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SHE-LEAPS Platform

News: SHE-LEAPS was launched on June 29, 2026, during the Rashtriya Gramin Vikas Sammelan in New Delhi to support rural women entrepreneurs.

About SHE-LEAPS Platform



Figure 1. Source – PIB

- **Full form:** SHE-LEAPS stands for 'Self-Help Entrepreneur-Livelihoods and Enterprise Application for Prosperity and Sustainability'.
- It is a **digital platform** that **empowers Self-Help Group women** through enterprise creation, livelihood support, and performance tracking.
- **Developed by:** The SHE-LEAPS mobile application has been developed by the Digital India Corporation.
- **Implemented under:** The platform is implemented under the LokOS platform, which digitizes the activities of community-based organisations (operated under Ministry of Rural Development).
- **Reach:** SHE-LEAPS will be implemented across 34 States and Union Territories.
- **Aim:** The platform aims to **empower rural SHG women**, strengthen women-led enterprises, improve financial inclusion, integrate rural producers with formal value chains, and promote **data-driven rural entrepreneurship**.
- **Key Features:**
 - **Unified Digital Support:** The platform supports both farm and non-farm enterprises through enterprise creation and performance tracking.
 - **Real-Time Monitoring:** It captures real-time enterprise data and tracks the complete livelihood journey from profile creation to enterprise performance.
 - **Better Governance:** It strengthens digital monitoring, improves planning, and supports informed policy decisions through better data.
 - **Support for Lakhpati Didi Mission:** It provides end-to-end tracking of income growth and enterprise performance to strengthen the Lakhpati Didi mission.

Project BRAHMANK

News: Project BRAHMANK of the Border Roads Organisation (BRO) celebrated its 16th Raising Day on 29 June 2026 at Ranaghat, Arunachal Pradesh.

About Project BRAHMANK



Figure 2. Source – BRO

Project BRAHMANK is a specialized engineering and infrastructure development unit that builds and maintains strategic infrastructure in frontier areas.

- **Operates under:** It operates under the Border Roads Organisation (BRO).
- **Establishment:** The project was set up in June 2011 at Ranaghat in East Siang district of Arunachal Pradesh and became operational in December 2011.
- **Area of Responsibility:** It develops and maintains strategic road infrastructure across the Siang, East Siang, West Siang, Upper Siang and Shi-Yomi districts of Arunachal Pradesh, along with parts of Dhemaji district in Assam.
- **Infrastructure Portfolio:** It maintains 811 km of strategic roads, around 86 bridges, and also develops helipads to strengthen regional connectivity.

About Border Roads Organisation (BRO)

- The Border Roads Organisation (BRO) is India's leading infrastructure agency for constructing and maintaining roads and other strategic infrastructure in high-altitude, snow-bound and extremely challenging terrains.
- **Institutional Framework:** It functions as an executive force under the Ministry of Defence and operates under the Border Roads Development Board (BRDB).
- **Genesis:** It was established in May 1960 with Project Vartak in the East and Project Beacon in the North.
 - At present, it operates 18 field projects across 11 States and 3 Union Territories.
- **Mandate and Core Functions:** It develops and maintains strategic border infrastructure to ensure all-weather connectivity and strengthen defence preparedness.
 - It also serves as a first responder during disasters.

Plant and Animal Discoveries 2025

News: According to Animal Discoveries 2025, India has recorded 483 species, of which 226 species were recorded for the first time in the country.

About Animal Discoveries 2025



Figure 3. Source – TH

- **Released by: Animal Discoveries 2025** is an **annual report** released by the [Zoological Survey of India \(ZSI\)](#) detailing the discoveries of fauna.
- **Animal Discoveries 2025:**
 - India has recorded **483 species**, of which **226 species** were recorded for the first time in the country.
 - **709 new faunal (animal) records** were added to the national biodiversity database.
 - **Total faunal biodiversity:** India's total faunal biodiversity now stands at 1,05,953 species, reaffirming its status as one of the world's premier megadiverse nations.
 - Among the animal groups added to the country's fauna, **Hymenoptera contributed the highest number of additions at 106**, followed by **Lepidoptera at 65, Diptera at 64, Arachnida at 64, Coleoptera at 55, and Pisces at 50.**
 - **State performance:** Among the states, **Kerala recorded the highest number of new species at 98**, followed by West Bengal at 76, Karnataka at 67 and Arunachal Pradesh at 65.
- **Plant Discoveries 2025:**
 - **'Plant Discoveries 2025'** is the **nineteenth edition** of the series, which added **353 new plant species** to the Indian Flora during 2025.
 - **First edition:** The first edition of this series was launched in **2007**.
 - **Compiled by:** This has been **compiled jointly by the ZSI and the [Botanical Survey of India \(BSI\)](#).**
 - **Biological classifications:** India added **353 taxa** to its flora, of which **141** are **intraspecific taxa**.
 - Of the 353 plant taxa added to the floral database, **221 have been described as new to science, while 132 taxa represent new distributional records for India.**

- It documents **154 angiosperms, three pteridophytes, 13 bryophytes, 62 lichens, 93 fungi, 22 algae, and six microbes.**
 - Among the most notable discoveries are several wild relatives of **economically and ecologically significant plant groups, including Begonia, Impatiens (balsams), legumes, and orchids.**
 - Approximately **43% of the newly described taxa belong to vascular plants.**
- **State performance:** A State-wise analysis of the plant discoveries indicates that **Arunachal Pradesh emerged as the leading contributor with 49 discoveries**, followed by Uttarakhand at 39 and Kerala at 37.

About PaleoIndia Portal

- **Developed by:** Recently, the PaleoIndia Portal was launched. It is a **digital initiative** jointly **developed by ZSI and the National Centre for Sustainable Coastal Management (NCSCM), Chennai**, using geological datasets from the Geological Survey of India (GSI).
- **Features:**
 - It documents **the spatial distribution of fossil fauna across all 28 states and eight Union Territories**, housing over 5,000 specimens spanning Mammalia, Reptilia, Aves, Pisces, Amphibia, Mollusca, Arthropoda, Foraminifera, Echinodermata and Ichnofossils.
 - It **features a real-time data upload system to enable field-based and citizen science contributions** for safeguarding India's paleontological heritage.

FCRA 2.0 Portal and the e-OCI Card

News: Union Home Minister launched the FCRA 2.0 Portal and the e-OCI Card in New Delhi to improve citizen services through digital governance.

About FCRA 2.0 Portal



Source – CSR News

- **The FCRA 2.0 Portal is a fully digital platform that simplifies compliance and strengthens monitoring under the Foreign Contribution (Regulation) Act.**
- **Launched by:** The portal was launched by the **Ministry of Home Affairs**.
- **Legality:** The portal has been **developed under the Foreign Contribution (Regulation) Act** and **incorporates the key provisions of the FCRA Amendment Rules, 2026**.
- **Aim:** It aims to simplify compliance, reduce paperwork, and strengthen the monitoring and enforcement of foreign contributions.
- **Key Features:**
 - **End-to-End Digital Services:** Applications, renewals, annual returns, and other services are now processed through a fully digital system.
 - **Technology Integration:** The portal provides **Aadhaar-based authentication, e-Sign, OCR-based document analysis, and integration with PAN, Aadhaar, OCI, NGO Darpan, ICAI's UDIN system, and banks.**
 - **Secure and Faster Processing:** The portal is **hosted on MeghRaj (Government Cloud)**, which supports secure data management and faster verification.
 - **Improved Governance:** The portal reduces paperwork, saves time, strengthens compliance monitoring, and improves oversight of foreign contributions.

About FCRA

- **The Foreign Contribution (Regulation) Act (FCRA):** It regulates foreign contributions to protect national sovereignty, security, and public interest.
- **Origin:** It was first introduced in 1976, replaced by the Foreign Contribution (Regulation) Act 2010.
- **Legality:** The Ministry of Home Affairs administers and enforces this Act.
- **Aim:** It regulates foreign contributions and prevents foreign influence on India's internal affairs.

About e-OCI Card

- **The e-OCI Card** is a fully digital system that transforms Overseas Citizen of India services for the global Indian diaspora.
- **Launched by:** It was launched by the Ministry of Home Affairs.
- **Legality:** The e-OCI Card has been introduced under the Citizenship (Amendment) Rules, 2026.
- **Aim:** It aims to provide a fully digital, convenient, and secure OCI service for more than 50 lakh OCI cardholders.
- **Key Features:**
 - **End of Physical Re-issuance:** OCI cardholders are no longer required to re-issue the OCI booklet after receiving a new passport after the age of 20 years.
 - **Online Passport Updates:** Cardholders must update their passport-related details online whenever a new passport is issued.
 - **Fully Digital OCI Process:** Applicants can complete the entire OCI process online, from submitting the application and uploading documents to downloading the approved e-OCI Card.
 - **Enhanced Convenience and Security:** The digital card reduces the risk of losing physical documents and enables real-time verification for smoother immigration clearance.

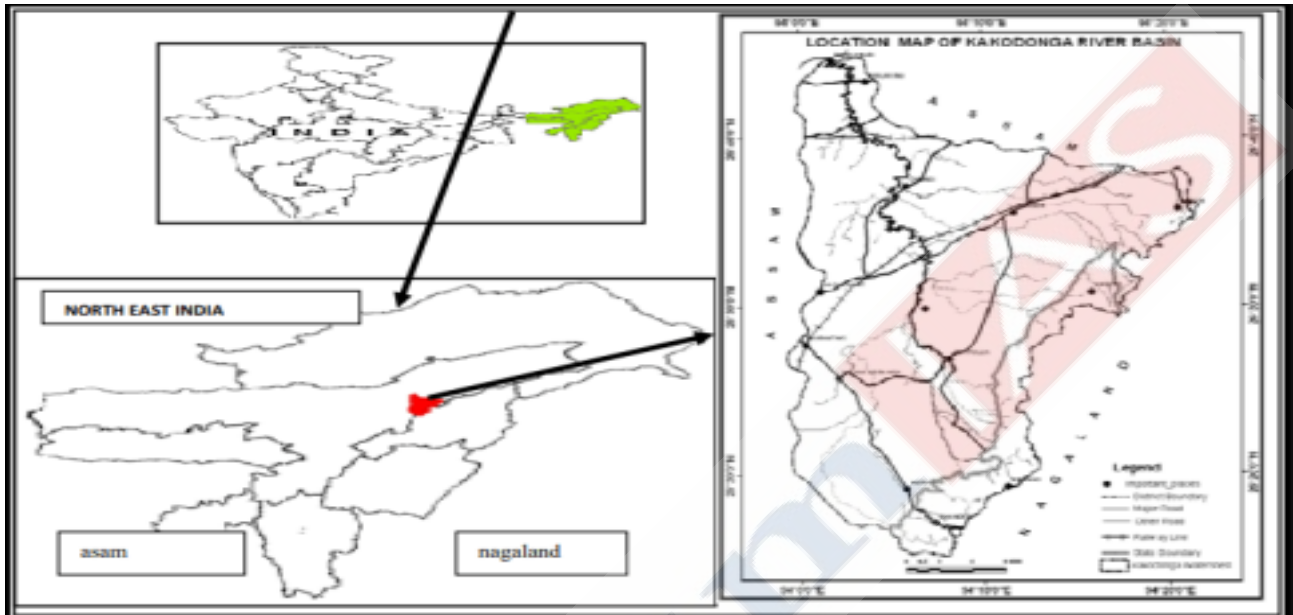
About Overseas Citizen of India (OCI) scheme

- **The Overseas Citizen of India (OCI) scheme** grants certain privileges to foreign nationals of Indian origin.
- **Legality:** It was introduced in 2005 through an amendment to the Citizenship Act, 1955.
- **Aim:** It strengthens India's engagement with the global Indian diaspora.

Kekaidong River

News: Recently, a juvenile [gharial](#) was sighted in the Kekaidong River in West Karbi Anglong, which indicates an important sign of improving river health and successful biodiversity conservation efforts in Assam.

About Kekaidong River



Source: Research Gate

- The **Kekaidong River** flows **through the state of Assam**.
- **Origin:** It originates in the **Naga Hills of Nagaland** and enters the Assam plains near Kulajan.
 - It flows through hilly and vast plain regions before **joining the Gelabil River**.
 - **Gelabil River** ultimately drains into the **Brahmaputra River**.
 - It marks the **border between Golaghat and Jorhat districts of Assam**.
- **Length:** Its length is **70 km**.
- **Basin area:** Its basin covers an area of about **1,112.86 sq. km**.
 - The majority of the watershed is **covered by agricultural land, mainly tea gardens and paddy fields**.
- **Tributaries:** Its major tributaries are **Bojalkata, Chereli, Soraipani, Kasojan, Dholi, Doijan, Chelcheli, Ghiladhari and Khar Jan**.
- **Tributary of:** It is one of the **important southern sub-tributaries of the [Brahmaputra River](#)**.
- **Historical Background:** It was also known as **Delsiri River** in ancient times.

Lavender Cultivation

News: The Union Government and Nagaland discussed expanding lavender cultivation and agri-entrepreneurship under the CSIR Aroma Mission across the State.

About Lavender Cultivation



Source – BL

- **Lavender** is a **small, perennial aromatic herb shrub** of the **mint family (Lamiaceae)**, that is mainly grown for its flowers and essential oil.
 - It was **introduced in the temperate regions of Jammu & Kashmir** under the **CSIR Aroma Mission**.
- **Key Aspects:**
 - **Climate:** Lavender grows in **temperate areas** and is a **drought-resistant crop**.
 - **Life Cycle:** A single lavender **plant bears flowers for up to 15 years**, requires minimal maintenance, and can be **harvested from the second year onward**.
 - **Propagation:** Lavender can be **propagated through seeds, rooted cuttings, tissue culture, and layering**.
- **Applications:** Lavender is used for **food and flavouring, pharmaceutical and therapeutic, cosmetic, and industrial purposes**.
- **Distribution in India**
 - Lavender cultivation is practiced in almost **all the 20 districts of Jammu & Kashmir**.
 - The successful model has also **expanded to Uttarakhand, Himachal Pradesh, Meghalaya, and Nagaland** through the CSIR Aroma Mission.

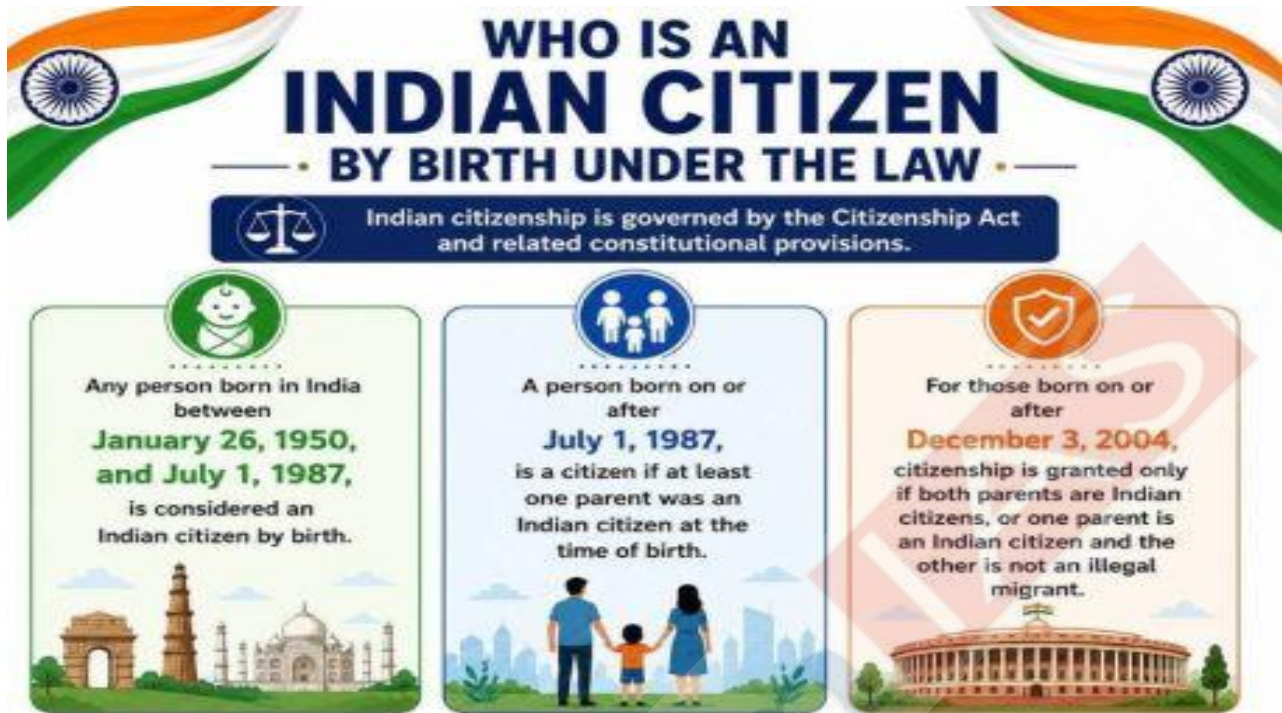
About Aroma Mission

- **Launched by:** The Union Ministry of Science & Technology launched the **Purple or Lavender Revolution in 2016** through the **CSIR Aroma Mission**.
- **Led by:** The mission is led by the **Council of Scientific & Industrial Research (CSIR)**, with **CSIR-Central Institute of Medicinal and Aromatic Plants (CSIR-CIMAP)**, Lucknow, as the nodal laboratory.
- **Also Known As:** The initiative is also known as the **Purple or Lavender Revolution**.
- **Aim:** The mission aims to **support a domestic aromatic crop-based agro economy** by promoting homegrown aromatic oils and transforming the aroma sector through agriculture, processing and product development.
- **Key Features:**
 - **Farmer Support:** The mission provides **free quality lavender planting material to first-time farmers and supports** the cultivation of aromatic crops.
 - **Value Chain Development:** The mission **promotes agriculture, processing, product development, technology support, skill development, and market linkages** to strengthen the aroma sector and rural employment.
 - **Phased Implementation:** The mission has been implemented in **two phases—Phase-I and Phase-II**, with Phase-II launched on 9 February 2021.

Birthright Citizenship

News: The US Supreme Court declared the Trump administration's executive order ending birthright citizenship unconstitutional and reaffirmed citizenship under the Fourteenth Amendment.

About Birthright Citizenship



Source – Inshorts

- **Birthright citizenship** is the **legal right to citizenship** acquired automatically **by birth within a country's territory or through one's parents**.
- **Core Principles of Citizenship:**
 - **Jus Soli (Right of the Soil):** Citizenship is granted because a person is born within a country's territory.
 - **Jus Sanguinis (Right of Blood):** Citizenship is granted based on the citizenship of one or both parents.
- **The US System:**
 - **Constitutional Basis:** The **14 Amendment** grants citizenship to all persons born or **naturalised** in the United States and subject to its jurisdiction.
 - **Supreme Court Ruling:** The Court held that **children born in the US** are citizens even if **their parents are in the country unlawfully or temporarily**.
 - **Exceptions:** Birthright citizenship does **not apply to children of foreign diplomats or enemies** present during hostile occupation.
 - **The Legal Conflict:**

- **Government's Argument:** The government argued that **such children were not fully subject to US jurisdiction** because their parents owed primary allegiance to another country.
- **Court's Decision:** The Court rejected this argument and **ruled that everyone physically present in the US is subject to its laws, regardless of immigration status.**

Indian Laws Regarding Citizenship

- **Constitutional Provisions :** Part II of the Indian Constitution (Articles 5-11) deals with citizenship at the commencement of the Constitution.
 - **Article 11** gives Parliament the exclusive power to make laws on citizenship.
- **Nature of Citizenship:** India follows **single citizenship** and a single domicile.
- **Legality:** The **Citizenship Act, 1955** is the main law that governs citizenship in India.
- **Citizenship Framework:** India's citizenship framework has gradually shifted from an open **Jus Soli (Right of the Soil)** system to a stricter **Jus Sanguinis (Right of Blood)** system.
 - Under **Section 3 of the Citizenship Act, 1955**, citizenship by birth is governed by different conditions for different time periods.
- **Modes of Acquiring Citizenship (Citizenship Act, 1955):** The Citizenship Act, 1955 provides **four legal methods** through which a person can acquire Indian citizenship.
 - **By Birth:** A person can acquire citizenship by birth under Section 3, subject to the conditions applicable during different time periods.
 - **By Descent:** A person born outside India can acquire citizenship through Indian parent(s). Births after 3 December 2004 require mandatory consular registration.
 - **By Registration:** Eligible Persons of Indian Origin (PIOs), spouses of Indian citizens, and other eligible persons can **acquire citizenship through registration.**
 - **By Naturalisation:** Eligible foreign nationals can **acquire citizenship after fulfilling the prescribed residency requirement, which is generally 12 years.**
- **Amendments:**
 - **1986 Amendment:** It **ended unrestricted birthright citizenship** by requiring **at least one parent to be an Indian citizen** for children born after the amendment came into force.

- **2003 Amendment:** It further restricted citizenship by birth by providing that a **child would not become a citizen if one parent was an illegal immigrant at the time of birth.**
- **Citizenship (Amendment) Act, 2019:** It **reduced the residency requirement for specified persecuted minorities** belonging to **Hindu, Sikh, Buddhist, Jain, Parsi, and Christian** communities from **Pakistan, Bangladesh, and Afghanistan** who entered India on or before 31 December 2014.

India's First Private Point-in-Space (PinS) Instrument Approach Procedure

News: The Ministry of Civil Aviation approved India's first Private Point-in-Space (PinS) Instrument Approach Procedure for helicopter operations at Undavalli Heliport.

About India's First Private Point-in-Space (PinS) Instrument Approach Procedure



Figure 4. Source – TV9

- **Private Point-in-Space (PinS)** is India's first private satellite-based instrument approach procedure that **enables safe and precise helicopter operations at heliports** without conventional landing infrastructure.
- **Operations at:** It has been approved for helicopter operations at **Undavalli Heliport, Andhra Pradesh.**
- **Developed by:** It was developed by the **Airports Authority of India (AAI)** and approved by the **Directorate General of Civil Aviation (DGCA).**
- **Key Features:**
 - **Satellite-Based Navigation:** It uses **advanced satellite-based navigation technology** to help helicopters land safely and accurately.
 - **Support for Heliports:** It enables **safe helicopter landings at heliports that do not have conventional instrument landing infrastructure.**
 - **All-Weather Operations:** It supports **safe operations during adverse weather conditions** and in areas without ground-based navigation aids.

- **Wider Benefits:** It improves **flight safety, operational efficiency, and all-weather accessibility** while supporting emergency medical services, disaster relief, tourism, offshore activities, pilgrimage services, corporate aviation, and regional connectivity.

World Bank's Climate Change Action Plan (CCAP)

News: Following criticism from the U.S.A., the World Bank Group has announced the withdrawal of its climate finance targets under the World Bank's Climate Change Action Plan (CCAP).

About the World Bank's Climate Change Action Plan (CCAP)



Source: World Bank

- It is an **institutional strategy** designed to **integrate climate action** into its development programmes and support countries in addressing climate change.
- It was established by the [World Bank](#) in 2021.
- **Implementation period:** It was for a duration of **over 5 years (2021-2025)**.
- **Aim:** It aims to **increase climate finance** to reduce emissions, strengthen climate change adaptation, and align financial flows with the goals of the Paris Agreement.
- **Actions:** It translates the **Green, Resilient, and Inclusive Development (GRID)** framework into practice through **three strategic action areas**:

- **Aligning Climate and Development:** It integrates climate goals into national development planning and policies. It aligns its activities with the Paris Agreement and expands climate finance to increase the impact of investments.
- **Prioritising Key Systems Transitions:** It focuses on key sectors, including energy, agriculture, cities, transport, and manufacturing. These sectors are prioritised to support low-carbon, climate-resilient, and sustainable development:
- **Financing to Support the Transitions:** It strengthens domestic public financing, mobilises private investment, and provides concessional finance to support climate action, particularly in developing countries.
- **It enabled the World Bank to significantly expand climate finance**, reaching \$42.6 billion in FY2024, and to increase its climate finance target to 45% of total annual financing.
 - Now, the **World Bank Group (WBG)** has decided to **remove its climate finance targets** after criticism from the **U.S.A** which is its largest shareholder.
 - It will now focus on the **actual development outcomes and results** achieved, instead of focusing on how much money is spent on climate projects.

'VIJAY' Vision For a Technology-Driven Future Force

News: General Dhiraj Seth takes over as the 31st Chief of the Army Staff and unveils the 'VIJAY' vision aimed at building a technologically advanced and future-ready force.

About 'VIJAY' Vision For a Technology-Driven Future Force



Source: Directorate of Indian Army Veterans

- ‘VIJAY’ is an acronym that defines the key priorities that will guide the Army’s future transformation.
- The acronym represents ‘V’ for vigilance, ‘I’ for innovation, ‘J’ for jointness and integration, ‘A’ for Aatmanirbharta and ‘Y’ for ‘Yodha first’.
 - ‘V’ – for Vigilance and Readiness: This highlights that the army will maintain constant vigilance regarding our borders and emerging threats and uphold a high level of operational readiness to effectively counter any challenge to national security.
 - ‘I’ stands for Innovation and Transformation: This defines the focus on both doctrinal and technological solutions. Innovation will be an integral part of the army’s mindset, operational methods, and capability development. This also includes transformations necessary to adapt to the evolving battlefield.
 - ‘J’ stands for Jointness and Integration: Army will adopt an integrated approach to maintain synergy, complete coordination and alignment with the Air Force and the Navy to enhance the Indian Army’s operational effectiveness.

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- **'A' stands for Aatmanirbharta:** The Army will build a **self-reliant Army** by leveraging indigenous capabilities and technologies developed within the country, we .
- **'Y' stands for 'Yoddha First' (Soldier First):** This will act as a **guiding principle** for the forces. The welfare, empowerment and professional growth of every soldier will remain an enduring commitment.

National SC-ST Hub (NSSH) Scheme

News: The National SC-ST Hub (NSSH) Scheme is strengthening entrepreneurship among SC/ST communities through capacity building, mentorship, market access, and business accelerator programmes.

About National SC-ST Hub (NSSH) Scheme



Source – MSME

- **The National SC-ST Hub (NSSH) Scheme** promotes entrepreneurship and strengthens the capacity of SC/ST entrepreneurs.
- **Initiative By:** The scheme is a **flagship initiative of the Ministry of Micro, Small and Medium Enterprises (MSME)**.
- **Implemented by:** The scheme is **implemented by the National Small Industries Corporation (NSIC)**, under the Ministry of MSME.

- **Aim:** The scheme aims to enhance the capacity of SC/ST entrepreneurs, promote entrepreneurship, and support their participation in public procurement to achieve the mandated 4% procurement target.
- **Details of the Programs:** There are two separate programs for wards (aspiring) and existing entrepreneurs.
 - **Business Accelerator Programme:** This programme supports existing SC/ST entrepreneurs with more than six months of business experience through mentorship, business strategy, market opportunities, and scaling support.
 - **Entrepreneurship Programme:** This programme helps aspiring entrepreneurs by providing mentoring and training to convert business ideas into prototypes that can be presented for early-stage financing.
- **Key Features:**
 - **Capacity Building:** The scheme provides training in financial management, tender participation, pricing strategies, and regulatory compliance to improve business readiness.
 - **Business Support:** It offers financial assistance, market linkages, credit support, Udyam registration, GeM onboarding, and exhibition participation.
 - **Entrepreneurship Promotion:** The scheme develops self-employment opportunities, strengthens business networks, and supports technology upgradation.
 - **Inclusive Growth:** The scheme encourages greater participation of SC/ST enterprises in government procurement and strengthens the MSME ecosystem.

Employees' Provident Fund (EPF) Scheme 2026

News: The Ministry of Labour and Employment has notified the New EPF Scheme, 2026 under the Code on Social Security, 2020, effective from June 29.

About Employees' Provident Fund (EPF) Scheme, 2026



Source – ToI

- **The Employees' Provident Fund (EPF) Scheme, 2026** is India's new statutory provident fund framework replacing the **Employees' Provident Funds Scheme, 1952**.
- **Notified under:** The EPF Scheme, 2026 has been **notified under the Code on Social Security, 2020**.
- **Ministry involved:** The scheme is administered by the **Ministry of Labour and Employment**.
- **Executive Authority:** The **Employees' Provident Fund Organisation (EPFO)** is the executive authority.
- **Aim:** The scheme aims to **provide financial security and retirement savings** while **implementing the Code on Social Security, 2020** through a modernized provident fund framework.
- **Key Features:**
 - **Contribution Provisions:** Employer and employee contributions **continue at 12% of wages**, while certain **notified establishments continue with a 10% contribution rate**.
 - **Mandatory contributions apply only up to the statutory wage ceiling.**
 - **Voluntary Higher Contributions:** Employees **may voluntarily contribute** on wages above the statutory wage ceiling or at a rate **higher than 12%**.
 - **Simplified Withdrawal Rules:** The **earlier 13 withdrawal** categories have been **consolidated into three categories—essential needs, housing needs, and special circumstances—to simplify partial withdrawals.**

- **Withdrawal and Minimum Balance:** Members can **withdraw funds for illness, education, marriage, and housing** after **completing 12 months** of membership, **subject to the prescribed withdrawal limits** and while **maintaining a minimum balance of 25% of total contributions**.
- **Protection for Contract Workers:** The scheme introduces the **concept of the principal employer**.
 - **Even if a contractor makes the provident fund payment, the principal employer remains ultimately responsible** for ensuring provident fund contributions are deposited.
- **Greater Digitalization:** The scheme formally recognizes digital systems such as **online filing of employer returns, digital member accounts, electronic claim processing, electronic records, and electronic annual statements** to improve provident fund administration.
 - The scheme gives **greater emphasis to Aadhaar-linked UAN and digital compliance**.

About EPFO

- The **Employees' Provident Fund Organisation (EPFO)** is a **statutory body** that **administers social security schemes for employees**.
- **Establishment:** It was established **under the Employees' Provident Funds and Miscellaneous Provisions Act, 1952**.
- **Objective:** It aims to provide retirement security, pension benefits, insurance protection, and financial support during emergencies.
- **Structure:** EPFO functions **under the Ministry of Labour and Employment** and is **administered by the Central Board of Trustees** with representatives of government, employers, and employees.
- **Schemes:** EPFO administers the **Employees' Provident Fund Scheme, Employees' Pension Scheme, and Employees' Deposit Linked Insurance Scheme**.

Rung Community

News: The Rung community opposed the installation of a three-tonne artificial Shivling near Om Parvat, stating that it violated their tradition of nature worship.

About Rung Community



Figure 5. Source – Uttarakhand Govt.

- The Rung (Rang or Shauka) community is an indigenous trans-Himalayan tribal community that follows nature worship and has a distinct Himalayan cultural identity.
- **Distribution:** The community lives in the India–Nepal–Tibet border region of the Kumaon Himalayas.
- **Settlement Area:** They inhabit the high-altitude valleys of Vyans, Darma, Chaudans, and Johar in Pithoragarh district, Uttarakhand.
- **Indigenous Identity:** The Rung are a Tibeto-Burman ethnic group with a distinct Himalayan tribal culture.
- **Language:** The Rung community speaks Runglo (Rangkas) and other distinct dialects such as Vyansi, Chaudangsi, and Darma.
- **Status:** The community is legally recognised as a Scheduled Tribe (ST) in India.
- **Key Aspects:**
 - **Nature Worship:** The community worships Lord Shiva through mountains, rivers, forests, and other sacred natural landscapes.
 - **Traditional Livelihood:** They traditionally practised trans-Himalayan trade, pastoralism, agriculture, animal husbandry, seasonal migration, and collected medicinal herbs such as Yartsa Gumbu, Kutki, and Gandrayan.
 - **Traditional Seed Bank:** The community preserves seeds in underground pits before migrating to lower altitudes during winter and retrieves them for the next sowing season.
 - **Festival:** The community celebrates the Kandali Festival once every 12 years during the flowering of the Kandali plant, and the festival is dedicated to Lord Shiva.
 - **Traditional Governance:** Gram Sabhas and traditional tribal institutions regulate community affairs and natural resource use.

Bharat Life Sciences Award 2026

News: Applications are invited for the Bharat Life Sciences Award (BLSA) 2026 to recognise excellence in scientific research, innovation, and public health impact across India's life sciences ecosystem.

About Bharat Life Sciences Award 2026



Source: Business Standard

About	● It is an award to recognise excellence in scientific research, innovation, and public health impact across India's life sciences ecosystem. ● The inaugural edition of the Award will be held on 1 October 2026 in New Delhi,
Organized by	● It is organized by the Federation of Indian Chambers of Commerce and Industry (FICCI). ● It is supported by the Office of the Principal Scientific Adviser to the Government of India, Department of Pharmaceuticals, Biotechnology Industry Research Assistance Council (BIRAC) & Invest India.
Aim	It aims to honour outstanding contributions and enable the advancement of impactful research and innovation in the country.
Eligibility	● It is open to eligible researchers, interdisciplinary teams, academic and research institutions, hospitals, startups, industry R&D organisations, public health institutions, and ecosystem leaders working in the life sciences and healthcare ecosystem.

	● Government officials and public servants may participate in the Award, subject to applicable conflict-of-interest and anti-corruption requirements. ○ They are not eligible to receive any Grant under the grant-eligible categories. ● The Award is open only to Indian citizens and organisations registered in India, subject to the eligibility criteria of the respective Award categories.
Categories of the Awards	● The Award includes categories for both individuals and organisations. ● The Award comprises six honours across five categories, covering: ○ Ramanujan Arogya Udaan Samman in the category of Individual Excellence – Young Scientist Award ○ Charaka Arogya Samman in the category of Collaborative Innovation – Innovation for Unmet Patient Needs ○ Sushruta Arogya Samman in the category of Collaborative Innovation – Translational and Clinical Advancement ○ Nalanda Arogya Vigyan Samman in the category of Institute of Scientific Excellence ○ Jivaka Arogya Navpravartan Gaurav in the category of Startups Innovator in Healthcare/Life Sciences ○ Sarabhai Arogya Drishti Gaurav in the category of Promoting Scientific Ecosystem in India ● While four categories carry grant support, two categories, Startups Innovator in Healthcare/Life Sciences and Promoting Scientific Ecosystem in India, recognise outstanding contributions to innovation and ecosystem building. ● Applicants may apply under multiple categories, subject to meeting the eligibility requirements of each category and submitting separate applications for each category.

Governed by	- It is governed by an independent, trans-sectoral jury comprising eminent leaders from science, healthcare, academia, policy, and industry. Grant Thornton Bharat serves as the independent Process Advisor to ensure transparency and adherence to robust evaluation standards.
Grant for the winner	The award is backed by Rs. 7 crore in grant support.

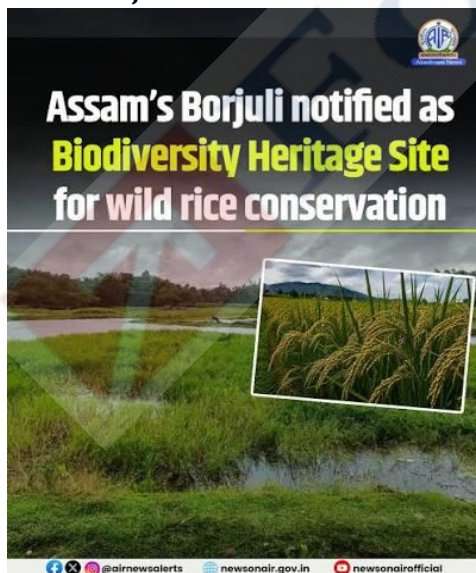
About the Federation of Indian Chambers of Commerce and Industry

- FICCI is the **largest and oldest apex business organisation** in India.
- Establishment:** It is a **non-government, not-for-profit organisation** established in **1927**.
- Members:** It involves **private and public sector companies, multinational firms, and regional chambers of commerce across India**, reaching over 250,000 companies.
- FICCI provides a platform for **networking and consensus building** within and across sectors and is the **first port of call for Indian industry, policy makers and the international business community**.

Borjuli Wetland and Oryza Rufipogon and Biodiversity Heritage Site

News: The Borjuli wetland in Assam, known for harbouring a Oryza Rufipogon variety of wild rice, has been notified as a Biodiversity Heritage Site (BHS).

About Borjuli Wetland



- Location:** The Borjuli wetland is located in **Assam**.
- Area:** It has spread across an **area of 0.41 hectares**.
- Feature:**
 - It is known for harbouring a **disease- and pest-resistant variety of wild rice** known as **Oryza rufipogon**.
 - Recently, it has been designated as a **Biodiversity Heritage Site (BHS)** under the '**In-situ Conservation and Management of Wild Rice (Oryza rufipogon)**' Project.

Figure 6. Source: News on Air

- The recognition is an important step **towards conserving India's rich wild rice diversity and promoting climate-resilient agriculture.**

About *Oryza Rufipogon*



Figure 7. Source: Science Direct

Oryza rufipogon is a **perennial plant and a wild progenitor** of cultivated rice, *Oryza sativa*.

- **Habitat:** It is commonly found in **marshes and other aquatic habitats** across eastern and southern Asia.

- **Features:**

- It is **photosensitive in nature** and **flowers during short days** in November and December.

- Its **seeds have a tendency to shatter** as soon as they mature.

- It is **resistant to pests and diseases** and can tolerate **flooding and saline conditions**, making it a valuable genetic resource for developing climate-resilient crop varieties.

About Biodiversity Heritage Site

- **Biodiversity Heritage Site (BHS)** refers to a **unique and fragile ecosystem** that can include **marine ecosystems, coastal and inland waters, or terrestrial areas.**

- **Criteria:**

- Richness of wild as well as domesticated species or intra-specific categories.

- High endemism.

- Presence of rare and threatened species, keystone species, species of evolutionary significance.

- Wild ancestors of domestic/cultivated species or their varieties.

- Past pre-eminence of biological components represented by fossil beds and having significant cultural, ethical or aesthetic values are important for the maintenance of cultural diversity with or without a long history of human association with them.

- **Notified by:** Under Section-37 of the Biological Diversity Act, 2002, the State Government, in **consultation with local bodies**, may notify areas of **biodiversity importance** as Biodiversity Heritage Sites(BHS).

- **First notified BHS:** India's **first** notified Biodiversity Heritage Site (BHS) is the **Nallur Tamarind Grove in Bengaluru, Karnataka**, which was declared in **2007**.
- **Latest site:** The **Borjuli wetland is located in Assam** has been latest notified as BHS.
- **Total numbers:** India has **55** Biodiversity Heritage Sites (BHS) as of July 3rd, 2026.

7th National Water Awards

News: The Department of Water Resources has launched the 7th National Water Awards on the Rashtriya Puraskar portal, with applications open until 28th August, 2026.

About 7th National Water Awards



Figure 8. Source – MoJS

to adopt a holistic approach to water resource management because surface water and groundwater are important in the water cycle.

- **Prizes:** Each winner receives a **Trophy along with a Citation**.
- **Process:** A **Screening Committee** scrutinises applications,
 - the **Jury Committee** recommends winners, and
 - the **Minister of Jal Shakti** approves the final list.

- The 7th National Water Awards **recognize and encourage outstanding work in water conservation and water resource management across India**.

- Launched By:** The **Department of Water Resources, River Development and Ganga Rejuvenation** under the **Ministry of Jal Shakti** launched the awards.

- First Edition:** The **first** National Water Awards were introduced in **2018**.

- Aim:** The awards **aim to support Jal Samridh Bharat, promote water conservation, and encourage better water usage practices**.

- Objective:** The awards **encourage stakeholders**

- **Conferral:** The **President of India** or the **Vice President of India** confers the awards during the award ceremony.
- **Eligibility for the Awards:** **States, Districts, Urban Local Bodies, Dam Owner Agencies,** and **Industries** that have done good work in water conservation and management are eligible.
- **Portal:** Applications are accepted only through the **Rashtriya Puraskar portal**.

Indian Ocean Dipole (IOD)

News: Delhi received the southwest monsoon on July 2 after a delayed onset, while June rainfall deficit renewed focus on the Indian Ocean Dipole (IOD).

About Indian Ocean Dipole (IOD)

The Indian Ocean Dipole

The IOD phenomenon is the difference in sea-surface temperatures in opposite parts of the Indian Ocean. It can shift moisture away from Australia (positive phase) or towards it (negative phase)

IOD has been known to precondition major wildfires in southeast Australia, where months-long bushfire crisis has been exacerbated by climate change and prolonged drought

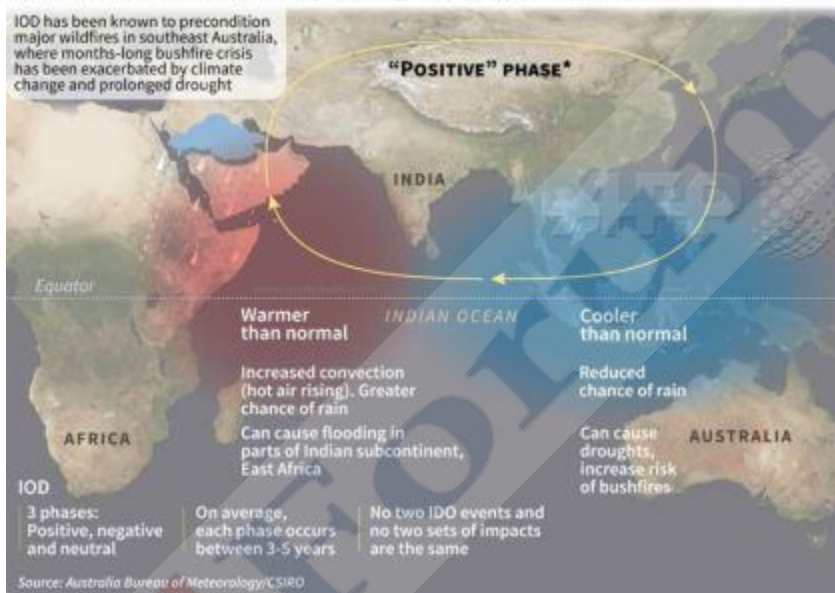


Figure 9. Source – AFP

- **Indian Ocean Dipole (IOD)** is an **atmosphere-ocean coupled phenomenon** characterized by **differences in sea-surface temperatures across the Indian Ocean**.

- **Mechanism:** The IOD develops when a **difference in sea-surface temperatures emerges between the eastern and western Indian Ocean**.

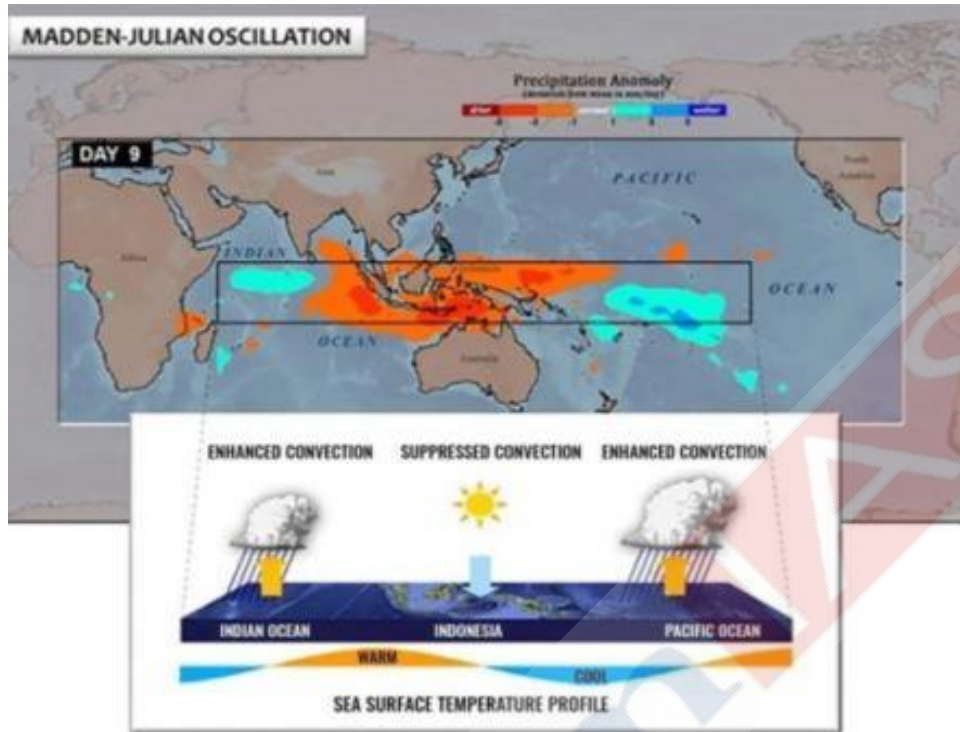
○ This **temperature difference** creates **pressure differences** that **change wind movement**, which **influences moisture, clouds, and rainfall** over surrounding regions.

- **Key Characteristics of IOD:**

- **Temperature Difference:** The IOD is measured by the difference in sea-surface temperatures between the **eastern Indian Ocean and the western Indian Ocean**.

- **Air-Sea Coupling:** Temperature differences change wind patterns, and these winds further change ocean temperatures, creating a continuous interaction that drives the IOD.
- **Development Pattern:** The IOD develops in the equatorial Indian Ocean from April to May and generally peaks during September to November or October.
- **Three Phases:** The IOD occurs in positive, negative, and neutral phases depending on the temperature difference between the eastern and western Indian Ocean.
 - **Positive IOD:** A positive IOD occurs when the western Indian Ocean is warmer than the eastern Indian Ocean.
 - **Negative IOD:** A negative IOD occurs when the eastern Indian Ocean is warmer than the western Indian Ocean.
 - **Neutral IOD:** A neutral IOD occurs when there is no significant sea-surface temperature difference between the eastern and western Indian Ocean.
- **ENSO Link:** El Niño, a climate phenomenon in which the central and eastern Pacific Ocean becomes warmer than usual, often precedes or strengthens a positive IOD.
 - However, the IOD can also develop independently because of local atmospheric variability.
- **Regional Impact:** A positive IOD increases rainfall over East Africa and the Indian subcontinent while reducing rainfall over Indonesia and Australia, whereas a negative IOD produces the opposite pattern.

Madden-Julian Oscillation (MJO)



Source – ResearchGate

- **The Madden-Julian Oscillation (MJO)** is an eastward-moving atmospheric disturbance of clouds, rainfall, winds, and pressure near the equator that circles the globe every 30–60 days.
- **Nature:** It is the primary driver of intra-seasonal variability in tropical weather and directly influences the active and break phases of the Indian monsoon.
- **Rainfall Influence:** The MJO acts as a travelling pulse of rain-bearing clouds and winds, strengthening or suppressing rainfall depending on its location.
- **Geographical Phases:** Its movement is monitored in eight geographical phases, covering the Western Hemisphere and Africa, the Indian Ocean, Indonesia, the eastern Indian Ocean, and the Western and Central Pacific.

Pashujanya Yudh Abhyas (PYA)

News: The Department of Animal Husbandry & Dairying (DAHD), Ministry of Fisheries, Animal Husbandry & Dairying, successfully conducted Pashujanya Yudh Abhyas (PYA).

About Pashujanya Yudh Abhyas (PYA)



Source: Principal Scientific Adviser

- Pashujanya Yudh Abhyas (PYA) is the **third national-level mock drill** under the [National One Health Mission](#) to strengthen India's preparedness for animal health emergencies and zoonotic disease outbreaks.
- **Aim:** It aimed to test and validate the country's preparedness, coordination mechanisms, and emergency response capabilities for managing animal health emergencies arising from zoonotic disease outbreaks.
- **Conducted by:** It has been conducted by the **Department of Animal Husbandry & Dairying (DAHD), Ministry of Fisheries, Animal Husbandry & Dairying.**
- **Duration:** It is a **5-day-long exercise** held at **Khari village, Vidisha District, Madhya Pradesh, from 29th June to 3rd July 2026.**
- **Participants:**
 - It involved the **Department of Animal Husbandry & Dairying (DAHD), ICAR, NCDC, ICMR, the Office of the Principal Scientific Advisor, laboratories under the National BSL-3 Network and the Ministry of Environment, Forest and Climate Change (MoEF&CC).**
 - It also included State and District Animal Husbandry, Health, and Forest Departments, and the administration of Madhya Pradesh.
- **Features:**

- It brought together stakeholders from the **animal health, human health, wildlife, food safety, laboratory and district administration**.
- It was designed to **assess operational readiness, intersectoral coordination and communication, and mechanisms** for managing a zoonotic disease outbreak from first alert to containment.
- The exercise simulated an **Influenza A (H1N1) outbreak in animals** with the potential to spread to humans and wildlife. It **tested the complete outbreak response system**, including **surveillance, early detection, investigation, laboratory testing, risk assessment, containment measures, movement control, and public communication**.
- **Significance:** The exercise provided **valuable insights to inform future strategies for strengthening India's preparedness and response to zoonotic disease outbreaks**.

Polygraph and Narcoanalysis tests

News: Pune Police sought court permission to conduct polygraph tests on Siya Goyal and her co-accused in the Ketan Agarwal murder case.

About Deception Detection Tests (DDTs)



Figure 10. Source – Telangana Today

- **Deception Detection Tests (DDTs)** include **polygraph, narcoanalysis, and brain mapping**.
- These tests are **used to obtain concealed information** related to crime and have important clinical, scientific, ethical, and legal implications.

About Polygraph Test

- A **polygraph test** attempts to **detect deception** by **measuring physiological responses** while a person answers questions.

- **Mechanism:** Instruments such as **cardio-cuffs and sensitive electrodes** measure **physiological responses during questioning**, and numerical values are assigned to determine truth, deception, or uncertainty.
- **Parameters Tracked:** The test records **blood pressure, pulse, respiration, sweat gland activity, and blood flow**.
- **Evaluation:** The scientific community **considers the test unreliable** because it has **not shown 100% accuracy**, and experts say **people can use countermeasures to mislead the results**.

About Narcoanalysis Test

- **Narcoanalysis** attempts to **obtain information by placing a person in a sedated or hypnotic state.**
- **Mechanism:** Drugs such as **sodium pentothal, scopolamine, and sodium amytal** are administered intravenously **to induce a hypnotic state** in which the **subject is expected to reveal information.**
- **Evaluation:** The method has **not been scientifically proven** to be completely reliable and **remains controversial in the medical field.**

Legal Position in India

- **D.K. Basu v. State of West Bengal (1997):** The Supreme Court ruled that **involuntary administration of polygraph and narcoanalysis tests amounts to cruel, inhuman, and degrading treatment under Article 21.**
- **Selvi v. State of Karnataka & Anr. (2010):**
 - **Consent Requirement:** The Supreme Court in Selvi v. State of Karnataka (2010) held that **these tests can be conducted only with voluntary consent.**
 - **Fundamental Rights:** Involuntary tests **violate the right against self-incrimination under Article 20(3)** and **amount to intrusion into mental privacy.**
 - **Admissibility:** **Test results are not confessions**, but any information or material subsequently discovered through a voluntarily **administered test may be admitted under Section 27 of the Indian Evidence Act, 1872 (now Bharatiya Sakshya Adhiniyam).**
 - **Refusal:** Refusal to undergo these tests **cannot be treated as evidence of guilt.**
- **NHRC Guidelines (2000):** The Supreme Court in Selvi case **directed that the National Human Rights Commission's Guidelines for the Administration of Polygraph Test on an Accused (2000)** must be strictly followed while conducting such tests.
 - **NHRC Guidelines:**
 - **Voluntary Consent:** The accused must willingly agree and may refuse the test.
 - **Informed Consent:** Police and the lawyer must explain the purpose, procedure, and legal consequences before consent.
 - **Recorded Consent:** Consent must be recorded before a Judicial Magistrate.
 - **Documentation:** Police must produce proof before the court that the accused voluntarily consented to the test.

- **Clarification:** Statements made during the test are treated as police statements and not as confessions.

About Brain Mapping

- **Brain mapping** is a **deception detection test** that **measures electrical activity in the brain** to **identify concealed information related to a crime**.
 - **Mechanism:** **Electrodes** are placed on the **scalp and connected to a recording system** to **measure the brain's electrical field potentials** while the **subject listens to words or stimuli**.
 - The **recorded brain responses are analyzed** to determine whether the subject recognizes information related to the crime.
 - **Parameters Tracked:** The **test records event-related potentials generated when the brain encounters a familiar stimulus**.
 - The commonly used method in India is the **Brain Electrical Activation Profile (BEAP)**, also known as the **P300 Waves Test**.
 - **Purpose:** The test is **used to detect concealed information related to a crime without requiring the subject to give oral answers**.
 - **Evaluation:** Brain mapping **only assists the investigation by indicating whether the subject has knowledge related to the crime**.
 - It **cannot identify the exact lie or the information** stored in the person's brain, and its results **do not have legal sanctity**.

INS Trikand

News: Indian Naval Ship INS Trikand will participate in the 58th National Day celebrations of Mauritius.

About INS Trikand



Figure 11. Source: NDTV

- INS Trikand is a **stealth frigate** of the Indian Navy.
- It is the last of the **three "Follow-On Talwar Class" frigates**.
- **Built by:** It was **built in the Russian Federation**.
- **Commission year:** It was **commissioned into the Indian Navy in 2013**.
- **Features:**

- **Combat Suite:** It is equipped with a **state-of-the-art combat suite** featuring the **supersonic BRAHMOS missile system**, **Shtil Surface-to-Air missiles**, the **upgraded A190 medium-range gun**, and an **Electro-Optical 30 mm Close-in Weapon System**.
- It also carries **advanced anti-submarine weapons**, including **torpedoes and rockets**, along with a sophisticated **Electronic Warfare system**.
- **Combat Management System:** The weapons and sensors are **integrated through a Combat Management System 'Trebovanie-M'**, which enables the ship to **simultaneously neutralise multiple surface, sub-surface and air threats**.
- **Stealth Feature:** It also **incorporates innovative features to reduce radar, magnetic and acoustic signatures**, which have earned this class of ships the sobriquet of 'Stealth' frigates.
- **Speed:** It is powered by **four gas turbines and is capable of speeds in excess of 30 knots**.
- It can **carry an integrated Kamov 31 helicopter**, which is best suited for **airborne early warning roles**.
- **Other ships of Talwar-class frigates:**
 - INS Talwar
 - INS Trishul
 - [INS Tabar](#)
 - INS Teg
 - INS Tarkash
 - INS Trikand
 - [INS Tushil](#)
 - [INS Tamal](#)
 - INS Triput
 - [INS Tushil](#)

ICMR-MINDS Project

News: ICMR-MINDS received the Gold Award at the National Awards for e-Governance 2026 for its AI-based citizen-centric mental healthcare platform.

About ICMR-MINDS Project



Source – PIB

- **ICMR-MINDS** stands for **ICMR's Multistate Implementation Research Study on Integration of Screening and Management of Mental and Substance Use Disorders with other Non-Communicable Diseases (ICMR-MINDS)**.
- **Initiative of:** It is a flagship **digital mental healthcare initiative** of the Indian Council of Medical Research (**ICMR**).
- **Implemented across:** The initiative is being implemented across **seven states** through **AIIMS Guwahati, Gujarat Institute of Mental Health, AIIMS New Delhi, St. John's Medical College, AIIMS Bhopal, AIIMS Bhubaneswar and PGIMER Chandigarh**.
- **Aim:** The project aims to **integrate the screening and management of mental and substance use disorders with the treatment of other non-communicable diseases**.
- **Key Features :**
 - **AI-enabled Clinical Decision Support System:** It enables trained frontline healthcare workers to **provide standardized screening, assessment, follow-up care and routine management** with evidence-based digital guidance.
 - **Digital Features:** The platform provides **standardized digital screening workflows, role-based clinical guidance, multilingual interfaces, offline functionality, gamified features and real-time** administrative dashboards.

- **Continuity of Care:** The platform supports structured referrals and **two-way back-referral mechanisms** to improve follow-up care and optimise specialist resources.
- **Healthcare Delivery:** The approach improves treatment adherence, **reduces patient dropout** and eases the burden on tertiary healthcare institutions.

About National Awards for e-Governance (NAeG)

- The National Awards for e-Governance (NAeG) are presented every year to recognize and promote excellence in the implementation of e-Governance initiatives.
- **Edition:** The year 2026 marks the 29th edition of the National Awards for e-Governance..
- **Presented by:** It is presented by the Department of Administrative Reforms and Public Grievances (DARPG) under the Ministry of Personnel, Public Grievances and Pensions.
- **Categories:** The awards are presented in seven categories, covering digital transformation, AI innovation, cyber security, district-level initiatives, Gram Panchayat initiatives, project replication and scaling, and data analytics.
- **Prize detail:** Gold Awardees receive a trophy, certificate and ₹10 lakh.
 - Silver Awardees receive a trophy, certificate and ₹5 lakh for implementing projects or programmes or bridging resource gaps in public welfare.
- **Awards in 2026:** A total of 16 awards are being conferred under NAeG 2026, including 10 Gold Awards and 6 Silver Awards.

'Joint Sea-2026' Exercise

News: Chinese and Russian navies are conducting the "Joint Sea-2026" naval exercise near Qingdao in July under their annual military cooperation plan.

About 'Joint Sea-2026' Exercise

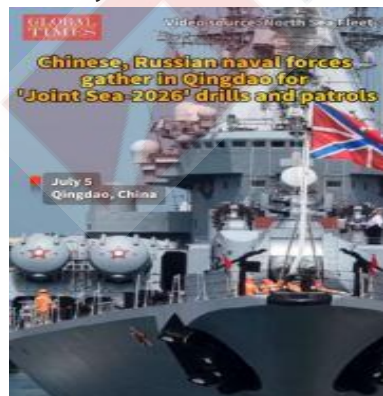


Figure 12. Source – Global Times

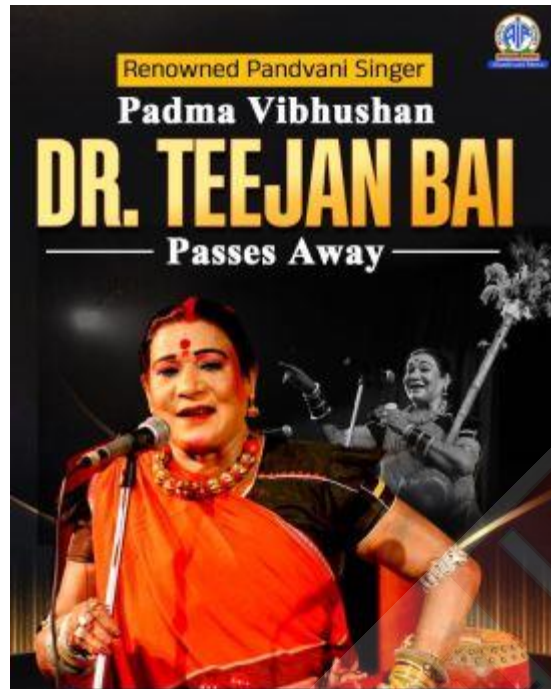
- **Joint Sea-2026** is an annual China-Russia bilateral naval exercise to strengthen cooperation in responding to maritime security challenges.
- **Location:** The exercise is being conducted in the waters and airspace near Qingdao in Shandong Province, East China.
- **Theme (2026):** The exercise is based on the theme "joint response to maritime security threats."

- **Aim:** The exercise aims to **demonstrate both navies' capability and determination to jointly address maritime security challenges, safeguard regional and international peace and stability, and deepen their comprehensive strategic partnership.**
- **Frequency:** The exercise is **conducted on an annual rotating basis between China and Russia.**
- **Key Features:**
 - **Three-Phase Exercise:** The exercise is conducted in **three phases – force assembly, port planning and coordination, and at-sea operations.**
 - **Force Assembly:** The first phase **focuses on assembling the participating forces** from both countries.
 - **Port Planning and Coordination:** This phase includes **courtesy meetings, joint operational planning, professional seminars, ship visits, and friendly interaction activities.**
 - **At-Sea Operations:** This phase **includes joint reconnaissance, air and missile defence, and maritime strike operations.**
 - **Joint Maritime Patrol:** After the exercise, both sides will conduct a **joint maritime patrol in relevant areas of the Pacific Ocean.**
 - **Comprehensive Naval Participation:** Both countries have **deployed major naval assets, submarines, shipborne helicopters, and marine personnel for the exercise.**
- **Historical Background:** The Joint Sea exercise **began as symbolic bilateral drills in 2012 and has gradually developed into an annual operational framework.**

Pandavani

News: Teejan Bai, the renowned Pandavani artist, passed away on July 5, 2026, after taking the Chhattisgarhi folk tradition to global audiences.

About Pandavani



Source – AIR

- **Pandavani** is a **traditional folk-narrative and musical performance art** from **Chhattisgarh** based on the **Mahabharata**.
- **Origin:** Pandavani originated from the **rural oral traditions of Chhattisgarh, Madhya Pradesh, and Odisha** to help common people **understand the moral teachings of the Mahabharata**.
- **Naming:** The word '**Pandavani**' is derived from "**Pandava**" and "**Vani**," which together mean "**the voice or narration of the Pandavas**."
- **Core Theme:** Pandavani presents **episodes from the Mahabharata** through **storytelling, music, acting, and improvisation**.
- **Key Elements of a Performance:**
 - **Narrator (Gayak):** The main performer **sings, narrates, and enacts different characters** through **voice, expressions, and gestures**.
 - **Musical Accompaniment:** Instruments such as the **tambura, tabla, harmonium, manjira, and kartal** provide rhythm and melody during the performance.
 - **Improvisation:** The performer adds **local humour, contemporary references, or social commentary** to connect with the audience.
 - **Language and Expression:** The narration uses the **Chhattisgarhi dialect** with expressive facial expressions, body movements, and hand gestures.

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- **Performance Styles:**
 - **Vedamati Style:** The performer sits and narrates the story in a composed and devotional manner.
 - This style gives **greater importance to storytelling than dramatization.**
 - **Kapalik Style:** The performer stands, moves around, and enacts different characters in a lively manner.
 - This style is **highly theatrical, interactive, and was popularised by Teejan Bai.**
- **Notable Artists:** Teejan Bai, Ritu Verma and Jhaduram Devangan are renowned artists who have contributed significantly to the popularity of Pandavani.

Himalayan Pangolin (*Manis aurita*)

News: Researchers have revalidated and concluded that the Himalayan pangolin (*Manis aurita*) is a distinct extant species, separate from the Chinese pangolin (*Manis pentadactyla*).

About Himalayan Pangolin (*Manis aurita*)



Source: DTE

- It is a **species** of Asian [Pangolin](#).
- **Earlier**, it was considered as a **subspecies** of Chinese pangolin (*Manis pentadactyla*).
- **Scientific name:** Its scientific name is **Manis aurita**.
- **Distribution:** Its distribution is **restricted to the southern Himalayan foothills, with confirmed populations in Nepal, South Tibet, and Northeast India, including the state of Assam.**
 - It experienced a **demographic contraction around the 14th century**, coinciding with the **onset of the Little Ice Age in the Himalayan region.**

- **Features:**

- Compared to the Chinese pangolin, the Himalayan pangolin **has a bigger body and skull, a longer tail and smaller ears.**
- **Size:** It is **larger on average (95.2 cm in size) compared to 71.2 cm** for the Chinese pangolin.

- **Threat:**

- It is facing a threat from the **illegal wildlife trade.**
 - The products from species have **infiltrated regulated traditional medicine markets.**
- It also faces an **internal threat of inbreeding.**

- **Protection status:** It has been called for the same level of protection to be given to the **species under the CITES Appendix I.**

'Viksit UDAN' Scheme

News: Prime Minister Narendra Modi recently launched the next phase of the regional air connectivity scheme, 'Viksit UDAN'.

About 'Viksit UDAN' Scheme

- It is a **revamped UDAN scheme** launched to **accelerate regional aviation and support the vision of Viksit Bharat 2047.**
- **Budget Outlay:** It has a budget outlay of **nearly ₹29,000 crore over the next 10 years.**
- **Major components:**
 - Under the scheme, **the government plans to develop 100 aerodromes** from existing unserved airstrips with an investment of ₹12,159 crore.
 - The plan allocates **₹2,577 crore** for the operation and maintenance of regional airports.
 - An additional **₹3,661 crore** has been earmarked for the construction of **200 modern helipads.**
 - To support the sustainability of regional air services, **₹10,043 crore** has been set aside as **Viability Gap Funding (VGF).**
 - It will **encourage the deployment of indigenous aircraft and helicopters, including HAL Dhruv and Dornier platforms,** in underserved and remote regions.

Underwater Fiber Optic Sensing System (UFOSS)

News: DRDO has invited industry partners to develop and deploy the Underwater Fiber Optic Sensing System (UFOSS) for continuous submarine surveillance.

About Underwater Fiber Optic Sensing System (UFOSS)

- **Underwater Fiber Optic Sensing System (UFOSS):** It is a **fixed network of undersea sensors** that provides **round-the-clock monitoring of underwater submarine activity**.
- **Developed by:** It is **being developed by the Naval Physical and Oceanographic Laboratory (NPOL)**, the **Defence Research and Development Organisation's (DRDO)** premier underwater warfare laboratory.
- **Objective:** The system aims to **strengthen underwater surveillance by continuously detecting submarine activity** and **supporting the Navy's anti-submarine warfare network**.
- **Working Mechanism:**
 - **Seabed Sensor Network:** The system uses **seabed sensor array nodes** connected through **subsea fibre-optic cables to collect underwater data**.
 - **Data Transmission:** The collected **data is transmitted through a beach manhole to a shore station**, where it is **received, monitored, and analysed**.
 - **Continuous Monitoring:** Unlike ships and aircraft that patrol only periodically, the **system continuously monitors underwater activity and guides anti-submarine warfare assets** towards potential contacts.
- **Key Features:**
 - **Robust Underwater Design:** The system uses durable underwater components, including **sensor array nodes, junction boxes, and branching units**, which are designed to withstand high pressure and seawater corrosion.
 - **Specialised Cable Deployment:** The **fibre-optic network will be deployed using Remotely Operated Vehicles (ROVs) and cable burial ploughs**, along with dedicated cable-laying ships, to install and protect the undersea infrastructure.
 - **Long Operational Life:** The system is **designed to operate continuously for 20 years** by using reliable underwater components that can function without routine maintenance.

- **Consortium-Based Development:** The project allows the lead system integrator to **partner with up to five specialised engineering** firms so that expertise in subsea cable manufacturing, marine surveys, and system integration can be brought together.

Perungulam Tank

News: Environmentalists have demanded conservation of Perungulam Tank due to illegal lotus cultivation, highlighting its rich avian biodiversity and ecological significance.

About Perungulam Tank



Source – TH

- **Perungulam Tank** is a **biodiversity-rich wetland** and an **important irrigation waterbody** that supports **rich bird biodiversity**.
- **Location:** It is located in the **Thoothukudi district, Tamil Nadu**.
- **Key Features:**
 - **Large Irrigation Tank:** The tank **spreads across about 850 to 900 acres** and serves as an important **source of irrigation and domestic water** in the region.
 - **Hydrological Significance:** The tank is the last in a chain of irrigation tanks and receives water from the historic **Thamirabarani River** and both **southwest and northeast monsoons**.
 - **Rich Bird Habitat:** The tank supports over 5,000 birds every year and provides an **important feeding and roosting site for resident and migratory birds throughout the year**.
 - **Unique natural landscape:** The tank is **bisected by the Ucham Parambu mound**, which shelters various native trees and thorny bushes.

- **Heritage significance:** The tank has the over 1,000-year-old Sivaite Thiruvazhutheswarar Temple and Vaishnavite Maya Koothar Perumal Temple near its northeast corner.
- **Threats:** Illegal lotus cultivation, high-tension power lines across the tank, and manmade structures have raised concerns for bird conservation and habitat protection.
- **Status:** It is currently being considered by environmentalists and the Tamil Nadu Forest Department for inclusion under the Ramsar Convention or as a Wetland Conservation Reserve.

Specialised Investment Funds (SIFs)

News: The newly introduced Specialised Investment Funds (SIFs) have crossed ₹13,814 crore in assets under management (AUM) after the framework was introduced.

About Specialised Investment Funds (SIFs)



Source – ICICI

- **Specialised Investment Funds (SIFs)** are pooled investment products that provide greater flexibility for managing advanced investment strategies.
- **Introduced by:** It is introduced by Securities and Exchange Board of India (SEBI), through a circular dated February 27, 2025.
- **Legality:** It operate under the SEBI (Mutual Funds) Regulations, 1996.

- **Effective from:** The SIF framework became **effective from April 1, 2025**.
- **Objective:** SIFs were introduced to **bridge the gap between traditional Mutual Funds (MFs) and Portfolio Management Services (PMS)** by providing **greater investment flexibility** with **regulatory safeguards for sophisticated investors**.
- **Eligibility criteria:**
 - **Investor eligibility:** Investors must **invest at least ₹10 lakhs per PAN** across all strategies of a particular **Asset Management Companies (AMC)**, while **accredited investors are exempted** from this requirement.
 - **AMC eligibility:** **Only SEBI-registered Asset Management Companies (AMCs)** can launch **SIFs** through either the sound track record route or the alternate route, subject to the prescribed experience, AUM, and regulatory conditions.
- **Categories of Investment:**
 - **Long-short strategy:** SIFs allow directional long-short equity exposure.
 - **Derivative strategy:** They permit derivative strategy **exposure up to 25% of NAV**.
 - **Multi-asset strategy:** They allow **multi-asset or hybrid allocations** combined with derivative exposure.
- **Key features:**
 - **Transparency:** Every scheme **provides an Investment Strategy Information Document (ISID)**, risk band from 1 to 5, and scenario analysis of expected losses.
 - **Risk controls:** **SIFs limit sector exposure to 25% of NAV** and prescribe **issuer-wise and derivative exposure limits**.
 - **Liquidity:** SIFs can be offered as **open-ended or closed-ended investment products**.
 - **Distribution:** SIFs require distinct branding, and distributors **must possess SEBI-mandated National Institute of Securities Markets (NISM) certification**.

Designated Repository under Biological Diversity Act, 2002

News: The Ministry of Environment, Forest and Climate Change has designated the Natural History Museum (NHM), Mizoram University, Aizawl, as a Designated Repository under Section 39 of the Biological Diversity Act, 2002.

About Designated Repository under Biological Diversity Act, 2002



Source: Natural History Museum (NHM)

- The **Ministry of Environment, Forest and Climate Change** has **designated** the **Natural History Museum (NHM), Mizoram University, Aizawl**, as a Designated Repository.
- **About Designated Repository (DR):** It is a **safe deposit** of **holotypes or isotypes or paratypes of new taxa discovered in India** and **samples of biological resources accessed by foreign citizens or entities** for research or sent/carried abroad by Indian citizens/institutions for research.
- **Designated by:** Under **Section 39 of the Biological Diversity Act, 2002**, the **[National Biodiversity Authority \(NBA\)](#)** is authorized to **designate institutions as repositories** for biological resources, in consultation with the Central Government.
- **Total Designated Repositories:** India has **21 Designated Repositories**.

About Natural History Museum (NHM), Mizoram

- **Establish year:** It was **established in 2022** under the **aegis of Mizoram University**.
- It is uniquely positioned **because of its location within the Indo-Burma Biodiversity Hotspot** and its **specialized taxonomic expertise**.
- **Importance of designation:** The designation advances **National Biodiversity Target 4 of India's National Biodiversity Strategy and Action Plan (2024-2030)** by strengthening ex situ conservation and the conservation of genetic diversity, **in line with Target 4 of the [Kunming-Montreal Global Biodiversity Framework](#)**.

Matcha Tea

News: An Assam tea estate sold India's first commercially-produced matcha tea, marking a significant shift from conventional teas.

About Matcha Tea



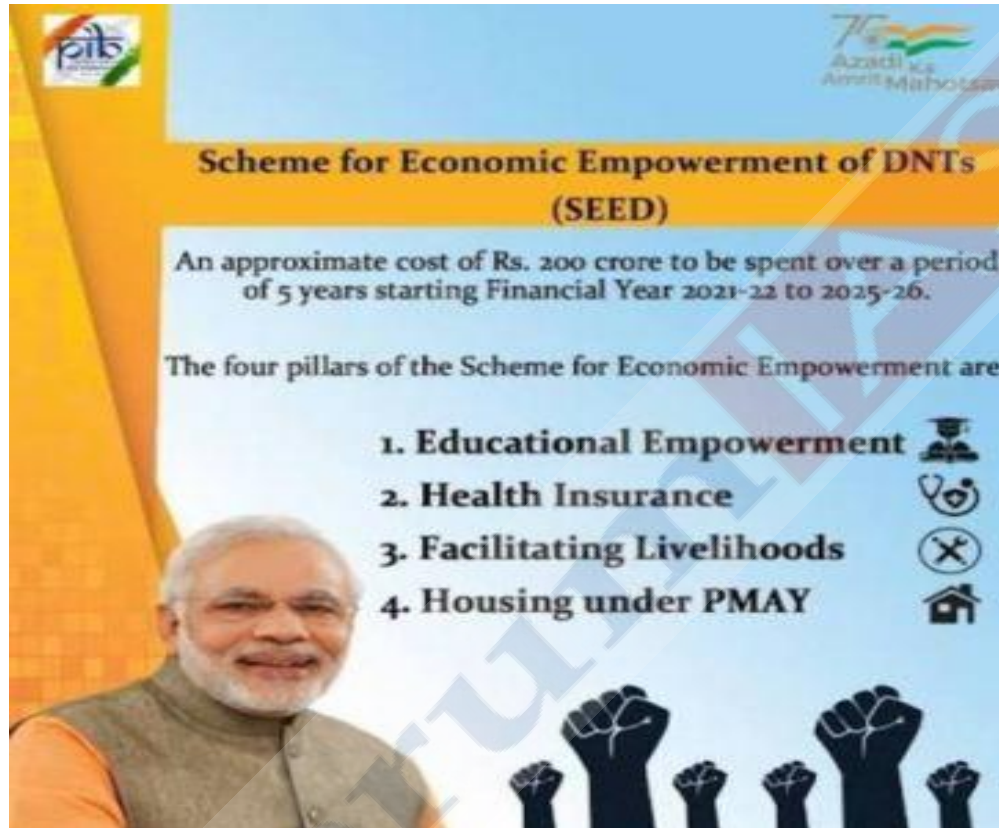
Figure 13. Source: Research Gate

- Matcha is a **bright green powder** made from ground, shade-grown green tea leaves.
- It is an **important part of Japanese culture** and is commonly used during traditional ceremonies.
- **Production:** It is primarily manufactured in **Japan, China, and Vietnam**.
 - In India, it is commercially produced in **Tinsukia district of eastern Assam**.
- **Process of making:**
 - It is made after shading **Camellia sinensis** tea leaves for **three to four weeks** before harvest.
 - The **tea plants** are grown under the **shade of bamboo mats** before harvesting.
 - **Blocking 90% of sunlight** from the leaves **boosts their chlorophyll** and **amino acid levels** and gives them a **distinct colour and flavour**.
 - It is made by **finely grinding the shade-grown tea leaves** into a vibrant green powder.
 - Unlike regular green tea, **where the leaves are steeped and discarded, matcha is whisked into water and consumed entirely**, providing higher levels of antioxidants, amino acids, and natural caffeine
 - It contains **much higher levels of caffeine than other forms of green tea**, generally **settling out at around 19-44mg of caffeine per gram**.
- **Health Benefits:** Matcha is **rich in antioxidants, phytochemicals, and the amino acid L-theanine**, which may help improve concentration and alertness.

Scheme for Economic Empowerment of DNTs (SEED)

News: The Ministry of Social Justice & Empowerment highlighted the SEED Scheme after covering over 1.10 lakh beneficiaries during 2025-26.

About Scheme for Economic Empowerment of DNTs (SEED)



Source – PIB

- **Launched in:** The Scheme for Economic Empowerment of DNTs (SEED) was launched in February 2022.
- **Implemented by:** It is implemented by the Ministry of Social Justice & Empowerment through the Development and Welfare Board for De-notified, Nomadic and Semi-Nomadic Communities (DWBDNC).
- **Partner Agencies:** National Backward Classes Finance and Development Corporation (NBCFDC), National Scheduled Castes Finance and Development Corporation (NSFDC), and Non-Government Organizations are the partner agencies.
- **Aim:** It aims to provide educational support, health insurance, livelihood opportunities and housing assistance for DNT, NT and SNT communities.
- **Core Pillars:**

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- **Educational Empowerment:** It provides **free coaching and financial assistance** to support admission and employment opportunities.
- **Health:** It **distributes Ayushman Cards** and provides **health insurance through PMJAY**.
- **Livelihood:** It promotes **income generation by forming Self Help Groups in DNT clusters**.
- **Land and Housing:** It **facilitates housing support** under Pradhan Mantri Awas Yojana and other government schemes.

About De-Notified, Nomadic and Semi-Nomadic Tribes

- **Historical Background:** During the British rule, many communities were notified as “**born criminals**” under the **Criminal Tribes Act, 1871**, and all **members had to register with local magistrates**.
 - After Independence, **this Act was repealed in 1952**, and these communities became **known as De-Notified Tribes (DNTs)**.
- **Socio-economic Status:** **Nomadic and semi-nomadic communities** are those who **move from one place to another** instead of living permanently in one place.
 - Historically, these **communities had no access to private land or home ownership**.
- **Status in India:** Around **10% of India’s population belongs to DNT communities**.
 - As per the report of the **National Commission for De-notified, Nomadic and Semi-Nomadic Tribes**, **1,235 communities** have been **identified as DNTs across the country**.
- **Institutional Support:** The **National Commission for De-notified, Nomadic and Semi-Nomadic Tribes (Indate Commission)** recommended measures for the development of these communities.
 - Based on its recommendations, the **Government constituted the Development and Welfare Board for De-notified, Nomadic and Semi-Nomadic Communities (DWBDNC)** in **2019** to formulate and implement welfare and development programmes.

Tribex Platform

News: Tribex Platform was launched to digitally transform tribal education and preserve India’s rich traditional heritage.

About Tribex Platform

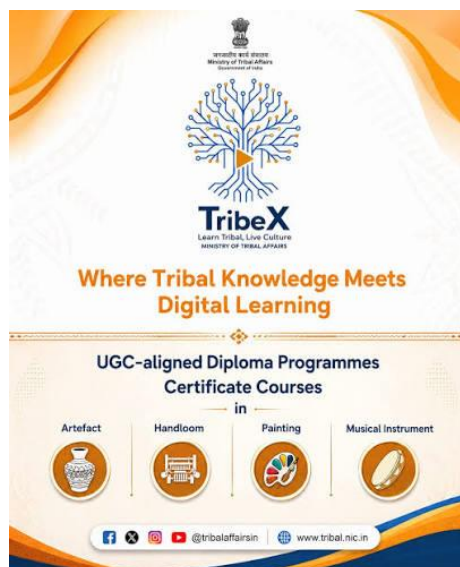


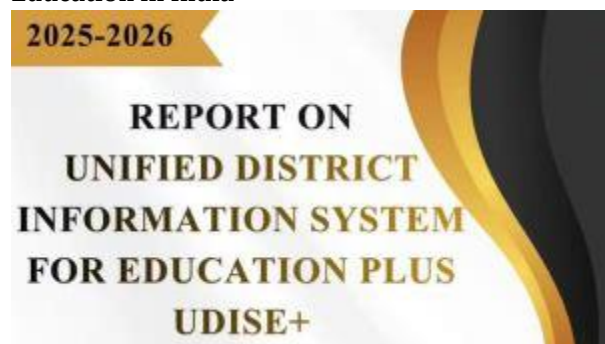
Figure 14. Source: Ministry of Tribal Affairs

- It is a **first-of-its-kind digital learning platform** dedicated to **tribal arts, culture, traditional knowledge and skill development**.
- It is a **one-stop digital platform** for **learning, documentation and preservation of tribal knowledge**.
- **Launched by:** It was launched by **Ministry of Tribal Affairs**.
- **Features:**
 - **Courses offered:** It offers **structured learning opportunities through free certificate courses and UGC-recognized Post Graduate diploma programmes** in tribal languages, art forms, crafts and traditional knowledge.
 - It currently **hosts 20 free certificate courses across a diverse range of tribal art forms**, including paintings, handicrafts, handloom, artefacts and traditional musical instruments.
 - It also integrates a **robust Learning Management System (LMS), and a Repository Management System** providing a **secure and seamless digital ecosystem** for learning, knowledge management and progress tracking.
 - **Digital Repository:** It serves as a **digital repository for documenting, preserving and promoting tribal languages, oral traditions, performing arts, cultural practices and indigenous knowledge systems** for future generations.
 - It also features a **Heritage Archive containing more than 5,000 multimedia resources** including audio recordings, videos and literature documenting tribal festivals, oral traditions and socio-cultural practices.
- **Significance:** It enables **learners, researchers, educators and enthusiasts across the world to learn directly from tribal knowledge experts and master artisans** while gaining authentic insights into India's diverse tribal traditions.

Report on Unified District Information System for Education Plus (UDISE+) 2025-26 on School Education in India

News: The Union Ministry of Education released the Report on Unified District Information System for Education Plus (UDISE+) 2025-26 on school education in India.

About Report on Unified District Information System for Education Plus (UDISE+) 2025-26 on School Education in India



of Education.

- **Key Highlights:**

- **Increase in Teachers:** The number of teachers **increased by 8.3% compared to 2022-23**, improving teacher availability.
- **Improved Pupil-Teacher Ratio (PTR):** The PTR **improved to 10, 12, 17, and 21 at the foundational, preparatory, middle, and secondary levels respectively**, which is better than the NEP recommended ratio of 30:1.
- **Better Student Retention and Lower Dropouts:** Between 2024-25 and 2025-26, dropout rates declined to **1.8%** at the preparatory level and **7.0%** at the secondary level, while retention improved at the middle and secondary stages.
- **Higher Enrolment and Transition:** The secondary Gross Enrolment Ratio (GER) **increased from 68.5% to 71.7%**, and transition rates improved across all major stages of schooling.
- **Fewer Single-Teacher and Zero-Enrolment Schools:** Single-teacher schools declined by around 3%, while zero-enrolment schools reduced by around 29%.
- **Improved Digital and Basic Infrastructure:** Schools with computer access (69.9%), internet connectivity (67.4%), and basic infrastructure such as electricity, drinking water, toilets, handwashing facilities, libraries, and ramps with handrails recorded improvements.
- **Greater Female Representation:** Women formed **54.9% of the teaching workforce**, while girls' enrolment increased to **48.4% in 2025-26**.

About Unified District Information System for Education Plus (UDISE+)

- UDISE+ is an **educational management information system** under the **Department of School Education & Literacy, Ministry of Education**.
- **Central Data Platform:** It enables recognised schools to **record and submit real-time data** on infrastructure, students, and teachers from **pre-primary to higher secondary levels**.
- **Validated Information:** The submitted **data is verified by officials at block, district, state, and national levels** to ensure credible information.
- **Unique School Identification:** Every onboarded school receives a unique **11-digit UDISE code** and login credentials for **real-time data entry and modification**.
- **Integrated Modules:** UDISE+ **manages school profile and facilities, student records** through the **Permanent Education Number**, and individual teacher and non-teaching staff profiles.

Char Kaman and Charminar Complex

News: The Government of Telangana has announced a restoration project of Char Kaman which is historically part of Charminar Complex.

About Char Kaman and Charminar Complex



Figure 15. Source: Telangana Gov

- **Build by:** The Charminar was built **between 1589 and 1591** by **Muhammad Quli Qutb Shah**, the fifth ruler of the Qutb Shahi dynasty.
- It is a **square shaped structure with four pillars, one on each side and intricate carvings**.
- **Architecture:**
 - **Inspired by:** The architectural design of Charminar is **inspired from the Shia “tazias”**.
 - **Material used:** It has been built with **granite and lime mortar**.
 - **Four Pillars:** The four pillars around Charminar represent the four caliphs. These pillars or minars are **48.7 meters high**.
 - These are **four stories, with each floor divided by intricately carved rings** that surround it.
 - On the top floor of **Chaminar** there is a **mosque** which is **believed to be the oldest mosque of Hyderabad city**.

- Attached to these is the **open space which can be used to accommodate more people on occasions like Friday prayers or festivals.**
- **Design:** The Char Kaman feature **distinctive Qutb Shahi architectural motifs**, with pillars crafted to resemble lotus leaves.
- In the year of 1889, **four clocks were also added on all the four sides of the structure.**
- **About Char Kaman:** The **four ornamental gateways** that lead to the Charminar, called the **Char Kaman.**
 - It was **built around 1594.**
 - **Architecture:** The **four arches had different names:** The arches **Machli Kaman, Kali Kaman, Sher-e-Batil Kaman, and Charminar Kaman** mark the four entrances to the historic city surrounding Charminar.
 - **Significance:** The arches **marked the entrances to the city of Hyderabad.** The adjoining outhouses were used as a sitting place for the nobles and officials.

Global Passport Index

News: India slipped one place to 125th in the fifth Global Passport Index, while its composite score reached a five-year high.

About Global Passport Index



Source – Bharat24

- **Global Passport Index** ranks passports **based on international travel, investment opportunities and quality of living**, unlike the **Henley Passport Index**, which **mainly measures visa-free travel access**.
- **Released by:** It is published by **Global Citizen Solutions (GCS)**.
- **Coverage:** It ranks **197 countries**.
- **Data Source:** It draws on quantitative data from various international institutions and multilateral organisations, such as the **World Bank, the World Economic Forum and the Sustainable Development Report**.
- **Criteria:** The Global Passport Index evaluates passports on the basis of three criteria.
 - **Enhanced Mobility:** It carries **50% weight** in the overall ranking.
 - **Investment:** It contributes **25% of the overall score**.
 - **Quality of Living:** It contributes **25% of the overall score** and is assessed through **14 indicators**.
- **Key Highlights:**
 - **Global**
 - **European Dominance:** **Nine European countries** are among the **top 10**.
 - **Top Asian Passport:** **Singapore is the only Asian passport in the top 20**.
 - **India:**
 - **Overall Ranking:** India **ranked 125th among 197 countries**, one place lower than last year, and
 - India is placed **between Namibia (124th) and Azerbaijan (126th)**.
 - **Travel Access:** The Indian passport **provides visa-free access to 26 countries**, while visas are still required for around 88 destinations.
 - **Quality of Living and Investment:** India ranked **118th in the Quality of Living Index** after **improving 11 places** and **ranked 94th in the Investment Index** after **improving three places**.
 - **Position in Asia:** Among Asian countries, **India stands at the 29th position**.

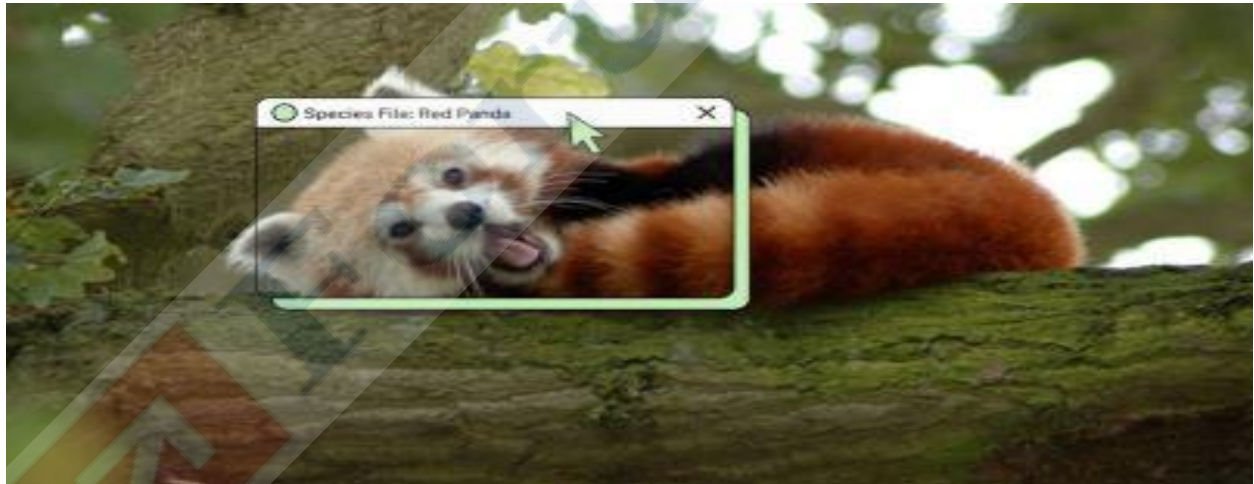
About Henley Passport Index

- **Published By:** It is compiled annually by **Henley & Partners**, a global citizenship and residence advisory firm.
- **Primary Data Source:** It relies on exclusive data from the **International Air Transport Association (IATA)**.
- **Coverage:** It covers **199 passports against 227 travel destinations**.
- **Scoring Criteria:** A passport receives one point if its holders can **enter a destination visa-free, with a visa-on-arrival, or through an electronic travel authority (eTA)** without prior embassy clearance.
- **India's Rank in 2026:** India ranked **80th globally**, providing visa-free or visa-on-arrival access to 55 destinations.

Red Panda (*Ailurus fulgens*)

News: Reports highlighted the red panda's conservation challenges, habitat fragmentation, illegal threats, and the need for cross-border conservation efforts.

About Red Panda (*Ailurus fulgens*)



Source – Mongabay

- The red Panda (*Ailurus fulgens*) is a small, shy, solitary and arboreal carnivorous mammal that mainly feeds on bamboo and is also known as the lesser panda.
- **Species:** There are two species of red pandas – the Himalayan red panda (*Aurilius fulgens fulgens*) and the Chinese red panda (*Aurilius fulgens styani*).
- **State Animal:** The red panda is the State Animal of Sikkim.

- **Habitat:** The red panda inhabits **mountainous mixed deciduous and conifer forests** with old trees and **dense bamboo undergrowth**.
- **Distribution:**
 - **Global Range:** The red panda is found in the mountainous forests of **Bhutan, China, Nepal, northern Myanmar, and India**, with **Himalayan and Chinese** species distributed across these regions.
 - **Indian Range:** In **India**, it is found in **Sikkim, Arunachal Pradesh**, and the Darjeeling and Kalimpong districts of **West Bengal**.
- **Key Features:**
 - **Diet:** It mainly feeds on **bamboo shoots but also eats eggs, insects, small birds, fruits, and small lizards**.
 - **Behaviour:** It is **nocturnal, shy, solitary**, and usually remains within a home range of two to three kilometres.
 - **Appearance:** It has a **ruddy coat, a ringed bushy tail**, and is about the **size of a house cat**.
 - **Ecological Importance:** It is considered an **indicator species** because changes in **its population provide an early warning of environmental changes** and help **assess the health of its forest ecosystem**.
- **Threat**
 - **Habitat loss**
 - **Habitat fragmentation**
 - **Illegal trapping**
 - **Poaching, snaring, and the loss of nesting trees and bamboo**
- **Conservation Status**
 - **IUCN Red List: Endangered.**
 - **CITES: Appendix I**
 - **Wildlife Protection Act, 1972: Schedule I**

World LNG Report 2026

News: India became the fourth largest regasification market in 2025 after surpassing Spain, according to the International Gas Union's World LNG Report 2026.

About World LNG Report 2026



Figure 16. Source – IGU

- **World LNG Report** is an annual report published by the International Gas Union (IGU) that presents global trends, trade, investment, capacity and future outlook of the liquefied natural gas (LNG) sector.

- **Key Findings of 2026 Report**

- **India:**

- **Global Ranking:** India added 52.5 mtpa of regasification capacity across eight terminals and became the fourth largest regasification market in 2025.

- **Terminal Development:** India commissioned the Chhara LNG terminal and expanded the Dabhol LNG terminal, increasing its capacity from 2.9 mtpa to 5 mtpa with year-round operations.

- **Infrastructure Expansion:** India has four

LNG projects under construction, which are expected to add 11.3 mtpa of regasification capacity by 2028.

- **Demand Outlook:** The International Energy Agency projected that India's natural gas consumption will increase by nearly 60% by 2030 due to city gas distribution, industrial demand and power generation.
- **Capacity Utilisation:** India's LNG regasification utilisation declined from 58% in 2024 to about 47% in 2025 because of weaker summer LNG imports and increased infrastructure.
- **Global Finding:**
 - **Record LNG Trade:** Global LNG trade reached a record 437 million tonnes in 2025, increasing by 6.3%, which was the strongest growth since 2022.

- **Top Exporters:** The **United States** remained the **world's largest LNG exporter with 110.7 million tonnes**, followed by **Qatar** (81.5 million tonnes) and **Australia** (80.3 million tonnes).
- **Top Importer:** **China** remained the **world's largest LNG importer** with 69.8 million tonnes.

About International Gas Union (IGU)

- **Establishment:** The International Gas Union (IGU) was **founded in 1931** and is a **non-profit organisation registered in Vevey, Switzerland**, with its **Secretariat located in London, UK**.
- **Role:** The organisation represents over **90% of the global gas market** and works across the **complete gas value chain**, from production to end use.
- **Functions:** IGU **promotes international gas trade, supports technology development**.
 - It **organizes global events** such as the **World Gas Conference, International Gas Research Conference, and World LNG conference series**.
- **Reports published:**
 - 2026 World LNG Report
 - 2026 Wholesale Gas Price Survey
 - Underground Gas Storage
 - Global Gas Report 2025

Guwahati Declaration

News: The BRICS nations adopted the Guwahati Declaration at the BRICS Heads of Anti-Drug Agencies Meeting held in Guwahati under India's 2026 BRICS chairmanship.

About Guwahati Declaration



Source – ANI

- The **Guwahati Declaration** was adopted to **strengthen cooperation against illicit drug trafficking and related transnational organized crime**.
- **Adopted by:** The declaration was **adopted by the BRICS nations**, under **India's 2026 BRICS chairmanship**.
- **Theme:** The meeting was held under the theme **"Building for Resilience, Innovation, Cooperation and Sustainability."**
- **Aim:** The declaration **aims to strengthen cooperation to prevent and combat illicit drug trafficking and related transnational organized crime**.
- **Key Pillars:**
 - **Information Sharing:** The declaration calls for **timely exchange of information, intelligence and best practices** in line with national laws and international obligations.
 - **Technology and Innovation:** The declaration highlights the **use of innovative technologies, digital tools and data-driven approaches** to strengthen law enforcement and regulatory measures against illicit drug trafficking.
 - **Demand Reduction:** The declaration stresses the **need to reduce drug demand, promote healthy lifestyles and protect vulnerable groups, especially children and young people**, through evidence-based and people-centred strategies.
 - **Coordinated International Action:** The declaration reaffirms the **commitment of BRICS nations to strengthen cooperation** to prevent and combat illicit drug trafficking and related transnational organised crime.

About BRICS

- BRICS is an **intergovernmental organization of major emerging economies** that aims to **promote greater economic and geopolitical integration and coordination among member states**.
- **Formation and Expansion:** BRICS began as BRIC countries comprising **Brazil, Russia, India and China**, **South Africa joined in 2010**, **five countries joined in 2024**, and **Indonesia became a member in 2025**.
- **Membership:** BRICS currently consists of **Brazil, Russia, India, China, South Africa, Egypt, Ethiopia, Iran, Saudi Arabia, the United Arab Emirates and Indonesia**.

- **Global Importance:** The grouping brings together **11 emerging economies** that account for around **49.5% of the world's population**, about **40% of global GDP**, and nearly **26% of global trade**.

Tulsi Lake and Vihar Lake

News: Tulsi Lake and Vihar Lake have begun overflowing after heavy rain in Mumbai.

About Tulsi Lake and Vihar Lake



Source: HT

- **Location:** Tulsi Lake and Vihar Lake are located in **Mumbai, Maharashtra**.
 - They are **Mumbai's smallest potable water-supplying lakes**.
- **About Tulsi Lake:**
 - It is Mumbai's **smallest man-made reservoir**.
 - It is **located within the Sanjay Gandhi National Park**.

- Its water was **formally channeled into the city** by the **then-Governor, Sir Richard Temple Bart**, on **March 15, 1879**.
- It is **one of the seven lakes supplying drinking water to Mumbai**.
- **Catchment area:** It has a catchment area of about **6.76 sq. km** and a water spread area of around **1.35 sq. km** when full.
- **Storage capacity:** It has a live storage capacity of **8,046 million litres** and supplies an average of **18 million litres** of water every day.
- **About Vihar Lake:**
 - It is **the second-smallest lake reservoir**.
 - It is the **oldest man-made reservoir** in the city which **was commissioned in 1860**.
 - **Storage capacity:** It has a storage capacity of **27,698 million litres**, supplying 90 million litres of water to the city every day.
- Water overflowing from **Tulsi Lake naturally flows into Vihar Lake**, helping maintain the interconnected water management system that serves the city.
- The overflow from **both Tulsi and Vihar lakes drains directly into the [Mithi River](#)**, which cuts through the centre of Mumbai before emptying into the Arabian Sea.

Partnership on Cyber, Critical Technologies and Supply Chains (PACTS)

News: India and Australia recently launched the Australia-India Partnership on Cyber, Critical Technologies and Supply Chains (PACTS).

About Partnership on Cyber, Critical Technologies and Supply Chains (PACTS)



Figure 17. Source – IANS

- The **Partnership for Cyber, Critical Technologies, Supply Chains (PACTS)** is a framework between **Australia and India** aimed at **strengthening cooperation in cyber security, critical technologies, resilient supply chains and defence research**.

- It replaces the **2020 Framework Arrangement on Cyber and Cyber Enabled Critical Technology Cooperation**.
- **Focus:** It seeks to **deepen collaboration in areas** considered critical to national security, economic growth and regional stability.
- **Bilateral Oversight:** The partnership will be jointly **overseen by India's Deputy National Security Advisor and Australia's Deputy Secretary of the International and Security Group in the Department of the Prime Minister and Cabinet**.
 - An **annual Senior Officials' Meeting** will **review progress**, identify emerging cyber and technology risks, and determine new collaborative projects under each pillar.
- **Pillars of partnership:** The partnership is structured around **five pillars of cooperation**:

pillars of Partnership	Description
Supply Chain Resilience and Diversification	● Under this, India and Australia will work to develop secure and trusted technology supply chains. ● They will establish a bilateral mechanism for trusted vendor frameworks, strengthen cooperation on undersea cable security through the Quad Partnership for Cable Connectivity and Resilience. ● They will also collaborate on semiconductor supply chain research, and promote secure critical minerals supply chains through coordinated investment and regulatory cooperation.
Critical Technologies	● The second pillar focuses on Critical Technologies with both countries committing to deepen collaboration in artificial intelligence, space technologies, telecommunications, biotechnology and advanced materials. ● The two sides will support joint research, innovation and investment initiatives while working together on international standards for trustworthy and secure AI.

	● They will also explore new opportunities for collaboration in the rapidly expanding space sector.
Cybersecurity	● Under the Cybersecurity pillar, India and Australia will enhance cooperation to combat cybercrime, strengthen cyber resilience and protect critical infrastructure. ● It includes plans to establish a streamlined bilateral cyber cooperation mechanism, expand dialogue on cybersecurity and data governance, facilitate joint workshops between government agencies and industry stakeholders, and establish a cyber technology skill incubator to promote workforce development.
Digital Resilience	● It aims to expand cooperation in digital public infrastructure (DPI) across the Indo-Pacific. ● The two countries will work together to promote scalable and trusted digital solutions in sectors such as renewable energy, healthcare, education, connectivity, skills development and social protection. ● The initiative also seeks to support partner countries in adopting India's Digital Public Infrastructure model through capacity-building programmes and pilot projects.
Defence Research Collaboration	● Under this, India and Australia will deepen defence science and technology cooperation through joint research, institutional partnerships and innovation. ● The two countries will strengthen ties between Australia's Defence Science and Technology Group and India's Defence Research and Development Organisation (DRDO). ● They will also promote collaboration between defence start-ups, and undertake joint research in maritime surveillance, advanced materials and other defence technologies.

Chandraloi River and Mugger Crocodile

News: The NGT is examining crocodile deaths and the presence of banned Aldrin pesticide in Rajasthan's Chandraloi River, while accountability remains unclear.

About Chandraloi River



Figure 18. Source – Wikipedia

- The **Chandraloi River** is a **small perennial river** flowing through **Kota district of Rajasthan**.
- **Origin:** The river originates **from a stream near Alania village in Kota district**.
- **Course:** The river **flows for about 15 kilometres through urban and rural areas**, carries urban runoff and industrial waste, and **finally merges with the Chambal River**.

- **Ecological Significance:** The river **supports a significant population of Mugger crocodiles (Crocodylus palustris)**, serves as **their breeding ground**, and also **supports diverse fish species**.

About Mugger Crocodile

- The mugger crocodile is a **medium-sized crocodile** and a **member of the genus Crocodylus**.
- **Distribution:** It occurs across the Indian subcontinent and surrounding countries, including **Sri Lanka, Iran, Pakistan, and Nepal**.
- **Habitat:** It lives in **freshwater habitats including rivers, lakes, and marshes**.
- **Key Features :**
 - **Appearance:** It has the **broadest snout** among living crocodiles.
 - It also has a **powerful tail, webbed feet, and acute visual, hearing, and smelling senses**.
 - **Breeding:** It is a **hole-nesting species**, and **egg-laying takes place during the annual dry season**.
 - **Diet:** It mainly **eats fish, frogs, crustaceans, and insects**.
- **Threat :** It faces **habitat destruction and illegal hunting for its skin** and the alternative medicine market.
- **Status:** It is listed as **Vulnerable by the IUCN**, included in **CITES Appendix I**, and **protected under Schedule I of the Wildlife Protection Act, 1972**, which provides the highest level of legal protection.

Aldrin Pesticide

News: The NGT is examining mugger crocodile deaths in Kota's Chandralok River after banned Aldrin was detected and accountability remained unresolved.

About Aldrin Pesticide



Figure 19. Source – India Mart

- Aldrin is a **highly toxic, synthetic organochlorine insecticide** that belongs to the **cyclodiene group of chemicals**.
- **Key Features**
 - **Toxicity:** Aldrin can kill birds, fish, humans, and many insect pests including termites, grasshoppers, and corn rootworm.
 - **Exposure:** Humans are mostly **exposed through dairy products and animal meats**.
 - Studies in India indicate an average daily intake of 19 micrograms of aldrin and dieldrin per person.
 - **Persistence:** It is **extremely toxic**, difficult to metabolize, and non-biodegradable, allowing it to persist in the environment and contribute to bioaccumulation and biomagnification.

- **Legal Status:**

- **The Stockholm Convention (2001)** lists Aldrin under **Annex A (Elimination)** as one of the original “**Dirty Dozen**” hazardous chemicals.
- **In India**, its **manufacture, import, and use are completely banned**, and Persistent Organic Pollutants are **regulated under the Regulation of Persistent Organic Pollutants Rules, 2018**, notified under the **Environment (Protection) Act, 1986**.

Key Highlights of PM's Visit to Australia (2026)

News: Prime Minister Narendra Modi visited Australia from 8–10 July 2026 for the Third Australia–India Annual Summit in Melbourne.

About Key Highlights of PM's Visit to Australia (2026)



Figure 20. Source – DD News

● **Prime Minister Narendra Modi visited Australia** from 8–10 July 2026 at the invitation of Prime Minister Anthony Albanese **for the Third Australia-India Annual Summit in Melbourne.**

● **Key Outcomes of PM's Visit to Australia**

○ **Defence Cooperation:**

○ **Strategic Framework:** India and Australia announced the **Joint Declaration on Defence and Security Cooperation**, making defence cooperation a stronger pillar of the partnership.

○ **Institutional Cooperation:** Both countries established an **Annual Defence Ministers' Dialogue** and expanded defence exercises under the **Mutual Logistics Support Arrangement**.

○ **Defence Industry and Innovation:** The leaders promoted defence industry collaboration, proposed an **MoU on Defence Articles and Defence**

Services, and agreed to explore a bilateral innovation framework connecting governments, industry, academia and research institutions.

○ **Military Capacity Building:** Both countries strengthened professional military education, joint research, young officers' exchanges and planned the placement of an Indian military instructor at the Australian Defence College.

○ **Maritime Security Cooperation:**

○ **Maritime Roadmap:** Both countries adopted the **India-Australia Maritime Security Collaboration Roadmap** for a peaceful and secure Indo-Pacific.

○ **Operational Cooperation:** They agreed to **cooperate in information sharing, capability development, capacity building** and operational coordination.

○ **Coast Guard Cooperation:** They welcomed the **MoU between the Maritime Border Command and the Indian Coast Guard**.

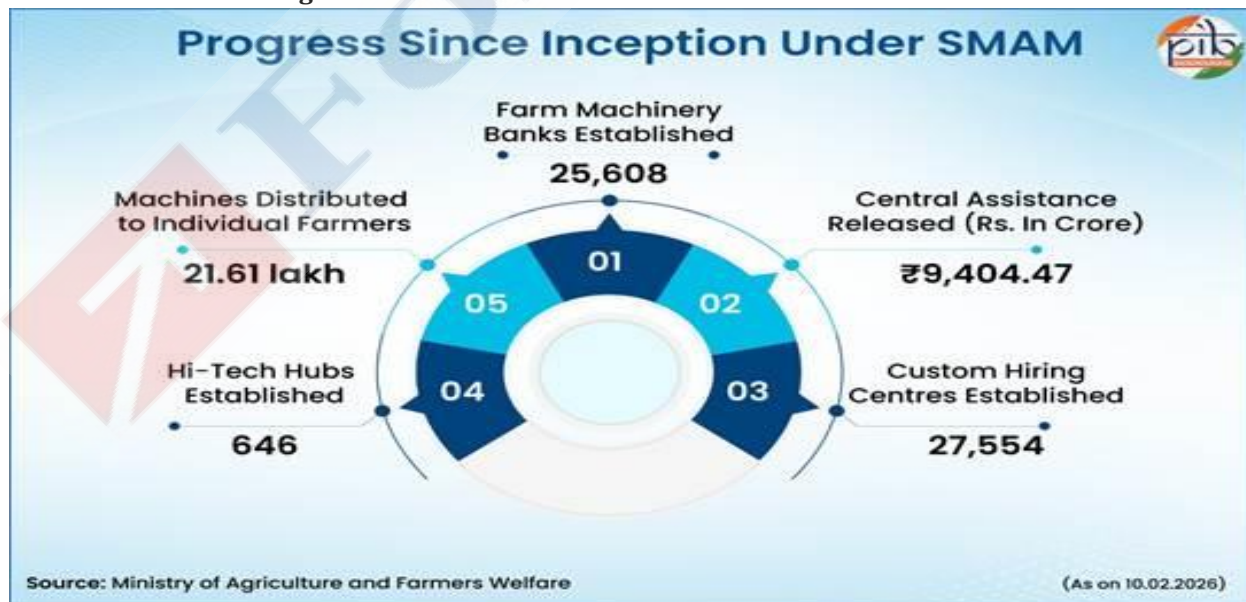
- **Economic and Trade Cooperation:**
 - **Trade and Market Access:** The leaders welcomed growing trade under **Economic Cooperation and Trade Agreement (ECTA)** and reaffirmed their commitment to conclude a balanced **Comprehensive Economic Cooperation Agreement (CECA)**.
 - **Industrial Cooperation:** They highlighted **complementarities between Make in India and Future Made in Australia**.
- **Critical Minerals and Supply Chains:**
 - **Critical Minerals:** Both countries promoted investment, research, processing and long-term supply arrangements for critical minerals.
 - **Supply Chain Resilience:** They committed to developing secure and resilient supply chains, particularly for energy and critical minerals.
- **Climate and Technology Cooperation:**
 - **Climate Cooperation:** They reaffirmed cooperation under the Paris Agreement and recognised progress under the India–Australia Renewable Energy Partnership.
 - **Technology Partnership:** They launched PACTS covering **cyber security, critical technologies, supply chains and digital resilience**.
 - **Innovation Partnership:** They welcomed the **Australia–Canada–India Technology and Innovation (ACITI)** Partnership MoU.
- **Space and Nuclear Cooperation:**
 - **Space Collaboration:** Australia reaffirmed **support for India's Gaganyaan Mission** and stronger cooperation between ISRO and the Australian Space Agency.
 - **Nuclear Cooperation:** Both countries finalised the **Administrative Arrangement for long-term Australian uranium exports to India** for peaceful purposes under IAEA safeguards.
- **Education, Skills and Cultural Cooperation:**
 - **Higher Education:** Both countries **expanded Australian university campuses in India**.
 - **Skill Development:** They supported a **National Centre of Excellence for Skilling in Mining in Odisha**.

- **Sports Cooperation:** They adopted the **India–Australia Sports Collaboration Roadmap**.
- **People-to-People and Culture:** They increased **Maitri grants**, strengthened **parliamentary exchanges** and advanced the repatriation of cultural artefacts and ancestral remains.
- **Regional and Global Cooperation:**
 - **Regional Institutions:** They strengthened **cooperation through the Quad, IORA, IPOI, ASEAN and the Australia–India–Indonesia trilateral mechanism**.
 - **Counter-Terrorism:** They expanded cooperation on **information sharing, counter-radicalisation and combating terrorism**.
 - **Multilateral Reforms:** Australia reiterated **support for India's permanent membership of a reformed UNSC**, and both countries reaffirmed support for each other's future non-permanent UNSC candidatures.

Sub-Mission on Agricultural Mechanization

News: The Sub-Mission on Agricultural Mechanization (SMAM) has significantly advanced inclusive farm mechanization, enhanced agricultural productivity, and promoted the adoption of modern technologies across India.

About Sub-Mission on Agricultural Mechanization



Source: PIB

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- The **Sub-Mission on Agricultural Mechanization (SMAM)** was launched to promote farm mechanization in India.
- **Scheme type:** It is a **Centrally Sponsored Scheme** under the [Rashtriya Krishi Vikas Yojana \(RKVY\)](#).
- **Duration:** It was launched in **2014–15**.
- **Nodal Ministry:** The nodal ministry for the scheme is **Ministry of Agriculture & Farmers Welfare**.
- **Aim:** It aims to “**reach the unreached**” by extending the benefits of mechanization to underserved sections.
- **Beneficiary targeted:** It includes **small and marginal farmers, including women, Scheduled Castes (SC), Scheduled Tribes (ST), Farmer-Producer Organizations (FPOs), Self-Help Groups (SHGs), and rural entrepreneurs**.
- **Funding pattern:**
 - For most states, **the funding pattern is 60:40, while for North-Eastern and Himalayan states, it is 90:10.**
 - In the case of Union Territories, **assistance is provided as 100 percent Central funding.**
- **Focus:** It is designed to **promote inclusive and efficient farm mechanization** by improving access to modern agricultural equipment, reducing drudgery, and enhancing farm productivity.
 - **Promotion of Agricultural Mechanization:** Supports training, testing, demonstrations, and post-harvest mechanization to improve farm productivity, processing, storage, value addition, and crop residue management.
 - **Financial Assistance for Agricultural Machinery:** Provides subsidies through **DBT—40% for general farmers and 50% for SC/ST, small and marginal farmers, and beneficiaries in North-Eastern states.**
 - Small and marginal farmers also receive **₹2,000 per hectare** for mechanized services, including **drones, through CHCs, SHGs, and FPOs.**
 - **Farm Machinery Banks (FMBs) and Custom Hiring Centres (CHCs):** Supports SHGs, FPOs, and local institutions with **80–90% assistance** for FMBs (up to ₹30 lakh) and **40% assistance** for CHCs (up to ₹250 lakh) to improve access to farm machinery.
 - **Hi-Tech Equipment Hubs:** Establishes centres with advanced, high-capacity machinery for crop-specific operations and improved access to modern equipment.

- **Mechanization in the North Eastern Region:** Provides region-specific support, including **up to 100% subsidy** for small machinery and **95% assistance** for Farm Machinery Banks.
- **Features:**
 - The scheme promotes the establishment of **Custom Hiring Centres (CHCs)**. These are units comprising **a set of farm machinery, implements, and equipment meant for hiring by farmers**.
 - It also supports the **development of hubs for hi-tech and high-value agricultural equipment**, and the distribution of farm machinery.
 - It also undertakes **awareness generation through demonstrations and capacity-building initiatives**.
 - Its crucial focus is **on regions with low farm power availability and on addressing structural constraints** such as small landholdings and high capital costs through affordable rental services via CHCs.
 - It also supports **the performance testing and certification of agricultural machinery**.
 - **Targeted Information, Education, and Communication (IEC) activities** are undertaken to enhance adoption among stakeholders.
- **Scheme coverage:** The number of beneficiaries for individual farm machinery ownership **increased from 2.07 lakh in 2020–21 to 2.32 lakh in 2024–25**.
- **Impact:** Under SMAM, from 2014–15 to 2025–26, central assistance of ₹9,404.47 crore has supported the **distribution of 21.61 lakh machines to individual farmers**.
 - Additionally, it supported the establishment of **27,554 Custom Hiring Centers, 646 Hi-tech Hubs, and 25,608 Farm Machinery Banks**.

Behali Wildlife Sanctuary

News: Serious allegations of illegal encroachment, extensive tree felling, and attacks on forest personnel, including incidents of gunfire, have emerged from Behali Wildlife Sanctuary.

About Behali Wildlife Sanctuary



Source: Mongabay

- **Location:** Behali Wildlife Sanctuary is located at the **foothills of the Eastern Himalaya**, in **Sonitpur district of Assam**.
- **Boundaries:**
 - It lies between the two famous protected areas, **the Nameri National Park on its west and [Kaziranga National Park on its south](#)**.
 - The northern boundary is shared by the **Papum Reserve Forest of Arunachal Pradesh** and the southern boundary has **many tea plantations and human habitation areas**.
- **Designated year:** It was **declared a reserve forest in 1917** and was notified a **Wild Life Sanctuary in 2022**.
- **Area:** The total area of the wildlife sanctuary is **157.25 sq. km**.
- **River associated:** The sanctuary is **bounded by the Singlajan River to the east**, which connects it to the Singlajan Reserve Forest, and **by the Borgang River to the west**.
 - **Note:** Both rivers are **tributary of Brahmaputra River**.
- **Vegetation:** It has **semi-evergreen and tropical wet forests**.
- **Flora:** Almost **308 native plant species** are found in the area. The dominant tree species include **Hodgson's magnolia, Ceylon ironwood and elephant apple**.
- **Fauna:**

- It is an important area for mammals like **Indian Elephant**, **Bengal tiger**, **Slow Loris**, **Capped Langur**, **Malayan Giant Squirrel**, **white-winged duck**, **hog deer**, and **Chinese pangolin**.
- It also provides habitat for critically endangered species, including the **black softshell turtle** and **red-necked vulture**.
- This area is also **recognised as an Important Bird Area in 1994** and a **Key Biodiversity Area in 2004**.

Mojari Craft

News: The Centre has granted a Geographical Indication (GI) tag to Jodhpur's nearly 200-year-old Mojari craft, giving it official recognition and better global branding.

About Mojari Craft



Source – IE

- **Mojari is a traditional handcrafted leather footwear of Jodhpur** that has now received a **Geographical Indication (GI) tag**.
- **Origins:**
 - **Traditional Community:** The Mojari craft is closely associated with the **Jingar community**, which traditionally made saddles, leather sheaths, and other leather goods for armies.
 - **Shift to Shoemaking:** Around **250 years ago**, the community gradually shifted from **saddle making to shoemaking**, and Mojari gradually became their main occupation.

- **Historical Identity:** Once patronised by the royals, Mojari gradually evolved into a distinctive craft that gave Jodhpur a unique cultural identity.
- **Key Features:**
 - **Handcrafted Footwear:** The Jodhpuri Mojari is entirely handmade using leather from camel, goat, cow, and buffalo.
 - **Material Used:** Buffalo leather is used for the durable outer sole, while suede leather is used for the upper part.
 - The embroidery uses a special thread from Surat that combines the softness of silk with the strength of nylon.
 - **Traditional Craftsmanship:** Men carry out leather cutting, punching, and stitching.
 - women create intricate embroidery by drawing designs from memory before stitching.
 - **Distinctive Design:** Mojari is made in two halves with a densely embroidered upper part.
 - Traditionally, both shoes have identical designs and can be worn on either foot.
 - **Customisation:** Artisans also prepare customized Mojaris for fashion designers and the wedding market, including designs embroidered with gold or silver threads.
 - **Comfort:** Jodhpuri Mojari is known for its comfort in Rajasthan's hot climate because its design is suitable for local conditions.

World Intangible Investment Report 2026

News: The World Intangible Investment Report 2026 highlighted that India recorded the fastest growth in intangible investment among the world's 15 largest economies.

About World Intangible Investment Report 2026



Source – WIPO

- **The World Intangible Investment Report** presents **annual and quarterly statistics on intangible investment** across 29 economies and **highlights global trends in knowledge-based investments**.
- **Published by:** The report is **published every year** by the **World Intellectual Property Organization (WIPO)** and **Luiss Business School (LBS)**.
- **2026 Edition:** The 2026 report is the **third edition** of the World Intangible Investment Highlights.
- **Tangible Investment:** Tangible investment means spending on physical assets such as factories, machinery and buildings.
- **Intangible Investment:** Intangible investment means spending on non-physical assets such as research and development, software, databases, organisational know-how, brands, design and intellectual property.
- **Key Findings:**
 - **Global:**
 - **Growth Trend:** Intangible investment has **grown more than three times faster than tangible investment since 2008** and exceeded USD 10 trillion in 2025.
 - **Global Leaders:** The **United States, Japan and Germany** lead in the absolute size of intangible investment, while Sweden, the United States and France lead in investment intensity.
 - **Asset Pattern:** Globally, **organisational capital and research and development** remain the **leading categories** of intangible investment.
 - **India's Performance:**
 - **Fastest Growth:** India **recorded the fastest growth in intangible investment among the world's 15 largest economies**, reaching USD 78.2 billion in 2023 with 7.9% growth.
 - **Major Components:** **Software and databases accounted for 45% of India's intangible investment**, followed by organisational capital, research and development, design and brands.
 - **Brand Growth:** India emerged among the **fastest-growing economies in brand investment**, recording a compound annual growth rate of 7.2% during 2013–23.

About World Intellectual Property Organization (WIPO)

- **World Intellectual Property Organization (WIPO)** is a specialized agency of the United Nations that promotes and protects intellectual property across the world.
- **Origin:** The origins of WIPO go back to the **Paris Convention for the Protection of Industrial Property (1883)** and the **Berne Convention for the Protection of Literary and Artistic Works (1886)**.
 - These conventions provided for the establishment of an International Bureau.
- **Formation:** The two **International Bureaus** were united in **1893** and were later replaced by the **World Intellectual Property Organization (WIPO)** in 1970 under the WIPO Convention.
- **Headquarters:** WIPO is headquartered in Geneva, Switzerland.
- **Membership:** WIPO has **193 member states**, and India became a member in 1975.
- **Functions:** WIPO develops international intellectual property rules, provides global intellectual property services, resolves cross-border disputes, and supports international intellectual property cooperation.

About Global Liveability Index 2026

News: The Global Liveability Index 2026 was recently released, ranking cities worldwide on different urban liveability and quality of life indicators.

About Global Liveability Index 2026

Top ten positions: EIU's Global Liveability Index 2026

Index score out of 100 (100=high), ranking out of 173 cities (7=high)

City	Country	Rank	Overall	Stability	Healthcare	Culture & environment	Education	Infrastructure
Copenhagen	 Denmark	1	98	100	99	99	100	100
Vienna	 Austria	2	97	99	100	94	100	100
Melbourne	 Australia	3	97	99	100	96	100	96
Sydney	 Australia	4	97	99	100	94	100	96
Zurich	 Switzerland	5	96	99	100	94	100	96
Geneva	 Switzerland	6	96	99	100	92	100	96
Osaka	 Japan	7	96	100	100	87	100	96
Adelaide	 Australia	8	96	99	100	91	100	96
Vancouver	 Canada	9	96	99	96	97	100	93
Tokyo	 Japan	10	96	100	100	88	100	93

Source: EIU

Source – EIU

- The **Global Liveability Index** evaluates **living conditions across cities** and serves as a **global benchmark for urban liveability, resilience, and quality of life**.
- **Published by:** It is published by **Economist Intelligence Unit (EIU)**.
- **Coverage:** The index assessed **173 cities** using more than **30 qualitative and quantitative indicators**.
- **Score:** The index uses a **1–100 scale**.
- **Parameters:** The index measured –
 - Stability (25%)
 - Healthcare (20%)
 - Culture & Environment (25%)
 - Education (10%)
 - Infrastructure (20%)
- **Key Findings**
 - **Global Trend:**
 - **Top Three Cities:** **Copenhagen** remained the **world's most liveable city**, followed by **Vienna and Melbourne**.
 - **Bottom Cities:** **Damascus** remained the **least liveable city**, while **Tripoli and Dhaka** were also among the lowest-ranked cities.
 - **Global Trend:** The average **global score remained 76.1**, as healthcare and education gains were offset by declining stability from geopolitical tensions, conflicts, and civil unrest.
 - **India Performance:**
 - **Ranking:** **New Delhi** ranked **120th**, followed by **Mumbai (121st)**, **Chennai (123rd)**, and **Bengaluru (127th)**.
 - **Top 100:** All four Indian cities remained outside the global top 100.
 - **Performance:** **New Delhi and Mumbai** showed **no change from the previous year**.

Economist Intelligence Unit (EIU)

- **Economist Intelligence Unit (EIU):** It is the **research and analysis division** of the **British media company The Economist Group**, which provides global business intelligence, forecasting, research, and advisory services.
- **Coverage:** The EIU's Country Analysis service covers **198 geographies**, using a **network of more than 750 specialists** to examine **political, policy, and economic trends with in-depth analysis**.
- **Major Reports:** The EIU publishes flagship reports such as the **Global Liveability Index** and the **Democracy Index**.

Key Highlights of PM's Visit to New Zealand

News: India and New Zealand announced the India–New Zealand Strategic Partnership and adopted the Roadmap to 2030 during the Prime Minister's visit.

About Key Highlights of PM's Visit to New Zealand (2026)



Source – Sarkaritel

- **Strategic Partnership:** On 11 July 2026, the Prime Ministers of India and New Zealand met in Auckland and **announced the India–New Zealand Strategic Partnership**.
- **Key Outcomes of PM's Visit to New Zealand:**
 - **Political and Diplomatic Engagement:**
 - **High-Level Political Dialogue:** India and New Zealand agreed to hold **regular meetings between their Prime Ministers, Cabinet Ministers, and Foreign Ministers**.

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- **Institutional Coordination:** Both countries decided to strengthen **interactions between ministries and government departments.**
 - They also agreed to continue annual senior-level meetings to guide the implementation of the Strategic Partnership and the Roadmap to 2030.
- **Defence and Security Cooperation:**
 - **Defence Cooperation:** Both countries agreed to **continue military exercises, unit visits, personnel exchanges, defence staff college exchanges, and high-level defence dialogue.**
 - They also agreed to **implement the 2025 Memorandum of Understanding on Defence Cooperation.**
 - **Maritime Security:** Both sides agreed to **implement the Maritime Cooperation Arrangement, Hydrography and Nautical Cartography Arrangement, and Mutual Logistics Support Arrangement.**
 - They also agreed to conduct **bilateral naval exercises, cooperate under the Indo-Pacific Oceans Initiative**, and establish an **annual Maritime Security Dialogue.**
 - **Counter-Terrorism and Cyber Security:** Both sides agreed to operationalize the **Joint Working Group on Counter-Terrorism, continue the Cyber Dialogue**, strengthen law enforcement cooperation, and improve infrastructure resilience.
- **Trade and Economic Cooperation:**
 - **Trade and Market Access:** Both countries **set a target to double bilateral trade to NZ\$7 billion (₹35,000 crore) by 2030.**
 - They also agreed to work towards the **early implementation of the India-New Zealand Free Trade Agreement.**
 - **Trade Facilitation:** Both sides agreed to **operationalize the 2025 Authorised Economic Operators Mutual Recognition Arrangement under the 2024 Customs Cooperation Arrangement** to simplify customs procedures and facilitate trusted trade.

- **Primary Industries:** India and New Zealand agreed to **implement cooperation in horticulture, forestry, animal husbandry, and dairying** through research, technical cooperation, and policy dialogue.
- **Tourism Connectivity:** Both countries agreed to **promote two-way tourism and encourage direct non-stop flights** under the **updated Air Services Agreement**.
- **People, Culture and Sport:**
 - **People-to-People Links:** Both countries agreed to **strengthen diaspora engagement and encourage cooperation between local governments**.
 - **Sports and Traditional Knowledge:** Both sides agreed to **continue sports cooperation**, implement the **Joint Action Plan on Sport**, and support **expert-level exchanges on traditional medicine**.
 - **Maritime and Cultural Cooperation:** India and New Zealand agreed to strengthen cooperation on **seafarer competency recognition, maritime heritage, and cultural exchanges**.
- **Education, Research, Science and Technology, and Disaster Management:**
 - **Education Partnerships:** Both countries agreed to **implement the 2025 Education Cooperation Arrangement** and expand partnerships between educational institutions.
 - **Research and Innovation:** Both sides agreed to **build partnerships in agriculture, climate, digital transformation, research, science, technology, and emerging technologies**.
 - **Climate and Disaster Management:** India and New Zealand agreed to strengthen cooperation through the **International Solar Alliance, the Global Biofuels Alliance**, and cooperation between their disaster management agencies.
- **Regional and Multilateral Cooperation:**
 - **Indo-Pacific Cooperation:** Both countries agreed to **coordinate in ASEAN-led and other regional forums**, strengthen cooperation under the **Indo-Pacific Oceans Initiative**, and **support peaceful dispute resolution** in accordance with international law, particularly UNCLOS.

- **United Nations Cooperation:** Both sides agreed to **strengthen cooperation at the United Nations, support UN reforms including India's candidature** for permanent membership of a reformed Security Council, and exchange support for multilateral candidatures where possible.

Wild Water Buffalo

News: The Governing Body of National CAMPA approved four major wildlife and forestry conservation projects focusing on River Dolphins, Snow Leopards, Indian Rhinoceros, and Wild Water Buffalo to boost species population monitoring and habitat protection across India.

About Wild Water Buffalo



Figure 21. Source: iNaturalist

- **About:** It is a **large bovine** native to the **Indian subcontinent and Southeast Asia**.
 - It is also called **Asian buffalo, Asiatic buffalo and wild buffalo**.
- **Scientific name:** Its scientific name is **Bubalus arnee**.
- **Habitat:** It inhabits **wet grasslands, swamps, flood plains and densely vegetated river valleys**.
- **Distribution:** The wild water buffalo occurs in **India, Nepal, Bhutan, Thailand, and Cambodia, with an unconfirmed population in Myanmar**.
 - It has been extirpated in **Bangladesh, Laos, Vietnam and Sri Lanka**.
 - In India, it is largely restricted to in and around **Kaziranga, Manas and Dibru-Saikhowa National Parks, Laokhowa Wildlife Sanctuary and Bura Chapori Wildlife Sanctuary** and in a few scattered pockets in **Assam**, and in and around **D'Ering Memorial Wildlife Sanctuary in Arunachal Pradesh**.
 - A small population survives in **Balphakram National Park in Meghalaya, and in Chhattisgarh in [Indravati National Park](#) and [Udanti Wildlife Sanctuary](#)**.
- **Characteristics:**
 - It has an **ash-gray to black skin**.

- The **moderately long, coarse and sparse hair** is directed forward from **the haunches to the long and narrow head**.
- There is a **tuft on the forehead**, and the **ears are comparatively small**.
- **Size:** Its head-to-body-length is **240 to 300 cm (94 to 118 in)**.
- **Both sexes carry horns** that are heavy at the base and **widely spreading up to 2 m (6 ft 7 in) along the outer edges**, exceeding in size the horns of any other living bovid.
- The tip of the **tail is bushy and the hooves are large and splayed**.
- **Weight:** It weighs from **600 to 1,200 kg**.
 - It is among the **heaviest living wild bovid species**, and is slightly smaller than gaur.
- **Diet:** It prefers **grazing on grasses and sedges**, but also **eats herbs, fruits, bark, and foliage**. Additionally, **it feeds on crops like rice, sugarcane, and jute**, often causing significant damage.
- **Behaviour:** It is both **diurnal and nocturnal**.
- **Threat:** The wild water buffalo's decline is driven by:
 - **Habitat loss**
 - **Colonial-era sport hunting, and**
 - **Livestock pressures** like disease, competition, and interbreeding
- **Conservation status:**
 - **IUCN: Endangered**
 - **CITES: Appendix III**

Phu Quoc Island

News: At least 15 Indian tourists were killed and 17 others were injured after a speedboat capsized near Vietnam's Phu Quoc Island.

About Phu Quoc Island



Figure 22. Source – Strait Times

- **Phu Quoc Island** is **Vietnam's largest island**, located in the **Gulf of Thailand** and known for its **white-sand beaches** and **nature-based tourism**.

- It is also known as **Pearl Island**,

- **Strategic Islands**: The island lies **closer to Cambodia than mainland Vietnam**, making it one of **Vietnam's most geographically strategic**

islands.

- **Shape**: The island has a **teardrop shape** and is also described as **roughly triangular**.
- **Size**: The main **island covers 567 sq. km.**, extends about **49 km** in length, and **forms part of an archipelago of 22 islands**.
- **Topography**:
 - A mountainous **ridge called "99 Peaks"** runs across the island.
 - The island is known for its **white-sand beaches**.
- **Highest Point**: The **Mount Chua** is the island's highest point (**630 m**).
- **Biodiversity**: A large part of the **island is protected under Phu Quoc National Park**, which is recognized as a **UNESCO Biosphere Reserve**.

International Physics Olympiad 2026

News: India's young physicists have brought immense pride to the nation by delivering an extraordinary performance at the 56th International Physics Olympiad (IPhO) 2026.

About International Physics Olympiad 2026



Source: PIB

- It is an **annual competition** that brings together **some of the brightest high school students from around the world**.
- **Selection process:** Participants are **tested through theoretical and experimental examinations** that assess their understanding of physics, analytical thinking, and problem-solving skills.
- **About the International Physics Olympiad 2026:**
 - This is the **56th International Physics Olympiad (IPhO) 2026**.
 - **Held at:** It was held in **Bucaramanga, Colombia**.
 - **Participants:** It saw participation from **381 students representing 87 countries**.
- **India's participation and winners:**
 - This was **India's 27th participation** in the International Physics Olympiad.
 - **Coordinating agency from India:** The Indian team was selected and trained under the **National Olympiad Programme** conducted by **Homi Bhabha Centre for Science Education (HBCSE)**, a National Centre of the Tata Institute of Fundamental Research (TIFR) under the Department of Atomic Energy (DAE).
 - The **centre selects talented pre-university students** through **several stages and provides them with intensive training before international competitions**.
 - **Nodal Department from India:** The **Department of Atomic Energy (DAE)** is the nodal department.
 - **Winners:** **5 Indian students** have won **gold medals** at the International Physics Olympiad 2026. The Indian gold medal winners are:

- Kansisk Jain from Pune,
 - Riddhesh Anant Bendale from Indore,
 - Rishit Garg from Delhi,
 - Shresth Suraiya from Mumbai, and
 - Svait Joshi from Ahmedabad.
- With this, India secured first place, jointly with Russia, China, Kazakhstan, South Korea, and Taiwan, in one of the world's leading competitions for school students.

About National Olympiad programme



- National Olympiad programme identifies, trains and prepares some of India's brightest young minds to compete at international science Olympiads.
- Nodal centre: The Homi Bhabha Centre for Science Education is the nodal centre of the country for this programme.
- Nodal Department: The Department of Atomic Energy (DAE) is the nodal department.
- The National Olympiad in basic sciences and mathematics aims at promoting excellence in science

and mathematics among pre-university students.

Amnesty Scheme, 2026 (of EPFO)

News: Amnesty Scheme, 2026 (of EPFO) has been launched by EPFO, giving employers operating exempted Provident Fund (PF) trusts a one-time opportunity to regularise their legal status.

About Amnesty Scheme, 2026 (of EPFO)

- **Launched by:** It has been launched by the Employees' Provident Fund Organisation (EPFO), under the Ministry of Labour & Employment.
- **Application of the scheme:** It is meant for establishments that have been running a Provident Fund Trust recognised under the Income Tax Act, 1961, but do not have a formal exemption notification issued by either the Central Government or the State Government.

- The scheme **helps employers bridge a regulatory gap between their income tax recognition and EPF exemption status** without facing prolonged legal proceedings.
- **Validity of Scheme:** It was **notified on 29 June 2026** and **is valid for a period of six months** from the date of notification.
- **Eligible Establishments**
 - **Category-I:** These include establishments seeking retrospective regularisation of their PF trust while either:
 - already complying as an un-exempted establishment, or
 - Planning to continue future compliance as an un-exempted establishment.
 - **Category-II:** These are establishments seeking retrospective regularisation and intending to continue operating as exempted establishments under the [Code on Social Security, 2020](#).
- **Key Benefits and Reliefs Provided:** It offers several relief measures for eligible employers.
 - **Retrospective regularisation:** Eligible PF trusts can obtain exemption status from the date the trust was established up to the notified cut-off date.
 - **Relaxation of eligibility conditions:** Certain requirements under the Code on Social Security, 2020 have been waived, including:
 - **minimum employee strength**
 - **corpus size rules**
 - **requirement of three years of prior compliance**
 - **Relief from legal proceedings:** Pending assessments relating to provident fund dues, damages and interest will be withdrawn and treated as closed, provided employees have received contributions and interest equal to or higher than the statutory EPF rates.
 - Also, **past finalised orders covered under the scheme will be treated as void ab initio**, effectively nullifying earlier proceedings.

Medog Dam and Paizhen Fault

News: Chinese geologists have warned that the under-construction Medog Hydropower Project is being built above the active Paizhen Fault, raising structural safety concerns.

About Medog Dam



Figure 23. Source – TH

- **Medog Hydropower Project** is a planned **60,000-MW run-of-the-river hydroelectric project** on the **Yarlung Tsangpo (Brahmaputra) River**.

- **Location:** It is located in **Medog County, Tibet**, near the **Great Bend of the Yarlung Tsangpo River** and **about 50 km from**

China's border with Arunachal Pradesh.

- **Key Features**

- **Scale:** It is expected to become the **world's largest hydropower project**.
- **Capacity:** It has a planned generation **capacity of 60,000 MW** and is expected to produce **around 300 billion Kwh of electricity annually**.
- **Timeline:** China **approved the project in December 2024**, construction **began in July 2025**, and commercial operations are targeted for **2033**.

About Paizhen Fault



Figure 24. Source – ZEE News

- The **Paizhen Fault** is an **active geological fault** located **beneath the Medog dam site** in the **reservoir area on the Yarlung Tsangpo (Brahmaputra) River**.

- **Faults** are **fractures in earth's crust** where **rocks on either side of the crack have slid past each other**.

- **Tectonic Origin:** It was created by the **ongoing collision between the Indian and Eurasian tectonic plates**.

- **Active Since:** It has remained **highly active since the Pleistocene epoch, (Ice Age)** and geological evidence shows that it **continued to remain active into the Holocene epoch**, with movement recorded as recently as **9,500 years ago**.

- A magnitude 6.9 earthquake struck the Milin area of Tibet in 2017 near the northern end of the fault, confirming its continuing seismic activity.
- **Concerns:** It may weaken the foundation-bearing capacity of the area and increase the risk of earthquakes, landslides, slope collapses, and structural damage to the Medog Hydropower Project.

Parrot Bornavirus 4 (PaBV-4)

News: Scientists have identified and genetically characterised Parrot Bornavirus 4 (PaBV-4) in India for the first time, raising concerns for captive parrots and conservation.

About Parrot Bornavirus 4 (PaBV-4)



Source – Moneycontrol

- Parrot Bornavirus 4 (PaBV-4) is an enveloped single-stranded RNA virus belonging to the genus **Orthobornavirus** in the family **Bornaviridae**.
- **Target Species:** It infects parrots and other psittacine birds such as macaws, cockatoos, parakeets, conures, cockatiels, budgerigars, and lovebirds.
- **Discovery by:** It was identified and genetically characterised in India by a team from Assam Veterinary and Fishery University.
- **Distribution:**
 - **Global:** It has been documented in the U.S., Canada, Israel, Japan, South Korea, and Europe.
 - **India:** It has been identified in captive birds from Assam, Karnataka, and West Bengal.

- **Pathogenesis:** It causes a **persistent non-cytolytic infection** in which **immune-driven inflammation** damages the **digestive and nervous systems**, leading to **enlargement of the proventriculus, poor digestion, and central nervous system inflammation**.
- **Transmission:**
 - **Direct Spread:** It spreads through **infected birds, contaminated food, water, saliva, feces, droppings, and feather dust**.
 - **Silent Spread:** Healthy-looking infected birds can shed the virus, and **infected parents can also pass it to eggs**.
- **Impacts**
 - **Bird Health:** It causes **Proventricular Dilatation Disease (PDD)**, resulting in **weight loss despite normal appetite, regurgitation, undigested seeds in droppings, neurological signs, poor digestion, and eventual death**.
 - **Conservation:** Its high prevalence in global aviculture and spread through the commercial bird trade **threaten captive breeding programmes and endangered parrot species**.
- **Diagnosis:** **RT-PCR (Reverse Transcription Polymerase Chain Reaction)** detects the virus from **cloacal swabs** in live birds and from **brain and proventriculus tissues** in dead birds.
- **Treatment:** There is currently **no specific antiviral treatment or vaccine**, and management focuses on **supportive care, reducing inflammation, and maintaining nutrition**.

Thamirabarani River

News: The Madras High Court stated that no one has the right to pollute the Thamirabarani River by dumping ritual waste during ceremonies.

About Thamirabarani River



Source – ResearchGate

- **Thamirabarani River** is a rare **perennial river** of southern India that **flows entirely within Tamil Nadu**.
- **Other Names:** The river is also known as the **Tamraparni River** and **Porunai River**, and its **name** refers to the **copper-like colour** of its waters.
- **Origin:** The river originates **from the Agastyarkoodam Peak in the Pothigai Hills of the Western Ghats**.
- **Course:** The river flows for nearly **128 km**, initially moving **northward** and **later turning eastward** through **Tirunelveli and Thoothukudi (Tuticorin)** districts before **draining into the Gulf of Mannar**.
- **Nature:** It is a **rare perennial river** that is **fed by both the southwest and northeast monsoons**.
- **Tributaries:** Its major tributaries include **the Servalar, Manimuthar, Gadananathi, Pachaiyar, Chittar, Ramanathi, and Koraiyar rivers**.
- **Major Waterfalls:** The river forms **Banatheertham Falls, Agasthiyar Falls, and Kalyana Theertham waterfalls**.

- **Major Dams:** Important dams on the river include **Papanasam, Karaiyar, Manimuthar, Servalar, and Gadanathi** dams.
- **Biodiversity Hotspot:**
 - **Rich Fish Diversity:** The river is one of the richest rivers in the world for fish and is dominated by native snakehead fish species.
 - **Otter Habitat:** It is inhabited by all three otter species found in India—the Eurasian otter, the smooth-coated otter, and the Asian small-clawed otter.

Operation Vajra and Mephedrone (MD)

News: The Central Bureau of Narcotics (CBN) dismantled an interstate Mephedrone manufacturing laboratory in Pune.

About Operation Vajra



Figure 25. Source – PIB

- **Operation Vajra** is an operation against an interstate synthetic drug trafficking syndicate led by the Central Bureau of Narcotics (CBN).
- **Led by:** The operation was carried out by the Preventive Branch of the Central Bureau of Narcotics (CBN), Madhya Pradesh.
- **Legal Framework:** The arrests, seizures, and possession of machinery, equipment, and chemicals were carried out under the Narcotic Drugs and Psychotropic Substances Act, 1985.
- **Aim:** The operation aims to dismantle organised drug trafficking networks and support the national vision of a Drug-Free India (Nasha Mukh Bharat).
- **Interstate Footprint:** The investigation and coordinated operations were conducted between 1st–10th July 2026 across Madhya Pradesh, Maharashtra, and Rajasthan, leading to the dismantling of a sophisticated laboratory in Pune.

About Mephedrone (MD)

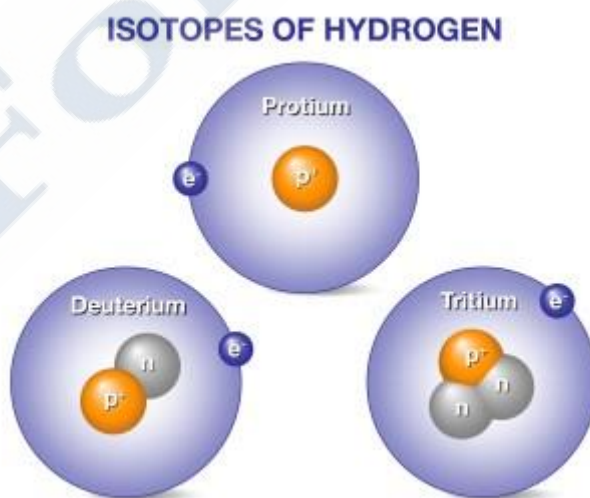
- **Mephedrone (4-methylmethcathinone or 4-MMC)** is a synthetic stimulant belonging to the amphetamine and cathinone chemical classes.
- **Street Names:** It is popularly known as “Meow Meow”, “MD”, “M-CAT”, “Drone”, or “White Magic”.

- **Effects:** It acts as a **central nervous system stimulant**, causing temporary **euphoria, alertness, and severe physiological dependency**.
- **Health Hazards:** It has been linked to **adverse physical and mental health effects**.
 - Short-term use may cause **anxiety, paranoia, nausea, and insomnia**, while prolonged use may lead to **cardiovascular problems, hallucinations, aggressive behaviour, addiction, and long-term psychological harm**.
- **Environmental Concern:** Mephedrone acts as a **xenobiotic and an environmental contaminant**, raising concerns about its presence in the environment.
- **Regulatory Status in India:** It is **strictly banned and classified as a psychotropic substance** under the **Narcotic Drugs and Psychotropic Substances Act, 1985**.
- **Dual-Use Precursors:** The **raw materials used to manufacture MD are often regular industrial chemicals**, making it **extremely difficult to track their diversion** from legitimate pharmaceutical industries into illegal cartels.

Tritium

News: A new study published in Environmental Science & Technology reports a breakthrough in removing tritium from contaminated water using a metal-organic framework (MOF).

About Tritium



Source: Department of Energy

- It is a **radioactive isotope of hydrogen**.
- **Properties:**

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- **Atomic mass:** It has an atomic mass of 3.014 and is considered an important and versatile radioisotope.
- **Components:** It consists of one proton and two neutrons. It is unstable.
- **Half-life:** The physical half-life of tritium is 12.33 years, meaning that it takes just over 12 years for tritium to decay to half of its original amount.
- When it **bonds with oxygen, it forms tritiated water, or HTO.**
- It decays over time, and **while decaying, it emits beta radiation.** As tritium decays, it **changes to helium.**
- **Production:** It is produced **naturally from interactions of cosmic rays with gases in the upper atmosphere,** and is also a **by-product of nuclear reactors.**
- **Uses:** It is combined with phosphor **to produce self-luminous lighting used in exit signs, emergency lighting, and airport runway markers.**
 - It is also **used as a radioactive tracer in biomedical research** to study and diagnose diseases such as heart disease, cancer and AIDS.
 - In the future, **it is expected to play a key role in generating electricity** through nuclear fusion reactors.

About the Recent Findings

- A new study **found a promising way to remove tritium more efficiently.**
 - Researchers from China developed a new material called a **metal-organic framework (MOF)**, a highly porous material often described as a microscopic sponge.
 - They **coated a stainless-steel mesh with this MOF, called NH₂-MIL-101(Cr).**
- The new material works in two ways:
 - It provides a **much larger surface area for separating water.**
 - It **captures tritium atoms and replaces them with normal hydrogen atoms.**
- **Result:** In laboratory tests, this method performed **134 times better** than the best existing industrial material and **about one million times better** than standard commercial packing materials used in distillation towers.
- **Applicability:** The researchers believe **this technology could make it much easier and cheaper to remove tritium from contaminated water,** helping reduce radioactive releases into the environment and improving the safety of nuclear waste management.

Reusable Rocket

News: Japan's JAXA tested a prototype reusable rocket, while China successfully achieved its first reusable rocket booster landing.

About Reusable Rocket



Source – Space News

- **Reusable launch vehicle (RLV)** is a **space launch system designed to recover and reuse** some or all of its component stages.
- **Goal:** RLVs aim to **transform space launches** from a **disposable model into a transportation model**, thereby **reducing the cost** of access to space.
- **Scientific Basis:** Rocket motion follows the **Tsiolkovsky rocket equation**, under which **carrying more fuel increases rocket weight and demands even more fuel**.
- **Working Principle:** After completing its mission, **the reusable stage separates, returns to Earth in a controlled manner**, and is recovered instead of being discarded.
- **Recovery Types:**
 - **Vertical Take-off, Vertical Landing (VTVL):** The booster uses **retro-propulsion (firing its engines downward)** and grid fins to **stabilize itself before landing vertically on a pad or barge**.
 - Examples: **SpaceX's Falcon 9 (United States)** and **Blue Origin's New Shepard (United States)** follows this recovery approach.

- **Horizontal Landing (Winged Body):** The reusable vehicle glides through the atmosphere and lands on a conventional runway like an aircraft.
 - **Example: ISRO's Pushpak (RLV-TD) (India)** follows this recovery approach.
- **Refurbishment:** The recovered stage is **inspected, repaired, and tested before being reused** for future missions.

Reusable Launch Vehicles in India

- **ISRO** started developing **reusable launch vehicle (RLV) technology in 2010** for a **two-stage-to-orbit (TSTO) launch vehicle**.
- **First Trial:** In **2016**, the **Reusable Launch Vehicle–Technology Demonstrator (RLV-TD)** **completed its first trial** by touching down at a predetermined landing site in the Bay of Bengal.
- **Vehicle Design:** The RLV uses a two-stage configuration in which the **first stage separates after fuel exhaustion**, while the **second stage continues the mission**.
- **Recovery Concept:** The **first stage re-enters the atmosphere, lands autonomously at a predetermined location, and is prepared for reuse after maintenance**.
- **Technology Demonstrator:** The **RLV-TD helps ISRO test key technologies required for developing a fully reusable launch vehicle**, including hypersonic flight, autonomous landing, and powered cruise flight.
- **Future Plan:** ISRO plans to **build a fully operational reusable launch vehicle by using the technologies demonstrated through the RLV-TD**.

Digital Threat Report 2025-26

News: The Ministry of Electronics and Information Technology (MeitY) released the second edition of the Digital Threat Report 2025–26 for the Banking, Financial Services and Insurance (BFSI) and payments ecosystem.

About Digital Threat Report 2025-26

2025-26 Threat Realization Matrix: Predictions vs Reality

Scale of Damage	Systemic	Cryptographic / Quantum Risk			Deepfake / Synthetic Identity
	Severe	Adversarial AI / Model Evasion	Supply Chain / Third-Party	Social Engineering / BLC	
				Credential Theft/Session Hijack	
			Ransomware (Multi-Extortion)	Mobile / UI/PI Fraud	
				Cloud Misconfiguration Exploit	
				AI-Driven Attacks	
	Material	Application Race Conditions	API / Business Logic Abuse	Phishing (Traditional)	
			Adversarial LLMs	IDOR / Broken Object	
			LLM Prompt Hacking	Insider Threat	
	Localized		Hardware / Sensor Side Channel		Insecure Coding / SDLC Gaps
		Latent	Developing	Accelerating	Immediate
Realization Speed					

Source: Digital Threat Report 2025-26

- The **Digital Threat Report 2025-26** provides a **comprehensive assessment of the cybersecurity landscape in the Banking, Financial Services and Insurance (BFSI) sector**.
 - It identifies **sector-wide security gaps** and offers a **forward-looking analysis of emerging cyber risks**, equipping financial institutions with insights to prepare for current and future cyber threats.
 - It draws on **extensive digital forensics and incident response (DFIR) research, analysis aligned with CERT-In and CSIRT-Fin observations**, and research into adversarial AI.
- **Aim:** This initiative **aims to support India's Banking, Financial Services, and Insurance (BFSI) sector in strengthening their defences** and building long-term cyber **resilience** with the rapid digitization of financial services.
- **2025-26 Edition:** This is the **second edition** of the **Digital Threat Report**.
 - The **first edition** of this report was released in **2025**.
- **Released by:** It has been released by the **Ministry of Electronics and Information Technology (MeitY)**, along with the [Indian Computer Emergency Response Team \(CERT-In\)](#), the Computer Security Incident Response Team in Finance (CSIRT-Fin) and SISA.
- **Findings of the report:**

- **Attackers are increasingly targeting trust in systems** rather than just stealing data. They are **exploiting biometric onboarding, partner apps, AI decision-making and real-time payments**, creating new risks for the banking, financial services and insurance (BFSI) sector.
 - Financial attacks are shifting **from direct system compromise to manipulating trust** across biometric onboarding, partner applications, AI systems, APIs, programmable finance and third-party ecosystems.
- **Six of the seven cyber threat predictions from the [previous edition of the report](#)** have already come true, showing that cyber threats are evolving faster than traditional security systems can keep up.
 - **Deepfake attacks have become more advanced**, using real-time executive video deepfakes, malicious large language models (LLMs) and constantly changing attack techniques.
 - **Social engineering and Business Email Compromise (BEC) attacks have increased**, while **credential theft and session hijacking remain the main ways** attackers gain access to systems.
 - **Cyberattacks are now generated and launched at machine speed** rather than being manually created. **Phishing emails have also become highly personalised and are often difficult to distinguish from legitimate communications**, making the BFSI sector the most targeted industry.
- **Recommendations**
 - There is a need to make **active liveness detection a standard part of digital onboarding** and **strengthen security with continuous session monitoring** using behavioural biometrics, device posture checks and token binding for high-privilege sessions.
 - **Expand identity governance beyond employees** to include service accounts, machine identities and AI agents, while **enabling cross-database identity verification for high-assurance account openings** where legally allowed.
 - There is a **need to adopt continuous security assurance, ecosystem-wide trust and a resilience-focused approach** to cybersecurity.

Ravidassias

News: Thousands of Ravidassias gathered in Punjab's Phagwara to renew their demand for a separate "Ravidassia religion" category in the Census.

About Ravidassias



Figure 26. Source – WikiBharat

- **Ravidassias are a Dalit community** that follows the spiritual teachings, egalitarian philosophy, and mystic poetry of **Guru Ravidas**.
- **Distribution:** The bulk of the community, comprising nearly 12 lakh people, lives in the Doaba region of Punjab, including Jalandhar, Hoshiarpur, Kapurthala, and Nawanshahr.
- **Key Features of Ravidassias:**

- **Sacred Scripture:** The community follows Amritbani, which contains 200 hymns of Guru Ravidas.
- **Begampura Concept:** Guru Ravidas introduced the idea of Begampura, which described an equal society free from sorrow, fear, and discrimination.
- **Pilgrimage Centre:** Seer Goverdhanpur in Varanasi, the birthplace of Guru Ravidas, is the major pilgrimage centre for devotees.

About Guru Ravidas

- **Guru Ravidas was born in Varanasi in a cobbler's family** and became a leading mystic poet-saint of the Bhakti Movement.
- **Beliefs:** He believed in one God and spread his message through unbiased religious poems.
- **Social Reform:** He dedicated his life to abolishing the caste system.
- **Contribution:** His devotional songs greatly influenced the Bhakti Movement, and around 41 of his poems were included in the Guru Granth Sahib.
- **Vision:** He introduced the concept of Begampura, which represented an egalitarian society free from sorrow, fear, and discrimination.

CapaCITIES Project

News: The event “Scaling Urban Climate Resilience: The CapaCITIES Legacy and Way Forward” celebrated a decade of the CapaCITIES programme in New Delhi.

About CapaCITIES Project



Source – CapaCITIES India

- **Capacity Building Project on Low Carbon and Climate Resilient City Development in India (CapaCITIES)** is a programme that strengthens the capacity of Indian cities to **promote low-carbon and climate-resilient urban development**.
- **Launched in:** The programme was **launched in 2016**.
- **Funder:** The programme is funded by the **Embassy of Switzerland to India and Bhutan**.
- **Implementing Agencies:** The programme is **implemented by ICLEI South Asia, South Pole and econcept**.
- **Knowledge Partner:** The **National Institute of Urban Affairs** serves as the knowledge partner.
- **Objective:** The programme aims **to build knowledge, tools and institutional capacity** for **integrating low-carbon and climate-resilient development** into urban governance **while supporting India's 2070 net-zero objective**.
- **Key Features :**
 - **Capacity Building:** The programme has **equipped Indian cities with knowledge, tools and institutional capacities** to integrate low-carbon and climate-resilient development into urban governance.

- **City Support:** The initiative has supported Coimbatore, Tiruchirappalli, Tirunelveli, Ahmedabad, Rajkot, Vadodara, Udaipur and Siliguri, along with the governments of Gujarat and Tamil Nadu.
- **Institutional Development:** The programme established permanent Net-Zero and Climate Action Cells in six project cities for long-term implementation, monitoring and climate budgeting.
- **Regional Expansion:** The capacity-building framework has expanded beyond India to Bhutan, Bangladesh, Sri Lanka and Malaysia.

Ayad River

News: Severe environmental degradation was reported along the Ayad River in Udaipur due to pollution, concretisation, and inadequate waste management infrastructure.

About Ayad River

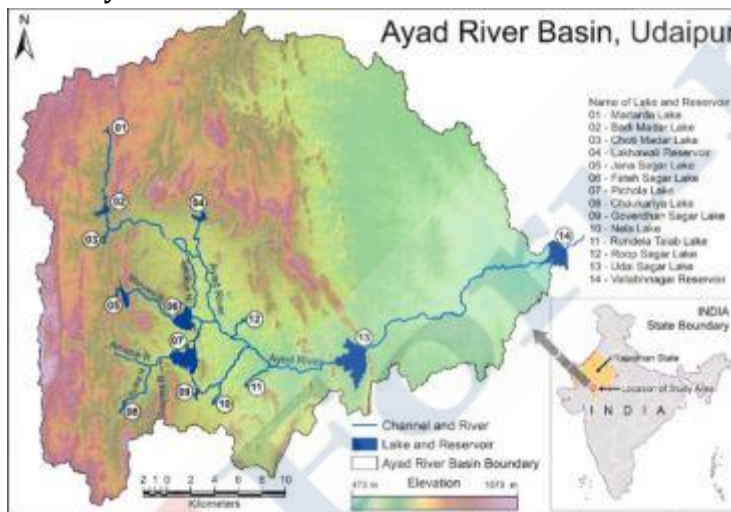


Figure 27. Source – ScienceDirect

- The Ayad River is also known as the Ahar River.
- **Origin:** The Ayad River originates in the Gogunda Hills in north-west Udaipur district of Rajasthan.
- **Course:** The river flows through Udaipur city, receives the outflow of Lake Pichola and Fateh Sagar Lake, feeds Udaisagar Lake, and later joins the Berach River.
- **Nature:** The Ayad River is a seasonal river, and its basin receives about 90% of its annual rainfall from the southwest monsoon between July and mid-October.
- **Tributary of:** The Ayad River is a tributary of the Berach River, which drains into the Banas River, then the Chambal River, followed by the Yamuna River, the principal tributary of the Ganga River.
- **Archaeological Value:** The river is associated with the Ahar-Banas Chalcolithic (Copper-Stone Age) culture, which dates from 3000 BC to 1500 BC.

- **Historical Monuments:** The riverbank contains the **Ahar ki Chhatriya**, which are the **royal cenotaphs (memorials) of the Maharanas of Mewar**.
- **Threats:** The Ayad River is **heavily polluted by solid waste and sewage**, while **concretization of its floodplains, riverbanks, and riverbed edges has reduced its carrying capacity**, restricted groundwater recharge, and **threatened the ecological integrity of Udaisagar Lake**.

Paraquat Dichloride

News: The Union government has issued a draft notification proposing a complete ban on the manufacture, import, transport, distribution, sale and use of paraquat dichloride.

About Paraquat Dichloride



Figure 28. Source – BS

- Paraquat is also known as **paraquat dichloride** or **methyl viologen**.
- It is one of the **world's most-used herbicides**.
- It is a **highly toxic chemical** which is mainly **used to control weeds and dry out crops like cotton** before harvest.
- The US Environmental Protection Agency (EPA) states that **"even a small accidental sip can be fatal"** to humans.
- The **WHO** classifies paraquat as a **Category 2 chemical**, indicating it is **moderately hazardous and irritating**.
- **Restrictions:** It is **banned** in over **70 countries**, including **China, India** (banned recently under **Section 27 of the Insecticides Act, 1968**) and the **European Union**, due to its high **toxicity**.
 - Despite this, it **remains widely used in the US**.
 - Paraquat is still **not officially listed** under the **Prior Informed Consent (PIC) procedure of the [Rotterdam Convention](#)**.

Indian Grey Hornbill

News: Gujarat's Gir forests have recorded a major conservation success with the successful reintroduction and breeding of the Indian Grey Hornbill.

About Indian Grey Hornbill

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Figure 29. Source: DD News

- The **Indian grey hornbill** is a **tropical bird** found on the **Indian subcontinent**.
- **Scientific name:** Its scientific name is **Ocyeros birostris**.
- **Habitat:** It prefers **dry plains, foothills, and open habitats**.
- **Distribution:** Among all the hornbill species in India, the Indian grey hornbill is the most widely distributed.
 - Its range spans the **length (Jammu to Kerala) and breadth (Rajasthan to West Bengal) of India**.
 - It is also **distributed in parts of some neighbouring countries, including Pakistan, Nepal, and Bangladesh**.
 - It doesn't **migrate** but may **make local movements in the drier western region**.
- **Characteristics:**
 - **Appearance:** Unlike the eight other hornbill species found in India, **the Indian grey hornbill is not brightly coloured**.
 - It is a **medium-sized bird** with **greyish-brown upper parts** and a **slight trace of a pale supercilium**.
 - The **ear coverts are darker**.
 - The **flight feathers of the wing** are **dark brown with a whitish tip**.
 - The **tail** has a **white tip and a dark subterminal band**.
 - It has a **red iris, and the eyelids have eyelashes**. The casque is short and pointed.
 - The **male has a larger casque on a dark bill, and the culmen and lower mandible are yellowish**.
 - The **bare skin around the eye is dark in males**, but sometimes pale reddish in females.
 - The female has a more yellowish bill with black on the basal half and on the casque.
 - The **juveniles lack the casque**, and the bare skin around the eye is dull orange.

- **Diet:** It is a **herbivore (frugivore)**. Sometimes, it also feeds on **molluscs, scorpions, insects, small birds, and reptiles**.
- **Behaviour:** It is **active during the day** and usually **spends time in pairs or small groups**.
 - It is **arboreal**, but very rarely descends to the ground.
 - It is quite noisy, **producing squealing calls, loud cackling, or short pipping-like sounds**.
 - Its **flight is heavy**, involving flapping interspersed with glides.
 - It prefers **mature trees with large trunk girths, particularly *Sterculia urens* and *Terminalia bellirica***.
- **Ecological role:** It plays a **crucial ecological role as a long-distance seed disperser**, helping regenerate forests by transporting seeds of fruit-bearing trees across large areas
- **Threat:** It is mainly threatened by the :
 - **Loss of dry forests and fruit trees**
 - **Hunting, and**
 - **Disturbance from agriculture and livestock grazing**
- **Conservation status:**
 - **IUCN Red List: Least Concern (LC)**

Cicadas (Cicadoidea)

News: Meghalaya's niangtaser cicadas (*Chremistica ribhoi*) have reappeared after four years, coinciding with the football World Cup.

About Cicadas (Cicadoidea)



Source – Mongabay

- **Cicadas (Cicadoidea)** are **hemipteran insects** known for **their loud, species-specific calls** and **long underground life cycles**.
- **Habitat:** Most cicadas are **canopy dwellers** and are found in **natural forests with large trees**, where they **spend most of their lives underground**.
- India has several cicada species, mainly in the Northeast, including **Meghalaya's World Cup cicada (Chremistica ribhoi)** and the **newly discovered Butterfly Cicada**.
- **Characteristics:**
 - **Life Cycle:** Cicadas remain underground for most of their lives and **emerge only when they are ready to metamorphose into adults**.
 - **Sound Production:** **Only male** cicadas produce **loud calls** through vibrations in the **tymbal membrane** to attract **female partners**.
 - **Species-specific Calls:** Each **species produces its own unique call**, and the **collective sound is a very good indicator of forest health**.
 - **Survival Strategy:** A cicada has the best chance of survival when it **emerges while its predators remain dormant**.
 - **Ecological Importance:** Cicadas feed **birds, reptiles, and mammals** while helping in **soil aeration and nutrient cycling**.
- **Conservation Status:** Cicadas as a group are **not listed on the IUCN Red List**, although **some individual species are classified as Least Concern or Near Threatened**.
 - **In India**, cicadas are **not listed under the Wildlife Protection Act, 1972**, and therefore **lack formal legal protection**.

Korku Community

News: Nearly 2,000 Korku community members from 150 villages marched in Madhya Pradesh demanding removal of forest encroachments and protection of livelihoods.

About Korku Community



Figure 30. Source – Tribesof India

- The **Korku** are an **ancient, peaceful Adivasi community** belonging to the **Munda group** and recognized as a **Scheduled Tribe** by the Government of India.

- **Distribution:** The Korku community is mostly found in **Madhya Pradesh, Chhattisgarh, and the adjoining Melghat region of Maharashtra.**

- **Key Characteristics of Korku Community:**

- **Language:** The Korku community speaks the **Korku language**, which is an **endangered Austroasiatic Munda language** generally written in the **Devanagari script.**

- **Traditional Self-Governance:** The Korku community follows a traditional **self-governance system** known as **Chavadi Swashasan.**

- **Village Administration:** Village affairs are managed through the **Korku Panchayat**, which is headed by a **Patel** and assisted by the **Padihar,**

Kotwar, and respected elders.

- **Agriculture and Livelihood:** The Korkus are primarily **cultivators who practise seasonal double-cropping.**
 - Their livelihoods also **depend on forest produce** such as **mahua, chironji, tendu leaves, and medicinal plants.**
- **Ancestor Worship:** The Korku community **regards its dead as gods** and **commemorates them by installing memorial pillars called Munda.**
- **Traditional Dance:** The community performs the **traditional Gadli dance** during cultural occasions.
- **Community Conservation:** During **Hari and Jitori festivals**, the Korkus **undertake tree planting** to protect forests and strengthen food security.

National Investment Policy for Urea-2026 for Atmanirbhar Bharat (NIPU-2026)

News: The Cabinet Committee on Economic Affairs approved the National Investment Policy for Urea-2026 for Atmanirbhar Bharat.

About National Investment Policy for Urea-2026 for Atmanirbhar Bharat (NIPU-2026)



Source – PIB

- **National Investment Policy for Urea-2026 for Atmanirbhar Bharat (NIPU-2026)** is a policy to encourage new investments in gas-based urea manufacturing units in India.
- **Piloted by:** This policy is piloted by the **Department of Fertilizers**.
- **Aim:** The policy aims to encourage new investments, increase indigenous urea production, and achieve self-sufficiency.
- **Key Features of NIPU-2026:**
 - **Production Targets:** The policy covers urea manufacturing units and is expected to add one crore metric tonnes of urea production capacity with eight to nine new plants.
 - **Transparent Cost Structure:** The policy separates fixed and variable costs to improve transparency in the pricing framework.
 - **Return on Equity:** The policy provides a Return on Equity (RoE) band of 12% to 16%, with a minimum of 12% and a maximum of 16%.
 - **Foreign Exchange Protection:** The policy reduces foreign exchange risk by converting fixed costs into Indian Rupees after four years based on prevailing exchange rates.

New Species of Bees

News: Researchers discovered two new rare solitary bee species in Arunachal Pradesh's Siang Valley, highlighting Eastern Himalayas' biodiversity and conservation needs.

About New Species of Bees



Source – The Sentinel

- **Elaphropoda Triangulata and Habropoda Adi** are **two newly discovered species of solitary bees** found in Arunachal Pradesh.
- **Discovered by:** Researchers from the Ashoka Trust for Research in Ecology and the Environment (ATREE), Bengaluru, discovered these species.
- **Naming:** **Elaphropoda Triangulata** was named after the **triangular markings on its abdomen**.
 - **Habropoda Adi** was named in honour of the **Adi indigenous community of Arunachal Pradesh**.
- **Scientific importance:** Each species is currently known from only one male specimen, making the discovery important, and researchers have called for more surveys to study their distribution, ecology, and conservation status.
- **Habitat and behaviour:** These species belong to the bee subfamily Anthophorinae, which mainly consists of ground-nesting solitary bees.
 - Unlike honeybees, they **do not live in colonies and usually nest alone**.
- **Ecological role:** Solitary bees are **important pollinators** because they help maintain healthy ecosystems and support agriculture.
- **Conservation concern:** **Habitat loss, infrastructure development, and other human activities could threaten these species**, making the conservation of forests and natural habitats in the Eastern Himalayas essential.

Viksit Bharat Yuva Connect Programme

News: The Ministry of Youth Affairs & Sports, Government of India will organise the Viksit Bharat Yuva Connect Programme (VBYP).

About Viksit Bharat Yuva Connect Programme



Source: PIB

- **Launched by:** It has been launched by **Ministry of Youth Affairs & Sports.**
- **Duration:** It will be **organized across universities and colleges from 16th July to 15th August 2026.**
- **Theme:** It has a theme of **“Nasha Mukht Yuva for Viksit Bharat.”**
- **Aim:** It aims **to connect young citizens with the vision of a developed India while creating awareness about the harmful effects of substance abuse.**
- It seeks **to empower youth to become ambassadors of a healthy, responsible and drug-free India** by combining civic engagement with anti-drug awareness.
- **Target Group:** It will primarily **engage youth in the 15–25 years age group from rural, urban and tribal communities.**
 - Institutions can also participate and they may subsequently **establish MY Bharat Chapters to ensure sustained youth engagement and facilitate implementation of future MY Bharat initiatives.**
 - All registrations and programme-related activities will be carried out through the [MY Bharat Portal](#).
- **Features:**
 - **Interactive student engagement:** It will **engage students through interactive sessions, presentations, awareness activities and digital participation** via the MY Bharat platform.
 - **Youth Icons to lead awareness: Distinguished Youth Icons** including State Champions of the Viksit Bharat Young Leaders Dialogue (VBLYD), winners of the Viksit Bharat Youth Parliament, NSS Awardees, National Youth Awardees and other accomplished youth leaders, **will visit educational institutions to interact with students.**
 - **Focus on the impact of substance abuse:** The youth leaders **will share insights into India’s development journey and explain how substance abuse poses a serious threat** to individual aspirations, social well-being and the country’s overall progress.
 - **Awareness film:** Participants will **watch a specially curated awareness film** featuring the experiences of individuals and families affected by substance abuse, offering a deeper understanding of its personal and societal consequences.

- **Nasha Mukht Bharat Pledge:** It also includes a **Nasha Mukht Bharat Pledge**, through which participants will reaffirm their commitment to leading healthy, drug-free lives and contributing to nation-building.
 - **Recovery Warriors' testimonials:** Wherever feasible, **personal testimonials from Recovery Warriors, in collaboration with NGOs and spiritual organisations**, will be incorporated to reinforce the campaign's message and inspire participants.

PARIVARTAN Scheme

News: MoHUA approved Guidelines for the PARIVARTAN Scheme to replace older polluting trucks and buses in the National Capital Region.

About PARIVARTAN Scheme



Source – ZEE Business

- **PARIVARTAN** stands for 'Programme for Accelerated Renewal and Incentivization of Vehicle Assets for Reducing Transport Air Pollution and Network Emissions'.
- **Implemented by:** It is implemented by the **Ministry of Road Transport and Highways (MoRTH)**.
- **Funded by:** It is funded by the **National Capital Region Planning Board**.
- **Aim:** This scheme aims to **replace older polluting trucks and buses with cleaner Bharat Stage-VI compliant or electric vehicles**.
- **Key Features:**
 - **Total Outlay:** The Scheme has a **total outlay of ₹9,585 crore**.
 - **Financial Incentives:** The Scheme provides **5% interest subvention on vehicle loans**, a **minimum 8% OEM discount**, **tax concessions**, registration fee waivers, fuel vouchers, financial assistance for electric vehicles, and Certificate of Deposit (CoD) trading support.
 - **State Support:** **Rajasthan, Haryana, Uttar Pradesh, and NCT of Delhi** granting **ten-year Motor Vehicle Tax concessions** and **registration fee waivers** on eligible new vehicles.
 - **Digital Platform:** The Scheme will operate through an integrated platform linked with **VAHAN, V-Scrap, DigiELV, the Public Financial Management System (PFMS)**, participating lenders, and fuel voucher systems for transparent benefit delivery.

Operation Southern Readiness 26-2

News: The Indian Navy will host Operation Southern Readiness 26-2, a four-day multinational maritime training engagement, in Kochi from July 20 to 23.

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About Operation Southern Readiness 26-2



Source – DD News

- **Operation Southern Readiness 26-2** is a **four-day multinational maritime training exercise**.
- **Hosted by:** The **Indian Navy** is hosting the exercise **at the Southern Naval Command, Kochi** under the **Indian Navy-led Combined Task Force 154 (CTF 154)**.
- **Partnership:** The exercise is conducted in partnership with the **Combined Maritime Forces (CMF)**.
 - The **CMF is a multinational maritime partnership comprising more than 40 nations**, with the **Indian Navy** playing an active role in advancing collaborative maritime security efforts.
- **Aim:** The initiative aims to **strengthen regional capacity building and enhance collective maritime security** through closer cooperation among participating countries.
- **Key Features**
 - **Comprehensive Training Programme:** The programme combines **classroom instruction, simulator-based learning, and practical onboard training** to provide professional maritime security training and operational exposure.
 - **Training Areas:** Participants receive training in **maritime law, maritime domain awareness, information sharing, counter-narcotics operations, force protection, asymmetric threats, maritime uncrewed systems, damage control, firefighting, maritime communications, survival at sea, and boarding procedures**.
 - **Regional Maritime Cooperation:** The exercise **brings together personnel from Combined Maritime Forces (CMF) partner nations for practical exercises and the exchange of best practices** to strengthen cooperation and collective maritime security.

Melatonin

News: A new study suggests that melatonin may help reduce chronic muscle and joint pain, besides its well-known role in regulating sleep.

About Melatonin

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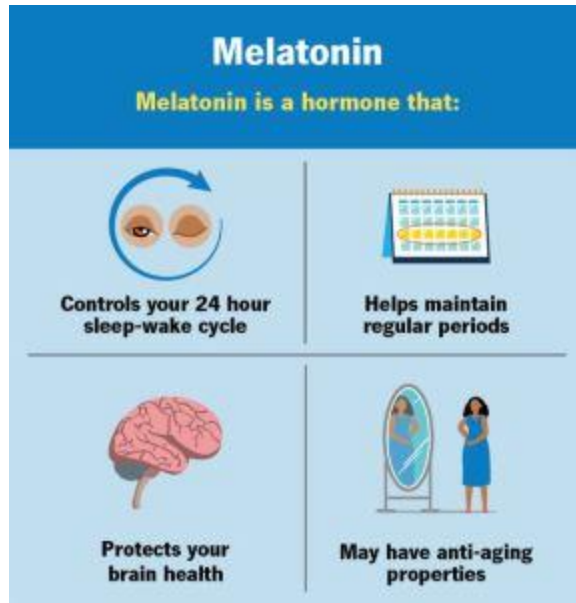


Figure 31. Source – Cleveland Clinic

- **Melatonin** is a naturally occurring indoleamine hormone primarily responsible for regulating the human body's circadian rhythm and sleep-wake cycles.
- **Natural Origin :** Melatonin is naturally secreted by the pineal gland in the brain.
 - Its production increases in darkness and decreases when the body is exposed to light.
- **Synthetic:** Melatonin can also be produced synthetically in laboratories and sold as a dietary supplement, which is known as exogenous melatonin.
- **Functions of Melatonin:**
 - **Sleep Regulation:** Melatonin regulates the body's sleep-wake cycle by increasing in darkness and preparing the body for sleep.
 - **It is widely used to treat insomnia and jet lag.**
 - **Pain Regulation:** Melatonin may reduce chronic muscle and joint pain by dampening pain signals in the brain and spinal cord, reducing inflammation, calming overactive nerves, and protecting cells from oxidative stress.
- **Antioxidative and Neuroprotective Properties:** Nano-formulated melatonin showed enhanced antioxidative and neuroprotective properties because of its sustained release and improved bioavailability.
- **Mitophagy Regulation:** Melatonin improves mitophagy, a process that removes unhealthy mitochondria from cells, and enhances mitochondrial biogenesis, which helps reduce oxidative stress
- **Role in Parkinson's Disease:** Nano-formulated melatonin showed enhanced neuroprotective effects and reduced oxidative stress in Parkinson's disease models, indicating its potential as a therapeutic candidate.
- **Concern:** Melatonin provides only modest benefits based on current evidence and may cause side effects such as daytime sleepiness, dizziness, headaches, nausea, hormonal changes, and mood swings.

Trial in Absentia

News: A Special NIA Court has issued a non-bailable warrant against Hafiz Saeed in the Pahalgam terror attack case. As he is unlikely to appear, the NIA is expected to seek a trial in absentia under Section 356 of the BNSS.

About Trial in Absentia



Source: TH

- A **trial in absentia** is a **criminal trial** conducted **without the accused being present in court**.
- **Key legal provisions:**
 - **Section 356 of the Bharatiya Nagarik Suraksha Sanhita (BNSS)** allows a court **to conduct such a trial if a person declared a proclaimed offender has absconded** to avoid trial and there is **no immediate possibility of arrest**.
 - After **recording its reasons in writing**, the court may **continue with the inquiry, trial, and judgment** as if the accused were present.
 - Under the earlier **Code of Criminal Procedure, 1973 (CrPC)**:
 - **Section 82(4)** allowed proclamation and attachment of the property of an absconding accused.
 - **Section 317** allowed a Judge or Magistrate to conduct proceedings without the accused in certain special situations.
 - **Section 299** allowed evidence to be recorded in the absence of an absconding accused if there was no immediate chance of arrest.
 - These **provisions gave courts limited discretion to proceed without the accused only when**:
 - **the personal presence of the accused was not necessary in the interest of justice, or**
 - **the accused repeatedly disrupted court proceedings.**
 - However, the CrPC **did not permit a full criminal trial in the absence of the accused**. As a result, many trials remained pending for years until the accused was arrested.
- **Applicability:** Trial in absentia is available **only in cases involving serious offences punishable with imprisonment of at least 10 years, life imprisonment, or death, where the accused has been declared a proclaimed offender**
- **Procedural safeguards under Section 356:** Section 356 includes **several safeguards to ensure a fair trial before proceedings** can begin in the absence of the accused. These include:
 - Two consecutive arrest warrants must be issued at least **30 days apart**.
 - A notice must be **published in a local or national newspaper**, giving the accused **30 days** to appear before the court.
 - The notice **must also be displayed at the accused's last known residence**.
 - A **relative or friend of the accused** must be **informed** about the trial.

- The trial cannot begin until **90 days after charges are framed**, giving the accused sufficient time to appear.
- If the **accused does not have a lawyer**, the court must appoint a **defence lawyer at the State's expense** to protect the accused's right to a fair trial.
- **Statements of prosecution witnesses recorded before the trial begins** may be used as evidence against the absconding accused.
 - However, **if the accused later appears or is arrested**, the court may allow the witnesses to be **cross-examined in the interest of justice**.
- As far as possible, **witness statements and examinations should be recorded through audiovisual electronic means**.
 - These **recordings must be preserved to ensure transparency, accuracy, and the integrity of the trial**, and to assist the court if the accused is later apprehended.

Falkland Islands

News: After Argentina's 2-1 victory over England in the semi-final of the 2026 FIFA World Cup, Lautaro Martínez and Giovani Lo Celso celebrated by holding up a banner that read, "*Las Malvinas son Argentinas*," meaning "*The Falkland Islands (Malvinas) are Argentine*."

About Falkland Islands



Figure 32. Source: World Atlas

Falkland Sound.

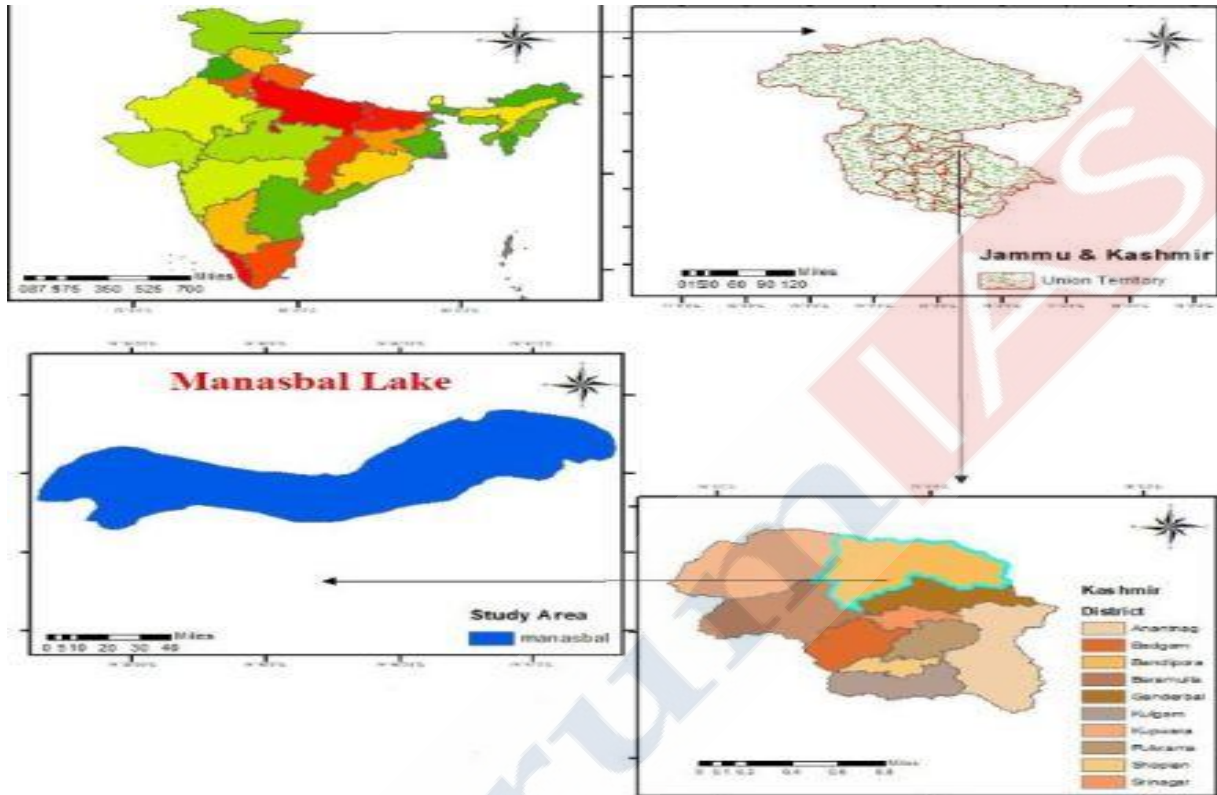
- The central areas of both **large islands** are covered by hills and low mountains, including the **Wickham Heights and Hornsby ranges**.
- **Highest Point:** The highest point in the archipelago is **Mount Usborne on East Falkland**, which rises to **2,312 feet (705 m)**.
- **Shallow streams, ponds, and small lakes** cover only a **small part of the land**.
- Drowned river valleys along the coast form protected natural harbors.

- **Location:** They are archipelago in the **South Atlantic Ocean on the Patagonian Shelf** and is considered a **British overseas territory**.
 - They are situated **483km (300 miles)** off the east coast of Argentina.
- **Capital:** The capital is **Stanley (also, Port Stanley)**.
- **Area:** They covers a **total area of 12,173 sq.km**.
- **Geography:**
 - They are an **archipelago made up of two large islands, East Falkland and West Falkland and 776 smaller islands and islets**.
 - They have a **rugged coastline**, and **most of the land is hilly, rocky, and covered with low shrubs and coarse grass**.
 - The **two main islands** are separated by

Manasbal Lakes

News: Manasbal Lake in central Kashmir's Ganderbal district is showing ecological recovery with the return of migratory birds.

About Manasbal Lake



Source – ResearchGate

- **Manasbal Lake:** It is the deepest natural freshwater lake in Jammu and Kashmir and is known as the “Supreme Gem of all Kashmir Lakes.”
- **Location:** The lake is located in Ganderbal district, Srinagar, at an altitude of about 1,585–1,600 metres in the Jhelum Valley.
- **Surroundings:** The lake is surrounded by the Baladar mountains, the Karewa plateau in the north, and the Ahtung hills in the south.
- **Size and depth:** The lake covers about 2.81 km² and reaches a depth of up to 13 metres (43 feet).
- **Water Source:** The lake has a drainage basin of about 10 km² and receives water mainly from precipitation.
- **Outflow:** The outflow of the lake is regulated into the Jhelum River.
- **Thermal Stratification:** The lake is monomictic, which means it circulates once in a year for a short time.
 - It shows thermal stratification from March to November, with a thermocline depth of 9 metres.
- **Ecology and Biodiversity:**
 - **Rich Aquatic Flora:** The lake supports macrophytes, phytoplankton, and extensive growth of Lotus (*Nelumbo nucifera*), which blooms during July and August.

- **Diverse Fauna:** The lake is home to zooplankton, benthos, and fish such as Schizothorax niger, Schizothorax esocinus, Cyprinus carpio, and Neomacheilus latius.
- **Important Bird Habitat:** The lake is one of the largest natural habitats for aquatic birds and supports many migratory birds, making it an important birdwatching site.
- **Economic Significance:** The lake supports local livelihoods through fishing, water supply, tourism, and the harvesting and marketing of lotus (Nelumbo nucifera) rootstocks for food and commercial use.
- **Cultural Heritage:** The lake has the ruins of a Mughal garden built by Nur Jahan.
 - Near the lake, there are also the ruins of a 17th-century fort and an ancient temple dating to 800–900 AD.

Prime Minister's National Apprenticeship Promotion Scheme (PM-NAPS)

News: The Government extended the Special Intervention under PM-NAPS for FY 2026–27 to expand apprenticeship opportunities across the North-Eastern Region.

About Prime Minister's National Apprenticeship Promotion Scheme (PM-NAPS)



Source – KNN India

- **Prime Minister's National Apprenticeship Promotion Scheme (PM-NAPS)** is a Government of India scheme launched in 2016 to promote apprenticeship training through financial support to establishments.
- **Extension:** It has been extended for FY 2026–27 to strengthen apprenticeship opportunities in the North-Eastern Region under the Special Intervention for Promotion of Apprenticeship.
- **Objective:** The scheme aims to develop skilled manpower through on-the-job training, encourage establishments to engage apprentices, provide up-skilling opportunities, and increase apprenticeship participation in MSMEs and underserved regions such as the North-East.
- **Implemented by:** The Ministry of Skill Development and Entrepreneurship (MSDE) implements PM-NAPS.

- The FY 2026–27 **special intervention in the North-Eastern Region** will be implemented by the **Indian Institute of Entrepreneurship (IIE), Guwahati**.
- **Legal backing:** The scheme provides financial incentives to establishments engaging apprentices under the Apprentices Act, 1961.
- **Key features:**
 - **Financial support:** The scheme provides **financial incentives** to establishments **through partial stipend support for apprentices**.
 - **Stipend support:** Government **shares 25% of the minimum prescribed stipend**, subject to a **maximum of ₹1,500 per apprentice per month**, through the **Direct Benefit Transfer (DBT)** mechanism.
 - **Industry-focused training:** The scheme **promotes industry-aligned, paid on-the-job training** to bridge the gap between education and employment.
 - **Certificate benefit:** Candidates **receive a NAPS certificate after completing training**, which improves their employability.
 - **Inclusive approach:** The scheme **encourages participation from MSMEs, women, marginalized communities, and underserved regions**, including the North-East.

VISHWAS, 2026

News: EPFO has launched VISHWAS, 2026, as a one-time dispute resolution initiative for settlement of damages and penalty-related disputes under EPF laws.

About VISHWAS, 2026

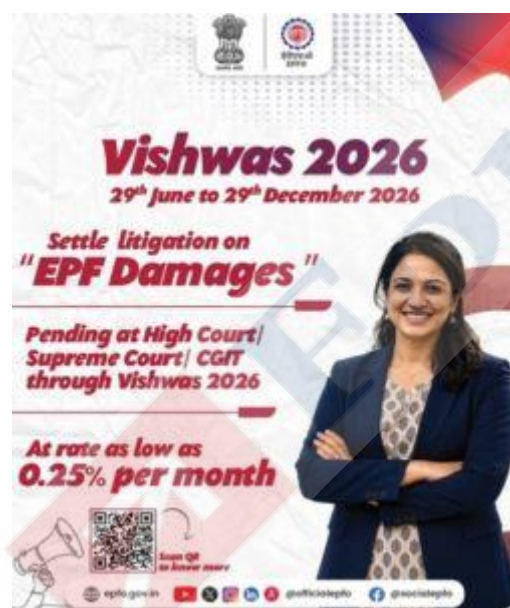


Figure 33. Source – EPFO

- VISHWAS, 2026 is a **one-time dispute resolution initiative** to facilitate amicable **settlement of damages and penalty-related disputes**.
- **Launched by:** The **Employees' Provident Fund Organisation (EPFO)** under the Ministry of Labour & Employment launched the scheme.
- **Objective:** The scheme aims to **promote voluntary compliance, reduce litigation, enable speedy resolution of long-pending disputes, and safeguard the interests of employees**.
- **Timeline:** The scheme came **into effect on 29 June 2026** and will **remain operational for six months from the date of notification**.
- **Four categories:**
 - Cases where **penalty or damages orders are under challenge** before a judicial forum.
 - Final penalty or damages orders **where recovery is pending or partly made, including Recovery Certificate (RRC) cases**.
 - Cases where **notices have been issued but final penalty or damages orders are yet to be passed**.
 - Cases where **notices for penalty or damages are yet to be issued**.

- **Exclusion:** The scheme excludes **fully recovered cases**, cases **involving fraud, misappropriation or deliberate falsification of records**, and cases where **statutory interest has not been fully deposited**.
- **Key features:**
 - **Digital and time-bound process:** Eligible employers can apply online through the EPFO Employer Portal using a Digital Signature Certificate (DSC) or e-Sign through a transparent, fully digital and time-bound process.
 - **Concessional rates:** For defaults before 14 June 2024, damages or penalty will be recalculated at 0.25% per month for defaults up to two months, 0.50% per month for defaults from two to less than four months, and 1.00% per month for defaults exceeding four months.
 - **Interest requirement:** Employers must fully deposit the applicable statutory interest before submitting an application.
 - **Undertaking:** Applicants must furnish an undertaking that no further appeal will be pursued for the dispute settled under the scheme.
 - **Compliance benefit:** The scheme enables employers to regularise legacy EPF compliance at a significantly lower financial cost while supporting quicker resolution of long-pending disputes and improved compliance.

Proton Exchange Membrane (PEM) Fuel Cell

News: Prime Minister Narendra Modi flagged off India's first hydrogen-powered train on the 89-km Jind-Sonapat route in Haryana on July 17.

About Proton Exchange Membrane (PEM) Fuel Cell

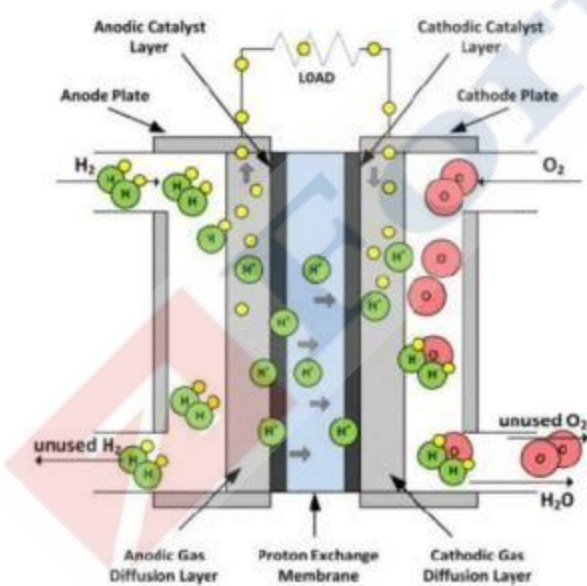


Figure 34. Source – ResearchGate

- **Key Features:**
 - **Continuous Fuel Supply:** Unlike traditional batteries, PEM fuel cells require a continuous supply of hydrogen fuel and oxygen to sustain electricity generation.

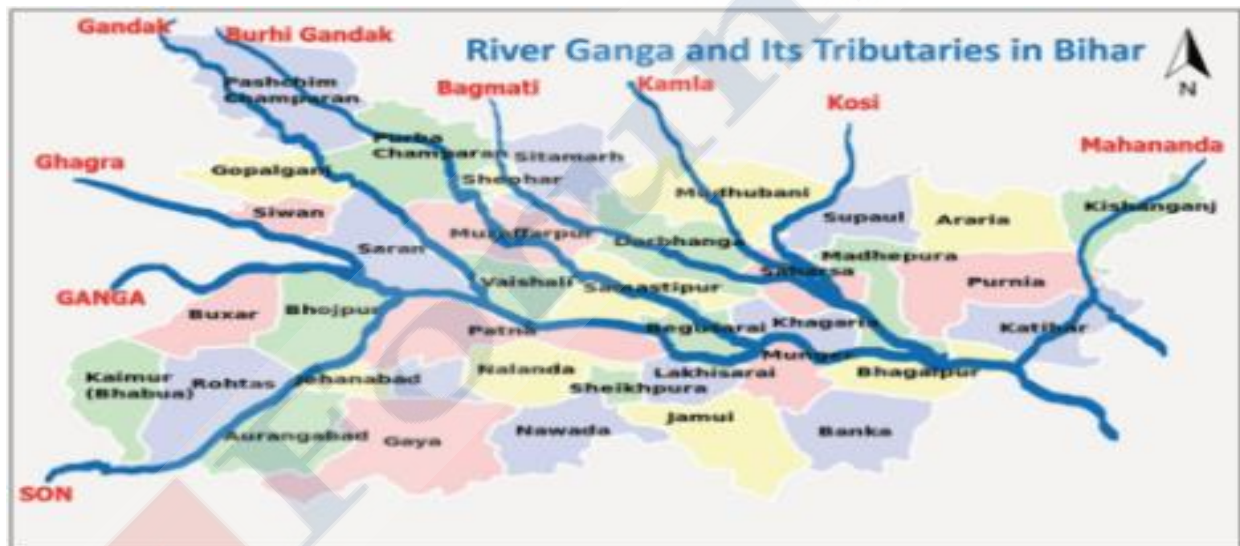
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- **Compact and Efficient Design:** They provide **high power density** in a compact size, making them an **environmentally friendly energy solution**.
- **Low Maintenance:** They **run on hydrogen fuel**, can be **refuelled easily**, and require **significantly less maintenance** than traditional backup power sources.
- **Application:**
 - **Telecom Towers:** PEM fuel cells provide **backup power for telecom towers** during grid outages.
 - They offer **quick start-up**, **operate at relatively low temperatures**, and provide a **clean alternative to diesel generators**.
 - **Portable Devices:** They are used in **laptops, mobile phones, battery chargers, and unmanned aerial vehicles**.
 - **Backup Power Systems:** They are **used as clean backup power systems** where reliable electricity is required and support uninterrupted operations during power interruptions.

Bagmati River

News: Heavy rainfall in Nepal's catchment areas has led to a continuous rise in the water levels of the Gandak, Bagmati, Kamla Balan, and Kosi rivers in Bihar.

About Bagmati River



Source – Mera Apna Bihar

- It flows **through south-central Nepal and northern Bihar**.
- **Origin:** It originates from the **Bagdwar area in the Shivapuri Hills**, located in the **northwestern part of Kathmandu Valley** of Nepal.
 - The river enters India near **Shorwati village** in **Sitamarhi district, Bihar** and joins **Kosi River** at **Badiaghat** in **Khagaria district, Bihar**.
- The Bagmati River basin transacts **three distinct latitudinal physiographic zones** in the **Nepal Himalayas- Mountain Zone, Siwalik Zone and Terai Zone**.
- **Tributary of:** It is a tributary of the **Kosi River**.
- **Length:** It is **597 km (207 km in Nepal and 390 km in India)** long **trans-boundary perennial river**.

- **Dam associated:** The primary dam constructed on the river is the **Dhap Dam** in Nepal.
- **Fauna:** The lower stretch of the river in India provides important habitat for the **Gangetic dolphin** and **gharial**.
- **Religious Significance:** It is considered holy by **both Hindus and Buddhists**.
 - The banks of the Bagmati River are home to various temples, including the **Pashupatinath Temple** which is a **UNESCO World Heritage Site**

Key Facts about Peru

News: At least six people were killed and many others were injured after earthquakes struck Peru's Junín region, causing widespread damage and relief operations.

Key Facts about Peru



Figure 35. Source – World Atlas

Huascarán (6,768 m) is the highest peak in Peru and is located in the Cordillera Blanca, which forms part of the Andes Mountains (Sierra region).

- **River Systems:** The major rivers include the **Amazon, Ucayali, and Madre de Dios**.
- **Important Lake:** Lake Titicaca is shared with Bolivia and is the world's highest navigable lake.
- **Oceanography:**
 - **Humboldt (Peru) Current:** It is a cold, northward-flowing ocean current that moves along Peru's Pacific coast and strongly influences the country's coastal conditions.

- **Location:** Peru is the **third-largest country in South America** and is located just **south of the Equator**.

- **Boundaries:**

- **Land Boundaries:** Peru shares its borders with **Ecuador and Colombia in the north, Brazil in the east, Bolivia in the southeast, and Chile in the south**.

- **Maritime Boundary:** Peru's western boundary lies along the **Pacific Ocean**.

- **Climate:** Peru has a **tropical climate in the east, a dry desert climate in the west, and temperate to frigid conditions in the Andes**.

- **Physiographic Zones:** Peru is divided into **three major regions** – **Costa (coastal plain) along the Pacific Ocean, Sierra (Andes Highlands) in the central part of the country, and Amazonia (Amazon Basin/Selva region) in the east**.

- **Highest Peak:** **Mount**

- **Upwelling System:** The cold Humboldt Current causes deep, nutrient-rich water to rise to the surface, which supports one of the world's richest marine ecosystems and major commercial fishing zones.
- **Earthquake prone:**
 - **Tectonic Setting:** Peru lies along the **Pacific Ring of Fire** (a highly active seismic belt around the Pacific Ocean).
 - **Reason for Vulnerability:** The **South American Plate** overrides the **Nazca Plate**, and the continued uplift of the **Andes** results in frequent earthquakes.
- **Biodiversity:**
 - **Megadiverse Status:** Peru is among the world's top 20 megadiverse countries, with 36 ecosystems that support more than 25,000 protected plant and animal species and over 4,000 marine species.
 - Peru also has the world's largest diversity of butterflies and ranks third globally in the number of bird species.

58th International Chemistry Olympiad

News: India won four gold medals and secured the joint top rank at the 58th International Chemistry Olympiad, achieving its best-ever performance.

About 58th International Chemistry Olympiad



Source – IE

- The **58th International Chemistry Olympiad** is the world's premier chemistry competition for secondary school students.
- **Host Country:** The 58th International Chemistry Olympiad was held in **Tashkent, Uzbekistan**.
- **Country Participation:** A total of **363 students from 93 countries** participated in the 2026 edition of the Olympiad.

- **Key Aspect related to India:**
 - **India's Position:**
 - India **won four gold medals** and **secured the joint top rank** along with China, Vietnam and the Individual Participant (Russia).
 - **Four Indian students who won gold medals are:**
 1. **Debadatta Priyadarshi** from Bhubaneswar, Odisha
 2. **Harshit Singhal** from Mandi Gobindgarh, Punjab
 3. **Kabeer Chhillar** from Delhi
 4. **Sandeep Kuchi** from Hyderabad, Telangana
 - **This was India's 27th participation** in the International Chemistry Olympiad.
 - **The 2026 edition marked India's best-ever performance** at the competition.
 - **Coordinating Agency:** The **Homi Bhabha Centre for Science Education (HBCSE)**, under the **Tata Institute of Fundamental Research (TIFR)**, conducts India's national selection and training programme.
 - **Funding Agencies:** The programme receives support from the **Department of Atomic Energy (DAE)**, the **Department of Science and Technology (DST)** and the **Ministry of Education (MoE)**.

About International Chemistry Olympiad

- The International Chemistry Olympiad is the world's premier competition for secondary school students in chemistry.
- **Annual Event:** The Olympiad has been held every year since 1968.
- **Nature of Competition:** Students compete through theoretical and practical examinations.
- **Objective:** The Olympiad brings together the best young chemistry students from different countries to compete at the international level.

Electronic Gold Receipts (EGRs)

News: In May 2026, the National Stock Exchange of India introduced Electronic Gold Receipts (EGRs) for buying and selling gold in electronic form.

About Electronic Gold Receipts (EGRs)

The infographic is titled "Salient Features of Electronic Gold Receipts (EGRs)" and is branded with the "bt" logo. It is divided into several sections:

- NSE EGR | WHAT IS ELECTRONIC GOLD RECEIPT, HOW IT WORKS**: This section introduces the concept.
- WHAT IS EGR?**: A text box explaining that an Electronic Gold Receipt (EGR) is a fungible securitized instrument backed by physical gold, held in safe custody by vault managers. It includes an icon of a document labeled "EGR".
- KEY BENEFITS**: A section on the right side, partially visible, which lists the advantages of EGRs.

Visual elements include images of gold bars and coins, and a line graph showing an upward trend.

Source – BT

- **Electronic Gold Receipts (EGRs)** are **exchange-traded securities** that represent **ownership of physical gold stored** in the Securities and Exchange Board of India (SEBI)-regulated vaults.
- **Launched in:** The **Bombay Stock Exchange** launched **India's first EGR segment** on **October 24, 2022**.
- **Regulator:** The **Securities and Exchange Board of India (SEBI)** regulates the Electronic Gold Receipt framework and SEBI-regulated vaults.
- **Aim:** The initiative aims to **improve transparency in gold pricing, standardize quality, provide secure ownership**, and make India's gold market more efficient.
- **Key Features of EGRs**
 - **Electronic Ownership:** EGRs are **held in a demat account, traded on stock exchanges**, and can be **converted into physical gold** through the prescribed process.
 - **Trading and Settlement:** EGRs **follow a T+1 settlement cycle** and are available for **trading during market hours**.
 - **Purity and Denominations:** EGRs are **available in 99.9% and 99.5 % purity** with denominations of **10 mg, 100 mg, 1 g, 10 g, 100 g, and 1 kg**.
 - **Transparent and Secure:** Each EGR is **backed by physical gold stored in SEBI-regulated vaults**, ensuring standardized ownership, transparent pricing, and assured purity.
 - **Tax:** There is **no GST on EGR trading**, but **3% GST is applicable on physical delivery of gold**.

SAMADHAN Portal 2.0

News: The Delhi Regional Office of the Chief Labour Commissioner (Central), Ministry of Labour & Employment, successfully organized a comprehensive awareness session on the **SAMADHAN Portal 2.0** for trade union representatives.

About SAMADHAN Portal 2.0

- It is an **upgraded digital platform** (for **online filing, conciliation, arbitration, and adjudication of industrial disputes** in alignment with the Labour Codes.
- **Nodal Ministry:** It is platform of **the Ministry of Labour and Employment**
- It facilitates **dispute resolution for workers, employers, and trade unions**.
- **Features:** It features **seamless online filing of Industrial Disputes, submission of various claims under the modern Labour Codes, and real-time status tracking mechanisms** designed to empower stakeholders.

About SAMADHAN Portal



Figure 36. Source: Ministry of Labour & Employment

- It is a **digital initiative** by the **Ministry of Labour and Employment**.
- It provides a **single online platform** for workers, trade unions, employers, and other stakeholders **to raise and track employment-related grievances**.
- **Features:**
 - Through the portal, **users can submit industrial disputes, charters of demand, claims under applicable labour laws**, and other employment-related complaints.
 - It promotes **transparency, improves efficiency, reduces delays caused by offline communication**, and helps users easily track the progress of their cases.
 - It also **enables centralized monitoring by the Ministry**, ensuring faster resolution and better implementation of labour laws.

Ex Pitch Black 2026

News: The Indian Air Force started participating in Ex Pitch Black 2026 at the Royal Australian Air Force Base Darwin from 20 July 2026.

About Ex Pitch Black 2026



Figure 37. Source – DD India

enhance operational interoperability, strengthen military cooperation, improve force integration, and exchange operational best practices in realistic multinational air combat scenarios.

- **First Edition: June 1981**
- **2026 Location:** The exercise is **conducted at RAAF Bases Darwin and Tindal in the Northern Territory, and RAAF Base Amberley in Queensland, Australia.**

- **Ex Pitch Black 2026** is the **Royal Australian Air Force's flagship biennial multinational air combat exercise with a 45-year history.**
- **Origin of Name:** The name "**Pitch Black**" comes from the exercise's **focus on night flying** over the large unpopulated areas of northern Australia.
- **Host Country:** **Australia hosts Ex Pitch Black 2026 through the Royal Australian Air Force (RAAF).**
- **Objective:** The exercise aims to

- **Participating Countries:** More than 19 nations, including India, Australia, the USA, the UK, Japan, France, Indonesia, Singapore, South Korea, Canada, and other Indo-Pacific partners, are participating in the exercise.
- **Key Features of Ex Pitch Black 2026:**
 - **Scale of Exercise:** The 2026 edition brings together more than 19 nations, 100+ aircraft, and 4,400+ personnel.
 - **Operational Training:** The exercise focuses on complex aerial manoeuvres, offensive counter-air operations, air defence tracking, tactical coordination, mission planning, and integrated high-intensity operational training.
 - **IAF Participation:** The Indian Air Force (IAF) has deployed Rafale fighter aircraft, supported by C-17 Globemaster III and IL-78 Air-to-Air Refuelling aircraft, along with pilots, engineers, technicians, controllers, and other experts.
 - **India's Previous Participation:** The IAF has participated in the 2018, 2022, and 2024 editions, reaffirming its commitment to strengthening defence cooperation and regional security.

Conocarpus Trees

News: The Karnataka High Court directed the Greater Bengaluru Authority to consider a PIL seeking the removal of Conocarpus trees across Bengaluru.

About Conocarpus Trees



Figure 38. Source – TH

- **Conocarpus tree** is a genus of trees that was introduced to India from Gulf countries for urban landscaping and greening purposes.
- **Species:** There are two species of Conocarpus trees found in India –
 - **Conocarpus erectus (buttonwood)** and **Conocarpus lancifolius (damask)**.
- **Key Characteristics:**
 - **Fast Growth and Low Maintenance:** Conocarpus became popular because it grows quickly, requires little maintenance, and survives well with limited care.
 - **Tolerance to Harsh Conditions:** The species is drought- and salinity-tolerant, making it attractive for urban greening and plantation drives.
 - **Urban Landscaping:** The trees were widely planted along roads, boundary walls, and public spaces by private and public entities.
 - **Strong Root System:** Conocarpus has vigorous roots that naturally search for subsoil water and can extend towards water sources.
- **Environmental concerns:**
 - **Ecological Concerns:** The Government of India has advised all states and union territories to stop planting both species because of ecological and public health concerns.
 - **Impact on Biodiversity:** Experts reported that Conocarpus replaced many native tree species and may release compounds that hinder the growth of nearby vegetation.

- **Health and Infrastructure Issues:** Studies from Pakistan and the Middle East raised concerns about **allergenic pollen**, while its **root system may damage infrastructure** under poor horticultural planning.
- **Status:**
 - **Species Status:** Conocarpus has **no formal invasive alien species status in India**, although experts have suggested treating it as an emerging invader until further studies are completed.
 - **Court and Government Status:** In August 2025, the **Government of India advised all States and Union Territories to stop planting both species**, while the **Karnataka High Court** directed the Greater Bengaluru Authority to consider the PIL regarding their removal.

Bardia National Park

News: A young boy died in a mugger crocodile attack in Bahraich, highlighting the wildlife-rich Terai landscape connected with Bardia National Park.

About Bardia National Park



Figure 39. Source – ResearchGate

- **Bardia National Park** is the **largest** and **most undisturbed national park** in Nepal's Terai, established in 1988.

- **Location:** The park is located in **Bardiya District of Nepal's Terai**.

- **Major River:** The **Karnali River** forms the park's **eastern boundary**, and the **Babai**

River flows through the park.

- **Protected Landscape:** Bardia National Park adjoins **Banke National Park** and together they form the **Bardia-Banke Tiger Conservation Unit**.
- **Wildlife Connectivity:** The park supports **cross-border wildlife movement** between **Nepal and India** through the **Western Terai Complex**.
- **Conservation Importance:** The park promotes wildlife conservation, ecotourism, and local livelihoods while protecting Nepal's natural heritage.
- **Vegetation:** About **70%** of the park is covered with **forests**, while the remaining area includes **grasslands, savannah, and riverine forests**.
- **Flora:** The park has **839 recorded plant species**, including vascular plants, ferns, and one gymnosperm species.
- **Fauna:** The park supports 642 faunal species, including the **royal Bengal tiger, one-horned rhinoceros, Asian elephant, gharial, mugger crocodile, fish, reptiles, amphibians, leopards, sloth bears, and many bird species**.

Salal Hydroelectric Project

News: Authorities opened all gates of the Salal Dam after heavy rainfall sharply increased water inflow into the Chenab River and reservoir.

About Salal Hydroelectric Project



Figure 40. Source – IE

- **Location:** The Salal Hydroelectric Project is located in the Reasi district of Jammu and Kashmir.
- **Timeline:** The project planning started in the 1960s, construction began in 1970, and commercial operation started in 1987.
- **River System:** The project is built on the [Chenab River](#) and harnesses its hydropower potential.
- **Developed and Owned by:** The project is developed and owned by the National Hydroelectric Power Corporation (NHPC).
- **Type:** The project is a 690 MW run-of-the-river hydropower project with Stage-I and Stage-II, each having three units of 115 MW.
- **Size:** The Salal Dam is 130 m high and has an elevation of 1,627 feet above mean sea level.
- **Strategic Importance:** This was the first hydropower project built by

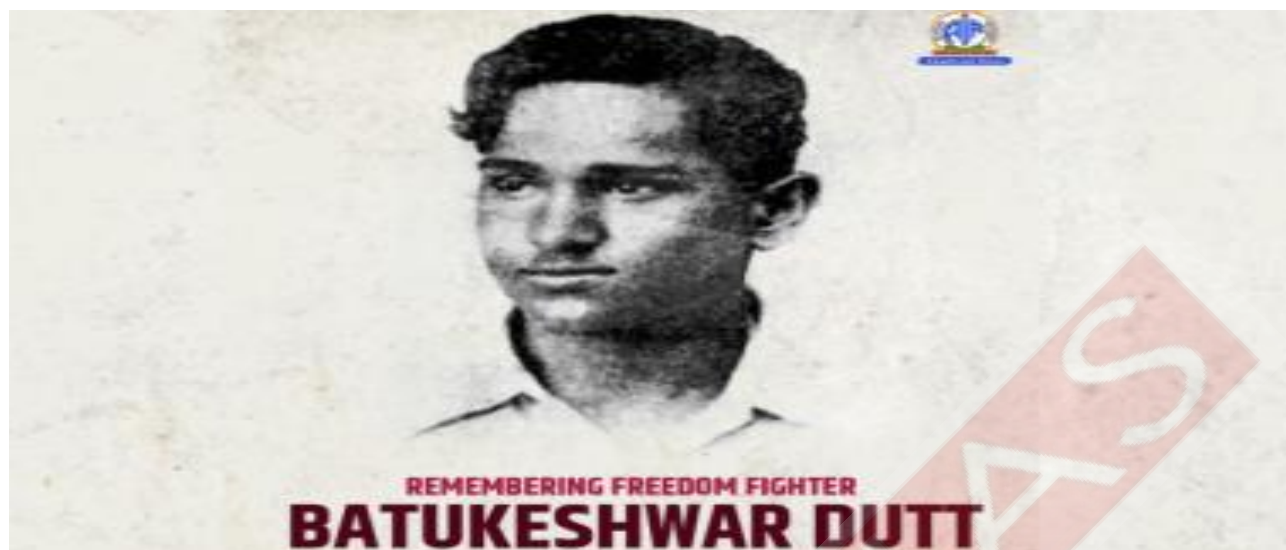
India in Kashmir under the [Indus Water Treaty](#) regime.

- **Beneficiaries:** The Jammu and Kashmir receives 12.5% of the energy generated from the project, while the remaining power is transmitted to the Northern Grid for distribution to Punjab, Haryana, Delhi, Himachal Pradesh, Rajasthan, and Uttar Pradesh.

Batukeshwar Dutt

News: Union Home Minister Amit Shah and Defence Minister Rajnath Singh have paid tribute to revolutionary and freedom fighter Batukeshwar Dutt on his death anniversary.

About Batukeshwar Dutt



Source: News on Air

- Batukeshwar Dutt was an **Indian revolutionary in the early 1900s**.
- He was also **known as BK Dutta**.
- **Birth:** He was **born on November 18, 1910**, in the **Bardhaman district of Bengal**.
- **Early life:** Patriotism and love for Indian culture were deeply ingrained in him from childhood, values he inherited from his family.
 - He was affectionately called **Mohan** and **Battu** during his early years.
 - His father, **Bihari Dutt**, was engaged in social service, while his mother, **Kamini Devi**, was a homemaker rooted in traditional values.
- **Influence:** During his high school years, he came into contact with revolutionaries **Surendranath Pandey** and **Vijay Kumar Sinha**, who inspired him to join the revolutionary movement.
 - His decision was influenced **by his family's nationalist values and by witnessing a British soldier mercilessly beat an innocent Indian child on Kanpur's Mall Road**.
- **Activities:** He joined the **Hindustan Republican Association (HRA)** through **Suresh Chandra Bhattacharya**, the editor of *Pratap*.
 - He developed a close association with **Bhagat Singh** and met **Chandrashekhar Azad** in **1924**.
 - After the **Kakori Conspiracy Case**, he moved **first to Bihar and later to Calcutta**.
 - In **1927**, the **Hindustan Republican Association** was reorganised and renamed the **Hindustan Socialist Republican Association (HSRA)**.
 - Within the organisation, he received specialised training in bomb-making and became one of its most skilled experts.
 - Many of the bombs used by revolutionaries during that period were **either manufactured by him or by young revolutionaries trained under his guidance**.
 - He stood alongside **Bhagat Singh** in the **1929 Assembly Bomb Case**.
 - He became a household name after the **Central Legislative Assembly Bomb Case of 1929**, in which **he and Bhagat Singh threw non-lethal bombs inside the Assembly to protest against repressive British laws**.
- **Later life:** While Bhagat Singh was sentenced to death, Batukeshwar Dutt was awarded **life imprisonment**.

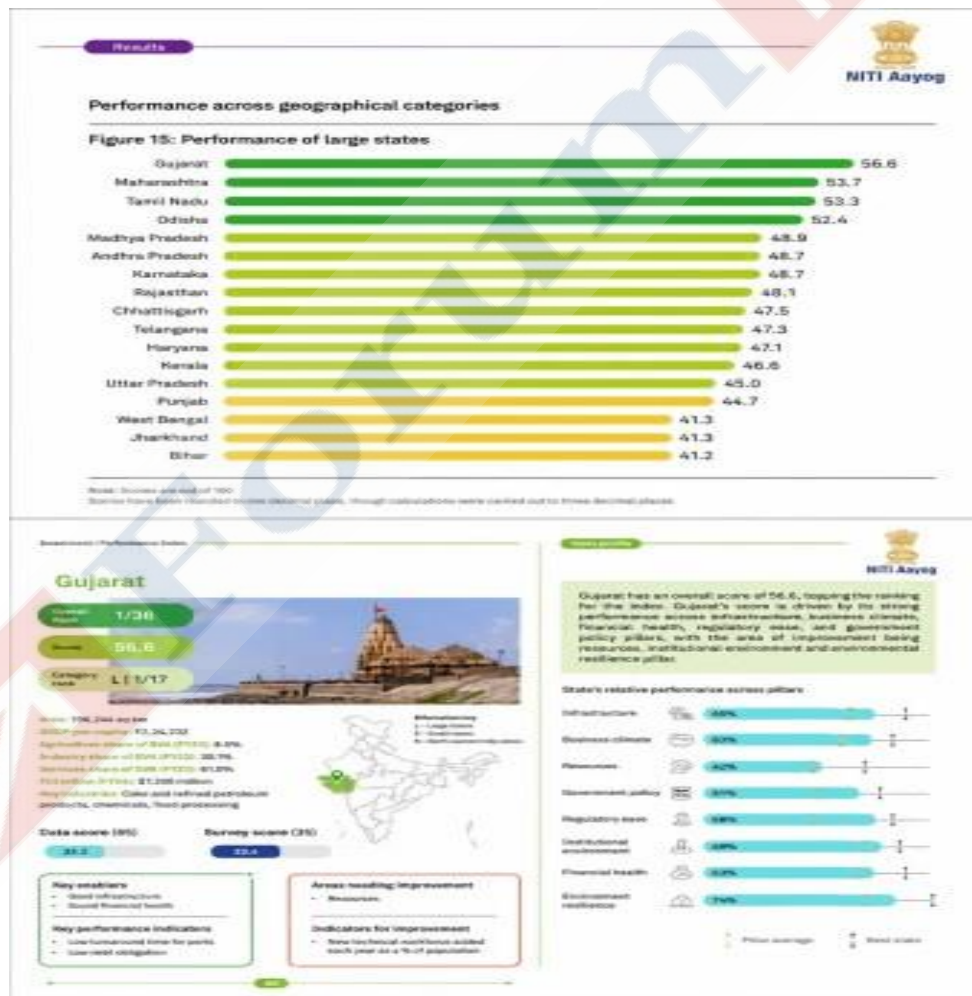
Factly Compilation July 2026

- He was imprisoned in the **Cellular Jail (Kala Pani)** in the Andaman Islands and later shifted to **Hazaribagh, Delhi, and Bankipur jails**. During his imprisonment, he endured severe torture that permanently damaged his health.
- In **1938**, he was released on the condition that he would abstain from political activities.
- He later joined **Mahatma Gandhi's non-violent movement**.
- During the **Quit India Movement of 1942**, he was arrested again and was finally released in **1945**.
- In **1958**, he received formal recognition and was nominated to the **Bihar Legislative Council**.
- **Death:** He passed away on **July 20, 1965**.
- **Legacy:** He is remembered for his **fearless role in India's freedom struggle** alongside Bhagat Singh and for the hardships he endured even after Independence.

Investment Friendliness Index

News: Recently, a report on "Investment Friendliness Index" was released by NITI Aayog.

About Investment Friendliness Index



Source: NITI Aayog

- It presents a **structured and data-driven framework** for assessing how effectively States and Union Territories **create, enable, and sustain an environment conducive to investments**.
- **Released by:** This report is released by NITI Aayog.
 - This is NITI Aayog's first -ever Investment Friendliness Index (IFI).
- It evaluates **key policy, institutional, regulatory, and infrastructure-related parameters** that **influence investment decisions** and **provides a comparative assessment of the investment ecosystem** across States and Union Territories.
- **Focus:** It seeks to **foster competitive and cooperative federalism by encouraging States and Union Territories** to adopt best practices and undertake continuous reforms in pursuit of the vision of Viksit Bharat @2047.
- **Indicators and pillars:** It evaluates States **across 84 indicators under eight key pillars** with different weightages that determine investment readiness: **infrastructure (25 percent), business climate (20 percent), resources (15 percent), government policy (10 percent), regulatory ease (12 percent), financial health (7 percent), institutional environment (6 percent), and environmental resilience (5 percent)**.
- **Performance of states:**
 - **Gujarat has secured the top position**, followed by Maharashtra and Tamil Nadu.
 - The Index identifies **Gujarat's policy stability and investor-centric governance as among the State's biggest strengths**.
 - In the **hilly and North-Eastern** category, Uttarakhand ranked first, followed by Assam and Himachal Pradesh.
 - Among UTs and city states, **Goa topped the rankings, followed by Delhi and Chandigarh**.
- **Classification:** The report classifies states into four categories: **Top performers, frontrunners, emerging performers and aspiring states**.
 - **Five states** have been identified as **top performers**, while **15 have been placed in the frontrunners category, including Delhi, Uttar Pradesh and Andhra Pradesh**.
 - Eight states and UTs including Punjab, West Bengal, Bihar, J&K have been categorised as **emerging performers**.
 - **Another eight including Mizoram, Arunachal Pradesh and Manipur** have been placed in the **aspiring states category**.

Mission Golden Spice and Lakadong Turmeric

News: The Union Minister of Communications and Development of North Eastern Region (MDoNER) launched Mission Golden Spice to promote Meghalaya's GI-tagged Lakadong turmeric globally.

About Mission 'Golden Spice'



Source – PIB

- **Mission Golden Spice** is an **Integrated Lakadong Turmeric Value Chain Enhancement Project** for turmeric cultivation and value chain development in Meghalaya.
- **Initiative by:** The **Ministry of Development of North Eastern Region (MDoNER)** launched the mission with the **Government of Meghalaya**.
- **Implementing Agencies:** The mission is anchored by **MDoNER** and the **North Eastern Council (NEC)** in collaboration with the **Government of Meghalaya**.
- **Inter-Ministerial Convergence:** The mission works with the **Ministries of Agriculture & Farmers Welfare, Food Processing Industries, and Commerce**, along with the Agricultural and Processed Food Products Export Development Authority (**APEDA**), **Spices Board**, National Turmeric Board, Indian Council of Agricultural Research (**ICAR**), Ministry of Electronics and Information Technology (**MeitY**), National Bank for Agriculture and Rural Development (**NABARD**), and Small Farmers Agribusiness Consortium (**SFAC**).
- **Financial Outlay:** The government has approved an **outlay of ₹175.45 crore** for the mission.
- **Time Period:** The mission will be **implemented in two phases** of an **Five year roadmap (2025-2030)**
 - **Implementation Phases:**
 - **First phase:** Focus on **Value chain strengthening and expansion** and scale up.
 - **Second phase:** Promotion of **Meghalaya's Unique Selling Proposition(USP)**.
- **Target:** The mission aims to increase **farmers' remuneration from ₹30-40 per kilogram to nearly ₹80 per kilogram by 2030** and expand the cultivation area **from about 2,500 hectares to 7,500 hectares**.

About Lakadong Turmeric

- **Cultivation Area:** Lakadong turmeric is **cultivated in the Lakadong area of the Jaintia Hills in Meghalaya**.
- **Special Quality:** It contains **7-12% curcumin**, which is nearly **four times** the world average.
- **Recognition:** It received the **Geographical Indication (GI) tag** in 2024.
- **Characteristics:** The turmeric is **darker in colour**, is **organically grown without fertilizers**.
- **Uses:** It is **used for its anti-inflammatory, antioxidant, and neuroprotective properties**.

- **Unique Advantage:** Meghalaya's acidic, iron-rich soil and specific environmental conditions contribute to the **unique qualities of Lakadong turmeric**.

RajmargYatra App, Digital Local Pass and 'MargMitra' Help Centre

News: The National Highways Authority of India (NHAI) has introduced the Digital Local Pass facility and the MargMitra Help Centre on the RajmargYatra app.

About RajmargYatra App



Source – Digit

- **RajmargYatra App** is a mobile application that **provides digital services to make National Highway travel more convenient and citizen-centric**.
- **Nodal Ministry:** Ministry of Road Transport and Highways is nodal minister.
- **Implementing Agency:** National Highways Authority of India (NHAI) is implementing agency.
- **Objective:** It aims to make National Highway **travel more seamless** by providing **technology-driven public services** and improving ease of living.
- **Key Pre-existing Features:**
 - **Annual Pass Facility:** The app provides an Annual Pass facility, through which more than 80 lakh Annual Passes have been sold with real-time activation.
 - **Other Digital Services:** The app also enables **geo-tagged complaint registration with photos and videos**, provides **real-time weather alerts**, notifies users about **nearby amenities** such as hospitals and fuel stations, and offers **unified FASTag banking services**.
- **New Features:** The app has **introduced the Digital Local Pass facility and the MargMitra Help Centre**.
 - **Digital Local Pass Feature:**
 - **Eligibility:** Residents living within a 20-kilometre radius of an **eligible toll plaza** can **purchase a Local Pass** through the app.
 - **Benefits:** Eligible users can **purchase a monthly Local Pass digitally** and enjoy unlimited travel through the respective toll plaza for one month.
 - **Digital Verification:** The system uses **consent-based integration with DigiLocker, VAHAN, and GIS-based verification** to establish eligibility while improving transparency, accuracy and user convenience.

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- **Initial Rollout:** The facility has been introduced at the Mundka-Bakkarwala Toll Plaza on Urban Extension Road-II (UER-II), Delhi, and will be expanded to other toll plazas across the country.
- **MargMitra Help Centre:**
 - **Single-Window Assistance:** It is an intelligent digital assistance platform integrated into the RajmargYatra app that enables commuters to access information, seek assistance and register grievances.
 - **Multilingual Support:** Users can type or speak their queries in 22 Indian languages.
 - **Key Services:** It provides instant assistance on FASTag recharge, KYC requirements, refund status, Annual Pass, Local Pass services and other frequently asked questions.
 - **Grievance and Road Safety:** Users can lodge complaints, track their status in real time, file appeals, check FASTag blacklisting status, view pending electronic notices, and report stalled vehicles or encroachments on National Highways.

Rhine River

News: A prolonged heatwave has caused several major European rivers, including the Danube, Rhine, Elbe, and Loire, to dry up, threatening drinking water supplies, inland navigation, trade, and recreational activities.

About Rhine River

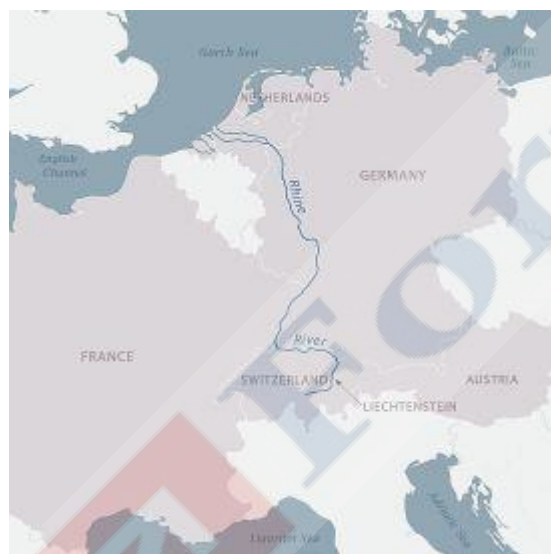


Figure 41. Source: World Atlas

- It is the **12th longest river in Europe.**
- It is **longest river in Western and Central Europe.**
- **Source:** It originates from two principal sources in Switzerland, including the **Anterior Rhine in Tomasee** and **Posterior Rhine in Tamin**, with both sources located in Graubunden.
- **Flows through:** It flows through **six countries: Switzerland, Germany, Austria, Liechtenstein, Germany, and the Netherlands.**
 - Additionally, the **Rhine Basin** drains **Belgium and parts of Italy and France.**
- **Length:** It covers a **distance of 1,230 km** from its source in Switzerland to its mouth in the Netherlands.
- **Falls into:** It empties into the **North Sea** at **Rotterdam (Netherlands).**
- **Tributaries:** Major tributaries of the Rhine River include the **Aare, Tamina, Moselle, Erft, Rein da Tuma, Plessur, Rotach, and Wiese rivers.**
- **Major cities along river:** It includes **Basel (Switzerland), Cologne, Bonn, Duisburg, Mainz, Leverkusen, and Neuss (Germany), Strasbourg (France), and Rotterdam and Utrecht (Netherlands).**
- It is one of **Europe's most important rivers**, playing a vital role in **industrial transport and production.** Nearly **20% of the world's chemical industry** is concentrated along its banks.

Key Facts About North Macedonia

News: President Droupadi Murmu addressed the India–North Macedonia Business Forum in Skopje during her official visit on July 21, 2026.

Key Facts About North Macedonia



Figure 42. Source – Britannica

- **Location:** North Macedonia is a landlocked country situated in the south-central Balkans in Southeast Europe.

- **Capital:** Skopje is its capital city.

- **Boundaries:** It is bordered by Kosovo and Serbia in the north, Bulgaria in the east, Greece in the south, and Albania in the west.

- **Name Dispute:** The country changed its name to the Republic of North Macedonia after signing the Prespa Agreement with Greece in June 2018.

- The name change removed Greece's veto and allowed the country to enter the North Atlantic

Treaty Organization (NATO) and pursue accession to the European Union (EU).

- **Climate:** It has a moderate continental climate influenced by both Mediterranean and continental climatic zones.
- **Relief:** North Macedonia is a predominantly mountainous country with rugged terrain, ancient metamorphic rocks, younger sedimentary deposits in the central region, and broad fertile valleys suitable for agriculture.
- **Major Rivers:** The Vardar River is the largest river and drains most of the country's territory.
- **Drainage:** About 90% of the country's area drains into the Aegean Sea through the Vardar River and its tributaries.
 - While the remaining areas drain towards the Adriatic Sea and the Black Sea basins.
- **Highest Peak:** Mount Korab, located on the Albanian border, is the country's highest peak.
- **Major Lakes:** The major lakes are Ohrid, Prespa, and Dojran.
 - Ohrid and Prespa are tectonic lakes, while these lakes are shared with neighbouring countries.
- **Flora:** It is covered with deciduous forests, coniferous forests, Pindus Mountains mixed forests, Balkan mixed forests, Rhodopes mixed forests, and Aegean sclerophyllous and mixed forests.
- **Fauna:** The major fauna includes wild pigs, wolves, bears, lynx, grasshoppers, and small lizards.

Journey of the Tiranga/India's National Flag

News: Seventy-nine years ago on July 22, 1947, the Constituent Assembly adopted the design of India's National Flag.

About Journey of the Tiranga/ India's National Flag



Figure 43. Source – DD News

- The **National Flag** embodies the **sacrifices of the freedom movement and the ideals of the Republic.**
- **Evolution During the Freedom Movement:**
 - **1904:** Sister Nivedita designed one of the earliest Indian flags with yellow and red colours, a Vajra symbol and a white lotus, representing India's cultural and spiritual nationalism.
 - **1906:** During the Swadeshi Movement, Sachindra Prasad Bose and Hemchandra Kanungo hoisted a tricolour at Parsee Bagan Square, Calcutta, featuring eight lotus flowers, "Vande Mataram", the sun and crescent moon.
- **1907:** Madam Bhikaji Cama unfurled the Saptarishi Flag at the International Socialist Congress in Stuttgart, Germany, the first known hoisting of an Indian national flag on foreign soil.
- **1917:** During the Home Rule Movement, Annie Besant and Bal Gangadhar Tilak introduced a flag with red and green stripes, the Union Jack, seven stars, and a crescent with a star.
- **1921:** Pingali Venkayya presented a flag design to Mahatma Gandhi at the AICC meeting in Bezwada (Vijayawada). Gandhi suggested adding a white band and the Charkha, forming the basis of the present Tricolour.
- **1931:** The Indian National Congress adopted the saffron-white-green tricolour with the Charkha, regarded as the precursor to the present National Flag.
- **Adoption of the National Flag**
 - **June 1947:** The Constituent Assembly appointed an ad hoc committee to recommend the National Flag. The committee retained the 1931 tricolour but replaced the Charkha with the Ashoka Chakra.
 - The Constituent Assembly adopted the present National Flag on July 22, 1947.
 - The Ashoka Chakra was taken from the Dharma Chakra on the Lion Capital of Emperor Ashoka at Sarnath.
 - The Tricolour became India's National Flag on August 15, 1947.
- **Symbolism**
 - The saffron band represents courage, sacrifice and selflessness.
 - White signifies peace, truth and integrity
 - Green stands for prosperity, growth and harmony with nature.
 - At the centre of the white band is the Ashoka Chakra, symbolising Dharma, justice and continuous progress.
 - Its 24 spokes underscore the importance of constant movement, ethical governance and the rule of law.
- **Constitutional and Legal Framework**
 - The Constitution does not prescribe the design or specifications of the National Flag.
 - Article 51A(a) makes it a Fundamental Duty to respect the National Flag.
 - Its display and protection are governed by:
 - [Flag Code of India, 2002](#)

- Emblems and Names (Prevention of Improper Use) Act, 1950
 - [Prevention of Insults to National Honour Act, 1971](#)
- **Dimensions and Specifications**
 - It is **manufactured as per Bureau of Indian Standards (BIS) specifications under the Flag Code.**
 - It maintains a **3:2 length-to-height ratio with three equal horizontal bands.**
 - The **Ashoka Chakra** has 24 equally spaced navy blue spokes.
 - Traditionally made only from hand-spun and handwoven khadi. **2022 amendments allowed machine-made flags** and flags made of polyester, cotton, wool, silk and bunting, besides khadi.
- **Display of the National Flag**
 - The **Flag Code of India, 2002 (effective January 26, 2002)** governs the display and use of the National Flag.
 - **2022 amendments** allowed the Tricolour to be **flown day and night**
 - The Flag may be **flown every day if displayed with dignity.**
 - **It must not:**
 - Touch the ground or water.
 - Be used as drapery, decoration or for commercial purposes.
 - When displayed with other flags, it must occupy the position of honour.
 - Damaged or soiled flags must be disposed of with dignity.
- **Punishable:** Disrespect to the National Flag is punishable under the **Prevention of Insults to National Honour Act, 1971.**

Sal (Shorea robusta) and Sal Borer Infestation

News: The Madhya Pradesh Forest Department has sought permission to fell nearly 150,000 sal trees after a severe sal borer infestation in Dindori district.

About Sal (Shorea robusta) Tree



Source – DTE

- **Sal (*Shorea robusta*)** is one of the **oldest and strongest tree species** and is an important forest tree of **northern India**.
- **Family:** It belongs to the **Dipterocarpaceae family**.
- **Distribution:** In India, Sal is naturally found in **Uttarakhand, the Terai region of Uttar Pradesh, Jharkhand, Odisha, Madhya Pradesh, Chhattisgarh, and West Bengal**.
 - The tree is also native to **Bangladesh, Nepal, Tibet, and across the Himalayan regions**.
- **Key Aspects:**
 - **Importance:** Sal provides **valuable timber, seed fat used in chocolate manufacturing**, and non-timber forest products that support rural livelihoods.
 - **Special Feature:** It is known as the “**Sentinel of the Forests**” because it can **survive for many years and withstand environmental changes**.
 - **Climate Requirement:** It grows well in a **warm and humid climate, light loamy soil with good drainage, and annual rainfall of about 1,000–3,000 mm**.
 - **Life Span:** The tree can live for nearly 100 years and does not require frequent watering or care.

About Sal Borer Infestation



Source – DTE

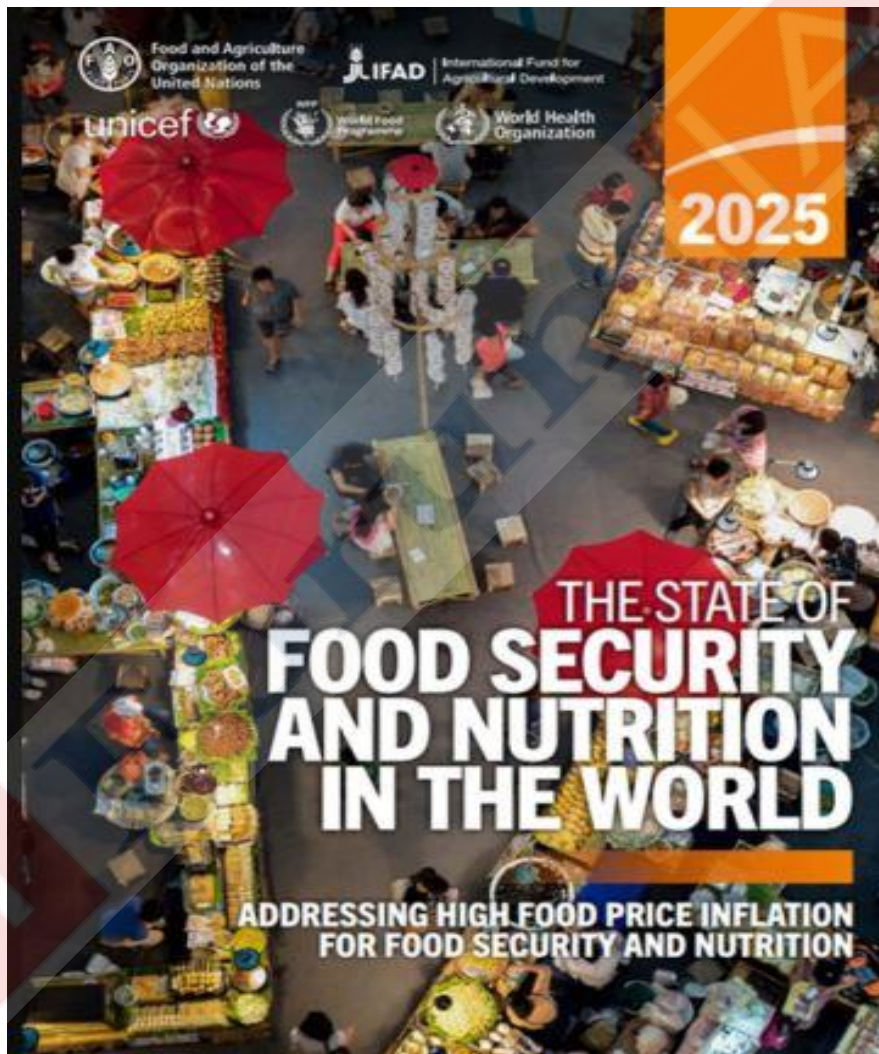
- **Caused by:** The infestation is caused by the **sal borer, a dark brown beetle of the order Coleoptera and family Cerambycidae**.
- **Nature of Damage:** It is the most **destructive insect pest of sal forests** and **damages both standing trees and freshly felled timber**.
- **Pest Outbreak Cyclical:** Major outbreaks occur naturally in a cycle of about 30 years, with the last major outbreak reported in 1997.
- **Symptoms of Infection:** **Sawdust-like material appears** around the trunks of infected sal trees.
 - The borer **first attacks weak and unhealthy trees**, while **adult insects are often seen gathering around household lights**.
- **India Current Scenario:**
 - **Region of Infection:** The current sal borer outbreak has affected **Dindori district and the Amarkantak region of neighbouring Anuppur district in Madhya Pradesh**.

- **Government Action:** The Madhya Pradesh Forest Department has sought **permission from the Central Government to fell 147,380 infested sal trees in Dindori**
- It is using the 'trap tree' method to control the spread of the pest.
- **Community Participation:** The Forest Department has set up **insect collection centres and is paying Rs 2 per insect.**

State of Food Security and Nutrition in the World 2026 report

News: The UN released the State of Food Security and Nutrition in the World 2026 report on July 21, 2026, highlighting India's nutrition progress and challenges.

About State of Food Security and Nutrition in the World 2026 Report



Source – WHO

- **State of Food Security and Nutrition in the World 2026 report is the UN system's flagship assessment of global hunger, food insecurity, and malnutrition.**

- **Produced by:** The report is **jointly produced by** the Food and Agriculture Organization (FAO), the International Fund for Agricultural Development (IFAD), the United Nations Children's Fund (UNICEF), the World Food Programme (WFP), and the World Health Organization (WHO).
- **Focused:** The 2026 report **focuses on the rising cost of healthy diets, the factors driving these trends, and policies to make nutritious food more affordable.**
- **Key Findings:**
 - **Global Findings:**
 - **Global Hunger:** Hunger **affected 7.8% of the world's population in 2025.**
 - **Food Insecurity:** Around **2.1 billion people** experienced moderate or severe food insecurity.
 - **Progress Towards SDG 2:** Global food security and nutrition improved slightly in 2025, but progress remains **insufficient to achieve the 2030 SDG 2 (Zero Hunger) target.**
 - **Healthy Diet Challenge:** Healthy diets remained **unaffordable for billions of people, especially in Africa**, where two-thirds of the population could not afford one.
 - **India's Findings:**
 - **Hunger Persists:** Despite this progress, about **142.5 million people** remained undernourished in 2023–25.
 - **Healthy Diet Affordability:** Around 520.1 million people (35.5% of the population) could not afford a healthy diet in 2025.
 - **Cost of Healthy Diets:** The cost of a healthy diet **increased by nearly 48% since 2017 and reached PPP \$4.11 per person per day in 2025.**
 - **Child Nutrition:** Child stunting declined to 32.9%, but wasting remained high at 18.7%.
 - **Rising Malnutrition:** Overweight among children, adult obesity, and anaemia among women continued to increase.

Key Facts About Panama

News: India and Panama held bilateral talks to deepen maritime cooperation in logistics, shipping, maritime security, skill development and digital transformation.

Key Facts About Panama



Source – Britannica

- **Location:** Panama is a **country in Central America**.
 - It is located on the **Isthmus of Panama**, a narrow bridge of land that connects **North America and South America**.
- **Borders:** It is bordered by **Costa Rica in the west and Colombia in the east**.
 - It is bounded by the **Caribbean Sea to the north** and the **Pacific Ocean to the south**.
- **Relief:** A **central mountain chain** divides the country into **Atlantic and Pacific-facing slopes**.
 - The **Panama Canal** passes through a **lowland depression**.
- **Highest peak:** **Barú** is the country's highest peak.
- **Major Rivers:** It has many short rivers, including the **Chagres, Tuira, Chucunaque, Chepo** and **Chiriquí Viejo** rivers.
- **Climate:** It has a **tropical climate** with heavier rainfall on the Caribbean side and a distinct dry season in many Pacific regions.
- **Rainforest:** It has the **largest rainforest in the Western Hemisphere outside the Amazon Basin**, and its tropical rainforests support rich biodiversity.

About Panama Canal

- **Location:** The Panama Canal is an **artificial waterway** located across the **Isthmus of Panama**.
 - It connects the **Atlantic Ocean through the Caribbean Sea with the Pacific Ocean**.
- **Built by:** The Panama Canal was built by the **United States between 1904 and 1914** and officially opened on **15 August 1914**.
- **Controlled by:** **Panama** has **owned and administered the canal since 1999** after the **transfer of control from the United States**.
- **Size:** It is **approximately 80 km long**, making it one of the two most strategic artificial waterways in the world (the other being the **Suez Canal**).
- **Structure:** It has a **series of locks that raise and lower ships by changing the water level**, allowing them to **pass across the continental divide**.

Hornbills

News: In July, four Malabar pied hornbills were spotted near agricultural fields along the Muvattupuzha river in Kannur district, Kerala, a first for the area.

About Hornbills

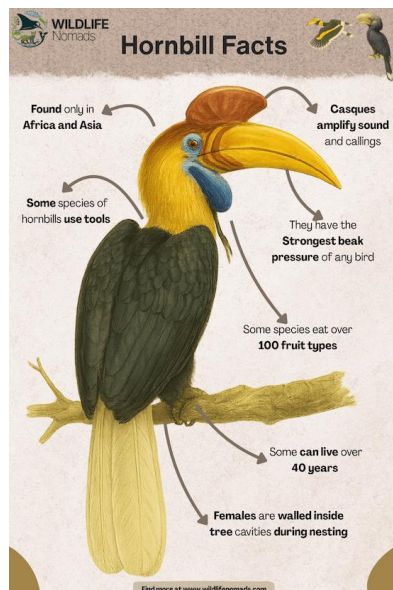


Figure 44. Source: Wildlife Nomads

- Hornbills are a **tropical birds** named for **their unusually large, curved bills**.
- **Scientific name:** They scientific name **Bucerotidae**.
- **Family:** They belongs to **Bucerotidae** family.
- **Habitat:** They inhabit the **canopy of tall evergreen forests**.
- **Distribution:** They are found largely in the **tropics of sub-Saharan Africa and south and south-east Asia**.
- **Characterstics:**
 - **Appearance:** They are easily **recognised by their long, curved bills topped with a casque**.
 - They nest in the **natural hollows of high-canopy trees**, where **females seal themselves inside tree cavities during breeding**.
 - **Diet:** They are one of the biggest **frugivores (fruit-eating birds)** in the **Asian rainforest**.
 - Around 40-70% of their diet consists of **large ficus fruits, figs, drupes and berries, usually red or black in colour**.
- **Ecological significance:** They are often known as '**farmers of the forest**' due to their propensity to **consume fruits and disperse seeds far and wide**.

- **Hornbills found in India:** They are **nine species of hornbill** found in India:

Species	Conservation status as per IUCN Red List of Species
Great hornbill (<i>Buceros bicornis</i>)	Vulnerable
<u>Malabar grey hornbill</u> (<i>Ocyrceros griseus</i>)	Vulnerable
<u>Malabar pied hornbill</u> (<i>Anthracosceros coronatus</i>)	Near Threatened
<u>Indian grey hornbill</u> (<i>Ocyrceros birostris</i>)	Stable population
Note: Most hornbill species in India are listed under Schedule I of the Wildlife (Protection) Act, 1972 , granting them the highest level of protection.	

Kharchi Puja

News: Tripura Chief Minister inaugurated the week-long Kharchi Puja, one of the state's largest and most significant religious and cultural festivals.

About Kharchi Puja



Source: HT

- It is **week- long, annual Puja** held at **old Agartala in Tripura**.
 - It is also called the '**Festival of 14 Gods**'.
- The word '**Kharchi**' is **derived from two Tripuri words** – '**khar**' or **kharta** meaning '**sin**' and '**chi**' or **si** meaning '**cleaning**'.
- It is observed on the **eighth day of the new moon in July or August every year**.
- **Deities worshipped:** The **Chaturdasa Devata** are the **14 ancestral deities of the Tripuri people**, central to the Kharchi Puja festival.
 - These deities, including **Shiva, Vishnu, Lakshmi, Saraswati, and Kartik**, are worshipped **with great reverence**.
- It is believed that **Tripura Sundari**, the presiding deity of Tripura, menstruates during **Ambubachi** (observed in June).
 - According to tradition, **the Earth becomes impure during this period, and Kharchi Puja is performed to ritually purify the Earth** and cleanse it of people's sins after the Goddess's menstruation ends.
- **Rituals performed during festivals:**
 - An important ritual of the festival is the **construction of the Chaturdasha Mandapa**, which **symbolises the royal palace of the Tripuri kings** and is constructed by **traditional artisans** who craft the structure out of **bamboo** and thatched roofs.
 - On the day of the main puja, the **idols of all the 14 deities from the ancient Ujjayanta Palace** are carried by the royal priest **Chantai** from the temple premises in Agartala to the **holy Saidra river** where they are **dipped in the holy waters** of the river and carried back to the temple.
 - The **idols** are then adorned with **different flowers, traditional attires, ornaments, and vermillion paste**.
 - After this, different varieties of **sweets are distributed** to the devotees as '**prasad**'.
 - The festival is marked by **vibrant folk dances, traditional music, and performances by local artistes**, showcasing Tripura's rich cultural heritage.
- **Cultural Fairs:** A **grand fair** is also **organized alongside the festival**, where cultural programmes and traditional performances are held throughout the days.

Rome Declaration for an Unarmed and Disarming Peace

News: The Rome Declaration for an Unarmed and Disarming Peace was signed on 16 July to seek a treaty restricting AI access to nuclear launches.

About Rome Declaration for an Unarmed and Disarming Peace

- **Rome Declaration for an Unarmed and Disarming Peace** is a declaration that calls for an international treaty to prevent autonomous AI systems from accessing nuclear launches.
- **Adopted during:** It was adopted by participants of the **Global Nobel Laureates Assembly**.
- **Inspired by:** It was inspired by Pope Leo XIV's encyclical **Magnifica Humanitas**.
 - The encyclical called for **protecting human dignity against technological overreach**.
- **Five Global Pillars:** The document mandates five actionable global pillars to avert existential technological risks.
 - **Meaningful Human Control:** It prohibits AI systems from making the final decision on the use of nuclear weapons.
 - **Digital Commons Model:** It promotes greater data sharing to understand existential threats from ungoverned AI.
 - **Responsible Development:** It requires developers to publish ethical frameworks and avoid uncontrollable autonomous AI systems.
 - **Internal Arsenal Audits:** It urges nuclear states to review systems against AI-driven cyber interference.
 - **Time-bound Disarmament:** It supports verified and irreversible elimination of nuclear weapons through negotiations.
- **Six Principles of the Declaration:** To ensure long-term stability, the signatories outlined a comprehensive roadmap.
 - **Disarming the Arms Race:** It promotes restraint to prevent an AI-driven arms race.
 - **Responsible Development:** It requires AI to follow international law and human rights.
 - **Responsible Use:** It encourages AI for human welfare while preventing harmful uses.
 - **Responsible Governance:** It supports coordinated oversight and verification of advanced AI.
 - **Responsible Leadership:** It promotes youth participation through education and intergenerational partnership.
 - **Nuclear Disarmament:** It seeks verifiable elimination of nuclear weapons and lower alert levels.
- **Warning:** AI-driven nuclear systems can shorten decision time, increase false alarms, and trigger unintended nuclear retaliation before human verification.

Pickaxe Mountain and Zagros Mountains

News: U.S. President Donald Trump threatened heavy strikes on Iran's fortified Pickaxe Mountain, which is linked to the country's nuclear programme.

About Pickaxe Mountain



Source – India Today

- **Location:** Pickaxe Mountain is a mountain in the Zagros Mountain Range located in Isfahan Province, Iran.
- It is also known as “Kuh-e Kolang Gaz La” in Iran.
- **Key Aspects:**
 - **Underground Nuclear Facility:** Pickaxe Mountain contains a fortified underground facility that is believed to be located more than 100 m beneath hard granite.
 - **Purpose:** It is being built for the production and assembly of advanced centrifuges.
 - **Infrastructure:** The facility has two pairs of tunnel entrances and a completed security wall.
 - **Strategic Importance:** The mountain's hard granite structure provides strong natural protection, making the underground facility difficult for bunker buster bombs to destroy

About Zagros Mountains



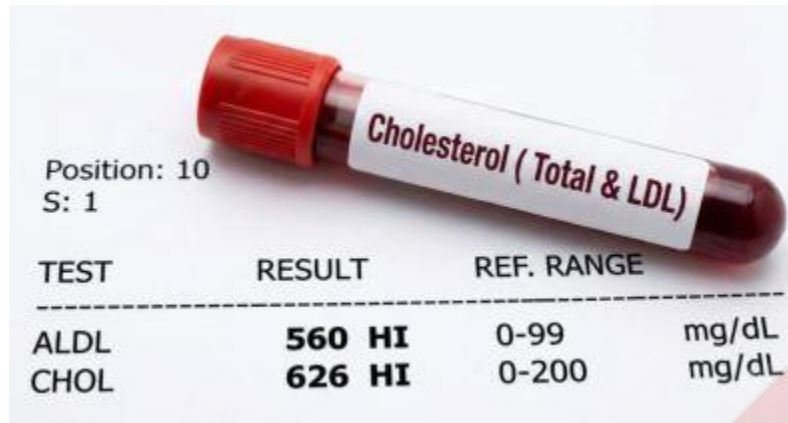
Source – Britannica

- **Location:** The **Zagros Mountains** extend from the **border areas of eastern Turkey and northern Iraq** across **Iran** to the **Strait of Hormuz**.
 - The range forms the **western boundary of the Iranian Plateau**.
- **Extent:** The mountain range extends for **about 1,600 km** and is **more than 240 km wide**.
- **Formation:** The range was formed by the **collision of the African Plate with the Eurasian Plate**, creating a **belt of folded mountains**.
- **Geology:** The **oldest rocks in the range** date back to the **Precambrian Period**.
 - While **limestone and shale from the Mesozoic Era and Paleogene Period** are the **most common rock types**.
- **Highest Peak:** **Mount Dena** is the highest peak.
- **Drainage:** The **western slopes** are **drained by perennial rivers**.
- **Flora:** The mountains are dominated by **Persian oak forests**, along with **Aleppo oak, Lebanon oak, pistachio, almond, hawthorn, nettle tree, and pear**.
- **Fauna:** Important wildlife includes the **Persian leopard, Syrian brown bear, bezoar ibex, striped hyena, and Persian squirrel**.

Lipfendra

News: The FDA has approved the first once-daily oral PCSK9 inhibitor, to lower LDL cholesterol in adults with high cholesterol and certain inherited cholesterol disorders.

About Lipfendra



Position: 10
S: 1

TEST	RESULT	REF. RANGE	
ALDL	560 HI	0-99	mg/dL
CHOL	626 HI	0-200	mg/dL

Source – IE

- **Lipfendra** is a **once-daily oral tablet** and is notable as the **first oral medication to block PCSK9**, a target previously addressed primarily through injectable therapies.
 - **Note: PCSK9** is a **protein** that **reduces the liver's ability to clear LDL or bad cholesterol** from the blood.
- **Who it's for:** It is **prescribed for adults with high cholesterol**, including those with a genetic condition called **heterozygous familial hypercholesterolemia (HeFH)**.
- **How it works:** It works by **blocking the action of a specific protein in the body** called **PCSK9**.
 - Normally, the **PCSK9 protein makes it harder for your liver** to remove low-density lipoprotein (LDL), or "bad" cholesterol, from your blood.
 - By blocking this protein, **Lipfendra (enlicotide) allows your liver to remove more LDL cholesterol** from your bloodstream.
 - As a result of this process, the **medication helps to lower your overall cholesterol levels**.
- **How it's used:** It is taken **once per day by mouth** and **should be used alongside a healthy diet and regular exercise**.
- It is **indicated in patients whose LDL cholesterol cannot be reduced sufficiently by lifestyle measures** and standard drugs alone or in whom the cardiovascular risk is high
- **Common Side Effects in HeFH:** For people with genetic high cholesterol (HeFH), the most common side effects are diarrhea and dizziness.

Tenzing Norgay National Adventure Award 2025

News: The Ministry of Youth Affairs & Sports invites online nominations for the Tenzing Norgay National Adventure Award (TNNAA) 2025.

About Tenzing Norgay National Adventure Award 2025



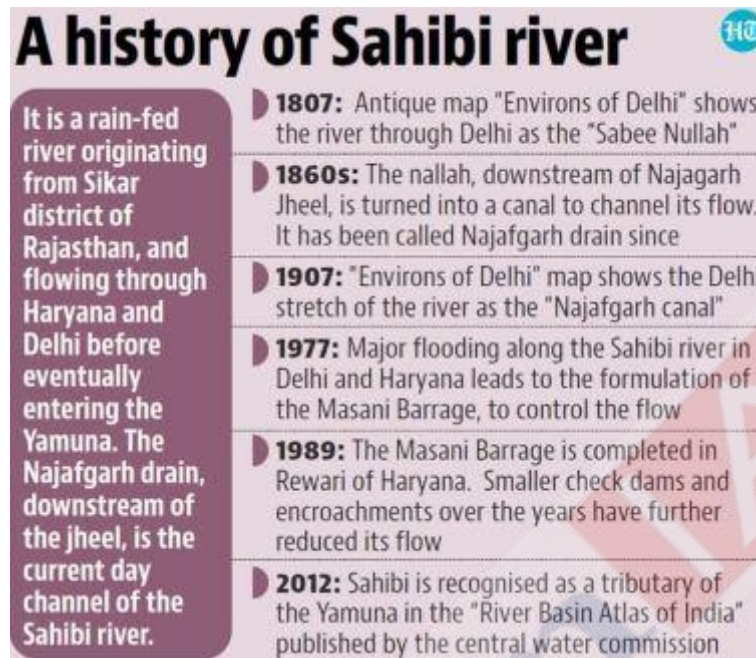
Source: News On Air

- It is **India's highest national honour** for outstanding achievements in the field of **adventure**.
- **Aim:** It was instituted to recognize exceptional accomplishments in the field of adventure and to inspire a spirit of endurance, courage, teamwork and leadership among the youth.
 - The award also seeks to encourage greater participation in adventure activities among young Indians.
- **Nodal Ministry:** The nodal ministry for the award is **Ministry of Youth Affairs & Sports**.
- **Categories:** It is presented in **four categories: Land Adventure, Water (Sea) Adventure, Air Adventure and Lifetime Achievement**.
- **Eligible:** Indian citizens with outstanding achievements in the field of adventure are eligible to apply.
- **Prizes:** It carries a **bronze statuette, a certificate, a blazer with a silken tie (or saree), and an award money of ₹15 lakh**.
 - The award **enjoys a status equivalent to the Arjuna Awards**.
- **Presented by:** It is presented by the **Government of India** along with the **National Sports Awards**.

Sahibi River

News: The Central Pollution Control Board (CPCB) informed the National Green Tribunal (NGT) about expanded Sahibi River monitoring under the Delhi-Yamuna Drain Monitoring Programme.

About Sahibi River



Source – HT

- The **Sahibi River** is also called **the Sabi River**.
- **Origin:** It originated from the **eastern slopes of the Saiwar Protected Forest hills in Sikar district, Rajasthan**.
- **Nature:** It is an **ephemeral river** because it flows mainly during the **monsoon season** and remains dry for the rest of the year.
- **Flows through :** It flows through **Rajasthan, Haryana and Delhi** before **joining the Yamuna at Wazirabad**.
- **Major Tributaries:** It's major tributaries includes the **Sota branch, the Krishnawati stream, Dohan river and the Indori river**.
- **Tributary of:** It meets the **Najafgarh drain in Delhi** before **joining the Yamuna River**.
- **Length:** It flows for **300 km** of which **157 km is in Rajasthan, 100 km is in Haryana and 40 km in Delhi**.
- **Environmental Concern:** After **entering Delhi, the Sahibi River becomes the Najafgarh drain**, which carries pollution from Haryana and waste from Delhi's colonies and industries.
- **Historical Significance:** It is often associated with the **ancient Drishadvati river** mentioned in the **Rigveda**.
 - Archaeological sites from the **Indus Valley Civilization** have been found along the banks of the **Sahibi and its tributaries**.
- **Revival Efforts:** Following NGT directions, **Rajasthan is preparing a Detailed Project Report (DPR)**, while **Haryana has conducted surveys and is trying to reclaim existing stretches**.

Portfolio Management Service (PMS)

News: SEBI has proposed a comprehensive review of the Portfolio Managers Regulations, 2020, to modernize Portfolio Management Services amid rapid industry growth.

About Portfolio Management Service (PMS)



Source – TrueData

- **Portfolio Management Service (PMS)** is a professional investment service where a qualified portfolio manager manages a client's investment portfolio.
- **Registration:** PMS providers must be registered under the SEBI (Portfolio Managers) Regulations, 2020.
- **Minimum Investment:** SEBI requires a minimum investment of ₹50 lakh per client.
- **Eligible Candidate:** PMS is meant for high net-worth individuals and other eligible entities such as NRIs, HUFs, and partnership firms, among others, subject to applicable rules.
- **Types of Portfolio Management Services (PMS):** PMS in India is classified into three primary categories based on the degree of control and investor involvement:
 - **Discretionary PMS:** The portfolio manager makes investment decisions on behalf of the investor.
 - **Non-Discretionary PMS:** The portfolio manager gives investment advice, but the investor makes the final investment decisions.
 - **Advisory PMS:** The portfolio manager provides advice, and the investor independently executes the transactions.
- **Key Features of PMS:**
 - **Professional Management:** A qualified portfolio manager manages investments in equity, debt, and other securities.
 - **Customized Portfolio:** Investment strategies are tailored to the investor's financial goals and risk profile.

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- **Direct Ownership:** Investors directly own the securities held in their portfolio.
- **Transparency:** PMS providers regularly update investors with performance reports, fees, and risk disclosures.

SEBI's Proposals for PMS

- **Wider Investment Options:** Portfolio managers may invest in overseas securities, to-be-listed securities, and limited unlisted debt securities.
 - It has also proposed allowing **discretionary portfolio managers to invest up to 10% of a client's assets under management (AUM)** in investment-grade unlisted debt securities.
- **Mutual Fund-Only Category:** A separate MF-PMS category has been proposed with lower investment and net worth requirements.
 - It has proposed reducing the **minimum client investment from ₹50 lakh to ₹25 lakh** and the **minimum net worth requirement for applicants from ₹5 crore to ₹2 crore.**
- **Operational Flexibility:** SEBI has proposed greater **flexibility in using derivatives for hedging and investment strategies, with exposure allowed up to 1.25 times the client's AUM.**
- **Lower Compliance Burden:** Smaller firms managing assets below ₹100 crore may not need a separate dealing room.

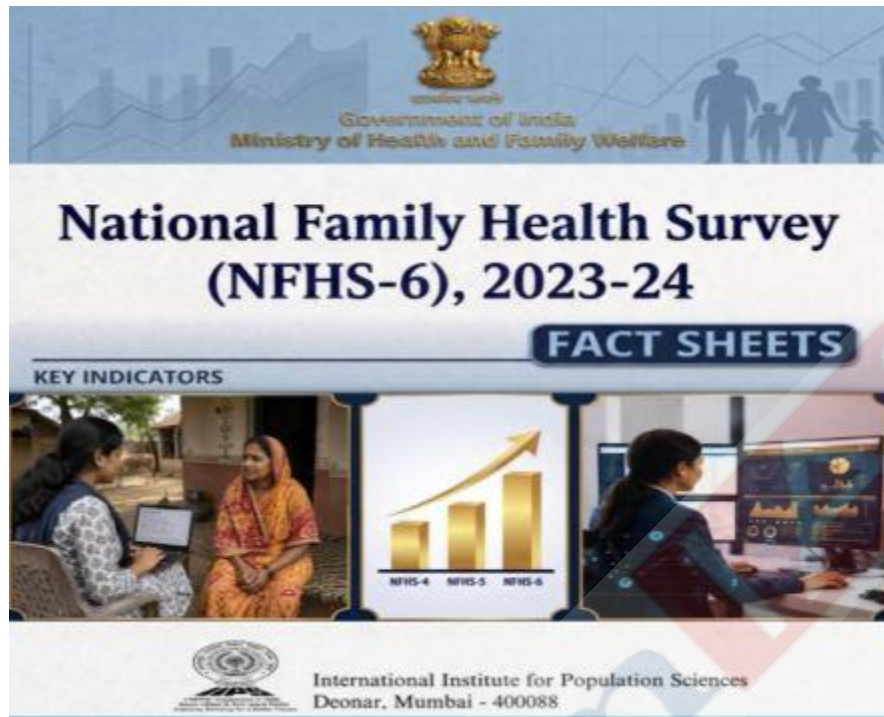
Potential Impacts on Investors

- **Greater Investment Choice:** Investors may receive broader and more diversified investment opportunities.
- **Improved Flexibility:** The proposals may provide more customized portfolio management while maintaining investor protection.

Key Highlights of National Family Health Survey (NFHS-6)

News: India recorded improvements in maternal and child health, while NFHS-6 reported a rise in lifestyle-related diseases among adults.

Key Highlights of National Family Health Survey (NFHS-6)



Source – PIB

- **Released by:** It is released by the **International Institute for Population Sciences (IIPS), Mumbai.**
 - IIPS is the **nodal agency** designated by the **Ministry of Health and Family Welfare (MoHFW)** for coordination and technical guidance.
- **Survey Period:** NFHS-6 was conducted **during 2023-24.**
- **Key features of NFHS-6:**
 - **Coverage:** The survey covered **6.79 lakh households** across **715 districts**, excluding **Manipur**.
 - **New Areas:** It included **Direct Benefit Transfer (DBT)**, **Self-Help Groups (SHGs)**, **digital literacy**, **digital financial transactions**.
 - It **expanded clinical, anthropometric, and biochemical (CAB) testing**, including **HIV testing**.
 - **Technology:** It **fully adopted Computer-Assisted Personal Interviewing (CAPI)** for real-time data validation and improved accuracy.
- **Key Findings of NFHS-6 (Comparison between NFHS-5: 2019-21 and NFHS-6: 2023-24)**
 - **Maternal Health**
 - **Institutional Deliveries:** Institutional deliveries **increased from 88.6% to 90.6%.**
 - **Antenatal Care (ANC):** ANC coverage **increased from 92.6% to 95.9%**, while **mothers receiving at least four ANC visits increased from 58.5% to 65.2%.**

- **Skilled Birth Attendance:** Births attended by skilled health personnel increased from 89.4% to 91.3%.
- **Family Planning**
 - **Contraceptive Prevalence Rate (CPR):** CPR increased from 66.7% to 69.1%.
 - **Unmet Need:** The unmet need for family planning declined from 9.4% to 8.5%.
 - **Total Fertility Rate (TFR):** TFR remained stable at 2.0, which is below the replacement level of 2.1.
- **Child Health and Nutrition**
 - **Full Immunisation:** Coverage among children aged 12–23 months increased from 83.8% to 87.1%.
 - **Vaccination:** Coverage of the second dose of the measles-containing vaccine increased from 58.6% to 71.8%,
 - while rotavirus vaccine coverage increased from 36.4% to 85.4%.
 - **Nutrition:** Stunting declined from 35.5% to 29.3%,
 - while severe wasting declined from 7.7% to 5.2% among children under five years.
- **Lifestyle Diseases**
 - **Obesity:** 30.7% of women and 27.3% of men aged 15–49 years were overweight or obese.
 - **High Blood Sugar:** The proportion of adults with high blood sugar increased from 13.5% to 17.8% among women and from 15.6% to 20.9% among men above 15 years of age.
 - **Hypertension:** The proportion of adults with hypertension declined from 21.3% to 19.4% among women and from 24.0% to 22.1% among men above 15 years of age.

About National Family Health Survey (NFHS)

- **National Family Health Survey (NFHS)** is a large-scale, multi-round survey conducted on a representative sample of households across India.
- **Origin:** It was launched in 1992–93.
- **Objective:** It provides district-level data on health and family welfare for evidence-based policymaking and programme implementation.

United Nations Commission on International Trade Law (UNCITRAL)

News: India hosted an international conference marking the 60th anniversary of UNCITRAL, where EAM S. Jaishankar highlighted the need for predictable and harmonised legal frameworks.

About United Nations Commission on International Trade Law (UNCITRAL)



Source – UNCITRAL

- **United Nations Commission on International Trade Law (UNCITRAL)** is the **legal body of the United Nations system** in the field of **international trade law**.
- **Establishment:** It was **established by the UN General Assembly in 1966** through **Resolution 2205(XXI) of 17 December 1966**.
- **Mandate:** Its mandate is to **promote the progressive harmonization and unification of the law of international trade** by reducing legal obstacles to trade.
- **Membership:**
 - **Composition:** The Commission is **composed of 70 Member States elected by the UN General Assembly**.
 - **India** is a **founding member** of this organization.
 - **Term of Members:** Members are **elected for six-year terms**, and the **terms of half of the members expire every three years**.
- **Key Aspects of UNCITRAL:**
 - **Core Legal Body:** It serves as the **main UN legal body for international trade law and commercial law reform**.
 - **Law Reform:** It **develops model laws, conventions, and legal standards to modernize and harmonize international trade law**.
 - **Sustainable Development:** It **supports the Sustainable Development Goals** by promoting coordination, cooperation, and the rule of law in international trade.
 - **Global Participation:** It follows an inclusive working process by **allowing non-member States and international organizations to participate as observers in its discussions**.
 - **Annual Sessions:** It holds its **annual sessions alternately at the United Nations Headquarters in New York and the Vienna International Centre in Vienna**.

East Asia Summit

News: External Affairs Minister S. Jaishankar, at the 21st East Asia Summit in Manila, stressed safe maritime channels and called for dialogue on regional conflicts.

About East Asia Summit (EAS)



Source – ASEAN

- **The East Asia Summit** is a **leader-led forum** where **Indo-Pacific partners** discuss **regional political, security, and economic challenges**.
- **Establishment:** It was **established in 2005** with the convening of its **first Summit in Kuala Lumpur, Malaysia**
- **Current Summit (2026):** The **21st East Asia Summit** was held in **Manila, the Philippines**.
- **Member:** It has **19 members**, comprising **11 ASEAN** (Association of Southeast Asian Nations) **countries and 8 Dialogue Partners**.
 - **ASEAN Member States:** Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, Vietnam, and Timor-Leste.
 - **Timor-Leste became the latest member** of the EAS on 26 October 2025.

- **Dialogue Partners:** The eight Dialogue Partners are Australia, China, **India**, Japan, New Zealand, the Republic of Korea, the Russian Federation, and the United States.
- **Objective:** It aims to **promote peace, stability, and economic prosperity through dialogue and cooperation** on strategic, political, and economic issues.
- **Other features:**
 - **ASEAN Centrality:** ASEAN leads the forum, and its chair rotates annually among ASEAN member states.
 - **Annual Meetings:** The forum holds an **annual Leaders' Summit along with Foreign Ministers' and Economic Ministers' Meetings**.
 - **Area of cooperation:** It has identified **16 streams of work**, namely (1) Peace and Security; (2) Sustainable Development; (3) Climate, Environment and Energy Cooperation; (4) Education Cooperation; (5) Finance; (6) Health, including Pandemic Diseases; (7) Cooperation on Natural Disaster Management; (8) Cooperation on ASEAN Connectivity; (9) Economic Cooperation and Trade; (10) Poverty Alleviation; (11) Food Security; (12) Maritime Cooperation; (13) Strengthening EAS Institutional Capacity; (14) Tourism Cooperation; (15) Advancement and Empowerment of Women and Youth Participation; (16) Others as identified by Leaders and Ministers.

BHAVYA Rasayan Scheme

News: The Union Cabinet has approved the Bharat Audyogik Vikas Yojana Rasayan (BHAVYA Rasayan) scheme for the establishment of three dedicated chemical parks across the country.

About BHAVYA Rasayan Scheme

Source – DD News

- **Full form:** Bharat Audyogik Vikas Yojana Rasayan or BHAVYA – Rasayan Scheme
- **Aim:** The scheme is devised for the **establishment of three dedicated chemical parks** across the country, aiming to **strengthen India's chemical manufacturing ecosystem**, attract **investments** and enhance **global competitiveness**.
- It was announced in the **Union Budget of FY 2026–27**.
- **Timespan:** The scheme would run for a period of **5 years from FY 2026-27 to FY 2030-31**.
- **Financial Outlay:** The Scheme will have a **total financial outlay of Rs. 3,030 crore**, with **Rs. 3,000 crore** towards meeting the **cost of establishing the Common Infrastructure Facilities and Basic Utilities** inside the park and **Rs. 30 Crores** as **administrative expenditure**.
 - The **Centre** would provide a grant of up to **Rs.1,000 crore per park**.
 - This will be **subject to minimum contribution of Rs.500 crore** by the concerned **State Government**.
- **Other Features**
 - The **Centre will facilitate development of three** dedicated Chemical Parks by the **State Governments** under **Challenge Route**.
 - **Each such park** will have a **minimum contiguous area of 8 sq. km.** (minimum 2,000 acres) of **encumbrance-free land**.
 - These parks will provide **plug-and-play infrastructure**, in the form of **Common Infrastructure Facilities and Basic Utilities** for the chemical industry such as –
 - Common Effluent Treatment Plant (CETP),
 - Treatment, Storage, and Disposal Facility (TSDF),
 - Water supply and distribution systems,
 - Solvent recovery and distillation facilities,
 - Steam generation and distribution network,
 - Interconnected pipeline network,
 - Logistics and warehousing facilities
- **Future Benefits**
 - It will **promote development of the Chemical industry** along the whole **value chains**, leading to **lower logistics cost**.
 - It will lead to **enhanced cost competitiveness** and will make the Indian Industry **globally competitive**.
 - It will help the Indian Chemical industry better **integrate in Global Value Chains** leading to **greater exports** and **higher import substitution**.
 - It will ensure **better compliance management** with **environmental regulations**, thereby promoting development of industry in **eco-friendly manner**.

- Development of Chemical sector will lead to a **cascading effect** through enhanced **development of downstream sectors** of the economy as well, helping achieve the goal of **Viksit Bharat @ 2047**.

Fields Medal 2026

News: The International Mathematical Union announced the 2026 Fields Medal winners at the International Congress of Mathematicians held in Philadelphia on July 23.

About Fields Medal 2026



Figure 45. Source – IMU

- **The Fields Medal** is awarded to recognize **outstanding mathematical achievement** for existing work and for the promise of future achievement.
- **Awarded by:** The fields medals are awarded by the **International Mathematical Union (IMU)**.
- **Funded by:** It is funded by a **trust established by J.C. Fields at the University of Toronto**.
- **Origin:** The Fields Medal was **first awarded in 1936**.
- **Frequency:** It has been awarded **every four years since 1950**.
- **Nobel Prize of Mathematics:** It is regarded as the highest professional recognition in mathematics and is considered equivalent to the Nobel Prize.
- **Eligibility:** Only **mathematicians below 40 years of age are eligible**.
- **Prize:** Each winner receives a **gold medal and 15,000 Canadian dollars**.

- **Key Winners of the 2026 Fields Medal:**

- **Yu Deng (University of Chicago):**
 - Yu Deng received the Fields Medal for his **work in partial differential equations and mathematical physics**.
 - He established rigorous **mathematical foundations** for the **Boltzmann equation, wave kinetic equations, and probabilistic approaches to nonlinear Schrödinger dynamics**.
- **Hong Wang (New York University and Institute for Advanced Scientific Studies, France):**

- Hong Wang was recognized for major **breakthroughs in harmonic analysis and geometric measure theory**.
- Her work advanced the **local smoothing conjecture, Fourier restriction, the Kakeya problem, Falconer distance sets, and Furstenberg sets**.
- She is the **third woman to ever win the Fields Medal in its 90-year history**.
- **Jacob Tsimerman (University of Toronto):**
 - Jacob Tsimerman received the medal for **developing o-minimality as a fundamental method in arithmetic and complex algebraic geometry**.
 - He also contributed to the **proof of major conjectures, including the Griffiths conjecture and the André-Oort conjecture**.
- **John Pardon (Stony Brook University):**
 - John Pardon was honoured for his contributions to **symplectic geometry, geometry, and topology**.
 - He introduced **new approaches to virtual fundamental cycles** and made significant **advances in knot theory and group actions on three-manifolds**.

High-Powered Task Force for Education Sector

News: Prime Minister Narendra Modi announced a High-Powered Task Force to reform the examination system and improve the credibility of future competitive examinations.

About High-Powered Task Force for Education Sector



Source – IE

- **High-Powered Task Force for Education Sector** is a **six-member panel** constituted to **recommend technology-driven and structural reforms in India's examination system**.

- **Announced by:** Prime Minister Narendra Modi announced the constitution of the High-Powered Task Force.
- **Led by:** The task force is chaired by Nandan Nilekani.
- **Objective:**
 - **Examination Reforms:** The task force will recommend reforms to make examinations trustworthy, transparent, and credible.
 - **Technology-driven System:** It will promote maximum use of technology, including digital infrastructure, Artificial Intelligence, encryption, authentication, and monitoring.
 - **Institutional Improvements:** It will recommend structural reforms in the National Testing Agency (NTA) and improve governance, accountability, operational efficiency, and leak-proof examination processes.
- **Panel Composition:**
 - **Nandan Nilekani:** He is the Infosys co-founder and the architect of Aadhaar, and he chairs the task force.
 - **S. Somanath:** He is the former Chairman of the Indian Space Research Organisation (ISRO).
 - **Tapan Deka:** He is the former Director of the Intelligence Bureau (IB).
 - **V. Kamakoti:** He is the Director of the Indian Institute of Technology (IIT) Madras.
 - **Anita Karwal:** She is the former Education Secretary.
 - **Amrit Lal Meena:** He is a logistics expert and a former civil servant.

Parallel Legislative Action

- **Public Examinations (Prevention of Unfair Means) Amendment Bill, 2026:** The proposed Bill seeks to strengthen the legal framework against examination fraud.
 - The Bill proposes higher punishment and enhanced monetary penalties for paper leaks and organised malpractice.
- **Fast-Track Courts:** The government has announced fast-track courts to ensure speedy prosecution of offences related to examination paper leaks.

Corporate Mitra Scheme

News: The Indian Institute of Corporate Affairs organised an awareness webinar on the Corporate Mitra Scheme in Arunachal Pradesh.

About Corporate Mitra Scheme



Source – MKPS Ass.

- **Corporate Mitra Scheme** is a flagship initiative to **create Corporate Mitras for supporting** Micro, India's Micro, Small and Medium Enterprises (**MSMEs**).
- **Launched by:** The **Ministry of Corporate Affairs** announced the scheme in the **Union Budget 2026-27**.
- **Implementation:** The scheme will be **implemented through the SWAYAM Plus portal**.
- **Aim:** The scheme aims **to strengthen the MSME ecosystem** through trained para-professionals, reduce compliance burden, improve ease of doing business, and create employment opportunities.
- **Key features:**
 - **Trained Support:** It will provide **affordable support in regulatory compliance, GST, accounting, financial management, cost accounting, secretarial services, and governance**.
 - **Training Structure:** Candidates will complete **6 months of academic learning followed by 6 months of on-the-job training with firms**.
 - **Wider Reach:** It will mainly **work in Tier-II and Tier-III cities** to improve access to professional services.
 - **Eligibility:** **Graduates and final-year graduation students up to 30 years of age** are eligible to apply for the scheme.
 - **Benefits:** Eligible **women candidates** and **applicants from the North Eastern Region, Himalayan Region, Andaman & Nicobar Islands, and Lakshadweep** will receive a **50 per cent course fee concession**.
 - During on-the-job training, **candidates will also receive a minimum stipend** as per the applicable norms of the Institute of Chartered Accountants of India (ICAI), the Institute of Company Secretaries of India (ICSI), or the Institute of Cost Accountants of India (ICoAI).

Unjha Jeera

News: Unjha Jeera from Gujarat has officially received the Geographical Indication (GI) tag.

About Unjha Jeera



Source: Better India

- It belongs to **Unjha region**, located in **Mehsana district, Gujarat**.
 - It is home to **one of Asia's largest spice markets and serves as a major trading hub for cumin**.
- **Features:**
 - It is particularly known for its **large seeds, stemless quality and higher essential oil content**.
 - It releases a **specific earthy aroma when added to tadka**.
- **Note:** **India** is the **world's largest producer and exporter of cumin**, while **Gujarat** is among the country's **leading cumin-producing states**, making Unjha a key centre in the global cumin trade.
- **Recognition:** It is given a **Geographical Indication (G.I.) tag in Gujarat**.
- **Tussle over G.I. Tag:** Rajasthan farmers argue that **Unjha is primarily a trading and aggregation centre rather than a major production hub for cumin (jeera)**.
 - Farmers contend that the **GI should be linked to the place of production**, not merely the place where the crop is marketed.
 - **Price Concerns:** Rajasthan farmers fear that the **GI tag may allow traders to market Unjha Jeera as a premium product**, potentially reducing the prices received for cumin produced in Rajasthan.

Sone River

News: Bihar and Jharkhand are set to sign an agreement on the sharing of Sone River waters, resolving a long-pending dispute that has persisted since the creation of Jharkhand in 2000.

About Sone River



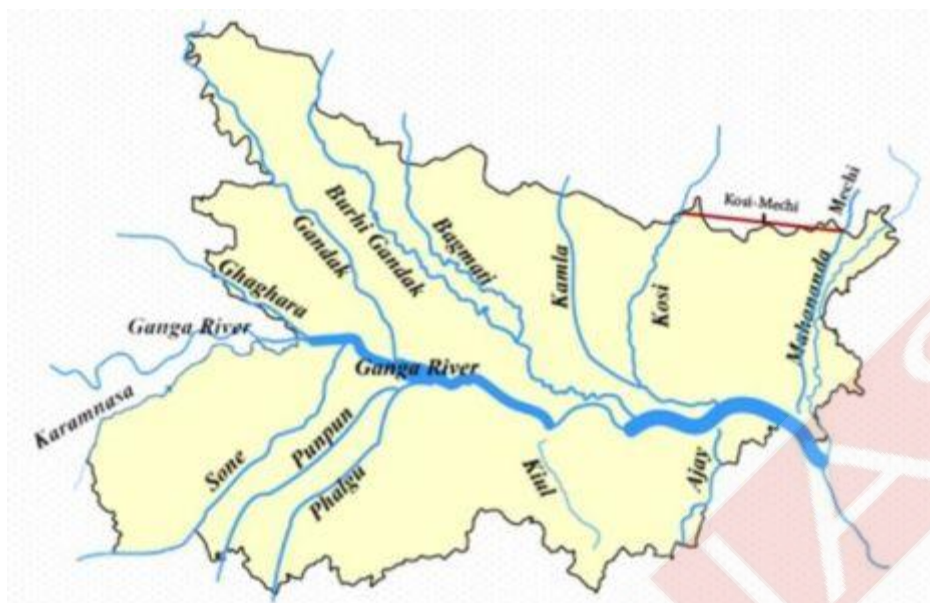
Figure 46. Source: Research Gate

- Sone River is a **perennial river**.
- It is also called “**Hiranyavaha**” because of its **golden coloured sand**.
 - It was believed that the river **carried gold dust** in its flow.
- **Origin:** It originates in the **Amarkantak hills of the Maikal Range in Madhya Pradesh**.
- **Course of river:** It flows in a north-northwest direction till **Bansagar reservoir**, after which it changes its course sharply eastwards, **flowing parallel to Kaimur Range**, and joins **Ganga River 30 km upstream of Patna in Bihar**.
 - It flows through the **Deccan Peninsula and Gangetic Plains biogeographic zones**.
 - The upper stretch of the Son River passes through the **tiger landscape of Central India**.
- **Valley:** The Sone River valley is **geologically regarded as a continuation of the Narmada River valley** towards the southwest.
 - The valley is bordered by the **Kaimur Range in the north and the Chota Nagpur Plateau in the south**.
- **Total length:** Its total length is **784 km**.
- **States through which it flows:** It flows through **Madhya Pradesh, Uttar Pradesh, Jharkhand and Bihar**.
- **Tributary of:** It is a tributary of the **river Ganga**.
- **Tributaries:** Its tributaries are **Banas, Gopad, Rihand, Kanhar and North Koel**.
- **Species associated:** It supports populations of **key indicator species such as gharial and mugger**.
 - **Seven species of turtles**, **Red-crowned roofed turtle**, **three-striped roofed turtle**, **crowned river turtle**, **Indian tent turtle**, **Indian narrow-headed softshell turtle**, **Ganges softshell turtle**, and **Indian flapshell turtle** have been reported from the River.
- **Dams constructed on river:** The **Bansagar Dam (Madhya Pradesh)**, **Rihand Dam (Uttar Pradesh)**, and **Indrapuri Barrage (Bihar)** are the major dams and water infrastructure projects built on the Sone River.

Mechi River and Kosi-Mechi Intra-State Link Project

News: The Kosi-Mechi Intra-State Link Project received PMKSY-AIBP support, with completion targeted by March 2029 and ongoing canal remodelling work.

About Mechi River



Source – DD News

- **Origins:** The Mechi River originates in the **Mahabharat Range** (Mahabharat Lekh) of **Nepal** as a **perennial river**.
- **Course:** It flows through **eastern Nepal** and the **Darjeeling district** of **West Bengal** before entering **Bihar**.
- **Confluence:** The Mechi River **joins the Mahananda River** in **Kishanganj district** of **Bihar**.
- **River System:** It is a tributary of the Mahananda River, **which ultimately drains into the Ganga**.
- **Key Features:**
 - **Braided Channel Nature:** The Mechi River **often develops braided channels because of heavy sediment load** and variable discharge during the monsoon.
 - **Alluvial Fan Formation:** The river forms **well-developed alluvial fans in the plains by depositing fertile sediments**, which **support agriculture** but also increase flood vulnerability.
 - **Flood-Prone Behaviour:** Heavy monsoon rainfall causes flooding and waterlogging in low-lying areas.

About Kosi-Mechi Intra-State Link Project

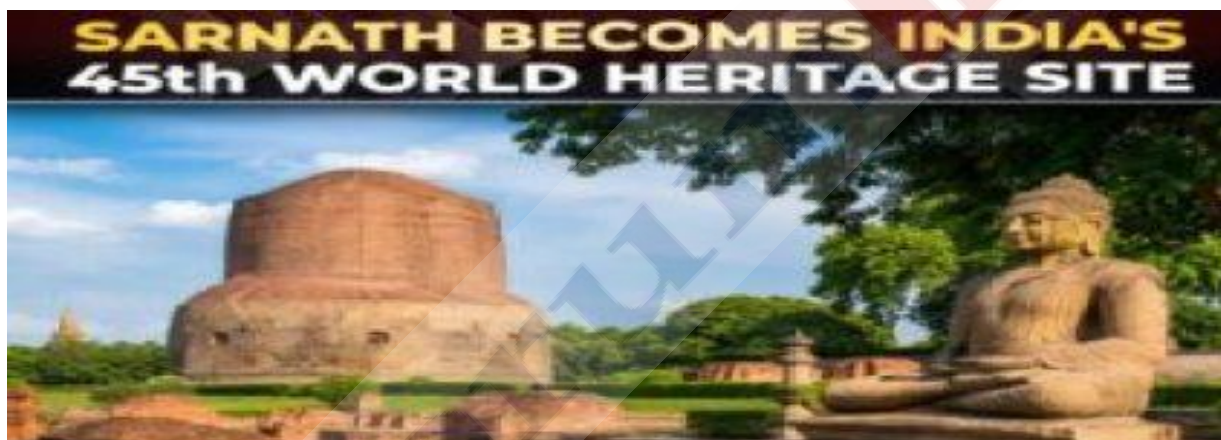
- **The Kosi-Mechi Intra-State Link Project:** It is a vital **water management initiative in Bihar** that transfers **surplus water from the Kosi River to the Mechi River**.
- **National Plan:** It forms part of the **National Perspective Plan for Interlinking of Rivers**.
- **Ministry involved:** The project operates **under the Ministry of Jal Shakti**.
- **Implemented by:** The project is **supervised by the National Water Development Agency**.

- **Objective:** It transfers surplus monsoon water from the Kosi River to the Mechi River to improve irrigation, strengthen water management, and support agriculture.
- **Key Aspects**
 - **PMKSY-AIBP Support:** The project has been included under the Pradhan Mantri Krishi Sinchayi Yojana–Accelerated Irrigation Benefit Programme (PMKSY-AIBP).
 - **Project Cost:** The project has a total estimated cost of ₹ 6,143.22 crore, out of which ₹3,652.56 crore has been sanctioned as Central assistance to Bihar.
 - **Project Progress:** The project is scheduled for completion by March 2029.

Sarnath Joins UNESCO World Heritage List

News: Sarnath, where Lord Buddha delivered his first sermon, has been inscribed on UNESCO's World Heritage List during its 48th Committee session.

About Sarnath Joins UNESCO World Heritage List



Source – ET

- Sarnath has become India's 45th and Uttar Pradesh's fourth UNESCO World Heritage Site.
- **Tentative List:** It has remained on UNESCO's Tentative List since 1998.
- **Location:** It is a sacred city located in north-east of Varanasi near the confluence of the Ganges and the Varuna rivers in Uttar Pradesh, India.
- **Discovered By:**
 - **Rediscovery:** The rediscovery of Sarnath is credited to the workers of Jagat Singh, the diwan of Raja Chait Singh of Benares, in 1799.
 - **Identification:** Jonathan Duncan reported the findings, which led to later excavations.

Alexander Cunningham identified Sarnath as the place of Lord Buddha's first sermon in 1836.
 - **Scientific Excavation:** Friedrich Oertel carried out the first systematic and scientific excavation of Sarnath during 1904–05.

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- **Historical and Religious Significance:**

- **Ancient Name:** Ancient **Buddhist scriptures** describe **Sarnath Rishipattana**, meaning the “place of sages.”
- **First Teaching of Dharma:** Sarnath is **one of the four most important Buddhist pilgrimage sites** because **Gautama Buddha** taught the Dharma for the first time here.

The **other three** most important pilgrimages are **Lumbini** (the birthplace of Gautama Buddha), **Bodh Gaya** (the location of Lord Buddha’s enlightenment), and **Kushinagar** (the location of Buddha’s parinirvana).

- **Dhammacakkappavattana Sutta:** It is also said that **Lord Buddha’s Dhammacakkappavattana Sutta** was written in Sarnath.

- **Architectural Marvels of Sarnath**

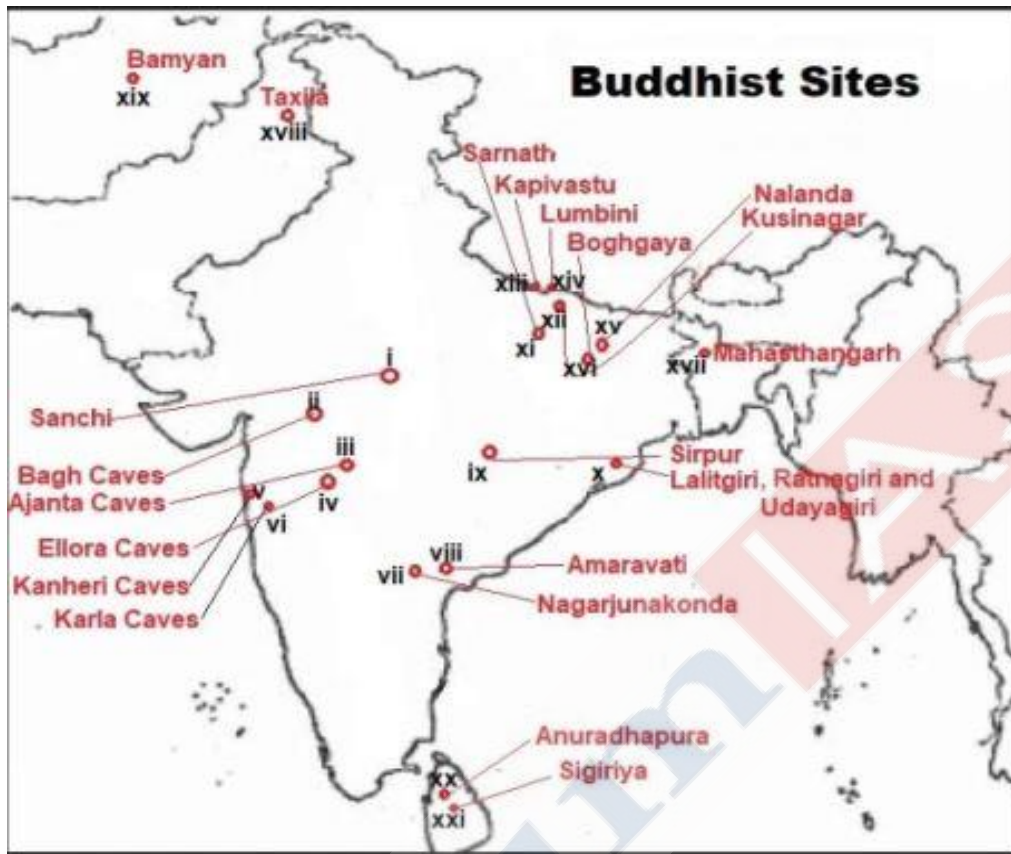
- **The Dhamekha Stupa:** A conspicuous structure believed to be the **dwelling place of Pañcavaggiya monks** after leaving Lord Buddha.

It was **constructed by Emperor Ashoka**.

It is considered the sacred ground where the voice of Buddhism first resonated.

- **The Chaukhandi Stupa:** Presently undergoing reconstruction, this stupa marks the site **where Buddha met his first disciples**.
- **The Ashoka Pillar (Lion Capital of Ashoka):** Despite facing fragmentation during Turk invasions, this pillar is an enduring imperial patronage symbol.
 - Its **emblem** also graces the **Indian flag**.
- **Monastery around Dhamekha Stupa:** Adding to the spiritual ambiance, the monastery around the **Dhamekha Stupa** offers a **glimpse** into the **communal life of the monks**.
- **Mulagandhakuti Vihara:** This modern temple stands where **Lord Buddha** is **believed to have spent his first rainy season in meditation**.
- **Sarnath Archaeological Museum:** Housing a vast **collection of artifacts**, it provides a visual narrative of Sarnath’s historical and cultural evolution.

Other Important Sites Related to Buddha



Source – IE

- **Lumbini (Nepal):**

- **Birthplace of Buddha:** Lumbini is the **birthplace** of Lord Buddha and is located in the **Rupandehi district of Nepal**.
- **Ashokan Legacy:** Emperor Ashoka erected a **commemorative pillar** at the site.
- **Rediscovery:** It was **rediscovered in 1896**.
- **UNESCO Recognition:** It was inscribed as a **UNESCO World Heritage Site in 1997**.

- **Bodhi Gaya (Bihar):**

- **Place of Enlightenment:** It marks the place where **Prince Siddhartha attained enlightenment and became the Buddha**.
- **Ashokan Contribution:** Emperor Ashoka built a **simple shrine** at the site in the **3rd century BCE**.
- **Present Temple:** The **present pyramidal temple** dates to the **6th century CE** during the **Gupta period**.
- **Temple Complex:** The complex includes a **descendant of the original Bodhi tree** and an **intricately carved tower**.
- **UNESCO Recognition:** The **Mahabodhi Temple Complex** is a **UNESCO World Heritage Site**.

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- **Kushinagar (Uttar Pradesh):**

- **Mahaparinirvana:** Kushinagar is the place where Lord Buddha attained **Mahaparinirvana** (ultimate salvation).
- **Important Monuments:** The Mahaparinirvana Temple houses a **reclining statue of Buddha**.
 - **The Ramabhar Stupa** is believed to be **Buddha's cremation site**.
- **Historical Importance:** Kushinagar was the **capital** of the ancient **Malla republic**, one of the 16 Mahajanapadas.
- **Excavation:** **Alexander Cunningham** and **A.C.L. Carlleyle** excavated the site in **1876** and discovered the main stupa and the **6-m-long reclining Buddha statue**.
- **Unique Feature:** It is one of the very few places in India where **Buddha is depicted in the reclining form**.

Chandipura Virus

News: Two children from Rajasthan have died in recent days after testing positive for the Chandipura virus.

About Chandipura Virus

UNDERSTANDING CHANDIPURA VIRUS

Illustration: Ashok Adepal

HISTORY: In 1966, two doctors at Pune's Virus Research Centre (VRC) isolated a virus of the vesiculovirus family that is also behind diseases like stomatitis and causes fever, chills and muscular pain. As the patient was from Chandipura near Nagpur, it got the name Chandipura virus (CPHV). This virus has so far only been reported in India.

WHAT CAUSES IT: While mosquitoes have also been identified as possible vectors, its transmission is mainly caused by sandflies. When a female sandfly bites humans, the virus enters the patient's bloodstream. Sandflies are found in many parts of Asia, Africa, central and South America apart from India.

WHERE DO SANDFLIES LIVE AND BREED: Experts in Gujarat say that as seen in past outbreaks, sandflies proliferate in crevices of mud houses soon after the first spell of rain when there is humidity in the ambient air. Other factors such as water accumulation in the vicinity and in open spaces causes outbreaks in rural areas.

IS IT CONTAGIOUS? WHAT ARE THE TREATMENT OPTIONS: Experts say CPHV does not spread through contact with the patient. Its spread is limited to the geographic areas with sandflies or other vector populations. Treatment is symptomatic to sustain the patient's vitals and treating encephalitis. Patients are generally put on ventilator support.

SYMPTOMS: Experts in the city say that unlike in other viral infections, in CPHV, health deteriorates rapidly, in 24-48 hours

- Very high-grade fever above 102 degrees fahrenheit in the first 24 hours
- Vomiting/diarrhoea
- Severe headache
- Delirium in 24 to 48 hours
- Convulsions and fits
- Malfunction of internal organs such as liver

Doctors say that any fever that lasts over 24 hours should be taken seriously and medical help should be sought. Full-sleeved clothes should be worn to reduce the risk of insect bites

OUTBREAKS IN INDIA: The year 2003 saw a major outbreak in parts of Andhra Pradesh and Maharashtra. Gujarat saw spikes in cases in 2014, 2016 and 2019. Other states that have reported significant numbers of cases are Tamil Nadu, Karnataka, Bihar, Madhya Pradesh and Uttar Pradesh.

VIRAL ENCEPHALITIS: In general parlance, it is also called brain fever. The viral infection affects the central nervous system and parts of the brain. An MRI scan of the patient's brain often shows the infected part. This is why CPHV infection, with a mortality rate of 50-60%, is dreaded.



Source: Times of India

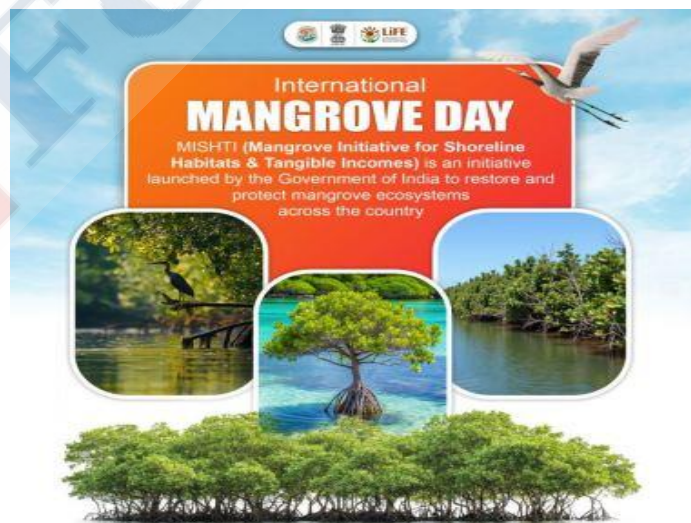
- Chandipura Virus is a virus of the **Rhabdoviridae family**.
 - It also includes **other members such as the lyssavirus that causes rabies**.
- **How it is caused:**

- Several species of **sandflies, like Phlebotomine sandflies and Phlebotomus papatasi, and some mosquito species**, such as *Aedes aegypti* (which is also the vector for dengue), are **considered vectors of CHPV**.
- The **virus resides in the salivary glands of these insects and can be transmitted to humans or other vertebrates**, like domestic animals, **through bites**.
- The **infection caused by the virus can then reach the central nervous system**, which can lead to encephalitis.
- **Symptoms:** The CHPV infection **presents initially with flu-like symptoms**, such as acute onset of fever, body ache, and headache.
 - It may **then progress to altered sensorium or seizures and encephalitis**.
 - Retrospective studies from India have also reported other symptoms such as respiratory distress, bleeding tendencies, or anaemia.
 - The infection often progresses **rapidly after encephalitis, which may then lead to mortality within 24-48 hours of hospitalisation**.
 - **Disease progression can be as rapid as a patient reporting high fever in the morning**, and their kidneys or liver being affected by the evening.
- **Affected age group:** It primarily affects children under 15 years.
- **Management:** The infection can only be **symptomatically managed as currently there is no specific antiretroviral therapy or vaccine available** for treatment.
 - As a result, it becomes crucial to manage brain inflammation to prevent mortality.

MISHTI Scheme and Great Green Wall of Andhra Pradesh initiative

News: Andhra Pradesh secured second place under the MISHTI scheme after restoring 2,047.70 hectares of mangroves during 2025–26.

About MISHTI Scheme



Source – PIB

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- **Full form:** Mangrove Initiative for Shoreline Habitats and Tangible Incomes (MISHTI) Scheme
- It is a scheme **to promote, conserve and restore mangroves** for ecological protection and climate resilience.
- **Launched by:** The **Ministry of Environment, Forest and Climate Change** launched the scheme **in 2023**.
- **Aim:** It **aims to promote and conserve mangroves**, restore degraded areas, strengthen coastal ecosystems and improve **climate resilience**.
- **Funding Sources:** The scheme promotes **convergence** of resources from the **CAMPA** (Compensatory Afforestation Fund Management and Planning Authority) **fund** and **MGNREGS** (Mahatma Gandhi National Rural Employment Guarantee Scheme) .
- **Target:** The scheme aims to **restore** approximately **540 sq. km of mangrove habitats over five years (2023–2028)**.
- **Coverage Area:** The scheme is being implemented **across 11 States** – West Bengal, Gujarat, Odisha, Andhra Pradesh, Tamil Nadu, Kerala, Maharashtra, Karnataka, Goa, Uttar Pradesh and Telangana – **and 2 Union Territories**, namely Andaman & Nicobar Islands and Lakshadweep.
- **International Significance:** The MISHTI scheme **aligns** India with the **UN Sustainable Development Goals (SDGs)** and the **Mangrove Alliance for Climate (MAC)**, which India joined during COP27.

About Great Green Wall of Andhra Pradesh initiative

- It is an **ecological restoration project** that develops mangroves, shelterbelts, windbreaks, agroforestry and community plantations **along the Andhra Pradesh coastline**.
- **Aim:** It's aim is to **protect coastal communities and ecosystems from cyclones, floods and erosion**.
- **Inspiration:** It draws inspiration from **Africa's Great Green Wall and the Aravalli Green Wall Project**.
- **Funding:** It is supported **through MGNREGS, CAMPA, Green Credit Programme, District Mineral Funds and International Climate Finance**.
- **Geographical Coverage:** It covers **Andhra Pradesh's 1,053-km coastline**.
- **Target:** It aims to create a **5-km-wide living ecological shield along the coastline by 2030**.
- **Key features:**
 - **Multi-layered Green Buffer:** It includes **mangroves, shelterbelts, windbreaks, agroforestry and community plantations**.
 - **Fish Bone Technique:** It adopts the **Fish Bone Technique** to improve tidal water circulation, increase mangrove survival rates and enhance long-term ecological resilience.
 - **Climate Resilience:** It strengthens biodiversity conservation and supports sustainable coastal management.

About Fish Bone Technique

- **The Fish Bone Technique** is an innovative mangrove restoration method used in degraded areas with poor tidal water flow.
- **Working Mechanism:** It creates a central “backbone” channel with smaller angled feeder channels that divert tidal water into degraded mudflats and mimic natural tidal creeks.
- **Mangrove Restoration:** The improved tidal flow enhances soil salinity and aeration.
 - Once suitable conditions are created, mangrove seedlings are planted, and natural regeneration is supported.

Kutki (Picrorhiza kurroa)

News: In Himachal Pradesh’s Mandi district, sustainable cultivation of the endangered medicinal herb Kutki (*Picrorhiza kurroa*) is helping conserve the species and supporting the rural mountain economy.

About Kutki (Picrorhiza kurroa)



Figure 47. Source: MoFCC

- It is a medicinal herb, locally known as Kutki.
- **Botanical name:** Its botanical name is *Picrorhiza kurroa*.
- **Native to:** It is native to the alpine and sub-alpine regions (2,700-4,500 metres) of the Him-alayas.
- **Habitat:** It grows naturally in rock crevices and moist, sandy soil.
- **Characteristic features:**
 - It has a long, creeping rootstock that is bitter in taste.
 - The leaves are oval, flat, and serrated.
 - The flowers are pale purple or white and are borne on a tall spike.
- The plants are harvested manually from October to December.
- **Medicinal part:** The medicinal part is the stolon (a side branch that creeps on the soil and possesses nodes), not the root.
 - The roots are fibrous and contain no medicinal content.
- **Uses:** It is one of the most commonly used herbs in polyherbal preparations clinically used in India.

- It is also used in **Liver disorders, strengthening stomach function in cases of indigestion, inflammation & fever.**
- **Conservation status:**
 - **IUCN Red List:** It is currently classified as an **Endangered** due to decades of destructive wild harvesting.
 - **CITES:** It is also listed in **Appendix II, allowing international trade only under regulated conditions with export permits.**

Houbara Bustard

News: The Houbara Bustard has suffered major population declines due to habitat loss, hunting, and degradation of its breeding grounds.

About Houbara Bustard



Source: DTE

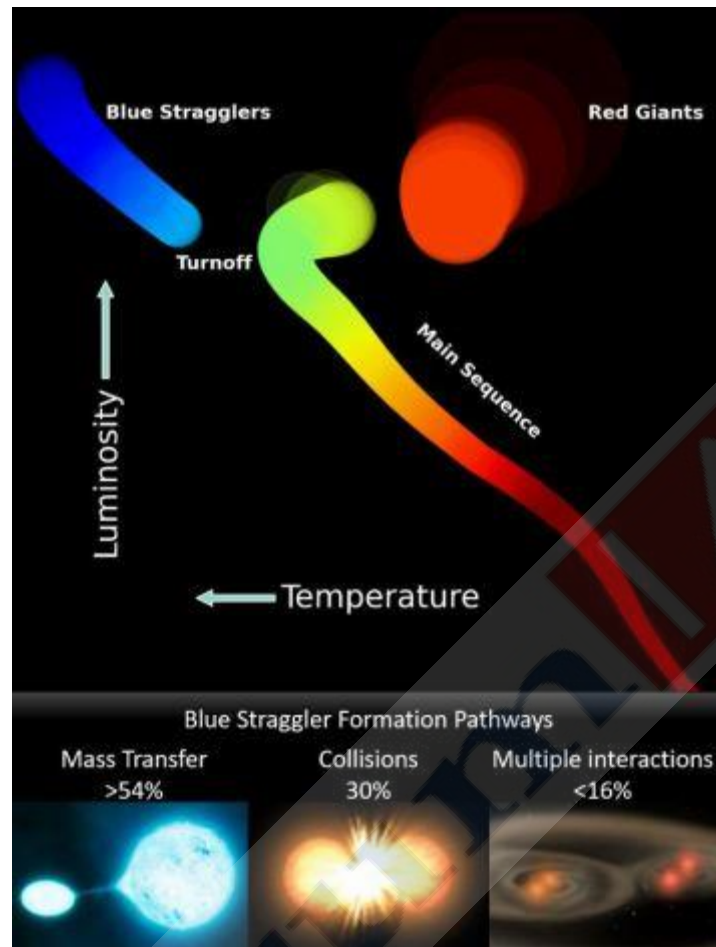
- It is a **large terrestrial bird.**
- **Scientific name:** It is **split into two distinct species** as recognized by the IUCN:
 - one residing in North Africa (***Chlamydotis undulata***) and
 - the other residing in Asia (***Chlamydotis macqueenii***).
- **Habitat:** It lives in **vast plains and semi-arid regions in pebbly, sandy deserts** with scattered vegetation cover.
- **Distribution:** It is found in **parts of Asia, the Middle East and Africa.**
- **Characteristics:**
 - **Appearance:** It is a **medium-to-large-sized bustard.**
 - Its **overall plumage is pale sandy-brown**, which helps it blend into dry habitats.

- It has a **white neck with a distinct vertical black stripe**, which is most prominent in adult males.
- **Females** are **slightly smaller and slimmer than males**.
- It closely **resembles the African Houbara**, but the two species are mainly distinguished by their geographic range.
- During the breeding season, **the male performs a unique courtship display** by dancing in long, straight lines across open hills.
- It **breeds in dry steppes and semi-desert regions** with scattered shrubs.
- Its eastern populations are **migratory and move seasonally**.
- **Diet:** It is **omnivorous** taking seeds, insects and other small creatures.
- **Behaviour:** It is normally **silent and rarely makes vocal sounds**.
- **Threat:** The main reasons for the decline in the species are:
 - **Poaching,**
 - **Unregulated hunting and the**
 - **Degradation of its natural habitat.**
- **Conservation status:**
 - **IUCN:** It is classified as **Vulnerable**.
 - **CITES:** It is listed in **Appendix I** under CITES.
 - **CMS:** It is also listed in **Appendix I** of the **Convention on Migratory Species (CMS)**.
 - It will be also **included in the forthcoming Central Asian Red Data Book**.

Blue Straggler Star

News: Indian astronomers and international collaborators have discovered a Blue Straggler Star during its formation, providing rare direct evidence of its origin.

About Blue Straggler Star



Source – DST

- **Blue Straggler Star (BSS)** is an **unusually hot, bright, blue, and massive star** found in old star clusters.
- **Location:** It is found in **old star clusters**, including **globular and open clusters**, as well as **dwarf galaxies**.
- **Discovery:** It was first discovered by Allan Sandage in 1952–53 in the globular cluster M3.
- **Formation Mechanisms:**
 - **Mass Transfer in a Binary System:** Two stars orbit each other in a binary system.
 - As one star becomes older, it expands and starts transferring its outer material to the other star.
 - This transfer of matter makes the second star hotter, brighter, and more massive, turning it into a Blue Straggler Star.
 - **Stellar Collision or Merger:** In crowded star clusters, two stars may collide or merge into a single star.

- The **combined star becomes more massive and energetic**, making it appear hotter, brighter, and younger than the other stars in the cluster.
- **Key Features**
- **Different Evolution:** These stars follow a different evolutionary path from most other stars in the same cluster because they are rejuvenated after gaining additional mass.
 - **X-ray Evidence:** Strong X-ray emission confirms that matter is currently being accreted by the Blue Straggler Star.

Initiatives Undertaken in Rashtrapati Bhavan

News: As President Smt. Droupadi Murmu marked four years in office, various Initiatives were undertaken in Rashtrapati Bhavan and the President's Estates.

About Initiatives Undertaken in Rashtrapati Bhavan



Figure 48. Source: PIB

Launch of e-Audio Guide for visitors to Rashtrapati Bhavan: The application-based e-Audio Guide has been launched to enhance visitors' experience.

- It will be available in **Hindi, English and 14 other Indian languages.**
- Its **sign language module** will also be available for visitors.

- **Launch of the third edition of e-Upahaar:**

- It features **300 curated Presidential gifts for public auction.**
- The auction will be open from 5 August to 5 September 2026.

- **Inauguration of Bachpan 'Bal Parisar' for the children in the President's Estate:**

- The initiative includes **'Kilkari', a play zone for children, and 'Samarth Anganwadi-cum-Palna'**, which provides a safe and nurturing environment for their growth and development.

- **Launch of RAAHI (Rashtrapati Bhavan Access And Heritage Interconnector):**

- It is a **fare-free electric bus service** to promote green and inclusive mobility.
- This **bus service for the staff and residents of the President's Estate** is being **operated by women drivers and conductors.**
- This will **provide safe, convenient and inclusive mobility**, particularly for women, children, senior citizens and Divyang persons within the President's Estate and up to the nearest Metro station.
- The initiative also involves laying foundation stone **for the construction of service block as part of Net Zero Energy Strategy.**

- It also includes **inauguration of accommodation facilities at Rashtrapati Niketan, Dehradun and Rashtrapati Nilayam, Secunderabad** and **laying of foundation stone for the redevelopment of staff quarters in the President's Estate.**

Tigidia Singhal

News: Researchers have described a new trapdoor spider species, *Tigidia singhal*, from the semi-arid grasslands of the Deccan Plateau.

About Tigidia Singhal



Source: Mongabay

- ***Tigidia singhal*** is a newly described species of **trapdoor spider** discovered in the **semi-arid grasslands of the Deccan Plateau** in Maharashtra.
- **Genus and Family:** It belongs to the **genus *Tigidia*** and the **family Barychelidae (brush-footed spiders)**, within the **infraorder Mygalomorphae**, which also includes tarantulas and funnel-web spiders.
 - Its discovery **brings the number of *Tigidia* species in India to eight.**
- It is the **first record of the genus *Tigidia* from a semi-arid open natural ecosystem**, expanding its known range beyond tropical evergreen and deciduous forests.
- **Habitat:** It inhabits **rocky hilltop grasslands of the Deccan Plateau.**
 - **Note:** Spiders of the genus *Tigidia* occur **only in Madagascar, Mauritius and India.**
- **Characteristics:**
 - The **female spider measures about 15 mm in length.**
 - It has **black legs covered with greyish bristle-like hairs** and a **lighter abdomen with chevron-shaped markings.**

- It constructs **silk-lined burrows** that are generally **4–10 cm deep**, have **two openings**, and are usually located **at the edges of rocks where soil retains more moisture**.
 - These burrows help protect the spider from **desiccation and predators** while also enabling efficient capture of prey.
- **Behaviour:** It is **long-living, sedentary spiders** that spend most of their lives in burrows, rarely leaving except to search for a mate.
- **Threat:** The species faces threats from:
 - **land-use change**
 - **soil extraction**
 - **tourism-generated plastic waste, and**
 - **stone quarrying**, which destroy its rocky microhabitats.

Retrieval-Augmented Generation (RAG)

News: As enterprises increasingly adopt AI, **Retrieval-Augmented Generation (RAG)** has emerged as a key framework for connecting AI models with an organization's proprietary knowledge.

About Retrieval-Augmented Generation (RAG)



Source: Google Cloud

- It is a technique that **makes AI more accurate by allowing it to search your organization's own documents** before answering a question.
- **Features:**
 - Instead of relying only on what the AI learned during training, RAG:
 - **Searches relevant documents from a private knowledge base.**
 - **Uses those documents to generate an answer.**
 - **Shows the source of the information, making answers more trustworthy.**
- **How Does it Work:** It works in **two phases**:

- **Phase 1: Build the Knowledge Base (Done Once)**
 - Company documents (reports, interview transcripts, policy manuals, legal documents, support tickets, etc.) are collected.
 - These documents are divided into smaller meaningful sections called **chunks**.
 - Each chunk is converted into a numerical representation called an **embedding vector**, which captures its meaning rather than just the words used.
 - All these vectors are stored in a **vector database**.
- **Phase 2: Answer User Questions (Every Time):**
 - **When a user asks a question**, the question is also **converted into an embedding vector**.
 - The system searches the vector database for the most similar information based on **meaning**, not exact keywords.
 - The relevant document sections are sent to the AI.
 - The AI generates an answer using only those **retrieved** documents.
 - It also cites the source documents and may provide a confidence score.

● **Application:**

Field of Application	Description
Banking and Financial Services	In banking and financial services, compliance officers query internal policy libraries to find applicable rules instantly, reducing manual effort and compliance risk.
Healthcare	In healthcare, clinical teams retrieve patient notes and treatment protocols without exposing sensitive data to external AI providers.
Legal Services	In legal services, associates find relevant precedents from a firm's entire case history by describing the legal situation in plain English, not by searching case names.
Manufacturing	In manufacturing, engineers query thousands of pages of equipment manuals to diagnose failures and retrieve repair procedures in real time.

DAANVEER Initiative

News: DAANVEER initiative was launched to strengthen the digital infrastructure of Gram Panchayats across the country.

About DAANVEER Initiative



Figure 49. Source – MoPR

- **DAANVEER** is a **citizen participation initiative** launched to **strengthen the digital infrastructure of Gram Panchayats across India**.
- **Nodal Ministry:** The **Ministry of Panchayati Raj** is the nodal ministry responsible for implementing the initiative.
- **Developed by:** It has been developed in collaboration with the **National Informatics Centre ; (NIC)** and **DigiHaat**.
- **Integrated with:** It is integrated with platforms such as **e-GramSwaraj, Meri Panchayat, Sabha Saar, AuditOnline, Gram Manchitra**, and other digital governance applications.
- **Aim:** The initiative aims to **bridge the digital infrastructure gap in Gram Panchayats and create a long-term, citizen-powered ecosystem** for strengthening local institutions.
- **Tagline:** It is a completely voluntary initiative that operates under the tagline **“Give Back to Your Village.”**
- **Features:**
 - It **provides a transparent, end-to-end, and digitally verifiable platform** through which citizens and organizations can contribute to the technology and infrastructure needs of Gram Panchayats.
 - The **platform incorporates verified institutional requirements, standardized contribution options, direct delivery, and end-to-end digital tracking** to ensure accountability and transparency.
 - It **establishes a credible and standardized mechanism** that enables citizens to participate in strengthening public institutions.
 - It **enables citizens across India and the world** to contribute meaningfully to the development of their native villages.
- **Contribution Mechanism**
 - The initiative is available through the [Meri Panchayat mobile application](#).
 - It enables **individuals and organizations to contribute standardized, quality-verified computer bundles** directly to eligible Gram Panchayats.

BIMCO-ICS Seafarer Workforce Report 2026

News: India has emerged as the world's second-largest supplier of seafarers, according to the BIMCO-ICS Seafarer Workforce Report 2026.

About BIMCO-ICS Seafarer Workforce Report 2026

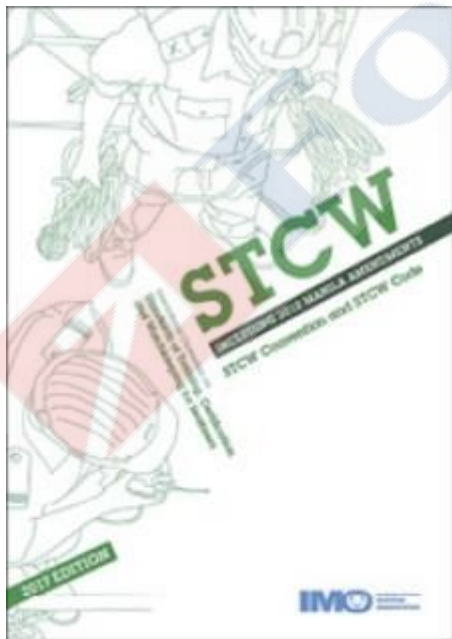


Figure 50. Source: News On Air

- It is regarded as the most comprehensive assessment of global supply of and demand for seafarers.
- **Published by:** It is jointly published by BIMCO and the International Chamber of Shipping (ICS).
- **Frequency:** It is published in every five years.
- **First edition:** The first edition of the report was published in 1990.
- The report provides:
 - **Assessment of global seafarer supply and demand** for the international merchant fleet.
 - **Analysis of workforce demographics**, including nationality, rank, age, and gender.
 - **Forecast of merchant fleet growth** and its implications for future seafarer workforce requirements.
- **Findings of the report:**
 - **Estimated Global Seafarer Supply:** The global supply of seafarers in 2026 is estimated at 2,565,580 seafarers, of which 1,048,980 are officers and 1,516,600 are ratings.
 - **Seafarer Workforce Gender Diversity:** The number of **female seafarers has increased**, mainly in **officer positions**.
 - **Seafarer Workforce Age Profiles:** The **average age of management-level officers has slightly decreased** since 2021. Most **operational-level officers and support-level ratings** are now in the **31–40 years** age group.
 - **Estimated Global Seafarer Demand:** The global demand for International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW) -certified seafarers in 2026 is estimated to stand at 2,547,790. There is a demand for approximately 1,088,080 officers and 1,459,710 ratings.
- **Findings related to India:**

- India has emerged as the **world's second-largest supplier of seafarers**, contributing **311,936 maritime professionals** to the global shipping industry.
- India now accounts for **12.16% of the global seafaring workforce**, ranking **second globally**, behind the **Philippines** and ahead of **China, the Russian Federation, and Indonesia**.
- India has a strong presence in the **officer cadre**:
 - **140,718 officers**, accounting for **13.41%** of the world's officer workforce.
 - **171,218 ratings**, representing **11.29%** of the global ratings serving aboard merchant vessels.
 - Overall, Indian seafarers constitute one of the **largest and most skilled maritime workforces** supporting global trade.
- The report highlights an **increasingly tight global labour market** and a **continuing shortage of qualified officers worldwide**, positioning **India as a critical partner** in meeting the shipping industry's future manpower requirements.
- **Recommendations:** It is essential that:
 - **Maritime education and training and careers at sea are promoted** with information on transitioning to shore-based roles; and
 - **Levels of seafarer recruitment and retention are regularly and closely monitored** by maritime **administrations** to inform the industry and policymakers of the global supply and demand situation of the seafarer workforce.

About International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW)



- The convention was adopted in 1978 by a conference at the **International Maritime Organization(IMO)** in London and entered into force in 1984.
- The convention was the **first to establish minimum basic requirements for training, certification and watchkeeping for seafarers** on an international level.
- The Convention prescribes minimum standards relating to training, certification and watchkeeping for seafarers which countries are obliged to meet or exceed.
- One **important feature of the Convention** is that it applies to ships of non-party States when visiting ports of States which are Parties to the Convention.

- The **Manila amendments** to the STCW Convention and Code were adopted in 2010 marking a major revision of the STCW Convention and Code.

Figure 51. Source: International Maritime Organization

Kalpasar Project

News: During his Netherlands visit, PM Narendra Modi visited the Afsluitdijk dam, and India signed an LoI with the Netherlands for technical cooperation on the Kalpasar Project.

About Kalpasar Project



Figure 52. Source: TOI

- It is a **multipurpose initiative** aimed at **providing water for irrigation and industrial and domestic use in the water-stressed Saurashtra region of Gujarat.**
- It envisages the **creation of one of the world's largest coastal freshwater reservoirs** through the construction of a dam across the Gulf of Khambhat.
- **Initiative by:** It is an ambitious water resources **initiatives of the Government of Gujarat.**
 - **Assisted by:** The Netherlands is collaborating with India by providing **technical expertise and engineering**

support for the Kalpasar Project.

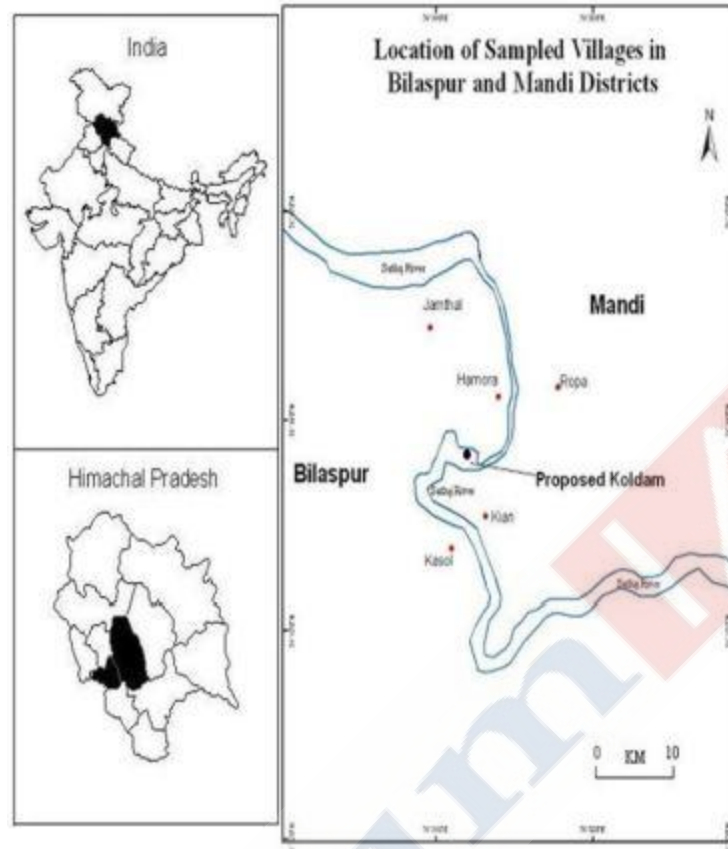
- **Features of the project:**
 - The project includes the **construction of a 60.13 km long dam across the Gulf, from Aladar (eastern side) to near Bhavnagar (western side).**
 - Out of which about **26.7 km length will be in the Gulf (sea portion), and 33.43 km length is extended on both flanks up to the nearest road across the Gulf of Khambhat.**
 - It includes a **proposed highway-cum-rail corridor** over the dam across the Gulf of Khambhat.
 - As per the present project layout, the corridor is expected **to reduce the travel distance between Bhavnagar and Surat by approximately 179 km, from about 356 km through the existing land route to about 177 km via the proposed dyke corridor,** thereby improving regional connectivity and reducing travel time.

- The project envisages **development of approximately 2,470 MW of hybrid renewable energy capacity** on reclaimed land that is presently submerged during high tide.
 - The renewable energy **generated is proposed to be utilized for pumping freshwater to meet irrigation requirements in the coastal regions of Saurashtra.**
- This reservoir will receive water from **four major rivers – Sabarmati, Mahi, Dhadhar and Narmada** – and **seven minor rivers – Wadhwan Bhogavo, Limbdi Bhogavo, Sukhbhadar, Utavli, Keri, Ghelo, and Kalubhar.**
 - For this, a **diversion canal is planned at the Bhadbhut barrage on the Narmada River** to divert its additional water into the reservoir.
- **Benefits:**
 - **Environmental benefits:** The project is expected **to improve groundwater conditions, protect tidal-affected areas,** reduce coastal salinity, and reclaim approximately **1.76 lakh hectares** of land.
 - **Renewable energy:** Kalpasar has the **potential to generate 1,000 MW of solar power and 1,500 MW of wind power,** helping meet the project's energy requirements.
 - **Livelihoods:** The freshwater reservoir is expected to **replace marine fisheries with freshwater fisheries,** increasing annual fish production from **2,000 tons** in the initial stages to **20,000 tons** at full development.
 - **Transport & connectivity:** It includes plans for a **flood regulator, a 16-lane roadway,** and a **4-lane rail corridor,** reducing the travel distance across the Gulf from **240 km to 60 km.**

Koldam Hydro Power Project

News: The Koldam NTPC Hydroelectric Project generated over 3512 million units of power in 2025-26, the highest ever since the project was commissioned.

About Koldam Hydro Power Project



Source – ResearchGate

- The **Koldam Hydro Power Project** is an **800 MW** hydroelectric station located in the **Bilaspur and Mandi districts of Himachal Pradesh, India**.
- **River associated:** It is built on the **Satluj River**.
- **Owned by:** It is developed and owned by **NTPC Limited**.
- **Dam Type:** It is a **163-meter-high rock and gravel fill dam** with a clay core.
- **Beneficiary Regions:** Supplies power to northern states including **Himachal Pradesh, Punjab, Haryana, Rajasthan, Delhi, and Uttar Pradesh**.

Rusty-spotted Cat (*Prionailurus rubiginosus*)

News: Scientists at the Wildlife Institute of India (WII) have reported two roadkill incidents of the rusty-spotted cat (*Prionailurus rubiginosus*) at the [National Chambal Sanctuary](#) in Etawah, Uttar Pradesh.

About Rusty-spotted Cat (*Prionailurus rubiginosus*)



Source: One Earth

- It is widely **recognised as the world's smallest wild cat species.**
- **Scientific name:** Its scientific name is **Prionailurus rubiginosus.**
- **Habitat:** It inhabits **moist and dry forests, tropical thorn forests, scrub forests, grasslands and rocky areas.**
- **Distribution:** It is native to **India, Nepal, and Sri Lanka.**
- **Characteristics:**
 - **Appearance:**
 - Its coat is **short and soft.** It is fawn-grey coloured with a rufous tinge and is patterned.
 - There are **horizontal bars on the legs and chest.**
 - Its **head is rounded**, and the relatively **large eyes** are marked with a **white streak along the inside edge.**
 - Each **cheek is marked with two dark streaks** and **four dark stripes extend from above the eyes backward over the head to the neck.**
 - The **back and sides are marked with red-brown blotches** which merge into lines.
 - The **belly, chest and throat are white** and **covered with large dark spots and bars.**
 - The **ears are rounded and small.**
 - Its **tail is about half the length of the head and body**, more rufous than the body and faintly marked with dark rings. The **soles of the feet are black.**

- **Size:** It is roughly half the size of a domestic cat, **measuring just 38-45 cm in body length.**
- **Weight:** It weighs **between 1 and 2 kg.**
- **Diet:** It is a **carnivore that mainly feeds on rodents and birds.** It also eats frogs, insects, and lizards.
- **Behaviour:** It is primarily **nocturnal and extremely shy.** It is also a **secretive hunter.**
- **Threat:** **Habitat loss and fragmentation** are the primary threats to the rusty-spotted cat.
- **Conservation status:**
 - **IUCN:** It is listed as **Near Threatened.**
 - **CITES:** It is listed under **Appendix I.**

Bhavani River

News: Large stretches of the Bhavani River near Kooduthurai have been overrun by water hyacinth, raising concerns over irrigation and the river's ecosystem.

About Bhavani River

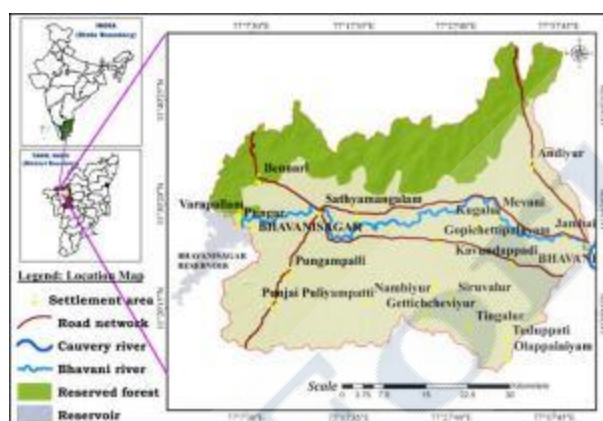


Figure 53. Source: Research Gate

- It is the **second largest and perennial river in Tamil Nadu.**
- **Origin of river:** It originates from Nilgiri hills of the Western Ghats in Tamil Nadu.
- **Course of the river:** From western ghat, it flows **through Kerala**, passing through **Silent Valley National Park.**
 - After traversing Kerala, it re-enters Tamil Nadu and **finally joins the Cauvery River at Bhavani**, near the **Bhavani Sangameswarar Temple.**
- **Drainage area:** Its watershed drains an area of **6,200 sq. km** spread over **Tamil Nadu, Kerala and Karnataka.**
- **Tributaries:** Its major tributaries are the **West Varagar and East Varagar rivers**, both of which originate in the Nilgiri Hills.
- **Tributary of:** It is a tributary of **Kaveri /Cauvery River.**
- **Dams:** The two dams situated on the River are **Bhavanisagar Dam and Kodiveri Dam.**

Shaheed Udham Singh

News: The Prime Minister Shri Narendra Modi paid heartfelt tributes to the great revolutionary martyr Udham Singh on his Balidan Diwas.

About Shaheed Udham Singh

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- **Shaheed Udham Singh** played a significant role in the history of the Indian freedom movement.
- He is also known by various other names such as **Sher Singh, Ude Singh, Ram Mohammad Singh Azad and Frank Brazil, Ram Mohammad Singh Azad** symbolizing the unification of the three major religions of India: Hinduism, Islam and Sikhism.
- **Birth:** He was born on **26 December 1899** in a **Sikh family at Sunam village in Sangrur district of Punjab.**
- **Early life:** Orphaned at a young age, he was raised at the Central Khalsa Orphanage in Amritsar, where he was given the name **Udham Singh.**
 - From a young age, he worked as a labourer to earn a living, including in **Mesopotamia during World War I and on Uganda's railways**, where he came into contact with members of the Ghadar Party.
- He later travelled to the **United States**, assisted **Punjabi migrants**, and established the **Azad Party in Chicago** as an offshoot of the Ghadar party.
- **Revolutionary activities:**
 - He witnessed the **Jallianwala Bagh massacre in 1919**. He was deeply impacted by this incident and **took a revolutionary path.**
 - In **1924**, he joined the **Ghadar Party** and was also associated with the **Hindustan Socialist Republican Association (HSRA).**
 - In **1927**, he was arrested under Arms act and sentenced to **five years' imprisonment.**
 - While in prison, **he continued to spread revolutionary ideas** among fellow inmates. As punishment, the British frequently flogged him and transferred him between jails.
 - During his imprisonment at **Mianwali Jail** (now in Punjab, Pakistan), he came into contact with **Bhagat Singh**, who had a profound influence on his revolutionary outlook.
 - On **14 March 1940**, he assassinated **Michael O'Dwyer**, the former Lieutenant Governor of Punjab, at **Caxton Hall, London**, in retaliation for the Jallianwala Bagh massacre.
 - During his trial, he adopted the name **"Ram Mohammad Singh Azad"** to symbolize India's religious unity.
- **Execution and death:** He was executed by hanging at **Pentonville Prison, London**, on **31 July 1940.**
 - His ashes were repatriated to India in **1974** and are preserved at the **Jallianwala Bagh Memorial.**
- **Legacy:** He is remembered as **"Shaheed-i-Azam" (Great Martyr)** for his courage and sacrifice in India's struggle against British colonial rule.
 - **Every year on December 26, his birth anniversary** is celebrated.

India's First Protection and Indemnity (P&I) Insurance Product

News: The Department of Financial Services (DFS) has launched India's first sovereign-backed Protection and Indemnity insurance product under Bharat Maritime Insurance Pool (BMIP).

About India's First Protection and Indemnity (P&I) Insurance Product



Source – CNBC

- **India's first sovereign-backed Protection & Indemnity (P&I) insurance product** has been launched **to provide domestic P&I cover** for **Indian ships and vessels** connected with Indian trade.
- It is launched under the **Bharat Maritime Insurance Pool (BMIP)**.
- **Launched by:** Department of Financial Services (DFS), Ministry of Finance
- It is designed by the **New India Assurance Company Limited**.
- It is **third-party liability insurance** for **shipowners**.
 - Unlike **Hull & Machinery Insurance**, which covers **damage to the ship** itself, **P&I insurance covers the shipowner's legal liabilities** to third parties.
- It covers **liabilities such as –**
 - Injury, illness or death of crew, passengers and others.
 - Collision liabilities.
 - Oil pollution and environmental damage.
 - Wreck removal.
 - Cargo-related liabilities.
 - Legal expenses arising from maritime claims.

About Bharat Maritime Insurance Pool (BMIP)



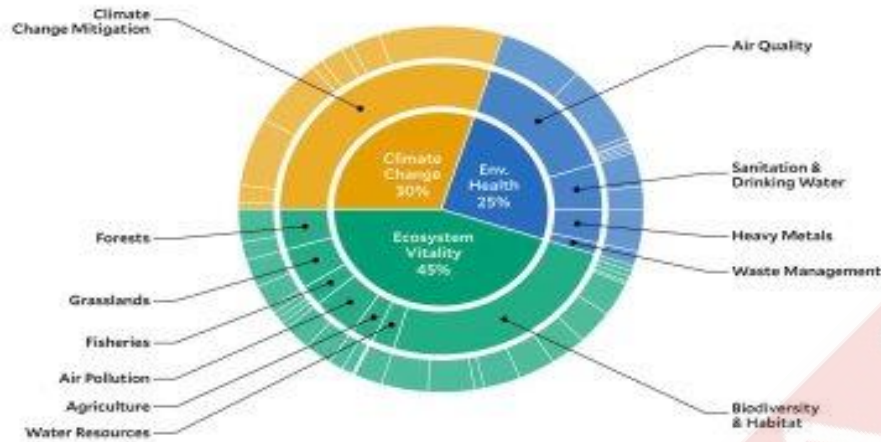
Source – Ministry of Shipping

- The **Bharat Maritime Insurance Pool (BMIP)** is India's first sovereign-backed domestic maritime insurance pool with a sovereign guarantee of Rs.12,980 crores.
- **Nodal Ministry:** It was launched by the Ministry of Ports, Shipping and Waterways (MoPSW).
- **Aim:** It aims to **strengthen India's maritime insurance ecosystem** and **reduce dependence on foreign insurers** and Protection & Indemnity (P&I) Clubs.
- It seeks to **enhance the resilience** of India's shipping sector, particularly during geopolitical conflicts, sanctions, or disruptions in the global insurance market.
- **Features**
 - The pool would **cover all maritime risks** like Hull and Machinery, Cargo, P&I and War risk.
 - The **policies** will be **issued by insurers** that are **Pool members**, using the **combined underwriting capacity** of the Pool, which would be **around Rs.950 crore**.
 - The Pool will **help to manage liability insurance locally**, tailored to Indian Shipping conditions and regulatory requirements, develop **specialized Marine underwriting**, claims management and legal expertise within India.

Environmental Performance Index

News: India's position in Yale University's Global Environmental Performance Index (EPI) 2026 has been labeled by experts as a stark warning that demands immediate attention.

About Environmental Performance Index



Source: Environmental Performance Index (EPI)

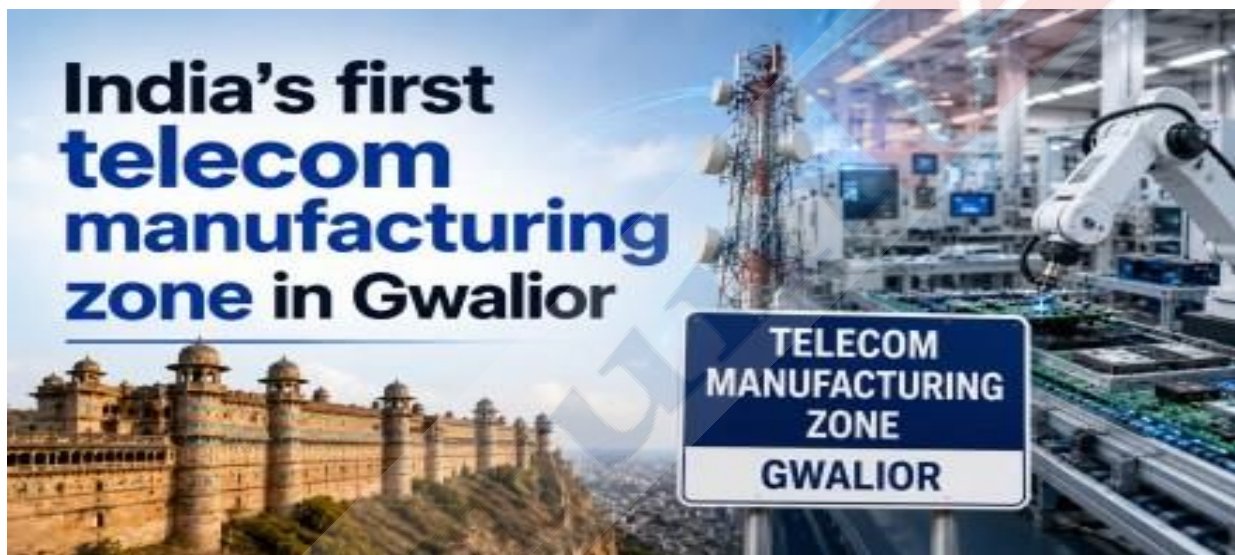
- It is a **data-driven global benchmark** which provides a comprehensive assessment of sustainability worldwide.
- **Developed by:** It is developed by the **Yale Center for Environmental Law & Policy, Columbia University's Center for International Earth Science Information Network (CIESIN) and Yale Center for Geospatial Solutions, Yale University with support from the McCall MacBain Foundation.**
- **First edition:** It is a **biennial index, first started in 2002** and was earlier known as the **Environmental Sustainability Index (ESI) which began in 2002.**
- **Importance**
 - It provides policymakers with an objective scorecard to **track sustainability progress, identify ecological vulnerabilities, and refine environmental policy.**
 - It serves as a **vital analytical tool for measuring how close nations are to achieving global sustainability targets.**
- **Environmental Performance Index (EPI) 2026:**
 - The 2026 EPI ranks **177 countries** on **47 indicators** across **12 issue categories** spanning **three policy objectives**:
 - Environmental Health
 - Ecosystem Vitality
 - Climate Change
- **Global highlights of 2026 Index:**
 - **Five European countries** ranked in the **top five this year in the EPI (2026).**
 - **Estonia** claimed the top spot with an **overall score of 74.79.**
 - Following behind, **Luxembourg, United Kingdom, and Finland** were positioned at **second, third and fourth position** respectively.
 - **Netherlands** secured the **fifth position.**
 - **Germany, France, and Norway** took the **sixth, seventh and eighth positions.**
 - **Sweden** ranked **ninth** and **Austria** ranked **tenth.**

- **India's status:**
 - India ranked second from the bottom, taking the 176th position out of 177 evaluated countries.
 - India's overall EPI score came out to 22.46, compared to a regional average of 31.81.
 - Tree cover loss in key biodiversity areas recorded a score of -3.92.

Telecom Manufacturing Zone

News: Department of Telecommunications Signs MoU with Government of Madhya Pradesh for Establishment of Telecom Manufacturing Zone (TMZ) in Gwalior.

About Telecom Manufacturing Zone



Source: Zee Business

- **Location:** The Department of Telecommunications (DoT) and the Government of Madhya Pradesh signed a Memorandum of Understanding (MoU) to establish India's first integrated Telecom Manufacturing Zone (TMZ) in Gwalior, Madhya Pradesh.
- **About:** It is envisaged as a 350-acre integrated plug-and-play industrial cluster that will provide world-class infrastructure for telecom and electronics manufacturing, research and development (R&D), innovation, and allied activities.
- **Objective:** The project aims to strengthen India's domestic telecom manufacturing ecosystem, promote Aatmanirbhar Bharat, and position Gwalior as a major telecom and technology hub.
 - The initiative will complement the India Semiconductor Mission (ISM), Electronics Components Manufacturing Scheme (ECMS), and Telecom Technology Development Fund (TTDF).

- **Industry Participation:** Leading companies, including **Dixon Technologies, HFCL, Tejas Networks, VVDN, and Syrma SGS**, are among the industry players expected to anchor the proposed zone.
- **Governance:** A **Special Purpose Vehicle (SPV)** will be established to implement the project, with **51% equity held by the Government of Madhya Pradesh** and **49% by the Department of Telecommunications**.
- **Budgetary allocation:**
 - **Central Government Support:** The **Central Government** will provide **100% funding for Phase-I**, with an allocation of **₹493 crore** for the development of core infrastructure.
 - **State Government Support:** The **Government of Madhya Pradesh** has provided approximately **170 acres of land free of cost**, including **100 acres in the SADA region** and **70 acres in the Gwalior IT Park**, with a combined value of around **₹596 crore**.
 - Additional land will be made available at a **nominal premium of ₹1** and an annual lease rent of **₹1 per square metre for 30 years**.
- **Features:**
 - The Telecom Manufacturing Zone will integrate the **entire telecom value chain**, covering **mobile devices, optical fibre, advanced semiconductor technologies, and next-generation 5G/6G research and development**.
 - It will also house **dedicated R&D centres, common testing laboratories, and certification facilities**.
 - **Incentives:** Units established in the Telecom Manufacturing Zone will receive **reimbursement of stamp duty and registration charges, power tariff rebates, and other fiscal incentives**.
 - The policy also provides a **50% capital subsidy on Eligible Fixed Capital Investment (EFCI)** (up to **₹200 crore**), **employment generation assistance of ₹5,000 per employee per month for five years**, and **skill development support of up to ₹13,000 per new employee**.
 - **R&D and Export Promotion:** Eligible units will be provided **50% freight subsidy** for exports, financial support for **standalone R&D units**, and **100% reimbursement** of expenses incurred for filing **patents, copyrights, and trademarks**, within prescribed limits.
- **Expected Outcome:** It is expected to **reduce import dependence, promote exports, strengthen domestic supply chains, enhance telecom security, and establish India as a global hub for telecom manufacturing and innovation**.