomacy:** It is a **multifaceted strategic tool** that combines cultural appeal with concrete diplomatic and economic objectives.
- **Lessons for India:** India can **use its native wildlife** (e.g., Bengal tiger, Indian rhinoceros) as a **soft power tool**, but **with an awareness** of the potential risks and ethical considerations.

About Golden Snub-nosed Monkey



Source – Outforia

- They are **rare, charismatic monkeys** unique to the frigid **mountains of central China**.
- The golden snub-nosed monkey is **known for its golden-orange fur, blue face, and thick coat adapted to cold climates**.
- It is being positioned as new “**animal ambassadors**” potentially a successor to **China’s famous panda diplomacy**.
- **IUCN status: Endangered**.

UAE Consensus

News: IRENA has recently published a report which evaluates global progress on the UAE Consensus goals to triple renewable energy capacity and double energy-efficiency improvements by 2030.

About UAE Consensus



Source: IRENA

- The **UAE Consensus** is the **negotiated outcome of the 28th COP (2023)** to the United Nations Framework Convention on Climate Change (UNFCCC).
- It includes the **First Global Stocktake (GST)** and **sets forth a comprehensive plan to keep 1.5°C within reach**.
 - The first GST, held at COP28, was the **first review** of global **progress** toward the **Paris Agreement's goals**.
 - It concluded that the **world is not on track** to limit global warming to **1.5 degree C** and that current **efforts are insufficient**.
- **Purpose:** To **assess progress** and close implementation gaps to **2030**.
- **International Agreement:** It was agreed by **197 countries and the European Union**, forming the most ambitious and wide-ranging climate agreement since COP21.
- **Key Goals:** It paves the way for a **transition away from fossil fuels, tripling renewable energy capacity, doubling energy-efficiency improvements by 2030**, and achieving **global net-zero emissions by 2050**.
 - It also establishes **actions needed to keep 1.5°C within reach and accelerate global climate ambition**.
 - It encourages **Parties to adopt ambitious economy-wide emission-reduction targets** in future NDCs.
- **Technology and Carbon Abatement Recognition:** The agreement formally recognizes **abatement and removal technologies** such as CCUS as climate-mitigation tools within the UNFCCC process for the first time.

Taal Volcano

News: Recently, the Taal Volcano in the Philippines erupted three times in a single day.

About Taal Volcano



Source – Britannica

- **Location:** It is in **Batangas province**, about 70 kilometers **south of Manila**, on the **island of Luzon of Philippines**.
- It is a **large caldera** filled by **Taal Lake in the Philippines**.
- It lies on the boundaries of the **Philippines Sea Plate** and the **Eurasian plate**, making it **prone to earthquakes and volcanism**.
- **Volcanic type:** It is a **complex or compound volcano** made up of **multiple vents rather than a single dome**.
- **Other names:** It was known as **Bombou or Bombon** in the 1800s.
- It has **multiple stratovolcanoes**, hills, and craters within a large caldera containing a crater lake.
- **Eruption history:** It is the **second most active volcano** in the Philippines, with at least **38 eruptions** in the **last 450 years**.
- **A Decade Volcano:** Because of its **proximity to populated areas** and its **eruptive history**, the volcano was designated a **Decade Volcano**, worthy of close study to prevent future natural disasters.
 - A Decade Volcano is a volcano selected by the **International Association of Volcanology and Chemistry of the Earth's Interior (IAVCEI)** for intensive study to help prevent volcanic disasters.
- The site was declared **National Geological Monument in 1998** and a **national park in 2018**.

Terms of Reference (TOR) of 8th Central Pay Commission

News: The Union Cabinet, chaired by the Prime Minister, approved the Terms of Reference of the 8th Central Pay Commission.

About Terms of Reference (TOR) of 8th Central Pay Commission

8th Pay Commission

- Centre announces formation of 8th Central Pay Commission in January 2025.
- Cabinet on October 28, 2025, approves 'Terms of Reference' for Commission
- ToR has been finalised after consultations with various ministries, state governments and government staff.
- Commission will make its recommendations within 18 months.
- Nearly 50 lakh central govt employees, including defence personnel, and close to 69 lakh pensioners to be covered.

Source – Mint

About 8th Central Pay Commission

- It was announced in **January 2025**.
- **Structure:** It will have a **Chairperson, one Part-Time Member, and a Member-Secretary**.
 - **Justice (Retd.) Ranjana Prakash Desai** is serving as the Chairperson.
- **Timeframe:** It will submit its recommendations **within 18 months** of its constitution.
- **Terms of Reference of 8th Central Pay Commission:** While making the recommendations the Commission will keep in view the followings:
 - The **economic conditions in the country** and the **need for fiscal prudence**;
 - The need to **ensure that adequate resources are available** for developmental expenditure and welfare measures;
 - The **unfunded cost of non-contributory pension schemes**;
 - The likely impact of the **recommendations on the finances of the State Governments** which usually adopt the recommendations with some modifications; and
 - The prevailing **emolument structure, benefits and working conditions** available to **employees of Central Public Sector Undertakings and private sector**.

About Terms of Reference (TOR) of A Central Pay Commission

- **TOR** is like a **rule book** for a pay commission, based on which the commission prepares its report.
- It has **definitions, terms and conditions used as a reference** for preparing a pay commission report.
- It will also **set the boundaries and timeframe** for the pay panel's recommendations.
- **Drafted by:** A **Joint Consultative Machinery (JCM)** drafts Terms of Reference (TOR) of a pay commission.
- **Joint Consultative Machinery (JCM)**
 - The JCM has **employee union representatives** from **each ministry**.
 - Out of 60 JCM members, **12 are selected for the standing committee**.
 - These 12 members **discuss TOR topics** with secretary-level government employees.
 - Once **finalised**, TOR goes to the **Cabinet for approval**.
- **Approved by:** The **Cabinet Committee** under the **Finance Ministry** approves it.
- If the **Cabinet** wants, it can **decline some TORs** or ask the members to **modify** them.

About Central Pay Commissions

- They are **periodically constituted** to examine **emolument structures, retirement benefits**, and other service conditions of **Central Government employees** and **recommend** necessary changes.
- Their recommendations are **usually** implemented **every ten years**.
- A **pay commission** has the power to **discuss matters outside of TOR**.

Intrusion Detection System

News: The Northeast Frontier Railway has introduced an Intrusion Detection System across its network to protect elephants and support uninterrupted train operations in forested and high-risk wildlife areas.

About Intrusion Detection System to Protect Elephants



Source: IE

- The Intrusion Detection System or IDS is **a method to avert train-elephant collision.**
- **Developed by:** Northeast Frontier Railway (NFR) – Headquartered at **Guwahati, Assam.**
- **Objective:** To **generate real-time alert on the occurrence of safety hazards** that might result in accident or serious disaster.
- **Working mechanism**
 - It uses a **fibre-optic acoustic sensing mechanism** to **detect elephant movement on railway tracks in real time.**
 - When **vibrations or external sound waves interact** with the Optical Fiber Cable (OFC), **variations occur in the reflected light pulses**, allowing the system to record a baseline **“reference signature”**.
 - During an intrusion event, **the system captures a new vibration signature**, compares it with the reference data, **performs classification and analysis**, and triggers **an alert**.
 - A **single IDS unit** can **monitor approximately 30 to 40 km of railway track** continuously and **send alarms** without range limitations.
 - The **remote sensing unit communicates with a central server** using Ethernet or 4G connectivity.
 - **Alerts are delivered** to the concerned railways personnel through **audio-visual signals, geo-location display, and train tracking functions.**
- The **AI-supported software** can also **detect rail fractures, track trespassing, unauthorized digging, and landslide risks**, enhancing overall railway **safety**.

Rehabilitation Council of India (RCI)

News: Rehabilitation Council of India (RCI) announced reforms to bring transparency, efficiency, and inclusivity to the rehabilitation ecosystem across the country.

About Rehabilitation Council of India (RCI)



**Rehabilitation
Council of India**

Figure 46. Source – RCI

- RCI is the **statutory body** that **regulates and standardizes rehabilitation and special education** given to **persons with disabilities**.

- **Origin:** It was set up as a **registered society in 1986**.

- The **RCI Act** was enacted by

Parliament in September 1992 and amended in 2000.

- It became a **Statutory Body on 22 June 1993**.
- **Nodal Ministry: Ministry of Social Justice and Empowerment.**
- **RCI's role**
 - It develops, standardizes, and regulates training programmes and courses at various levels in **rehabilitation and special education**.
 - It maintains the **Central Rehabilitation Register (CRR)** for qualified professionals and promotes research in special education.
 - It has recognized **16 categories** of professionals and personnel training programmes.

About RCI Reforms

- The reforms aim to ensure transparency, efficiency, and inclusivity, **aligning with Jan Vishwas, trust-based governance, and Ease of Doing Business** through innovation and digital transformation.
- **Fees for CRR** issuance, renewal, and qualification addition are **fully waived**.
- **CRR validity extends to seven years** with automatic renewal for candidates earning 100 or more CRE points, and free online corrections are enabled.
- 144 top-performing institutions are designated as **Centers of Excellence**.

AmazonFACE Programme

News: The AmazonFACE project, situated near the city of Manaus, seeks to explore how climate change will influence the Amazon rainforest, its rich biodiversity, and the ecosystem services it provides to humankind.

About AmazonFACE Programme



Source: amazonface.unicamp.br

- **Led by:** National Institute for Amazon Research (INPA) in collaboration with several international partners.
- **Location:** The programme is a large-scale field experiment located near Manaus, Brazil.
- **AmazonFACE** marks the first-ever application of FACE technology in tropical rainforests.
- It is designed to expose sections of old-growth Amazon forest to future levels of atmospheric CO₂ using Free-Air CO₂ Enrichment (FACE) technology.
- **Objective:** To study how the Amazon rainforest will adapt to increasing CO₂ levels and changing climate conditions.
- **Structure:** The experimental area contains six large rings of steel towers that rise above the rainforest canopy. Each ring surrounds groups of 50 to 70 mature trees, forming individual research plots for the experiment.
- **Experimental Design**
 - After the initial baseline testing, scientists will release CO₂ into three of the six rings to simulate the atmospheric conditions expected in future decades.
 - The remaining three rings will serve as control plots, allowing researchers to compare the responses of trees exposed to elevated CO₂ with those in normal conditions.
- **Working mechanism:**
 - FACE systems release controlled amounts of CO₂ into open-air forest plots.
 - This method simulates elevated CO₂ conditions without enclosing the vegetation, allowing researchers to study natural forest responses.
 - The project uses FACE (Free-Air CO₂ Enrichment) technology, which allows CO₂ to be released directly into the open-air environment without enclosing the vegetation.

- **Sensors** installed across the site record data every **10 minutes**, tracking how trees **absorb carbon dioxide, release oxygen**, and **emit water vapor**. These sensors also measure how trees respond to **rainfall, storms, sunlight**, and other environmental factors.
- In later phases, scientists will simulate **future atmospheric conditions**, such as CO₂ levels expected in **2050 or 2060**, to observe long-term ecosystem responses.
- **Scientific and Environmental Significance**
 - The **Amazon rainforest** plays a vital role in **regulating the global climate** and **absorbing carbon dioxide** from the atmosphere.
 - Understanding how the forest reacts to increased CO₂ levels is essential for **predicting its future ability to act as a carbon sink**.
 - The data will help scientists **refine climate models** and guide **global environmental policies** focused on carbon management and forest conservation.
 - This research is particularly important at a time when **wildfires and climate crises** are intensifying worldwide.

SJ-100

News: In Moscow, India's Hindustan Aeronautics Ltd (HAL) and Russia's United Aircraft Corporation signed an MoU to produce SJ-100 passenger aircraft in India.

About SJ-100



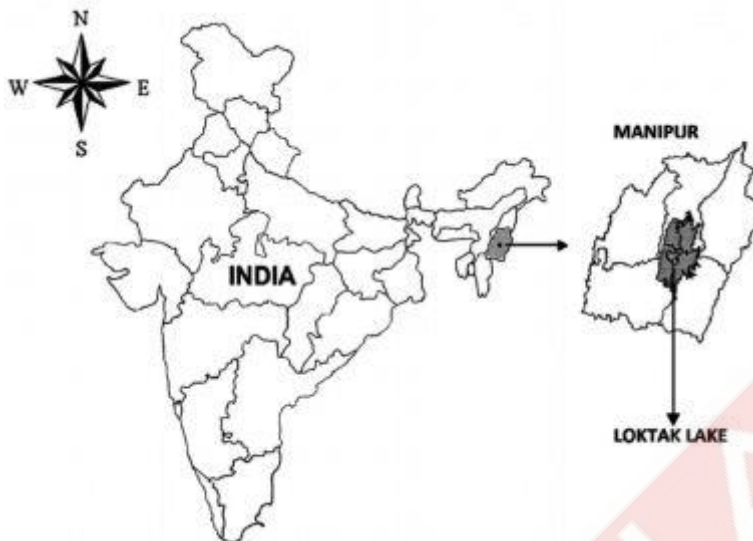
Figure 47. Source – India Today

- The SJ-100 is a new-generation, **jet-powered, civil commuter aircraft** of **Russian origin**.
- **Known as:** Earlier it was called the **Sukhoi Superjet 100**.
- **Designed by:** It was originally designed by **Sukhoi Civil Aircraft**, a division of United Aircraft Corporation (now the "Regional Aircraft" branch).
- **Key features**
 - It is a **twin-engine, narrow-body** regional jet aircraft.
 - It can **accommodate 103 passengers**.
 - It has a **flight range of 3,530 km** suited for short-haul routes.
 - It can operate in **all climatic zones, from -55°C to 45°**
 - It offers **low operating costs**, supporting **affordable regional connectivity**.
 - Manufacturing the SJ-100 in India will boost short-haul connectivity under the UDAN scheme.

Loktak Lake

News: A study has highlighted environmental concerns regarding Manipur's Loktak Lake, noting that alterations in land use are degrading the water quality of the rivers that flow into the lake.

About Loktak Lake



Source – ResearchGate

- **Location:** It is located in the **Bishnupur district of Manipur**.
- It is India's **only floating lake and Northeast India's largest freshwater lake**.
- **Area:** It stretches to an area of **about 287 square kilometers**.
- It is famous for its **clear, glassy water and its floating islands** called **phumdis**.
 - A **phumdi** is **made up of plants, soil, and other natural materials that float on the water**.
 - Because of these phumdis, **Loktak Lake** is also known as the **"Floating Lake."**
- It is home to the **Keibul Lamjao National Park**, the only floating national park in the world, and a **home to the critically endangered Sangai deer**.
- **Rivers:** Nine rivers namely **Khuga, Thongjaorok, Awang Khujairok, Nambol, Nambul, Imphal, Kongba, Iril, and Thoubal** drain in this lake.
- **Designated as:** It was **designated as a wetland of international importance** under the Ramsar Convention in 1990 and also **features under the Montreux Record in 1993**.
- **Flora and fauna:** It has around **233 aquatic Plants, 57 water bird species, 14 wetland-associated species, and 28 migratory waterfowl**. It has also **425 animal species**, including **Sangai (brow-antlered deer), Sambhar, Barking deer and Indian python**.
- **Environmental Challenges:** Despite its ecological significance, the Lake is confronting several escalating environmental threats such as **Developmental Impacts, Catchment Degradation and Water Pollution**.

ASEAN Defence Ministers' Meeting – Plus (ADMM-Plus) 2025

News: The 12th ADMM-Plus will be held in Kuala Lumpur, Malaysia on November 1, 2025. Raksha Mantri Shri Rajnath Singh will represent India at the meeting.

About ASEAN Defence Ministers' Meeting – Plus (ADMM-Plus) 2025



Source – ASEAN

- **Held at:** Kuala Lumpur, Malaysia
- It is the **highest defence consultative and cooperative mechanism** within ASEAN.
 - The **first ADMM-Plus** was held on **October 12, 2010** in **Hanoi, Vietnam**.
 - Since **2017**, ADMM-Plus has been held **annually** to reinforce defence cooperation.
- **India's Role in ADMM-Plus:** India is the **co-chair** (with **Malaysia**) of the **Experts Working Group on Counter Terrorism** for the **2024–2027** cycle.
- **Strategic Importance:**
 - The meeting underscores India's commitment to **regional security, counter-terrorism cooperation, maritime stability**, and the **Indo-Pacific vision** aligned with ASEAN centrality.
 - It also reflects India's proactive engagement in multilateral defence diplomacy and regional peacebuilding under the '**Act East Policy**'.

About ADMM-Plus

- The **ASEAN Defence Ministers' Meeting Plus (ADMM-Plus)** serves as a key platform to promote **peace, stability, and sustainable development** across the region.
- **Established:** 12 October 2010
- **ADMM-Plus** includes ASEAN's **10 member states** (Brunei, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, Timor-Leste, and Vietnam) plus **8 dialogue partners** — **India, USA, China, Russia, Japan, South Korea, Australia, and New Zealand**.
- **Chairmanship:** Rotates every year and is chaired by the host of ASEAN Summit.
- **Objectives:** The ADMM-Plus seeks to:
 - Build ASEAN's capacity to address shared security challenges.
 - Promote mutual trust and transparency among defence establishments.
 - Enhance regional peace and stability through defence cooperation.
 - Support the ASEAN Security Community's vision of peace, stability, and prosperity.
 - Advance the Vientiane Action Programme for a secure and outward-looking ASEAN.
- **Focus areas:** It currently focuses on **seven areas of practical cooperation** – Counter-Terrorism, Maritime Security, Humanitarian Assistance and Disaster Management, Peacekeeping Operations, Military Medicine, Humanitarian Mine Action and Cyber Security.

UNEP'S Adaptation Gap Report 2025

News: The Adaptation Gap Report 2025: Running on Empty was published recently by UNEP.

About UNEP'S Adaptation Gap Report 2025



Source: TH

- **Released by:** United Nations Environment Programme (UNEP)
- **Title of the report:** Adaptation Gap Report 2025: **Running on Empty**
- It evaluates the **world's preparedness for climate adaptation and financing needs** and **underscores the widening gap between adaptation finance needs and actual funding flows**, particularly for developing countries.
- **Key Findings**
 - **Developing countries will require \$310–\$365 billion annually by 2035** to adapt to climate change.
 - **Current adaptation finance stands at \$26 billion**, leaving a gap that is 12–14 times wider than existing support.
 - The **Glasgow Climate Pact goal to double adaptation finance to \$40 billion by 2025 is unlikely to be met** without immediate action.
 - Adjusted for inflation, **true adaptation needs may rise to \$440–\$520 billion annually by 2035**.
 - **172 countries have at least one national adaptation plan** or policy, but **36 are outdated**, increasing risks of maladaptation.
 - **Over 1,600 adaptation actions have been reported globally** across biodiversity, agriculture, water, and infrastructure sectors, but few track measurable outcomes.
 - Support from global climate funds such as **Adaptation Fund, Global Environment Facility (GEF), and Green Climate Fund (GCF) reached \$920 million in 2024**, an 86% increase over the five-year average.
 - UNEP warns this rise may be temporary, with emerging fiscal constraints threatening future finance flows.
 - **India's Perspective:** India is among the nation's **most at risk from heat stress, water scarcity, and air pollution**.
- **Private Sector Involvement:** Current private investment in **adaptation stands at \$5 billion per year**.
 - With supportive policy and blended finance mechanisms, **private sector funding could rise to \$50 billion annually**.
 - UNEP **stresses the need to mobilize both public and private finance collaboratively**.
- The report also highlights that **adaptation finance gap is not merely a funding shortfall but a threat to global equity, justice, and resilience**.

- **Recommendation:** UNEP calls for **urgent, scaled-up, and equitable climate finance, ensuring resilient systems for health, agriculture, and livelihoods** in vulnerable nations.

Bharat Taxi – India’s First Cooperative Cab Service

News: The Union Ministry of Cooperation and the National e-Governance Division (NeGD) have jointly launched Bharat Taxi to provide affordable and driver-friendly transportation.

About Bharat Taxi

- **About:** Bharat Taxi is India’s **first-ever cooperative cab service**, scheduled to be launched in **November 2025 in Delhi**.
- **Launched by:** **Union Ministry of Cooperation** and the National e-Governance Division (**NeGD**)
- **Managed by:** The service will be **managed by Sahakar Taxi Cooperative Limited**, comprising **cooperative leaders and driver representatives**.
 - It is **backed by eight major institutions**, ensuring **strong governance, transparency, and long-term sustainability** of the initiative.
- **Aim:** To provide both drivers and passengers a fairer system
- **Importance of Bharat Taxi – Cooperative Cab Model**
 - Bharat Taxi provides a **sustainable solution** to the persistent issues faced by **commuters and drivers** in private cab systems.
 - The cooperative model ensures that **all stakeholders including** drivers, passengers, and management **have a voice** in decision-making.
- **Benefits For Passengers**
 - Protects users from **unpredictable surge pricing** and **inconsistent service quality**.
 - Ensures **transparent and centrally managed operations**, offering fair and dependable service.
- **Benefits For Drivers**
 - Operates on a **zero-commission model**, allowing drivers to **retain 100% of their earnings**.
 - Promotes **driver ownership and participation**, positioning them as shareholders in the cooperative system.
 - Ensures **fair and regulated fares**, strengthening financial stability for drivers.
- **Working mechanism:**
 - A **membership-driven framework**, requiring a **small joining fee** to become part of the cooperative.
 - Members can **retain their entire fare income** without intermediary deductions.
 - The system integrates with **government digital services** such as **DigiLocker** and **UMANG**, enabling **seamless verification and service access** in line with **PIB guidelines**.
 - Bharat Taxi adopts inclusive terminology, its members are called **“Saarthis”** (meaning *charioteers*), symbolizing **equality, dignity, and partnership**.

Koyla Shakti Dashboard and CLAMP Portal

News: Union Minister of Coal and Mines launched KOYLA SHAKTI Dashboard and CLAMP portal.

About KOYLA SHAKTI Dashboard



Source: PIB

- **About:** The Koyla Shakti Dashboard is a digital platform that integrates the entire coal value chain from mine to market on a unified interface.
- **Launched by:** Ministry of Coal
- **Aim:** To serve as the **Digital Backbone of India's coal ecosystem**, promoting efficiency, transparency, and data-driven governance.
- **Objective:** To promote **real-time coordination, enhance operational efficiency, and support data-based decision-making.**
- It integrates data from **coal companies, railways, ports, ministries, state departments, and end users.**
- **Key stakeholders** include:
 - Coal producing companies (public and private)
 - Ministries of Coal, Railways, Power, Finance, Ports, Shipping & Waterways, and Road Transport & Highways
 - State mining departments (E-khanij platforms)
 - Power generation companies and industrial consumers
 - Port authorities and private terminals
- The platform acts as a **comprehensive decision-support system**, ensuring:
 - **Seamless coordination** among coal companies, railways, ports, and end users.
 - **Transparency and accountability** through data-driven monitoring.
 - **Faster, smarter decision-making** enabled by live analytics and digital dashboards.

About CLAMP Portal (Coal Land Acquisition, Management, and Payment)

- The CLAMP Portal is a **unified and centralized repository** of land records.
- **Aim:** It aimed at **streamlining land acquisition, compensation, and rehabilitation & resettlement (R&R) processes** in the coal sector.
- The portal ensures data integration, enhances accountability, and minimizes procedural delays.
- CLAMP portal enhances **transparency, efficiency, and inter-agency coordination** in land management practices across coal PSUs.

Sudan

News: Satellite images from Yale's Humanitarian Research Lab show mass killings after the Rapid Support Forces (RSF) captured El-Fasher.

About Sudan



Source – Britannica

- It is located **in Northeastern Africa**.
 - It is **Africa's third-largest country by area**.
- **Extension:** It borders the **Sahara on the north** and extends **southward to the forests of West Africa and the Congo River basin**.
- **Capital:** Its capital is **Khartoum**, located at the **confluence of the Blue Nile and White Nile rivers**.
- **Land borders:** It shares **land borders** with **seven countries**: Central African Republic, Chad, Egypt, Eritrea, Ethiopia, Libya, and South Sudan.
- **Maritime border:** It has a **maritime border** along the **Red Sea**.
- **Relief:** The relief mainly consists of vast plains and plateaus, and much of the land is desert and arid grassland.
- **Rivers:** The river system is dominated by the **Nile and its tributaries**.
- **Highest point:** Its highest point is **Jabal Marrah**.
- **International Memberships:** It is a member of the **United Nations, Arab League and African Union**.
- **Recent Conflict:** Since 2011, the country has faced significant challenges, including a major **displacement crisis and ongoing military conflicts**, which have worsened **acute food insecurity**.
- **Major places in the news due to conflicts:** Due to the ongoing civil war, the major places in the news are –
 - Khartoum State
 - Darfur
 - South and West Kordofan
 - Blue Nile State
 - Red Sea State (Port Sudan)

Saranda Wildlife Sanctuary

News: The Supreme Court directed Jharkhand to notify Saranda as a wildlife sanctuary; area fixation and exclusions are under judicial review.

About Saranda Wildlife Sanctuary



Source – ResearchGate

- **Location:** It is a **proposed wildlife sanctuary** within the **Saranda Forest Division** located in **West Singhbhum district** of Jharkhand.
- **Naming:** The **Saranda**, literally means “**700 hills**” in local language.
- **Area covered:** The cabinet approved the notification of **314.65 sq km** of the Saranda forest as a wildlife sanctuary.
- The area has **three elephant corridors** that link Saranda to **Similipal** and **Sundargarh**, ensuring ecological connectivity.
- **History:**
 - It was declared a **Game Sanctuary** in **1968** under undivided Bihar.
 - In 2001, Jharkhand-govt declared “**Singhbhum Elephant Reserve**”, comprising the entire area of the Saranda Forest Division as its core zone.
 - In **2022**, the **National Green Tribunal** directed Jharkhand to notify it under the **Wildlife Protection Act, 1972**.
- **River:** The perennial **Karo** and **Koina** rivers flow through the Saranda landscape.
- **Major tribes:** It includes **Ho, Munda, Oraon** and some primitive tribes.
 - Each and every tribal village has a **sacred grove (Sarna)** of about **2–5 acres** of forests.
- **Flora:** The forest has dense **Sal**, along with **Kusum, Mahua**, mushrooms, and rare orchids.
- It supports **elephants, four-horned antelope, sloth bears, flying lizards, and migratory birds**.