

Factly Monthly

Compilation

2026

**For UPSC CSE Prelims
Exam**

April 2026

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Malwan – Anti-Submarine Warfare Shallow Water Craft

News: Malwan, the second of eight Anti-Submarine Warfare Shallow Water Craft, was delivered to the Indian Navy on 31 March 2026.

About Malwan – Anti-Submarine Warfare Shallow Water Craft



Source – AIR

- **Malwan** is a high-tech, waterjet-propelled warship designed for specialized naval operations in coastal and shallow waters.
- **Built by:** It has been constructed by Cochin Shipyard Limited (CSL), Kochi as per Indian Navy specifications.
- **Standards Compliance:** The ship is built in accordance with Det Norske Veritas (DNV) classification rules, which ensure international safety and construction standards.
- **Naming:** It is named after Malwan, a historic coastal town in Maharashtra linked to the maritime heritage of Chhatrapati Shivaji Maharaj.
- **Aim:** It aims to provide advanced capabilities for underwater surveillance and specialized combat operations in littoral zones.
- **Key features**
 - **Dimensions:** It measures about 80 m in length with a displacement of around 1,100 tons.
 - **Propulsion:** It uses Waterjet propulsion for high manoeuvrability in shallow waters.

- **Weapon systems:** It is equipped with torpedoes and multifunctional anti-submarine rockets.
- **Sensors:** It has advanced radars and sonar systems for detecting underwater threats.
- **Operational role:** It can perform Anti-Submarine Warfare, Low Intensity Maritime Operations, and mine warfare.

Bhavasagara

News: The Ministry of Environment, Forest and Climate Change designated CMLRE's "Bhavasagara" Referral Centre as a National Repository for Deep-Sea Fauna.

About Bhavasagara



Source – Goa News

- **Bhavasagara** is a specialized scientific hub and National Repository for preservation, study, and documentation of deep-sea marine life, officially designated on March 30, 2026.
- **Aim :** It aims to provide a foundational resource for ocean scientists while strengthening India's blue economy and marine biodiversity framework.
- **Location:** It is located in Kochi, Kerala.
- **Parent organisation:** It functions under the Centre for Marine Living Resources & Ecology (CMLRE).
- **Nodal ministry:** It operates under the Ministry of Earth Sciences (MoES).
- **Designated by:** It is designated by the Ministry of Environment, Forest and Climate Change (MoEFCC).
- **Legal Framework:** It is recognized under the provisions of the Biological Diversity Act, 2002.
- **Key Functions:**

- **Secure custody:** It preserves biological samples as voucher specimens along with DNA and associated data for future scientific reference.
- **Specimens custodian:** It acts as the official custodian for new deep-sea species discovered in Indian waters.
- **Capacity building:** It promotes expertise in deep-sea taxonomy aligned with the UN Decade of Ocean Science (2021–2030).
- **Scientific repository:** It maintains over 3,500 taxonomically identified and geo-referenced specimens covering diverse marine life.
- **Research facilitation:** It provides a centralized platform for researchers and institutions to access deep-sea data.

About Centre for Marine Living Resources & Ecology (CMLRE)

- **Institutional status:** It is a premier institute under the Ministry of Earth Sciences, Government of India.
- **Core mandate:** It is dedicated to exploration, management, and conservation of marine living resources.
- **Operational area:** It focuses on the Indian Exclusive Economic Zone (EEZ) and adjacent deep seas.

Energy Statistics India 2026

News: The National Statistics Office released Energy Statistics India 2026, presenting updated data on reserves, production, consumption, trade, and energy sector trends.

About Energy Statistics India 2026



Source – MoSPI

- It is an annual publication providing an integrated dataset on India's energy sector covering major energy resources.
- Released by: It is released by the National Statistics Office under the Ministry of Statistics and Programme Implementation.
- Edition: It is the 33rd edition of the report.
- Key Findings
 - Growth in Energy Supply: Total Primary Energy Supply grew by 2.95% to 9,32,816 KToE in FY 2024-25.
 - Renewable Energy Potential: Renewable energy potential reached 47,04,043 MW, with solar contributing around 71%.
 - More than 70% of renewable potential is concentrated in six states, including Rajasthan, Maharashtra, Gujarat, Andhra Pradesh, Karnataka, and Madhya Pradesh.
 - Installed Capacity Expansion: Renewable capacity increased from 90,134 MW in 2016 to 2,29,346 MW in 2025 with 10.93% CAGR.

- **Rise in Renewable Electricity Generation:** Electricity generation from renewables increased from 1,89,314 GWh to 4,16,823 GWh.
- **Increase in Per Capita Consumption** Per capita energy consumption rose from 15,296 to 18,096 megajoules per person.
- **Improved Efficiency** Transmission and distribution losses reduced from about 22% to 17%.
- **Dominance of Coal and Rising Demand** Coal supply increased to 5,52,315 KToE, and Total Final Consumption (TFC) over 30% to 6,08,578 KToE, along with a rise in credit flow to ₹10,325 crore.

20 Cities Towards Zero Waste Initiative and International Day of Zero Waste

News: Ahead of the International Day of Zero Waste on 30 March, 20 Cities Towards Zero Waste Initiative has been initiated.

About 20 Cities Towards Zero Waste Initiative and International Day of Zero Waste



Figure 1. Source: UNEP

About 20 Cities Towards Zero Waste Initiative

● It highlights cities demonstrating ambitious and innovative approaches to reducing waste, advancing circular economy solutions, and building more sustainable, resilient, and inclusive

urban systems.

- **Initiative led by:** The initiative is led by the U.N. Secretary-General's Advisory Board on Zero Waste, with support from UN-Habitat and the UN Environment Programme (UNEP).
- **Aim:** It aims to –
 - **Recognise city leadership and innovation**
 - **Promote exchange of good practices and lessons learned**
 - **Inspire other cities to accelerate their transition toward zero waste**

- It contributes directly to the **SDG 11 (Sustainable Cities and Communities)**, **SDG 12 (Responsible Consumption and Production)**, and **SDG 13 (Climate Action)**.
- **Selected cities:** 20 cities including cities such as **Accra (Ghana)**, **Bologna (Italy)**, **Chefchaouen (Morocco)**, **Dar es Salaam (Tanzania)**, **Dehiwala City (Sri Lanka)**, **Florianópolis (Brazil)**, etc. have been identified.
 - **Varkala, Kerala**, is the **identified city in India**.
 - The selected cities will be **showcased on global platforms to share experiences** and inspire further action.

About International Day of Zero Waste

- The United Nations General Assembly adopted a resolution on 14 December 2022, during its 77th session, declaring 30 March as the International Day of Zero Waste.
- The Day is observed annually on 30 March across the world.
- The observance is facilitated by United Nations Human Settlements Programme and United Nations Environment Programme.
- Its main objective is to promote sustainable production and consumption patterns.
- It raises awareness about the importance of reducing waste generation, reusing materials, and recycling resources efficiently.

Carpet Industry of India

News: Key global carpet exhibitions are being postponed and cancelled due to ongoing geopolitical conditions, which will impact the exports of carpets from Kashmir, overall affecting the Carpet Industry of India.

About Carpet Industry of India



Source – CEPC

- The Indian carpet industry includes **handmade carpets, handloom carpets, coir carpets, silk carpets, and floor coverings.**
- Currently, India is ranked first in handmade carpet and other floor coverings production and exports in terms of value and volume.
- **Governing body:** Carpet industry is governed by Carpet Export Promotion Council India (CEPC).
- **Major carpet producing states:** Currently, the sector has a broad cluster spread across several states such as **Uttar Pradesh, Jammu & Kashmir, Rajasthan, Punjab, Haryana, and Madhya Pradesh.**
 - **Major carpet-producing centres:** The major carpet-producing centres in India are **Bhadohi, Mirzapur, Varanasi, Agra, Jaipur, Panipat, Srinagar, and Gwalior.**
- **G.I. Tagged carpets:** Seven key products in the carpet and durries sector registered in a geographical indication (GI) are –
 - **Handmade Carpet of Bhadohi, Mirzapur Handmade Dhurrie, Kashmir Handmade Carpet, Navalgund Durrie, Ghazipur Wall hanging, Wrangle Durries, and Agra Durrie.**

- Export trends:

India's carpet and other floor coverings export (US\$ million)



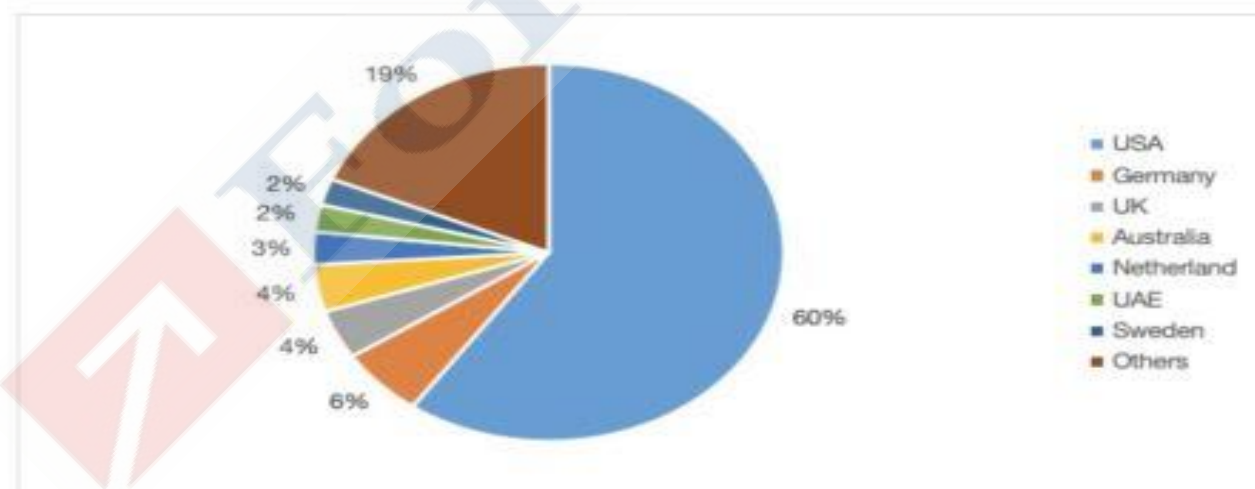
Source: Department of Commerce & Industry, Niryat

Source – IBEF

- India exports silk, coir, jute, and handloom carpets and floor coverings.
- The country exports about 85-90% of the total carpets it produces and is the largest exporter in the world.
- India is responsible for around 40% of worldwide exports of handmade carpets.
- India's carpet export in FY25 stood at US\$ 1.54 billion, whereas in FY24 carpet exports stood at US\$ 1.39 billion.

Major export destinations: India exports carpets to more than 100 countries in the world.

Country-wise share of India's exports (FY25)



Source: Department of Commerce & Industry, Niryat

Source – IBEF

- The USA, Germany, Australia, the UK, Netherlands, and Sweden are amongst the largest importers from India.

- The USA was the biggest importer of carpets from India in FY25, with an amount of US\$ 921 million, accounting for about 59% of total export.
- Germany and United Kingdom were among the top 3 importers in FY25, with carpet imports from India valued at US\$ 91.7 million and US\$ 65.4 million, respectively.

About Carpet Export Promotion Council India (CEPC)

- It was formed in 1982 by the Ministry of Textiles.
- **Objective:** Its objective is to **promote handmade carpets, rugs and other floor coverings.**
- **Functions:** Some of the **activities** taken up by the CEPC are **fairs and exhibitions** as a part of Market Access Initiative (MAI), **liaising with the Government**, **protecting the interest of the exporters** in the global markets, **conducting trade meets and surveys**, **conducting training and information dissemination.**

Molucca Sea

News: A magnitude 7.6 earthquake struck Indonesia's Northern Molucca Sea, causing damage, one death, tsunami waves, and multiple aftershocks.

About Molucca Sea



Figure 2. Source – NBC News

northward to the Philippine Sea.

- **Tectonic activity:** The sea lies over the Molucca Sea Plate, which is subducted in two opposite directions, called **Divergent Double Subduction.**

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- **Divergent Double Subduction:** This is a rare geological phenomenon where the Molucca Sea Plate is being subducted in two opposite directions – westwards under the Eurasian (Sangihe) Plate and eastwards under the Philippine Sea (Halmahera) Plate.
- **Seismic zone:** It is part of a highly active seismic region with frequent earthquakes and crustal movements.
- **Basin Structure:** The sea floor is divided into three basins, with the deepest being the Batjan basin at 15,780 feet.
- **Indonesian Throughflow (ITF):** It serves as a vital passage for the Indonesian Throughflow, a current system that transports warm water from the Pacific Ocean to the Indian Ocean, playing a crucial role in global climate regulation.

TAK-003 Dengue Vaccine

News: TAK-003 dengue vaccine received clearance from Subject Expert Committee under Drugs Controller General of India for individuals aged 4 to 60 years.

About TAK-003 Dengue Vaccine



Source – NDTV

- **TAK-003 (commonly known as 'Qdenga')** is a tetravalent dengue vaccine designed to protect against all four dengue virus serotypes 1, 2, 3, and 4.
- **Developed by:** The vaccine is developed by Takeda.

- **Mechanism:** It is a live-attenuated vaccine containing weakened versions of dengue virus serotypes 1, 2, 3, and 4, and it uses the DENV-2 strain as the genomic backbone.
- **Dose:** The vaccine is administered as a two-dose series, with both doses given three months apart.
- **Eligibility:** It has received clearance for use among individuals aged 4 to 60 years in India.
 - **WHO Recommendation:** As per WHO guidance, TAK-003 (Qdenga) is recommended for children aged 6 to 16 years in settings with high dengue transmission, and it is administered as a two-dose series with a three-month interval.
- **Strong protection:** The vaccine provides strong protection against severe dengue and hospitalisation, reducing pressure on healthcare systems.
- **Nature of protection:** It reduces severity of illness rather than completely preventing infection, so dengue transmission may continue.
- **Limitation:** It shows lower effectiveness against DENV-3 and DENV-4, especially in individuals without prior infection.
- **India-specific Context:** All four serotypes co-circulate in India, with DENV-2 accounting for about 48–66% cases and DENV-3 contributing around 20–30%, indicating evolving epidemiology.

About India's Dengue Vaccine Pipeline

- **Indigenous candidate:** 'DengiAll' is being developed by Panacea Biotec in collaboration with Indian Council of Medical Research (ICMR).
- **Clinical stage:** It is currently undergoing large phase III clinical trials, indicating advanced evaluation status.
- **Scientific basis:** The vaccine is based on the National Institutes of Health (NIH) TV003 platform and is designed as a single-dose vaccine for balanced protection across all four serotypes.
- **Future potential:** If successful, it may be available around 2027 and could offer broader protection and better suitability for large-scale public health deployment.

Maternal Mortality

News: A recent Lancet study highlights slowing progress in reducing Maternal Mortality Ratio and challenges in achieving the SDG 2030 target.

About Maternal Mortality

INDIA MATERNAL HEALTH: THE NUMBERS

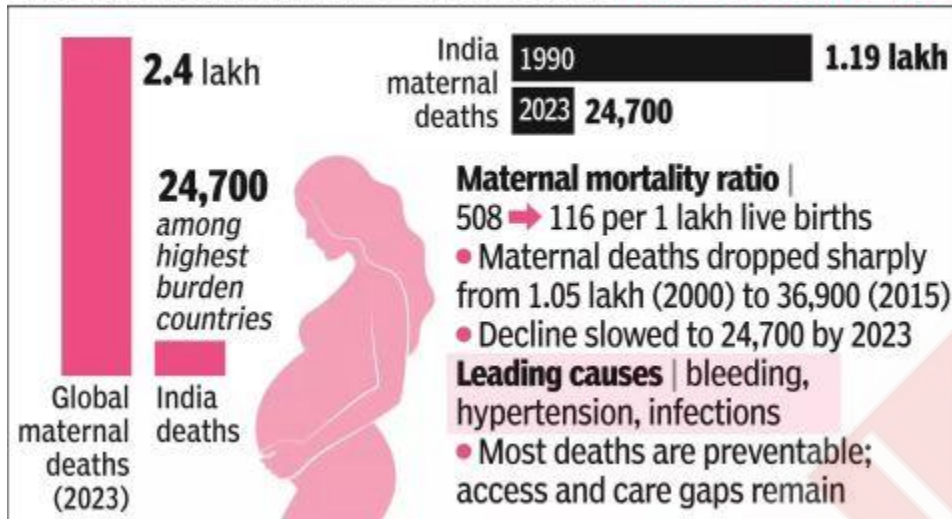


Figure 3. Source – Tol

- **Maternal Mortality Ratio:** It refers to the number of maternal deaths per 100,000 live births in a given time period.

- India aims to reduce Maternal Mortality Ratio to below 70 deaths per

one lakh live births by 2030.

- **Maternal Mortality Ratio Trend (Global)**

- **Global burden:** Total maternal deaths were 4 lakh in 2023, showing a high global burden.
- **Target achievement:** 100 out of 204 countries achieved MMR below 70 by 2023, indicating partial success.
- **Uneven progress:** 73 countries still have MMR above 140, highlighting serious gaps.
- **Developing regions:** Majority of deaths occur in developing regions due to inequality in healthcare access.

- **Maternal Mortality Ratio Trend (India):**

- **Long-term decline:** Maternal deaths reduced from 19 lakh in 1990 to 24,700 in 2023, showing strong improvement.
- **MMR reduction:** MMR declined from 508 (1990) to 116 (2023), reflecting nearly 80% reduction.
- **Recent trend:** As per SRS, MMR declined from 122 (2015-17) to 88 (2021-23), but progress has slowed.

- Global share: India accounts for one-tenth of global maternal deaths, indicating a significant burden.
- Regional disparity: States like Assam and Uttar Pradesh continue to pull down national performance.

Samrat Samprati

News: On Mahavir Jayanti, Prime Minister Narendra Modi inaugurated the Samrat Samprati Museum, dedicated to Jain history and Samprati's legacy.

About Samrat Samprati



Figure 4. Source: IE

- Samrat Samprati was a **Mauryan ruler**.
- He was the **son of Kunala** and the **grandson of Ashoka**.
- **Title:** He was also known as **Indrapalit, Sangat and Vigatashok**.
- **Reign:** His reign is believed to be between **230 BCE and 220 BCE**.
 - After Ashoka's death (232 BCE), a theory suggests the **Mauryan Empire** was divided between Samprati and

Dasharatha.

- **Religious journey:**
 - He is described as a **Jain from birth**, while most accounts say he **converted under the monk Suhastin**.
 - He **accepted Suhastin** as his **guru** and followed the **ritual conduct of a Jain layman**, including daily icon worship.
 - **Suhastin** was the **eighth leader of the Jain congregation** established by Mahavira.
 - In the **Shvetambara Jain tradition**, he is considered the **most central person in the Mauryan dynasty**.

- **Associated texts:** His story first appears in **Shvetambara** writings related to monastic practice rules.
 - Later medieval texts, such as **Samprati Nripa Charitra** were devoted entirely to his life.
- **Contribution to the spread of Jainism:**
 - Some historians believe that he helped spread Jainism to regions like **China, Myanmar, Afghanistan, Nepal, and Bhutan.**
 - He also strengthened Jainism in **Andhra Pradesh, Tamil Nadu, Karnataka, Maharashtra, Gujarat, Malwa, and Rajputana.**
 - Broader interpretations further credit him with extending Jain influence into **Central Asia, the Arabian peninsula, and parts of West Asia.**
 - He also contributed in building **125,000 new temples, renovating old temples, consecrating stone icons and metal icons and establishing charitable centres for the poor.**

About Samrat Samprati Museum

- The **Samrat Samprati Sangrahalaya** is a major Jain heritage museum located in **Koba, Gujarat.**
- It is named after **Samrat Samprati Maharaj.**
- **Objective:** Its primary objective is **to preserve, promote, and showcase the rich artistic and religious traditions of Jainism** for present and future generations.
- It has been developed as a **Kala-Tirth**, meaning it serves both as a **cultural centre and a spiritual heritage site** dedicated to Jain philosophy and art.

INS Agray, INS Dunagiri and INS Sanshodhak

News: Three frontline naval platforms, **INS Dunagiri, INS Sanshodhak, and INS Agray** were delivered to the Navy by **Garden Reach Shipbuilders and Engineers Ltd. (GRSE).**

About INS Agray, INS Dunagiri and INS Sanshodhak



Source: PIB

About 'Agray' ASW SWC

- INS Agray is the fourth vessel among the eight Anti-Submarine Warfare Shallow Water Craft (ASW SWC) being built for the Indian Navy.
- Designed and constructed by: It has been indigenously designed and constructed by Garden Reach Shipbuilders & Engineers (GRSE), Kolkata.
- It is a reincarnation of the earlier INS Agray, which belonged to the 1241 PE class of patrol vessels and was decommissioned in 2017.
- It has been designed and built in accordance with the classification rules of the Indian Register of Shipping (IRS).
- Features: It measures approximately 77 metres in length.
 - It is among the largest Indian Naval warships powered by waterjet propulsion systems.
 - It is equipped with state-of-the-art lightweight torpedoes, indigenous rocket launchers, and shallow-water SONAR, enabling effective detection and engagement of underwater threats.

About INS Dunagiri



Source: Indiandefensenews

- It is the fifth ship of Nilgiri Class developed under Project 17A.
- Features: It is 149-metre-long and 6,670-tonne stealth frigate.

- It is equipped with advanced weapons and sensors, including BrahMos cruise missiles, AESA radar, and an integrated combat management system.
- It is powered by a combined diesel and gas turbine configuration.
- It is capable of multi-dimensional operations across air, surface, and sub-surface domains.

About INS Sanshodhak



Figure 5. Source: Newsd Defence

- INS Sanshodhak is the fourth and final Survey Vessel (Large) of the four Survey Vessel (Large) (SVL) class ships.
- Features: It is 110-metre vessel, with a displacement of around 3,400 tonnes.
- It is equipped with advanced systems such as data acquisition and processing units, autonomous underwater vehicles, remotely operated vehicles and digital side scan sonar.
- It can also support helicopter operations, HADR missions, and limited combat roles.
- It is designed for coastal and deep-water surveys, collection of oceanographic data and geophysical data for both defence and civilian applications.

About Project 17A

- Project 17A is an Indian Navy initiative to build seven advanced stealth frigates as successors to the Shivalik-class (Project 17).
- Project 17A frigates are versatile multi-mission platforms, designed to address current and future challenges in the maritime domain.
- These frigates feature superior stealth characteristics, enhanced automation, advanced sensors, and modern weapon systems.
- Built by: Of the seven ships, four – Nilgiri, Udaygiri, Taragiri, and Mahendragiri – are being built by MDL, and three– Himgiri, Dunagiri, and Vindhyagiri by GRSE.
- The four frigates earlier delivered under the Project are –
 - [INS Himgiri](#)
 - [INS Udaygiri](#)
 - [INS Nilgiri](#)
 - [INS Taragiri](#)

Non-Deliverable Derivative (NDD) Market

News: The Reserve Bank of India barred banks from NDD contracts in rupee to curb misuse, stabilize currency, and improve transparency.

About Non-Deliverable Derivative (NDD) Market



Figure 6. Source – Outlook Money

- An NDD is a derivative contract where parties agree on a future rupee exchange rate but settle differences in cash, usually in US dollars.
- Mechanism
 - Agreement on Exchange Rate: Two parties enter into a contract and agree

on a future exchange rate for the rupee.

- **No Physical Delivery:** Due to capital controls, offshore investors cannot trade the rupee physically, so the contract does not involve actual currency delivery.
- **Calculation of Difference:** On the settlement date, the difference between the agreed exchange rate and the prevailing market rate is calculated.
- **Cash Settlement:** The calculated difference is settled in cash, usually in US dollars, instead of exchanging the rupee.
- **Purpose of Structure:** This mechanism allows participants to take positions on the rupee's movement without handling the currency itself.
- **Offshore Nature:** NDD trades occur outside India in financial hubs and remain outside RBI control.
- **Eligibility:** It is mainly used by foreign investors, hedge funds, and global banks who cannot freely access the rupee market.
- **Role in Price Discovery:** NDD markets influence rupee expectations and often act as a price discovery mechanism before Indian markets open.
- **Limitations:** NDD markets distort price discovery and are misused for speculative activities through repeated contract entry and exit.
- **Significance for India:** The RBI move reduces speculative activity, limits misuse, stabilises rupee volatility, and strengthens the onshore market.

Rebate of State and Central Taxes and Levies (RoSCTL) Scheme and Remission of Duties and Taxes on Exported Products (RoDTEP) Scheme

News: The Ministry of Textiles has extended the Rebate of State and Central Taxes and Levies Scheme (RoSCTL) for apparel exports and continued the Remission of Duties and Taxes on Exported Products Scheme (RoDTEP) till 30 September 2026.

About Rebate of State and Central Taxes and Levies (RoSCTL) Scheme



Source: GOI

- It is a scheme **to rebate all embedded State and Central taxes and levies not covered under any other scheme** to enhance the global competitiveness of India's apparel and made-up exports.
 - It has replaced the previous "Rebate of State Levies (RoSL) Scheme."
- It is **operational from 7th March 2019**.
- **Launched by:** It was launched by the Ministry of Textiles.
- **Implementing agency:** It is being implemented by the Department of Revenue, Ministry of Finance.
- **Objective of the scheme:** Its objective is **to compensate for the State and Central Taxes and Levies in addition to the Duty Drawback Scheme** on export of apparel/ garments and Made-ups by way of rebate.
- It is **based on the principle of zero-rating of exports**, ensuring remission of unrefunded taxes embedded in exported products.
- **Features**
 - **Beneficiary Eligibility:** All exporters of garments, apparel, and made-ups manufactured in India can get benefits under the RoSCTL scheme
 - Those exporters whose **Importer -Exporter Code (IEC)** is in the **DGFT Denied Entity List** are not eligible.
 - Eligible exporters under RoSCTL **cannot claim RoDTEP benefits**.
 - **Mechanism:** The rebate under the scheme shall be given to the exporter in the form of **duty credit scrips**, which will be **maintained in the electronic duty credit ledger**.

- The scrips shall be **issued electronically** on the **Customs automated system**.
- **Transferable:** The scrips is used for **payment of basic customs duty only** and is **transferable** to any other person.
- The duty credit available in an e-scrip shall be transferred **at a time for the entire amount in the said e-scrip to another person. Partial transfer is not allowed.**
- **Validity of the e-scrip:** The period of validity of the e-scrip, of one year from its creation, shall not change on account of transfer of the e-scrip.

About the Remission of Duties and Taxes on Exported Products (RoDTEP) Scheme



Figure 7. Source: My Gov

- **Launched in:** It was launched in 2021 and has been **extended till September 30, 2026.**
- It replaced the **Merchandise Export Incentive Scheme (MEIS).**
- **Launched by:** It was launched by the **Department of Commerce, Ministry of Commerce and Industry.**
- **Implementing agency:** It is being implemented by the **Department of Revenue, Ministry of Finance.**
- **Objective:** It is to provide refunds on taxes, duties, and levies incurred by exporters during manufacturing and distribution.
- **Features:**
 - **Beneficiary eligibility:** Both manufacturer and merchant exporters (traders) are eligible to avail benefits under the RoDTEP scheme.
 - **Special Economic Zone Units** are also eligible to claim the benefits under this Scheme.
 - **Coverage:** It covers all sectors, with priority given to labour-intensive sectors.
 - It is also applicable to goods exported through courier via e-commerce platforms.
 - **Mechanism:** The refund will be provided as transferable electronic scrips, and these duty credits will be recorded and monitored through an electronic ledger.
 - Its benefit cannot be claimed for services exported outside India.
 - **Re-exported products** are not eligible under the scheme.

- **Refund range:** Refunds under the scheme range from 0.3 per cent to 3.9 per cent.

Indian Softshell/Gangetic Softshell Turtles

News: Police rescued 16 Indian Softshell turtles from a smuggler in Jharcha, Greater Noida, during a routine check, exposing illegal wildlife trade.

About Indian Softshell/Gangetic Softshell Turtles



Figure 8. Source – Research Gate

- The Indian softshell turtle (*Nilssonia gangetica*) is a freshwater turtle species found in South Asia.
- **Habitat:** It lives in rivers, canals, ponds, and freshwater systems.
- **Distribution:** The species is found in major river basins such as the Indus, Ganga and Mahanadi, along with their tributaries and intervening drainages.
- **Geographical range:** It occurs across India (including Assam, Bihar, Jammu & Kashmir, Madhya Pradesh, Odisha, Punjab, Rajasthan, Uttar Pradesh and West Bengal), and is also found in Afghanistan, Bangladesh, southern Nepal and Pakistan.
- **Characteristics**
 - **Carapace structure:** It has a large soft shell with eight pairs of costal plates and well-developed plastral callosities.
 - **Appearance:** The body is olive above with yellowish lower parts and distinct black streaks on the head.
 - **Size:** It can reach a carapace length of up to 94 cm.
 - **Diet:** It feeds mainly on fish, amphibians, carrion, other animal matter, and also consumes aquatic plants.
 - **Breeding:** It breeds during August and November.
 - Nests are located in islands and clayey river banks.

- **Ecological role:** They are predatory scavengers that help maintain water quality by consuming organic waste and carrion.
- **Cultural significance:** It is considered sacred and is often maintained in temple ponds in Odisha.
- **Threats**
 - Habitat degradation through hydrologic alteration
 - Accidental drowning in fishing nets
 - Poaching
 - Illegal trade
 - Sand mining
- **Conservation Status**
 - IUCN Red List: Vulnerable
 - CITES: The species is listed under Appendix I.
 - Wildlife (Protection) Act, 1972: The species is placed under Schedule I (Part II), which provides it the highest level of legal protection in India.

Dudhwa Tiger Reserve

News: The Opposition criticized the Uttar Pradesh government after a tigress died after being hit by a train in Dudhwa buffer zone.

About Dudhwa Tiger Reserve

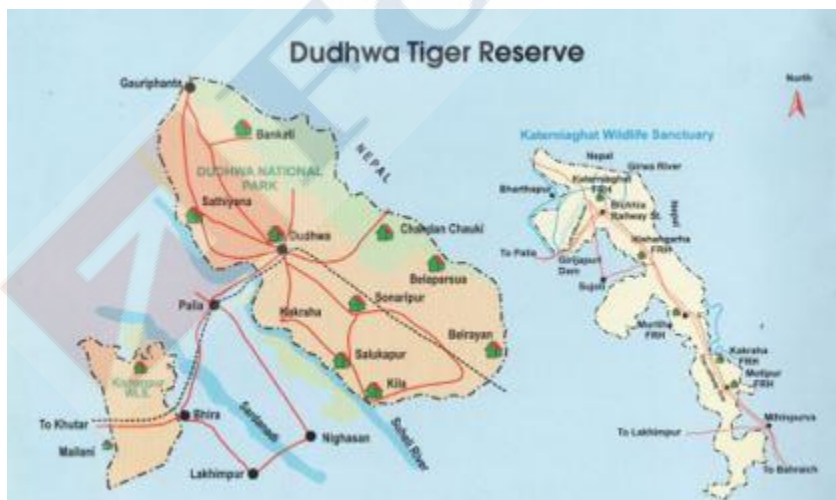


Figure 9. Source – Dudhwa NP

- **Location:** It is located on the Indo-Nepal border in Lakhimpur-Kheri district of Uttar Pradesh in the Terai region.
- **Establishment:** It was established as a Tiger Reserve in 1988 under Project Tiger.
- **Constituent areas:** It comprises Dudhwa National

Park, Kishanpur Wildlife Sanctuary and Katarniaghat Wildlife Sanctuary.

- **Topography:** It is a typical Tarai-Bhabar habitat of the upper Gangetic plains biogeographic province.
- **Rivers:** The reserve is drained by the Sharda (near Kishanpur), Geruwa (through Katarniaghat), and Suheli and Mohana streams (in Dudhwa National Park), all tributaries of the Ghagra River.
- **Vegetation:** It has North Indian Moist Deciduous vegetation with dominant Sal forests and associated species like *Terminalia alata*, *Lagerstroemia parviflora*, and *Adina cordifolia*.
- **Fauna:** It includes tiger, leopard, swamp deer, rhinoceros, chital, hog deer, barking deer, sambar, wild boar, and ratel.
 - It has about 400 bird species such as florican and black-necked stork.
 - It is a biodiversity hotspot with interlinked food chains and ranked 4th in All-India Tiger Census 2022 with about 135 tigers and 180 butterfly species.

Chambal River

News: The Supreme Court of India stayed a Rajasthan notification altering the boundaries of the National Chambal Gharial Sanctuary that freed 732 hectares along the Chambal River.

About Chambal River



Source – ResearchGate

- **Origin:** It is a perennial river which originates from Janapav hills, situated south of Mhow town near Indore, along the southern slopes of the Vindhya Mountain Range in Madhya Pradesh.
- **Course of river:** From its source, it flows in a north-northeasterly direction through Madhya Pradesh, then passes through Rajasthan for a short stretch.

- It subsequently forms part of the **boundary between Rajasthan and Madhya Pradesh** before turning **southeastward** and eventually joining the **Yamuna River in Uttar Pradesh**.
- It **ends at a confluence of five rivers**, including the **Chambal, Kwari, Yamuna, Sind, and Pahuj, at the Pachnada confluence near Bhareh in Uttar Pradesh**.
- It is bounded by the **Vindhyan range (West-East-South)** and the **Aravalli range (NW)**.
- **Total Length:** Its total length is 1024 km.
- **States covered:** It flows through **Madhya Pradesh, Rajasthan and Uttar Pradesh**.
- **Tributaries:** Its main tributaries include the **Banas, Mej (left bank) and Parbati, Kali Sindh, and Shipra (right bank) rivers**.
- **Drainage:** The **Chambal and its tributaries** drain the **Malwa region of northwestern Madhya Pradesh**.
 - Its largest tributary **Banas River, drains southeastern Rajasthan**.
- **Drains into:** It is a **right bank tributary of Yamuna River** meeting it in **Jalaun district of Uttar Pradesh**.
- **Dams situated:** **Gandhi Sagar Dam, Jawahar Sagar Dam, Ranapratap Sagar Dam, Kota Barrage, Kotwal Dam, Pagara Dam and Pillowa Dam** are the dams situated on it.
- **Protected area:** The [Chambal National Sanctuary](#) extends along a 425 km stretch of the Chambal River which is India's first and only tri-state protected riverine sanctuary.

Kar Saathi AI Website and PRARAMBH Programme

News: The Income Tax Department launched 'Kar Saathi' website to simplify tax processes and support transition to the Income Tax Act, 2025.

About Kar Saathi AI Website



Figure 10. Source – Legal Dev

- Kar Saathi is an AI-powered digital assistant integrated into the revamped income tax portal for guidance and compliance support.
- **Launched by:** It is launched by the Income Tax Department.

- **Aim:** It aims to simplify tax compliance, provide 24×7 assistance, and improve taxpayer experience through technology-driven governance.
- **Key Features:**
 - **24×7 AI assistance:** It provides round-the-clock automated responses for queries related to filing returns, provisions, forms, notices, refunds, and compliance.
 - **Single platform access:** It brings all direct tax resources such as forms, challans, e-payment, e-verification, and FAQs under one roof.
 - **User-friendly system:** It is designed for faster navigation, easier usability, and reduced compliance complexity for taxpayers.

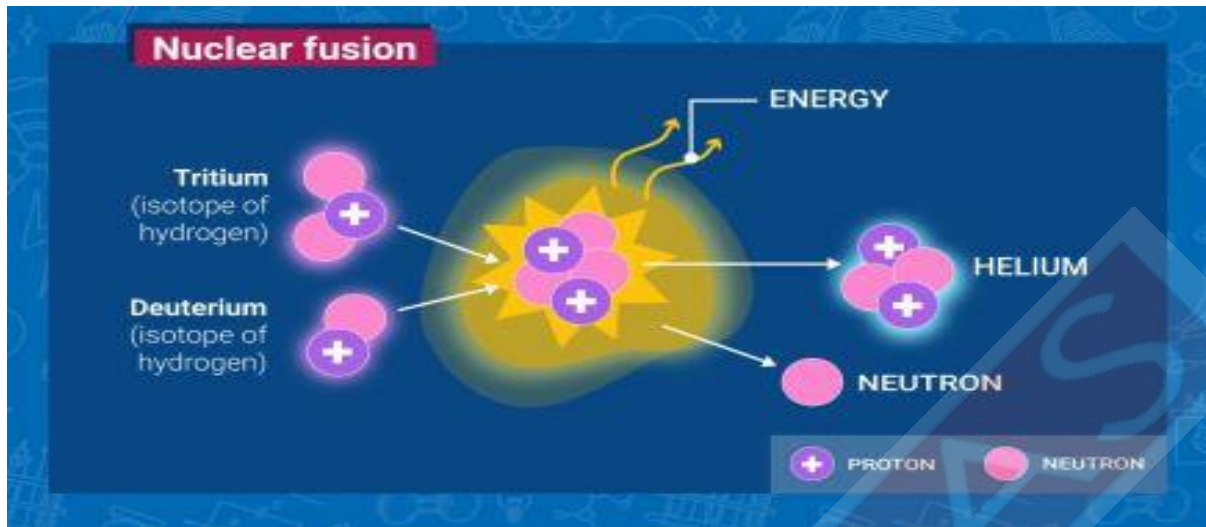
About PRARAMBH Programme

- **PRARAMBH** stands for Policy Reform and Responsible Action for Mission Viksit Bharat, which is a nationwide outreach programme for tax awareness.
- **Nature:** It is a citizen-first outreach and facilitation initiative conducted through print, digital media, workshops, and guidance material.
- **Aim:** It aims to reduce confusion, encourage voluntary compliance, and ensure clear understanding of new tax rules.
- **Philosophy:** It is guided by the spirit of “Nagrik Devo Bhava”, focusing on simple, clear, and reliable tax administration.
- **Components**
 - **Multi-channel Outreach:** It uses print, radio, television, digital platforms, and social media for awareness.
 - **Educational Support:** It provides simplified guidance material, FAQs, and workshops for better understanding.
 - **System Reforms:** It highlights reduction of rules from 510 to 333 and forms from 399 to 190, easing compliance and reducing over six crore transaction requirements.

Nuclear Fusion

News: Researchers and investors are investing billions in nuclear fusion as a potential green energy source, but a Nature Energy study warns that cost assumptions may misguide investments.

About Nuclear Fusion



Source – IAEA

- Nuclear fusion is a process where light atomic nuclei combine to release a large amount of energy.
- Process: Two light nuclei are brought very close under very high temperature and pressure, allowing strong nuclear forces to combine them and release energy.
- Fuel: It uses light elements like isotopes of hydrogen, especially deuterium and tritium, which form helium and a neutron after reaction.
- Conditions: Extremely high temperature of about 100 million °C and high pressure are required to overcome electrostatic repulsion between nuclei.
- Methods: It is achieved through magnetic fusion and laser-based inertial fusion, where plasma state is created for the reaction.
- Differences between Nuclear Fission and Fusion
 - Nature of Reaction: Fission involves splitting of a heavy nucleus, whereas fusion involves combining light nuclei into a heavier nucleus.
 - Fuel Used: Fission uses heavy elements like uranium or plutonium, while fusion uses light elements like hydrogen isotopes.
 - Energy Process: Fission produces energy through a chain reaction, whereas fusion does not depend on a chain reaction.
 - Waste and Safety: Fission generates long-lived radioactive waste, whereas fusion produces minimal long-lived radioactive waste.

- Examples: Nuclear reactors and atomic bombs are based on fission, whereas the Sun and hydrogen bombs are based on fusion.

Key Facts About Indonesia

News: A 7.4-magnitude earthquake struck Indonesia's Molucca Sea near Ternate, causing casualties, injuries, and temporary tsunami warnings later withdrawn.

Key Facts About Indonesia



Figure 11. Source – Legal Dev

Source – World Atlas

- **Location:** Indonesia is an archipelagic nation located in Southeast Asia between the Indian Ocean and the Pacific Ocean, along major global sea lanes.
- **Bordering countries :** It shares borders with Malaysia, Papua New Guinea, and Timor-Leste, with some islands shared with these countries.
- **Maritime boundaries:** It is surrounded by the Indian Ocean in the south and the Pacific Ocean (including the South China Sea) in the north.
- **Capital city:** Jakarta is the present capital city, and the new capital named Nusantara (meaning “archipelago” in Javanese) will be established in the future.
- **Major islands:** Indonesia's islands are grouped into the Greater Sunda Islands (Sumatra, Java, Kalimantan, and Sulawesi), the Lesser Sunda Islands (Bali and island chain up to Timor), the

Moluccas (Maluku) between Sulawesi and New Guinea, and the western part of New Guinea (Papua), showing its vast and diverse island system.

- **Underlying Structure:** Beneath the surface, Indonesia has a complex physical structure formed by the junction of three major sections of the Earth's crust with shelves, volcanic mountain chains, and deep-sea trenches.
- **Geology (Plate):** The islands of Sumatra, Java, Madura, and Kalimantan lie on the Sunda Plate, while western New Guinea lies on the Australian Plate, showing Indonesia's location across major tectonic plates.
- **Topography:** The major Indonesian islands have densely forested volcanic mountains in the interior that slope down to coastal plains with thick alluvial swamps, which further merge into shallow seas and coral reefs.
- **Climate:** The climate of Indonesia is almost everywhere equatorial, which is hot, humid, and rainy throughout the year.
- **Mountains:** The highest peak is Puncak Jaya (5,030 m).
- **Rivers:** The main rivers are Kapuas, Barito, Musi, and Digul.
- **Resources:** Indonesia is rich in natural gas, crude petroleum, coal, nickel, bauxite, gold, tin, and copper, showing strong resource-based importance.
- **Time zones:** Indonesia has three time zones—covering different island regions.

Tribes of Nicobar – Nicobari (Nicobarese) and Shompen

News: A draft plan to relocate Nicobarese tribal communities affected by the Great Nicobar Island mega-infrastructure project to their ancestral lands has created confusion and increased concerns among local people.

About Tribes of Nicobar – Nicobari (Nicobarese) and Shompen



Source: Official Website of Nicobar

About Nicobari (Nicobarese) Tribe

- The Nicobari tribe lives in **all the inhabited islands of the Nicobar Islands**.
- **Origin:** They belong to the **Mongoloid racial group**.
- **Population:** According to the 2011 census, the **indigenous Nicobarese number 23,681**.
- **Language:** They speak various dialects of the Nicobarese language, which belongs to the **Austroasiatic language family**.
- They are **not divided into sub-tribes**, but territorially, they are divided into **six groups**:
 - The people of **Car Nicobar, Chowra, Teressa with Bompoka, the Central Group, the Southern Group** and the **single inland tribe of the Shompen on Great Nicobar**.
- **Food:** Their chief food is **Coconut, Pandanus pulp, fish and rice and tropical fruits**. **Pigs and fowls** are mainly **reared for feasts**.
- **Social structure:** The Nicobari family system is **patriarchal in nature**.
 - They usually live in **joint families**, which are known as **Tuhet**.
 - In the Tuhet system, **land, coconut trees, and pigs are owned jointly by the family**, and there is **no individual ownership**.
 - **Love marriage is very common** and the **age of marriage is comparatively high** in the Nicobari society.
- **Houses and Settlement Pattern:** They live in **large and permanent villages**, which are mostly located near the seashore.

- Their houses are well-built and raised 5–7 feet above the ground on wooden piles, with entry through a movable ladder. Most of the houses are **circular in shape**.
- **Village Public Structures:** In most islands, there is a place near each coastal village called **Elpanam**.
- The **Elpanam** consists of important public buildings such as a **meeting house, a lying-in house, a mortuary, and a cemetery**.
- **Livelihood:** They engage in **pottery making, basket making, canoe and iron spear making, pig rearing and collection of forest produce**.
- **Feasting is one of the major cultural activities** of the Nicobari people.
- **Football is the most popular sport** among them. Other popular sports played by them are **canoe racing, volleyball, and wrestling**.

About Shompen Tribe

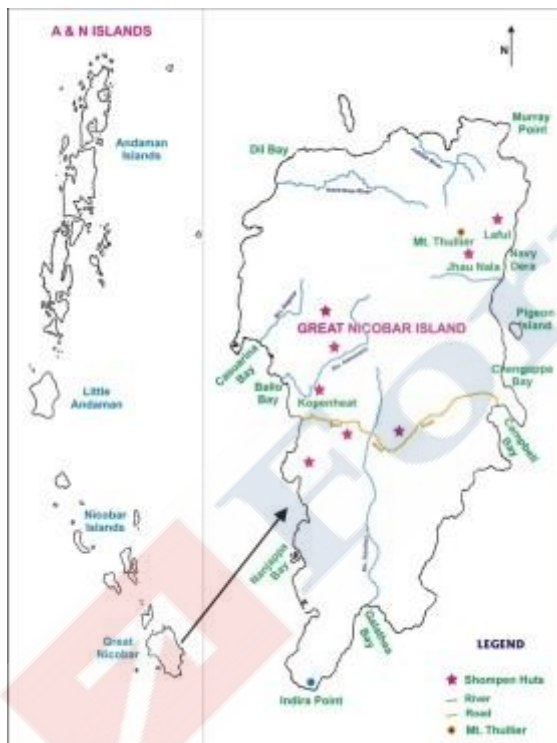


Figure 12. Source: Researchgate

- The Shompen tribe are the **indigenous tribe of the interior of Great Nicobar Island**.
- They are **designated as a Particularly Vulnerable Tribal Group** within the list of Scheduled Tribes.
- They are one of the **most isolated tribes on Earth**.
- **Note:** In 2024, for the first time, 7 members of the Shompen tribe cast their votes in the Andaman and Nicobar Lok Sabha constituency.
- **Livelihood:** They are **semi-nomadic hunter-gatherers**, and their main sources of livelihood are **hunting, gathering, fishing**, and a little bit of horticultural activities in a rudimentary form.
- **Food:** They **collect a wide variety of forest plants**, but their staple food is the pandanus fruit, which

they call larop.

- **Population:** According to the Census (2011), the estimated population of Shompen is 229.

- **Language:** They **speak their own language**, which has many dialects. Members of one band do not understand the dialect of the other.
- **Social structure:** They have **nuclear families** comprising **husband, wife, and their unmarried children**.
 - The **family is controlled by the eldest male member**, who controls all activities of the women and kids.
 - **Monogamy is generally practised**, though polygamy is also permitted.

Gangotri National Park

News: Gangotri National Park has reopened for tourists after a six-month winter closure.

About Gangotri National Park

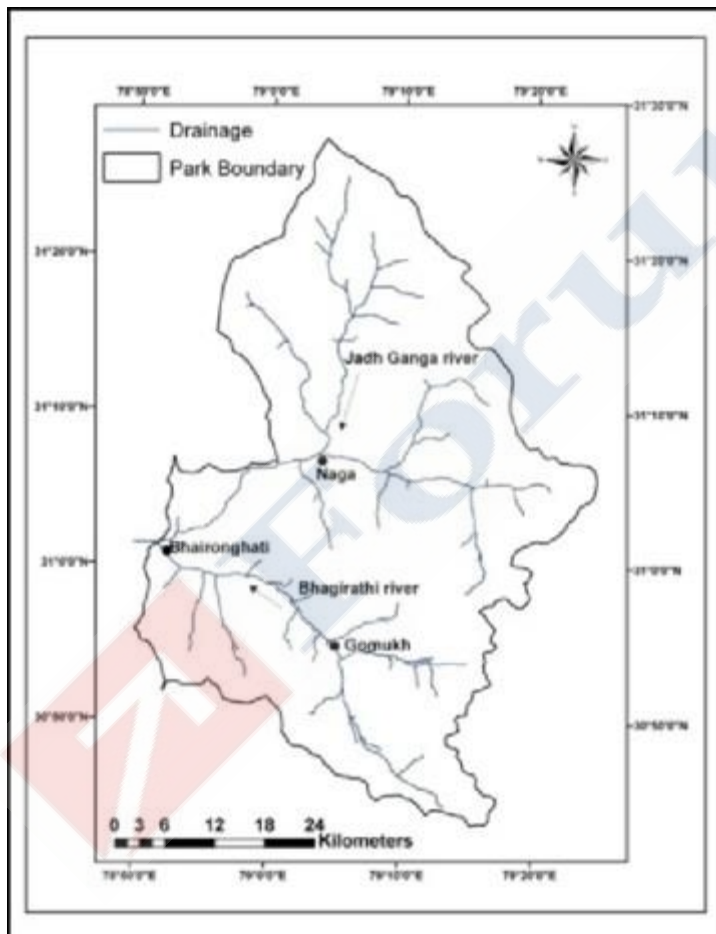


Figure 13. Source: Researchgate

catchments of the **River Bhagirathi**.

- Gangotri National Park is located in the **Uttarkashi district, Uttarakhand**.
- It derives its name from the **famous Gangotri Temple**, one of the four highly revered Hindu Dhams.
- **Established:** It was established in 1989.
- **Area:** It spreads over an area of **about 2,390 square kilometres**.
- It falls **under the bio-geographical zone** and sits at an **altitude of 1,800 meters to 7,083 meters above sea level**.
- It **forms a corridor** between **Govind National Park** and the **Kedarnath Wildlife Sanctuary**.
- **Boundary:** The northeastern section of the park forms the **international boundary of India and Tibet (China)**.
- **River associated:** It lies in the upper

- **Gaumukh glacier**, the origin of the Ganga, is **located inside the park**.
- It also includes the **Gaumukh–Tapovan Trek**, which is one of the most popular trekking routes in the region.
- **Peaks**: It includes iconic peaks like **Chaukhamba I–III, Satopanth, and Kedarnath Main**.
- **Flora**: It is covered with dense temperate coniferous forests, where **chir pine, deodar, fir, spruce, oak, and rhododendron** are the main types of vegetation.
- **Fauna**: It is the natural home of the **snow leopard**. Other species such as **black bear, brown bear, musk deer, blue sheep (Bharal), and Himalayan Monal** are found there.

Babu Jagjivan Ram

News: On 5 April 2026, the 119th birth anniversary of Babu Jagjivan Ram was observed with floral tributes and prayers in New Delhi.

About Babu Jagjivan Ram

- Babu Jagjivan Ram, known as Babuji, was a national leader, freedom fighter, and a strong crusader for social justice.
- **Birth**: He was born on April 5, 1908, in Chandwa village of Bihar in a Dalit family.
- **Education**: Despite facing caste discrimination, he studied at Banaras Hindu University and later graduated from Calcutta University in 1931.
- **Philosophy**: He followed the philosophy of equality and human dignity throughout his life and worked continuously to remove social discrimination and injustice.
- **Key Contributions & Legacy**:
 - **Freedom Struggle**: He participated in movements and also acted as a bridge between Dalits and the Indian National Congress, linking social reform with national freedom.
 - **Social Reformer**: In 1934, he founded the All India Depressed Classes League to promote equality for untouchables.
 - **Interim Government (1946)**: He became the youngest minister in Jawaharlal Nehru's interim government and handled the Labour portfolio.
 - **Labour Minister (1946–1952)**: During this period, he introduced important labour laws such as the Minimum Wages Act, Employees' State Insurance scheme, and Provident Fund Act.

- **Defence Minister (1970–1974):** He led India during the 1971 Indo-Pak war, which resulted in the creation of Bangladesh.
- **Agriculture Minister (1967–1970):** During this tenure, he guided the Green Revolution and made India self-sufficient in food grains.
- **Other Key Role:** In 1977, he formed the Congress for Democracy and later served as Deputy Prime Minister from January 1979 to July 1979.
- **Longest-Serving Minister:** He served as a Union Cabinet Minister for 35 years, which is the longest tenure in Indian history.
- **Literature:** In 1980, he wrote *Caste Challenge in India*, which explains his views on social inequality.
- **Death:** He passed away on July 6, 1986.

Bengal Florican

News: Bengal florican populations are declining as grasslands vanish due to land conversion, agriculture expansion, burning, and habitat fragmentation pressures.

About Bengal Florican



Figure 14. Source – DTE

- It is a medium-sized bustard species found in grasslands, and it is a grassland indicator species.

- **Different names:** It is called *ulu-mo'ra* in Assamese and *daotrilang* in Bodo, and it is also known as the “dancer of the grasslands.”

- **Habitat:** It lives in seasonally inundated

alluvial grasslands of the Gangetic-Brahmaputra plains dominated by grasses.

- **Distribution:** It is found in Uttar Pradesh (Dudhwa National Park), Assam (Manas, Kaziranga, Orang, and Dibru-Saikhowa National Parks), and Arunachal Pradesh, as well as in the terai of Nepal and in Bangladesh.
- **Characteristics**
 - **Appearance:** The male shows black plumage, crest, elongated display feathers, and white wing patches visible in flight.
 - **Behaviour:** It performs vertical leaps, wing movements, and vocalisations in group displays called "lekking."
 - **Sexual traits:** It shows reverse sexual dimorphism and colour dichromatism.
 - **Diet:** It is omnivorous and eats insects, fruits, seeds, flowers, and small reptiles.
- **Threats**
 - **Habitat loss** occurs due to land conversion, agriculture expansion, burning, overgrazing, encroachment, river changes, fragmentation, invasive species, and fire mismanagement.
- **Conservation Status**
 - **IUCN:** Critically Endangered
 - **Schedule I** of the Wildlife Protection Act, 1972
 - **Appendix I** of CMS

India-UN Development Partnership Fund

News: The Board of Directors of the India-UN Development Partnership Fund met at India's Permanent Mission in New York to review operations, ongoing projects, and future scope.

About India-UN Development Partnership Fund



Figure 15. Source – India in UN

It is a fund established by India in partnership with the United Nations to support development projects in other developing countries, especially in the Global South.

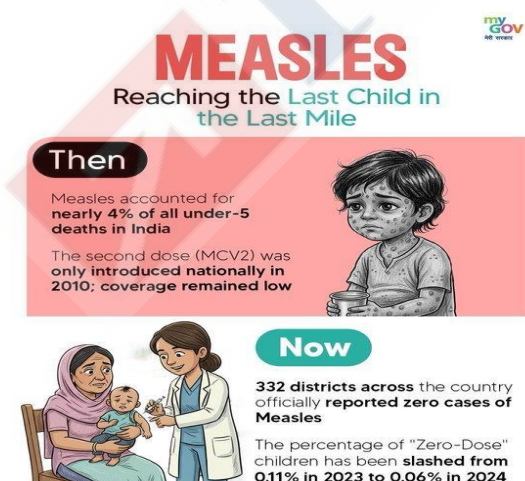
- **Established in:** It was established in 2017.

- **Implemented by:** It is implemented by the United Nations agencies in close collaboration with partnering governments.
- **Managed by:** It is managed by the United Nations Office for South-South Cooperation.
- **Core Objectives:**
 - **South-South Cooperation:** It promotes shared prosperity through Southern-owned and led, demand-driven development initiatives.
 - **SDG Alignment:** It supports projects contributing to all 17 Sustainable Development Goals across sectors like health, climate resilience, and infrastructure.
 - **Priority Groups:** It focuses on least developed countries and small island developing States.
- **Funding**
 - **Commitment:** The Government of India has committed \$150 million over 10 years.
 - **Commonwealth Window:** A specific \$50 million portion of the fund is dedicated to supporting developing countries within the Commonwealth of Nations.
- **Significance:** It promotes shared prosperity and strengthens cooperation between developing countries through sustainable and country-led development initiatives.

Measles

News: Bangladesh launched an emergency vaccination campaign targeting more than a million children as a fast-spreading measles outbreak sweeps across the nation.

About Measles



Measles is an infection of the respiratory system, immune system and skin.

○ It is also known as morbilli.

● **Caused by:** It is caused by the measles virus (MV), a paramyxovirus of the genus *Morbillivirus*.

○ Paramyxovirus is a family of negative-strand RNA viruses in the order Mononegavirales.

● **Transmission**

○ It is a highly contagious disease

- It spreads by contact with infected nasal or throat secretions (coughing or sneezing) or breathing the air that was breathed by an infected person.
- The virus remains active and contagious in the air or on infected surfaces for up to two hours.
- **Symptoms:** It usually begins 10–14 days after exposure to the virus.
 - Rash is the most visible symptom along with a running nose, cough, red and watery eyes and small white spots inside the cheeks.
 - The rash begins about 7–18 days after exposure, usually on the face and upper neck.
 - It usually lasts 5–6 days before fading.
- **Who is at greater risk:** Any non-immune person can become infected.
 - Unvaccinated young children and pregnant persons are at the highest risk of severe measles complications.
- **Treatment:** There is no specific treatment for measles.
 - Care focuses on relieving symptoms, staying hydrated, and eating a healthy diet.
 - Vitamin A supplements are given to children and adults to help prevent eye damage and blindness.
- **Prevention:** Community-wide vaccination is the most effective way to prevent measles.
 - Vaccines used: Vaccines such as Measles, mumps, rubella (MMR) vaccine and Measles, mumps, rubella, varicella (MMRV) vaccine are used for prevention.
- **India's effort toward prevention:** Union Health Minister recently launched the [National Zero Measles-Rubella Elimination Campaign 2025–26.](#)

Mission MITRA

News: India's four Gaganyaan astronauts began Mission MITRA, which is a high-altitude test in Ladakh.

About Mission MITRA



Source: ISRO

- Mission MITRA stands for **Mapping of Interoperable Traits and Response Assessment**.
- It is a **first-of-its-kind team behavioural study** to examine the **physiological, psychological, and operational dynamics of Crew and ground teams functioning** in a high-altitude environment.
- **Aim:** The primary aim of the Mission MITRA is to **study how the crew members communicate amid stressful working conditions**, which include **communication, dealing with conflicts, taking up leadership positions, and making decisions**.
- **Led by:** It is led by ISRO's Human Space Flight Centre.
- **Designed by:** It is designed by **ISRO & IAF-Institute of Aerospace Medicine**.
- **Testing site:** It will be **conducted at Leh, Ladakh**.
 - This place is chosen as **it is about 3,500 m** above mean sea level and **naturally offers a certain space-like environment**, including **hypoxia, coldness, and isolation**.
- **How it will be conducted:** The participants are **put in environments where the presence of thin air, cold, and isolation** mirrors the experience of actual space flight.
 - **Such analog missions conducted under controlled yet realistic conditions are utilised to understand how the gaganyatris perform under challenging conditions**.
- **Significance:** The information gathered in this experiment is expected to be **used to prepare for future flights**.
 - It will also help **create guidelines related to crew interaction and survival**.

Hokersar and Wular Lake

News: A CAG report highlighted that 518 lakes (74%) in Jammu and Kashmir have disappeared or shrunk, causing ecosystem degradation and climate insecurity.

About Hokersar Lake



Source – WII

- Hokersar is an important high-altitude wetland in Kashmir Valley known for biodiversity and migratory birds.
- **Location:** It is located in Baramulla district of Jammu and Kashmir, at an altitude of 1,583 m.
- It is known as the “Queen of Wetlands” or “Queen Wetland of Kashmir”.
- **Ramsar status:** It is an acknowledged Ramsar Site, designated in 2005.
- **River associated:** It is connected to the Jhelum River through a network of channels, which sustains its ecosystem.
- **Key features**
 - **Biodiversity support:** It provides habitat to birds, fish, amphibians, and reptiles with rich vegetation like Typha and Phragmites.
 - **Migratory birds:** More than half a million migratory birds visit between October and March, including species from Siberia and Europe.

About Wular Lake

- **Location:** Wular Lake lies between Bandipora and Sopore at the foothills of Haramuk Mountain.

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- It is the largest freshwater lake in India and second largest in Asia.
- **Formation:** Its basin was formed due to tectonic activity and is considered a remnant of ancient Satisar Lake.
- **Ramsar status:** It was designated as a Ramsar Site in 1990.
- **River:** It is fed by the Jhelum River.
- **Key features**
 - **Rich biodiversity:** It supports 56 bird species, 39 fish species, and over 20 plant types.
 - **Notable species:** It hosts rare birds like White-bellied Heron and Pink-headed Duck.
- **Conservation Management:** The Wular Conservation and Management Authority (WUCMA) is currently implementing a comprehensive management action plan for biodiversity conservation and desilting.

About First ever Annual Survey of Incorporated Services Sector Enterprises (ASISSE)

News: The National Statistics Office launched the first-ever ASISSE from April 2026 to build a comprehensive database of the services sector.

About Annual Survey of Incorporated Services Sector Enterprises (ASISSE)



Figure 17. Source – DD News

- It is a nationwide survey to generate reliable data on incorporated services sector enterprises.
- **Launched by:** It is launched by the National Statistics Office (NSO) under the Ministry of

Statistics and Programme Implementation (MoSPI).

- **Reference period:** The reference period is the financial year 2024–25.
- **Legal Framework:** It is conducted under the provisions of the Collection of Statistics Act, 2008.

- **Sampling Frame:** The sampling is based on the GSTN database and covers about 1.21 lakh enterprises, ensuring wide and representative coverage.
- **Objectives**
 - It aims to develop a comprehensive database of the incorporated services sector.
 - It provides key operational and economic indicators for evidence-based policymaking.
- **Coverage:** It covers companies registered under the Companies Act and Limited Liability Partnership Act across sectors like trade, transport, hospitality, information technology, education, and healthcare in all States and Union Territories.
- **Complementary Survey:** ASISSE complements Annual Survey of Industries (ASI) for manufacturing and Annual Survey of Unincorporated Sector Enterprises (ASUSE) for unincorporated sector to provide a holistic view of the non-agricultural economy.
- **Significance:** It strengthens data on a sector contributing over half of India's GDP and generating millions of jobs.

Prototype Fast Breeder Reactor (PFBR)

News: India achieved a major milestone in its civil nuclear programme as the 500 MWe Prototype Fast Breeder Reactor at Kalpakkam attained criticality, marking the start of a controlled nuclear chain reaction.

About Prototype Fast Breeder Reactor (PFBR)



Figure 18. Source – TNIE

The Prototype Fast Breeder Reactor is India's first fast breeder reactor, a nuclear reactor that produces more fissile material than it consumes using fast neutrons and plutonium-based fuel.

- **Developed by:** The reactor was indigenously developed by Indira Gandhi Centre for Atomic Research.
- **Built by:** It was built and commissioned by Bharatiya Nabhikiya

Vidyut Nigam Limited.

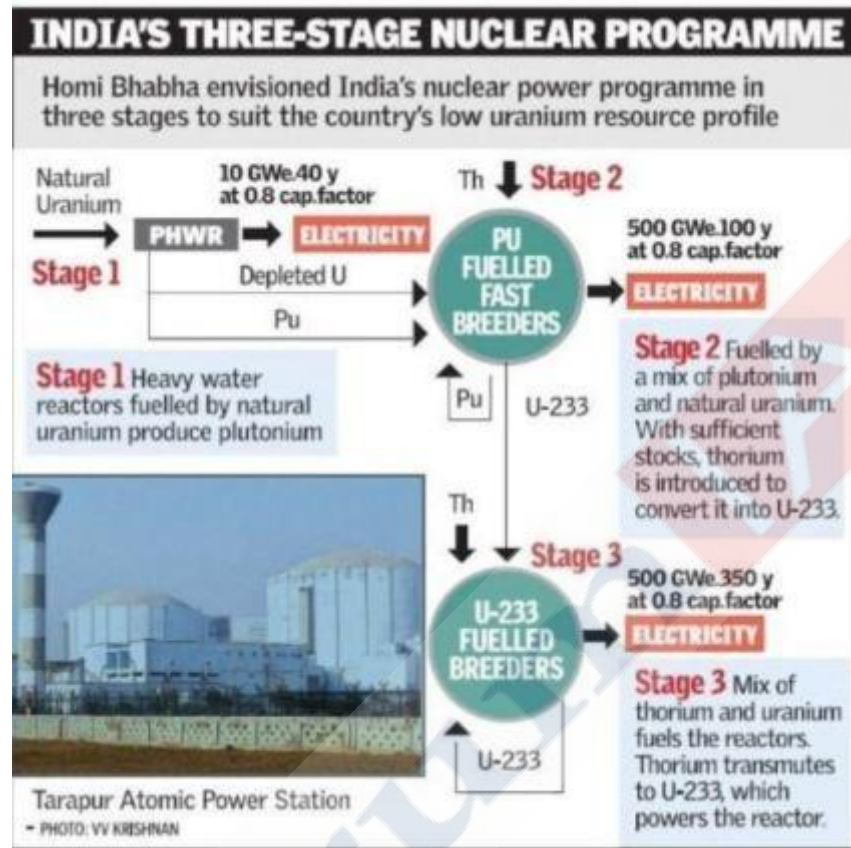
- **Operated by:** It is operated by the BHAVINI under the Department of Atomic Energy (DAE).
- **Working Mechanism of PFBR:**
 - **Fuel use:** The reactor uses Uranium-Plutonium Mixed Oxide (MOX) fuel, where plutonium undergoes fission using fast neutrons.
 - **Neutron process:** Fast neutrons convert fertile Uranium-238 into fissile Plutonium-239, sustaining the chain reaction.
 - **Breeding process:** This conversion enables the reactor to produce more fuel than it consumes, which is the core principle of breeder reactors.
 - **Coolant system:** The reactor uses liquid sodium coolant, which efficiently removes heat and allows fast neutrons to persist.
 - **Thorium pathway:** The reactor is designed to use Thorium-232, which can be converted into Uranium-233 for the third stage.
- **Key Features:**
 - **High fuel efficiency:** It can extract more energy from uranium, improving resource utilization.
 - **Support to nuclear programme:** It acts as a bridge between Stage I and Stage III of India's nuclear programme.
 - **Closed fuel cycle:** It enables recycling of nuclear materials, reducing waste.
 - **Energy security role:** It supports long-term clean and reliable base-load power generation.

About Criticality in Nuclear Reactors

- **It is the stage where a nuclear chain reaction becomes self-sustaining and stable.**
- **Operational importance:** It marks readiness of the reactor for power generation.
- **States of Criticality:**
 - **Subcritical state:** In this state, neutron losses are greater than production, so the chain reaction gradually dies out and the reactor shuts down.
 - **Critical state:** In this state, neutron production equals neutron loss, so the chain reaction becomes stable and self-sustaining, and power remains constant.
 - **Supercritical state:** In this state, neutron production exceeds losses, so the chain reaction increases rapidly, and reactor power rises.

- Safety aspect: Controlled criticality is essential for safe reactor operation.

About India's 3 Stage Nuclear Programme



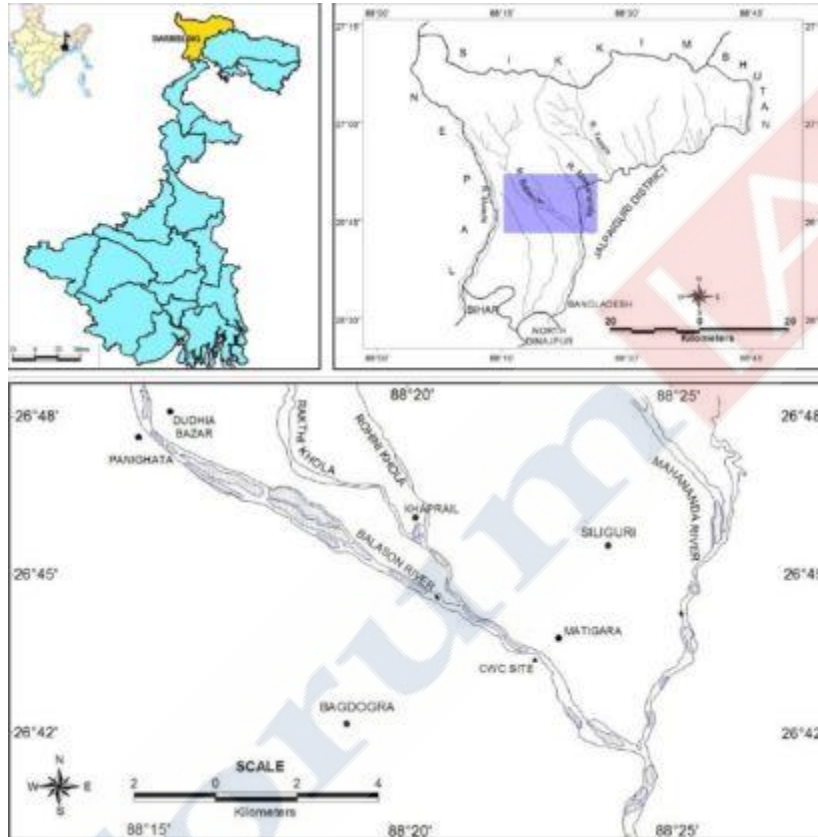
Source – TH

- It is a long-term strategy to achieve energy security using uranium and vast thorium reserves.
- Formulated by: It was formulated by Homi Bhabha in the 1950s.
- Aim: It aims to ensure energy independence, efficient fuel use, and utilisation of abundant thorium reserves.
- Three stages are:
 - Stage 1: Pressurised Heavy Water Reactors using natural uranium.
 - Stage 2: Fast Breeder Reactors using plutonium-based fuel.
 - Stage 3: Advanced systems using thorium to produce Uranium-233.

Balason River

News: An application filed before the NGT has raised concerns over violations of environmental laws and riverbank regulations by the construction of the Balason Blues Resort & Camping on the Balason riverbank in Darjeeling.

About Balason River



Source – Research Gate

- **Origin:** It originates from **Lepchajagat** on the **Ghum-Simana ridge** at an altitude of about **2,361 m** in the **Darjeeling Himalayas**, below **Tiger Hill** in **Darjeeling District** of **West Bengal**.
- **Naming:** The name '**Balason**' is derived from the **Lepcha language**, highlighting local heritage.
- **Course of the river:** The **main course** of the **Balason River** flows from north to southeast for approximately **51.92 km**.
 - It flows north to south-east, **joining the Mahananda River at Naukaghat (Siliguri)**.
 - **So, it is a major right-bank tributary of the Mahananda River.**
 - The **Mahananda River** eventually merges with the **Ganga River** system.

- **River basin:** The river basin spans parts of Rangli Rangliot, Naxalbari, Matigara, Jorebunglow Sukiapokhri, Mirik, and Kurseong in the Darjeeling district of West Bengal.
 - The basin area is **largely composed of intensely metamorphosed rocks**, including gneiss, slates, phyllite, and schists and the basin area is dominated by **Inceptisol soils**.
- **Tributaries:** Its right bank and left bank tributaries are:
 - **Right-bank tributaries:** Pulungdung Khola, Rangbang Khola, Marma Khola, Manjwa Jhora, and Dudhia Jhora.
 - **Left-bank tributaries:** Bhim Khola, Rangmuk Khola, Pachhim Khola, Rinchigtong Khola, and Ghatta Hussain Khola.
- **Drainage pattern:** The drainage network exhibits a **dendritic pattern** and the river valley is characterised by a **steep, ungraded channel, a narrow valley floor, and steep valley sides**.

Global Heat Health Information Network (GHHIN)

News: On the occasion of World Health day 2026, a South Asia Hub of the Global Heat Health Information Network (GHHIN) was advanced by the Council on Energy, Environment and Water (CEEW).

About Global Heat Health Information Network (GHHIN)



Source: Global Heat Health Information Network official page

- The Global Heat Health Information Network (GHHIN) is an **independent, member-driven platform** comprising scientists, practitioners, and policymakers.
- It focuses on **enhancing global capacity** to protect populations from **avoidable health risks caused by extreme heat** in the context of a changing climate.
- **Launched in:** It was **launched in 2016** by experts from multiple founding institutions.
- **Led by:** It is led by **World Health Organisation (WHO), World Meteorological Organisation (WMO) and United States National Oceanic and Atmospheric Administration (NOAA)**.

- **Aim:** It aims to **strengthen the capacity of professionals, organisations, and governments** to safeguard populations from the **preventable health impacts of extreme ambient heat**.
- **Goals:** The Network accelerates heat action through three goals:
 - **Connect and empower people and institutions to form multi-disciplinary partnerships to reduce heat risks.**
 - **Accelerate the generation of evidence, actionable knowledge, and standardized guidance and risk metrics.**
 - **Catalyze global, national and local policy and action to minimize societal consequences of heat impacts.**
- **Key activities and programmes:** The network supports capacity-building through:
 - **Biannual Global Forum on Heat and Health**
 - **Dissemination of news, information, and knowledge** via an online platform
 - **Development of inventories of Heat Health Action Plans and case studies**
 - **Preparation of country profiles**
- **Report:** It publishes **Global Synthesis Reports on Heat Health**.

About South Asia Hub of the Global Heat Health Information Network (GHHIN)

- The **South Asia Hub of the Global Heat Health Information Network (GHHIN)** is a **regional initiative** aimed at **strengthening preparedness and response to extreme heat** by translating scientific evidence into practical action.
- **Developed by:** It is being developed by the **Council on Energy, Environment and Water (CEEW)** under the joint Climate and Health programme of the **WHO** and the **WMO**, with support from the Wellcome Trust.
 - **India's Participation:** The Hub will work closely with the **South Asia Climate and Health Desk at the Indian Institute of Tropical Meteorology and the India Meteorological Department**.
- **Goal:** Its main goal is **to strengthen preparedness for extreme heat by converting scientific data into early warnings** and actionable measures to protect communities.
- It reflects a **One Health approach**, bringing together climate science, public health, and partnerships to deliver solutions for saving lives.

RBI Revises Banking Correspondent Classification

News: The Reserve Bank of India proposed restructuring of Business Correspondent framework with new classification, governance norms, and remuneration standards, inviting comments.

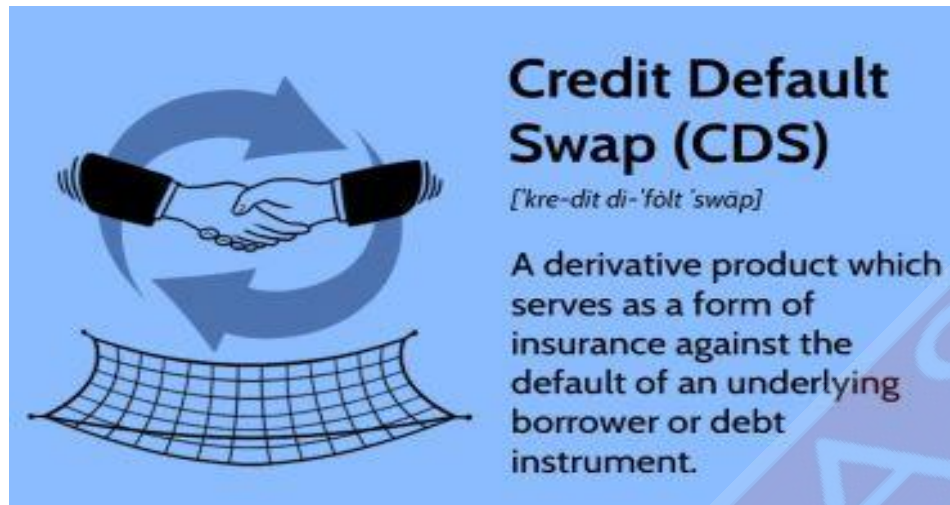
About RBI Revises Banking Correspondent Classification

- It introduces a structured framework with defined delivery points, governance norms, and remuneration standards to improve efficiency and oversight.
- **Business Correspondents (BCs):** Business Correspondents are individuals or entities engaged by banks to provide basic banking services in areas where bank branches are not present.
- **Effective Date:** The framework will come into force from July 1, 2026, with transition timelines up to September 30, 2026 for classification and migration.
- **Key Features:**
 - **Types of Delivery Points:** The draft defines three delivery points—Branch, Business Correspondent- Banking Outlet (BC-BO) and Business Correspondent- Banking Touchpoint (BC-BT) for service delivery.
 - **Transition of Business Facilitators:** The draft removes the separate category of Business Facilitators, and existing entities must transition into BC-BO or BC-BT by September 30, 2026.
 - **Functioning of BCs:** BC-BOs will operate as fixed service units for at least four hours daily and five days a week, while BC-BTs will provide limited services such as small-value transactions and remittances with flexible hours.
 - **Recognition:** BC-BOs will be treated as banking outlets for regulatory purposes within the framework.
 - **Coverage:** The presence of BC-BOs will be considered for classification of centres as banked, including unbanked rural centres.
 - **Governance:** Banks must adopt Board-approved policies and review BC operations at least once every six months.
 - **Accountability:** Banks will remain fully responsible for the acts of BCs and their sub-agents.
 - **Remuneration:** BC-BOs will receive a combination of fixed and variable pay, while BC-BTs will receive only variable pay.
 - **Operations:** All transactions must be conducted online and integrated with core banking systems, along with customer protection safeguards.
 - **Training and Certification:** Individuals operating BC-BOs must obtain advanced certification, while those operating BC-BTs must complete basic training or certification within prescribed timelines.

Credit Default Swaps (CDS)

News: RBI kept FPI investment limits unchanged and fixed CDS sale limit at 5% of outstanding corporate bonds for 2026-27.

About Credit Default Swaps (CDS)



Source – Investopedia

- Credit Default Swaps (CDS) is a financial derivative that allows investors to transfer or offset credit risk of a debt instrument.
- Key Components of a CDS:
 - Parties: CDS involves a protection buyer and protection seller, where risk transfer takes place between them.
 - Premium Payment: The buyer pays regular premiums similar to insurance payments to the seller.
 - Compensation Mechanism: The seller agrees to pay the value and interest if a credit event like default or bankruptcy occurs.
 - Underlying Reference: It is linked to a specific credit entity or credit instrument on which the risk of default is based.
- Uses of Credit Default Swaps:
 - Risk Hedging: It is used to protect against default risk of a credit instrument.
 - Speculation: It allows investors to bet on the creditworthiness of an entity.
 - Arbitrage: It helps in exploiting price differences in credit markets.
- Risks:
 - Counterparty Risk: The CDS seller may itself default, causing loss of protection.
 - Premium Loss: The buyer may lose premiums paid if the seller fails.

Tar-balls Management Rules, 2026

News: The Ministry of Environment, Forest and Climate Change issued draft Tar-balls Management Rules, 2026 to address marine pollution from toxic oil residues.

About Tar-balls Management Rules, 2026



Source – IE

- These are dedicated rules for managing tar balls pollution across coastal areas.
- Released by: The rules were issued by the Ministry of Environment, Forest and Climate Change (MoEFCC).
- Framed under: They are framed under the Environment (Protection) Act, 1986.
- Aim: The rules aim to ensure environmentally sound management of tar balls and reduce risks to marine ecosystems, public health, and coastal economy.
- Key Provisions of the Draft Rules (2026):
 - Lifecycle Management: The rules cover generation, collection, storage, transport, treatment, disposal, and repurposing of tar balls.
 - Polluter Pays Principle: Oil facility owners must pay environmental compensation if mismanagement causes oil spills and public health damage.
 - State Disaster Provision: States must declare tar ball pollution as a "state disaster" and act under the Disaster Management Act.
 - Institutional Responsibilities: Multiple ministries and authorities are assigned roles for coordinated and environmentally sound management.
 - Steering Committee: A committee with members from seven ministries and pollution control boards will guide implementation.
 - Industrial Use: Tar balls with calorific value above 1,500 kcal can be used as fuel in cement industries after authorisation.

About Tar Balls

- Nature: Tar balls are sticky, weathered residues of oil formed from spills, leaks, and marine accidents.
- Formation Process: They form when lighter oil evaporates and heavier hydrocarbons mix with sand and debris.
- Impact: They contain toxic contaminants like heavy metals and persistent pollutants, posing risks to marine life, human health, and tourism, especially along the western coast.

Production Linked Incentive Scheme for Food Processing Industry (PLISFPI)

News: The Production Linked Incentive (PLI) Scheme for Food Processing Industry (PLISFPI) was launched recently to strengthen India's food processing sector.

About Production Linked Incentive Scheme for Food Processing Industry (PLISFPI)

PLIS for developing Global Champions in Food Sector

The Central Sector Scheme - Production Linked Incentive Scheme for Food Processing Industry (PLISFPI) of MoFPI

- ◆ Has an outlay of **Rs. 10900 crore**.
- ◆ Will create employment opportunities for nearly **2.5 lakh** people by the year 2026-27.
- ◆ Food Product Segments covered in the scheme via
 - **Ready to Cook/Ready to Eat (RTC/RTE)** food including Millet based Products
 - Processed Fruits & Vegetables
 - Marine Products
 - Mozzarella Cheese
 - **Innovative/Organic products** of SMEs including Free Range Eggs, Poultry Meat, Egg Products



Source: Ministry of Food Processing Industries

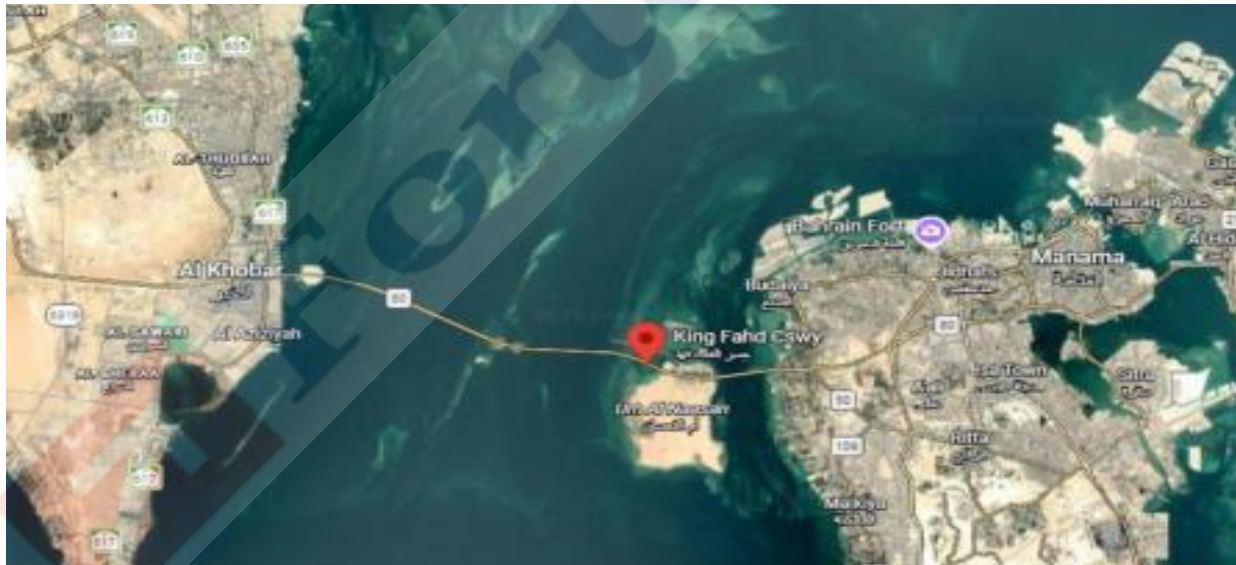
- It is a government scheme **to modernize and enhance competitiveness of the food processing industry**.
- **Nodal Ministry:** It has been launched by the **Ministry of Food Processing Industries**.
- **Type:** Central Sector Scheme
- **Aim:** It aims **to strengthen India's food processing sector, promote Indian brands globally, and create global food manufacturing champions**.
- **Duration:** It will be implemented for over six years from 2021-22 to 2026-27.
- **Budget:** The total financial outlay of the scheme is **₹10,900 crore**.
- **Objectives of the Scheme**
 - The scheme seeks to enhance value addition in the food processing sector.
 - It focuses on expanding processing capacity across the country.
 - It intends to generate employment opportunities, particularly in rural and non-farm sectors.
 - It also focuses on promoting Indian food brands in global markets.
- **Key Components of the Scheme:**
 - **First Component:** The scheme incentivizes the manufacturing of major food product segments such as Ready-to-Cook/Ready-to-Eat foods, processed fruits and vegetables, marine products, and mozzarella cheese.
 - It also covers innovative/ Organic products of Small and Medium Enterprises (SMEs), including free range – Eggs, Poultry Meat, and Egg Products in these segments under the above component.
 - **Second Component:** It relates to production of Innovative / Organic products of SMEs.
 - **Third Component:** It also provides support for branding and marketing abroad, including in-store branding and shelf space renting.
 - It encourages the **use of millets in food products and promotes value addition** under the millet-based PLI component.

- **Eligibility:** Applicants shall be: Proprietary Firm or Partnership Firm or Limited Liability Partnership (LLP) or a Company registered in India; Co-operatives and Small & Medium enterprises.
- **Coverage:** A total of 128 companies have been approved under the scheme, covering 274 units across the country.
 - The scheme includes strong MSME participation with 68 MSME applicants. It also supports 40 contract manufacturing units.
- **Achievements:**
 - **Growth in Sales and Exports:** Sales of PLI-supported products have increased at a CAGR of 10.58%. Export sales of these products have grown at a CAGR of 7.41%.
 - **Promotion of Millet-Based Products:** Sales of millet-based products increased from ₹345.73 crore in FY 2022-23 to ₹1845.25 crore in FY 2024-25.
 - Procurement of millets increased from 1103.18 metric tonnes to 17089.16 metric tonnes. This reflects nearly a 15-fold increase in millet procurement.
 - **Impact on Value Addition and Supply Chain:** The scheme ensures that complete value addition of products takes place within India. It strengthens the farm-to-fork value chain and reduces post-harvest losses.

King Fahd Causeway

News: The King Fahd Causeway was recently closed following threats of Iranian attacks targeting Saudi Arabia's Eastern Province.

About King Fahd Causeway



Source: Turkiye Today

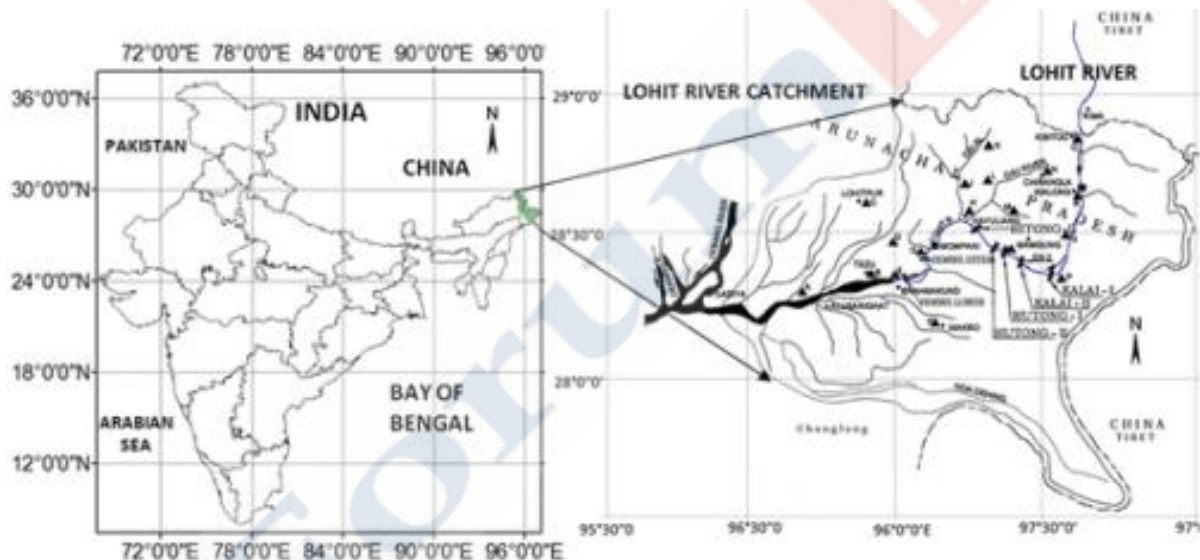
- **Location:** It is a series of bridges connecting the island nation of Bahrain to Saudi Arabia, spanning the Gulf of Bahrain.
- **Inaugurated:** It was started in 1986.
- **Managed and operated by:** It is managed by the King Fahd Causeway Authority.
- **Length:** It is 25 km long and 23.3 m wide.
- It starts in Saudi Arabia in a place known as Al-Aziziyya and ends at Al-Jasra in Bahrain.

- It has **two sections** –
 - **The longer section of the bridge starts from Khobar to Nasan Island in Bahrain**
 - **The shorter section starts from Nasan Island to the main island of Bahrain.**
- It plays an important role in **boosting trade and commercial exchange between the two countries and other GCC countries through Saudi Arabia.**
- **Strategic significance:** It is Bahrain's only road connection to the Arabian Peninsula and holds strategic importance, particularly as Bahrain hosts the United States Fifth Fleet.
 - It also serves as a strategic alternative route during disruptions in the Strait of Hormuz, ensuring the flow of people, essential supplies, and limited commercial transport.

Lohit River

News: Recently, the cabinet approved the investment Proposal for the construction of the 1200 MW Kalai-II Hydro Electric Project in Anjaw District of Arunachal Pradesh.

About Lohit River



Source: Researchgate

- **About:** It is a **perennial river** which flows through **Arunachal Pradesh and Assam.**
- **Origin:** It originates in the **Zayal Chu range in eastern Tibet.**
- **Course of river:** It flows through Arunachal Pradesh, passing across the Mishmi Hills. It finally enters Assam, where it joins the Brahmaputra River near Sadiya.
- Its main source is **snowmelt from the Himalayan glaciers and other small streams.**
- **Tributaries:** Rivers **Dau, Dalai and Tidding** are its major tributaries on the **right bank** and the river **Lang** is the major tributary on the **left bank.**
- **Catchment area:** The catchment area of the river, including the Tibet region, is **29,487 sq km.**
 - The catchment area experiences **mostly a tropical wet season and supports dense mixed forest.**
- **Hydel Project on river:** [**Kalai-II Hydro Electric Project**](#) has been developed on the Lohit River in Anjaw district, Arunachal Pradesh.

Exercise Cyclone-IV

News: The Indian Army contingent departed for Egypt to participate in Exercise Cyclone-IV scheduled at Anshas from 09 to 17 April 2026.

About Exercise Cyclone-IV



Figure 19. Source – DD News

● It is a joint special forces exercise conducted between India and Egypt.

● Aim: It aims to enhance joint mission planning capabilities and improve interoperability through the exchange of best practices in special operations.

● Frequency: It is an annual exercise conducted alternatively in India and Egypt.

● 2026 Edition: It is the fourth edition of the Exercise Cyclone series.

● Location: The exercise is being conducted at Anshas in Egypt.

● First Edition: The first edition was held at Jaisalmer in Rajasthan in January 2023.

● Key Features

- Participating Forces: The Indian contingent comprises 25 personnel from Special Forces units, who train alongside Egyptian counterparts in a realistic operational environment.
- Operational Training: The participating troops undertake training in special operational tactics, techniques, and procedures in desert and semi-desert terrain.
- Professional Exchange: The exercise facilitates mutual exchange of professional expertise and strengthens camaraderie and understanding of military traditions and cultures.

● Significance: It strengthens defence cooperation, mutual trust, and military ties between India and Egypt.

Gourami Fossils

News: Scientists discovered freshwater fish fossils in Saharanpur, including first gourami fossil in India and second globally, indicating a Pliocene ecosystem.

About Gourami Fossils



Source – News Point

- The Gourami fossils are freshwater fish remains identified through otolith structures from ancient ecosystems.
- Discovered by: The fossils were discovered by scientists led by Dr. Ningthoujam Premjit Singh of the Wadia Institute of Himalayan Geology.
- Location: The fossils were found in the Siwalik foothills at Mohand in Saharanpur district of Uttar Pradesh.
- Geological Era: The fossils belong to the Pliocene Epoch, dated about 4.8 million years ago.
- Rarity: This is the first record of a Gourami fossil in India and only the second globally (the first was in Sumatra).
- The Fossil Type: The fossils are otoliths, which are calcium carbonate structures used for hearing and balance in fishes.
- Key Findings
 - Structured Food Chain: The presence of snakeheads, gouramis, and gobies shows a clear food chain, where smaller fish acted as prey and snakeheads acted as predators.
 - Freshwater Ecosystem: The fossils indicate a calm and stable freshwater body surrounded by dense vegetation during the Pliocene period.

Kunming-Montreal Global Biodiversity Framework (GBF) and Protected Planet Report, 2024

News: The recent UNEP reports state that the world still needs to protect an area almost the size of the Indian Ocean by 2030 to reach the 30% target under the Kunming-Montreal Global Biodiversity Framework (KMGBF).

About Kunming-Montreal Global Biodiversity Framework (KMGBF)



Kunming-Montreal

GLOBAL BIODIVERSITY FRAMEWORK

Source: CBD

- It was adopted during the **15th** meeting of the Conference of the Parties (**COP 15**) to the Convention on Biological Diversity (**CBD**) .
- **Aim:** It aims to address **biodiversity loss, restore ecosystems and protect indigenous rights.**
- The framework **consists of 4 global 2050 goals and 23 global 2030 targets.**
- **Key goals of the GBF:** The **4 key goals** are:
 - Biodiversity conservation and restoration
 - Nature's contribution to people's
 - Access and benefit sharing and tools
 - Solutions for mainstreaming and implementation.
- **Signatories:** It was **adopted by 196 countries.**
 - **India is also a signatory** to it.
- **Binding:** It is **not an international treaty** and is **not legally binding** to the parties.
 - All Parties to the framework are **committed to setting national targets for its implementation.**

About Protected Planet Report, 2024

- It is the **first report to assess the global status of Protected and Conserved Areas (PCA)** in the context of **Target 3 of the KMGBF.**
- **It also tracks progress on Aichi Target 11.**
- **Launched by:** It was launched by the United Nations Environment Programme (**UNEP**) and the International Union for Conservation of Nature (**IUCN**).
- **First Published:** It was first released globally in 2012.
- **Key highlights of the report**
 - The **Report recorded 8.6% of ocean and coastal areas** within documented **protected and conserved areas globally.**
 - **Around 10% of the global ocean** is now **within protected and conserved areas.**
 - The world still needs to **protect an area almost the size of the Indian Ocean by 2030** to reach the **30% target** under the KMGBF.
 - Over the **past two years**, nearly **5 million km² of ocean** have been newly protected.
 - Only **1.3% of the ocean** is covered by protected areas where **management effectiveness has been assessed and reported.** This shows gaps in monitoring.
 - New areas were added to the **World Database on Protected and Conserved Areas (WDCPA)**, which tracks global progress toward KMGBF targets.
 - Since **2024, 175 marine or coastal sites** have been designated, including **protected areas and Other Effective Area-based Conservation Measures (OECMs).**
 - New sites span **Asia, Oceania, Africa, Europe, North America, and South America.**

Factly Compilation April 2026

- **Tainui Atea** (French Polynesia, 2025) became the **largest marine protected area** at **4.5 million km²**.
- The expansion of the **Heard Island and McDonald Islands Commonwealth Marine Reserve (Australia)** added about **309,700 km²** in 2024. In 2025, both island reserves were **expanded by 400%**.
- About **95% of Earth's habitat by volume** lies in the **high seas**, yet only **1.66%** of these areas are protected, highlighting a major protection gap.

International Conference on Spacecraft Mission Operations, SMOPS-2026

News: The second edition of SMOPS-2026 conference is being held from 8–10 April 2026 in Bengaluru, India.

About International Conference on Spacecraft Mission Operations, SMOPS-2026



Source – ISRO

- It is a global conference focused on spacecraft mission operations and future space mission management.
- **Organized by:** It is jointly organized by ISRO, Astronautical Society of India (ASI), and International Academy of Astronautics (IAA).
- **Edition:** It is the second edition of the conference.
- **Theme:** The theme is “Innovative Operations for Smart and Sustainable Space Mission Management – Next Generation.”
- **Held at:** It is being held in Bengaluru, India, from 8–10 April 2026.
- **Aim:** It aims to cover a wide range of topics such as mission operations management, advanced design, automation, AI, robotics, cybersecurity, and interplanetary exploration.
- **Key features**

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- **Wide Participation:** The conference includes 120 oral and 88 poster presentations with global experts from agencies like NASA, ESA, and JAXA.
- **Focus Areas:** It discusses mission operations strategy, AI-driven automation, large constellations, and space domain awareness.
- **Emerging Challenges:** It addresses issues like increasing space traffic, complex mission systems, and human space missions.
- **Collaboration Platform:** It brings together space agencies, startups, academia, and industry for sharing knowledge and innovation.
- **Student Engagement:** It includes a workshop for students and young professionals to encourage future space scientists.
- **Significance:** It acts as a platform for global collaboration and development of smart, sustainable, and efficient space mission operations.

Trade Receivables Discounting System (TReDS)

News: Recently, Reserve Bank of India proposed removing due diligence for MSMEs onboarding on TReDS to promote ease of doing business.

About Trade Receivables Discounting System (TReDS)

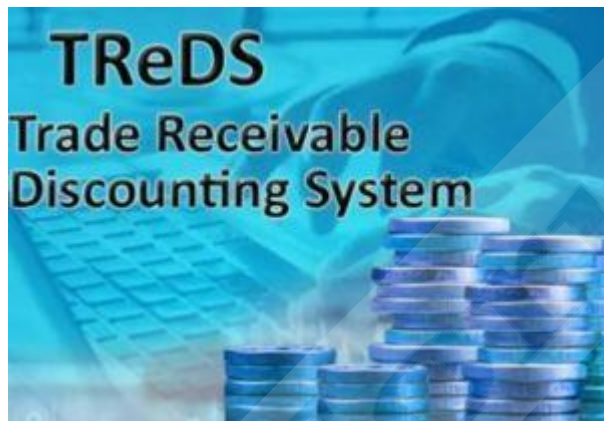


Figure 20. Source – BlueCrest

- It is an electronic platform that facilitates financing or discounting of MSME trade receivables through multiple financiers.
- **Launched by:** It was launched by the Reserve Bank of India.
- **Launched in:** It was introduced in 2014 and later strengthened in 2018.
- **Aim:** It aims to allow MSMEs to discount invoices raised against buyers and receive faster payments to meet their working capital needs.
- **Participants:**
 - **Sellers:** Only MSMEs can participate as sellers.
 - **Buyers:** Corporates, Government Departments, and PSUs can participate.
- **Financiers:** Banks, NBFC-Factors, and other permitted financial institutions.
- **Insurers:** They are allowed to insure receivables or invoices.
- **Mechanism:** MSMEs upload invoices on the platform, and financiers discount them based on buyer creditworthiness, providing funds without collateral.
- **TReDS platforms:** RXIL (Receivables Exchange of India), M1xchange (Mynd Solutions) and Invoicemart are the main platforms operating in India.
- **Key features:**
 - **Collateral-free financing:** MSMEs receive funds without providing security, which improves credit access.
 - **Digital and fast process:** It ensures quicker payments and reduces delays in receivables realization.
- **Significance:** It enhances credit access, liquidity, and ease of doing business for MSMEs, supporting their participation and economic contribution.

Caribou

News: A recent study highlights that declining lichen and increasing snow depth can significantly reduce winter survival of caribou populations in the Arctic.

About Caribou



Figure 21. Source – Wildlife Nomads

- Caribou are large herbivorous ungulates adapted to Arctic and sub-Arctic environments.

- They are also called 'Reindeer' in Eurasia.

- Scientific Name: *Rangifer tarandus*

- Habitat: Caribou thrive in polar and Arctic regions.

- Distribution: Caribou are found across Arctic tundra and boreal forests of North America (Canada, Alaska, Greenland) and Eurasia (Scandinavia, Russia).

- Key features

- Adaptation to cold: Caribou have thick fur and specially adapted noses that warm cold air before it reaches their lungs.

- Feeding behavior: They are among the few animals that can digest lichen, which becomes their main winter food.

- Movement pattern: They are highly migratory, covering long distances each year.

- Physical traits: Both males and females grow antlers, though males have much larger antlers.

- Unique vision: Caribou are the only mammals capable of seeing ultraviolet light, helping them detect predators.

- Ecological Significance: Caribou hold ecological importance as their survival is closely linked to

lichen availability and snow conditions, which highlights that changes in Arctic vegetation and climate directly affect species survival and ecosystem stability.

- Threats

- Human-caused habitat destruction
- Fragmentation
- Climate change

- Conservation Status

- IUCN: Vulnerable

Emperor Penguin (*Aptenodytes forsteri*)

News: Emperor penguin and Antarctic fur seal have been uplisted to Endangered category in International Union for Conservation of Nature Red List due to climate change impacts.



Figure 22. Source – Mongabay

About Emperor Penguin (*Aptenodytes forsteri*)

- Emperor penguin is the largest penguin species that survives and breeds in extreme Antarctic winter conditions.

- Scientific name: *Aptenodytes forsteri*.

- Habitat: They depend on fastened ice near the Antarctic coast, which is sea ice attached to land or icebergs, for breeding, moulting, and raising chicks.

- Distribution: Emperor penguins are found across the Antarctic continent.

- Key features

- Weight: Adults can weigh up to 40 kg at the start

of the breeding season.

- Breeding: They are the only animals that breed during the Antarctic winter, and males take responsibility for incubation.
- Adaptation: They have several layers of scale-like feathers and body fat for insulation.
- Heat conservation: Their body structure and blood circulation help in recycling heat efficiently.
- Social behaviour: They huddle together to reduce heat loss and survive extreme cold conditions.
- Diving ability: They can dive up to 565 m and stay underwater for up to 22 minutes.
- Population Trend / Projection: The population is projected to show a sharp decline, with a possible halving by the 2080s due to changing sea-ice conditions.
- Threats
 - Climate change and sea ice loss
 - Reduced food availability
 - Commercial fishing/competition
 - Disease
- Conservation Status: Emperor penguins were earlier listed as Near Threatened, but are now uplisted to Endangered due to climate change, sea-ice loss.

'Watan Ko Jano' Programme

News: A 250-member youth delegation from Jammu and Kashmir called on Vice President at Uprashtrapati Bhavan under 'Watan Ko Jano' programme.

About 'Watan Ko Jano' Programme



Source – VP's Office

- 'Watan Ko Jano' Programme is an exposure and cultural integration programme for youth from Jammu & Kashmir.
- Implementing Agencies: Ministry of Home Affairs (MHA) and Government of Jammu and Kashmir
- Aim: The program aims to introduce the youth and children of Jammu and Kashmir to the nation's dynamic progress, rich social fabric, and cultural diversity, fostering a strong sense of social, cultural, and emotional connection.
- Objective
 - Promote national integration
 - Provide youth with exposure to different parts of India
 - Familiarize them with cultural diversity, development initiatives, and institutions
- Key Features
 - Youth are taken on educational tours across India
 - Visits include historical sites, educational institutions, and industrial units
 - Interaction with officials, security forces, and students

Operation Dhahabu Blitz

News: DRI Mumbai busts gold smuggling syndicate in Op Dhahabu Blitz; seizing approx. 30 kg gold worth ₹38 crore.

About Operation Dhahabu Blitz



Figure 23. Source – PIB

- It is an enforcement operation carried out to crack down on gold smuggling networks into India.
- Naming: Gold is called 'Dhahabu' in Swahili language.
- Organized by: Directorate of Revenue Intelligence (DRI)
- Aim: It targets the organized syndicates involved in illegal import of precious metals.
- Key Features
 - Conducted as a pan-India coordinated operation
 - Involves intelligence gathering, surveillance, and simultaneous raids
 - Aims to curb economic offences and customs evasion
- Recoveries: DRI received a tip-off about women coming from Nairobi in Kenya with hidden gold.
 - Following this, 24 foreign nationals, who had landed at Mumbai Airport from Nairobi, were stopped.
 - From their bags and clothes, 25.1 kg of gold bars and 4.27 kg of gold jewellery were recovered.

Punatsangchhu-II Hydroelectric Project (PHEP-II)

News: India and Bhutan strengthened hydropower cooperation during the visit, with signing of tariff protocol of Punatsangchhu-II Hydroelectric Project (1020 MW).

About Punatsangchhu-II Hydroelectric Project (PHEP-II)



Source – ResearchGate

- It is a 1020 MW run-of-the-river hydroelectric power project in Bhutan.

- **Developed by:** It is developed by the Punatsangchhu II Hydroelectric Project Authority under an Inter-Government Agreement between Bhutan and India.
- **Location:** It is located in Wangdue Phodrang district (Bhutan) on the right bank of the Punatsangchhu River.
- **Funding:** It is funded by the Government of India with 30% grant and 70% loan at 10% interest, repayable in 30 installments.
- **Key Features:**
 - **Infrastructure Details:** The project includes a 91 m-high dam and diversion tunnel of 1118 cubic mt per second.
 - It has an underground powerhouse 15 km downstream at Kamechu with six 170 MW turbines, increasing capacity by 40% to over 3500 MW.
 - **Institutional Mechanism:** The PHPA-II is an autonomous body established by Bhutan and India for project implementation.
 - **Technical Coordination:** A Technical Coordination Committee (TCC) ensures coordination among management, consultants, and experts for timely technical decisions.

About Punatsangchhu-I Hydroelectric Project

- **Developers & Partners:** It is developed under a bilateral agreement between the Government of India and the Royal Government of Bhutan.
- **Capacity & Type:** It is a 1.2 GW run-of-the-river hydroelectric project.
- **Location:** It is located in Wangdue Phodrang district on the left bank of Punatsangchhu River.
- **Funding Pattern:** It is funded by India with 40% grant and 60% loan at 10% interest, repayable in 30 installments.
- **Infrastructure Details:** It includes a 130 m-high and 239 m-long concrete gravity dam, two diversion tunnels, and an underground powerhouse with six 200 MW turbines.

Morchella Mushrooms

News: Recently, the Sheri Kashmir University of Agriculture and Sciences has successfully cultivated Morchella mushroom for the first time in controlled conditions.

About Morchella Mushrooms



Figure 24. Source – Britannica

- Morchella (commonly known as common morel, morel, yellow morel, true morel, morel mushroom, and sponge morel) is an edible mushroom.
- It is locally known as Kangaech or Gucci.
- **Scientific name and family:** The scientific name is Morchella esculenta, and it belongs to the Morchellaceae family under Ascomycota.
- **Natural Habitat:** These mushrooms grow naturally in high elevation forest ecosystems during a narrow rainy season, usually on decaying wood, leaves, or humus soil.

- **Distribution:** Morchella mushrooms grow in conifer forests across temperate regions, especially in the foothills of Himachal Pradesh, Uttarakhand, and Jammu and Kashmir.
- **Climatic conditions:** It requires daytime temperatures of 15–20°C and night temperatures of 5–9°C for proper growth.
- **Growth pattern:** It grows in clusters on decaying wood, leaves, or humus soil, and may not grow in the same place every season.
- **Appearance:** It has a pale yellow colour with pits and ridges on the cap and a large white stem.
- **Economic value:** It is one of the most expensive mushrooms, costing Rs. 15,000 to Rs 40,000 per kg, making it highly valuable.
- **Nutritional and medicinal value:** It is rich in carbohydrates, proteins, fibre, vitamins, and minerals, and has antioxidant, antimicrobial, anti-inflammatory, and antitumor properties.
- **Agricultural importance:** Controlled cultivation is a game-changing breakthrough, as it reduces dependence on uncertain wild collection and creates new opportunities for farmers, youth, and entrepreneurs.

Manikya Dhara Falls

News: A 15-year-old girl from Kerala, missing near Manikyadhara Falls, was found dead 500 m below the watchtower after a drone search.

About Manikya Dhara Falls



Figure 25. Source – Trawell

- **Location:** It is situated in the dense forest of Baba Budangiri hills in Chikkamagaluru district of Karnataka.
- **Other names:** It is locally called Nellikayi Theertha, while Manikyadhara means “stream of pearls,” describing water droplets shining like pearls in sunlight.
- **Perennial nature:** The waterfall does not get drained during summer, which makes it unique and important.
- **Height:** The waterfall has a height of about 30 feet.
- **Eco-Region:** It lies in the Western Ghats region, known for its dense forests and rich natural beauty.
- **Religious significance:** It is considered a holy site by Hindus with strong local beliefs and rituals associated with it.
- **Healing belief:** People believe that bathing here can cure ailments, and herbal medicines are sold nearby.
- **Natural beauty:** The site offers mist-covered hills, cool breeze, and scenic surroundings, enhancing its attraction.

Southern Elephant Seal (*Mirounga leonina*)

News: The International Union for Conservation of Nature has reclassified the southern elephant seal from Least Concern to Vulnerable on its Red List.

About Southern Elephant Seal (*Mirounga leonina*)



Figure 26. Source: Researchgate

The southern elephant seal is one of two species of elephant seals.

- **Scientific name:** Their scientific name is *Mirounga leonina* and they belong to the Phocidae family or true seals.
- They are the largest seals on the planet and also the biggest mammals on Earth after whales.
- They are the deepest diving seals on earth.
- **Habitat:** They exhibit an almost circumpolar distribution in the cold, nutrient-rich waters of the Southern Ocean.
 - They live on land only when molting, breeding, and giving birth.
- **Distribution:** They inhabit large portions of the

southern hemisphere.

- This includes lands in Antarctica and islands in the southern part of Africa, South America, and Australia.
- **Characteristics**
 - **Appearance:** They have a thick layer of blubber covered with a yellowish or silvery grey-brown coat.
 - Every year, they undergo molt, shedding their fur along with a layer of skin, then regrowing it within about a month.
 - A distinctive feature of mature males is their large, trunk-like snout (proboscis), which is used to amplify their vocalisations.
 - They show sexual dimorphism where adult males are much larger and heavier than females.
 - They often bunch together in muddy pits called wallows, using their small flippers to cover themselves with wet sand, which helps keep them cool.
 - **Diet:** They are carnivores and feed upon cephalopods, pelagic and demersal fish species, and crustaceans, including krill.
 - They commonly dive to depths of 980-2600 feet (300-800 meters) while feeding and remain submerged for 30 minutes at a time.
- **Threat:**
 - Anthropogenic activities
 - Climate change and spread of diseases
- **Conservation status**
 - IUCN Red List: It is classified as Vulnerable (earlier Least Concern).

Antarctic Fur Seal (*Arctocephalus Gazella*)

News: The International Union for Conservation of Nature has reclassified the Antarctic fur seal from Least Concern to Endangered due to a sharp population decline.

About Antarctic Fur Seal (*Arctocephalus gazella*)



Source: Antarctica gov

- They are one of eight seals in the genus *Arctocephalus*.
- They are the smallest of the Antarctic seals.
- **Scientific name:** Their scientific name is *Arctocephalus gazella*.
- **Habitat:** They spend much of their time in the ocean, hunting for food. On land, they prefer rocky areas and sometimes rest on beaches or in vegetated zones.
- **Distribution:** They are found mainly on sub-Antarctic islands south of the Antarctic convergence.
 - Antarctic fur seals are rarely found in Antarctica.
- **Characteristics**
 - **Appearance:** Antarctic fur seals have a slender, pointed muzzle, long external ears, and long vibrissae (whiskers).
 - Adult males are usually darker in colour than females, while females can appear quite pale, sometimes even blonde or silvery-grey.
 - There is strong sexual dimorphism in this species, with adult males being much larger and heavier than females.
 - Their fur consists of two layers –
 - a dense, water-resistant underfur that provides insulation
 - coarse guard hairs that protect the underfur from water and damage.
 - Unlike most other Antarctic seals, they can lift their bodies using strong front flippers and move on land on all four flippers.
 - They are capable of moving quickly, reaching speeds of up to 20 kmh on land and even faster in water.
 - **Behaviour:** They are solitary animals, except when breeding and molting. They use vocalisations to communicate.
 - **Diet:** They are carnivores (piscivores). They mainly eat fish, krill, crustaceans, and cephalopods like squid and octopuses.
- **Population:** Its current population is only 944,000 (as of 2025).

- **Threat**
 - Climate change
 - Reducing food availability and lowering pup survival rates
 - Hunted by sharks, killer whales, and leopard seals
- **Conservation status**
 - IUCN Red List: It is classified as Endangered (earlier Least Concern).

About Project Glasswing

News: Indian IT industry and government are assessing implications of Claude Mythos under Project Glasswing due to its advanced cybersecurity capabilities.

About Project Glasswing



Figure 27. Source – Analytics Vidya

- It is a collaborative cybersecurity initiative led by Anthropic to strengthen global software security using advanced AI.
- **Aim:** The project aims at securing critical global software infrastructure using advanced AI models like Claude Mythos Preview.
- **Working mechanism:** It works by using an unreleased AI model that can autonomously discover zero-day vulnerabilities and generate code to fix them, even in complex systems.
- **Zero-day vulnerabilities:** These are hard-to-detect critical software flaws that remain undiscovered until exploited, such as in the WannaCry attack (2017).
- **Key Aspects:**
 - **Advanced AI capability:** It uses a powerful AI model with strong coding and reasoning abilities to analyse complex systems.
 - **Large-scale vulnerability detection:** It can identify high-risk vulnerabilities across widely used software and systems.
 - **Controlled access:** The model is restricted to a closed group to prevent misuse.
 - **Dual-use risk awareness:** It recognises that AI can be used for both defence and cyberattacks.
 - **Collaboration with major firms:** It brings together firms like Amazon Web Services, Apple, Google and Microsoft along with critical infrastructure organisations.
- **Significant:** Project Glasswing is important because it promotes a proactive cybersecurity approach, addresses AI-driven cyber threats, and supports security in open-source systems through funding and collaboration.

About Kangsabati River

News: Despite adequate reservoir water, irrigation was denied for Boro cultivation, leaving farmers in multiple districts without work and facing economic hardship.

About Kangsabati River

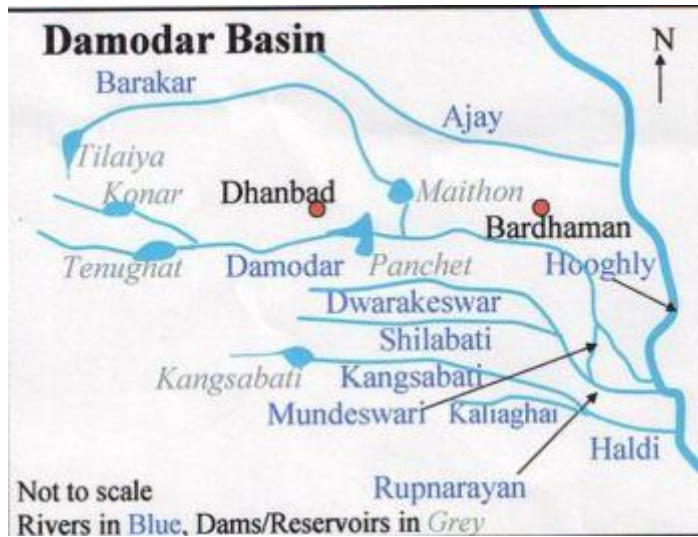


Figure 28. Source – Wikipedia

- **Origin:** The Kangsabati River rises from the Chota Nagpur Plateau in Purulia district near Jhalda (West Bengal), where Saharjhor and Girgiri rivers join together.
- **Course:**
 - The river flows through Purulia, Bankura, Jhargram, Paschim Medinipur and Purba Medinipur districts.
 - At Keshpur, it splits into two branches, showing an important river feature.
- **Tributaries:** The Bhairabanki is an important tributary that joins the river at Binpur.
- **Drains into:** The river meets Keleghai to form Haldi River, which drains into the Bay of Bengal at Haldia.
- **Major Project:**

- The Kangsabati Irrigation Project was launched in 1956 to provide irrigation to Bankura, Hooghly and Midnapore districts.
- Mukutmanipur Dam, an earthen gravity dam, was constructed with 1.04 cubic km storage capacity, irrigating about 3,500 sq km area, showing its regional importance.

Key Facts About Hungary

News: Nationalist leader Viktor Orban, who ruled for 16 years, conceded defeat to Peter Magyar in Hungary's parliamentary elections, with a record 77.8% turnout and clear majority results.

Key Facts About Hungary



Figure 29. Source – Britannica

- **Location:** Hungary is a landlocked country in Central Europe.
- **Bordering Countries:** Hungary shares borders with Slovakia (north), Ukraine (northeast), Romania (east), Serbia and Croatia (south), Slovenia (southwest), and Austria (west).
- **Capital:** The capital city of Hungary is Budapest.
- **Climate:** Hungary has a moderately dry continental climate, with average temperature of 10°C and variable rainfall between 500–800 mm annually.
- **Relief:** It is dominated by lowland expanses, including the Great Alfold and Little Alfold, along with a central mountain system.
- **Highest Peak:** The Mátra Mountains contain Mount Kékes (1,014 m), which is the highest peak.
- **Major Rivers:** The Danube (longest river),

Tisza, Rába, and Dráva rivers are significant, with frequent flood events.

- **Soil Type:** The country has chernozem (rich black soil), gray-brown podzolic, brown forest soils, and sandy soils.
- **Flora:** Natural vegetation is largely modified, with beech forests at high elevations and oak woodlands in uplands, while much land is cultivated.
- **Fauna:** Forests support deer and wild pigs, while lowlands have hares, rodents, partridge, and pheasant, along with diverse freshwater fish species.
- **Hortobágy National Park:** It is established in 1973 as Hungary's first and largest protected area, is a UNESCO World Heritage site known as "the Puszta."

Keytruda

News: Keytruda is now being used worldwide to treat lung, cervical, renal cell, and aggressive breast cancers, among others.

About Keytruda

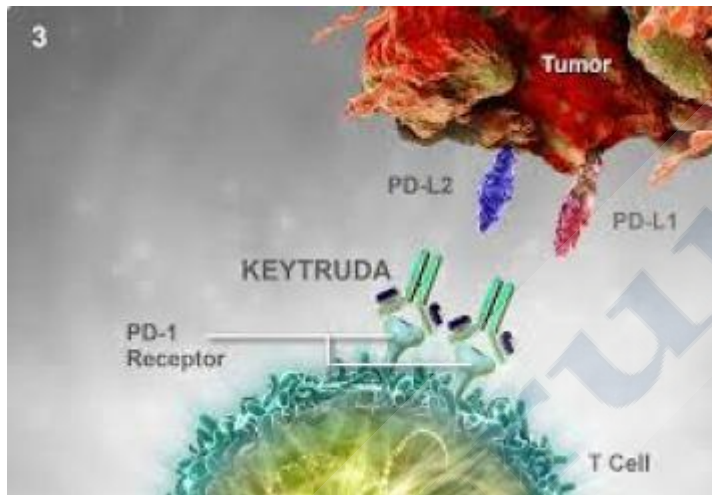


Figure 30. Source: Keytruda official

- Keytruda is the brand name of pembrolizumab, which is an immunotherapy drug used to treat several cancers.
- **Manufactured by:** It is manufactured by Merck & Co (MSD), a US-based pharmaceutical company.
- It belongs to a class of drugs called **checkpoint inhibitors**, which help the immune system fight cancer.
 - These drugs **remove the “brakes”** that **prevent T cells** from attacking cancer cells.
- It belongs to the category of **monoclonal antibodies**.
 - **Monoclonal antibodies** are **laboratory-made** molecules designed to **bind to specific targets**.
 - They help the **immune system identify and destroy cancer cells**.
- **How it works:**
 - **Pembrolizumab works by attaching to PD-1 receptors on T cells.** This prevents the interaction between PD-1 receptors on T cells and PD-L1 receptors on cancer cells.
 - As a result, **T cells are able to recognize and attack cancer cells.** In this way, Keytruda uses the body's own immune system to fight cancer.
- **Cost and Dosage:** The recommended dosage of Keytruda is **200 mg every three weeks**.
 - Each 100 mg vial costs **more than ₹1.5 lakh**.
- **Availability in India:** Keytruda and other monoclonal antibodies are available in tertiary care hospitals across India.
 - **Note:** India's **first** indigenous CAR-T therapy, called **NexCar19**, has been developed by **ImmunoAct**.
- **Use:** It is being used globally to **treat several cancers, including lung cancer, cervical cancer, renal cell cancer, and aggressive breast cancer.**

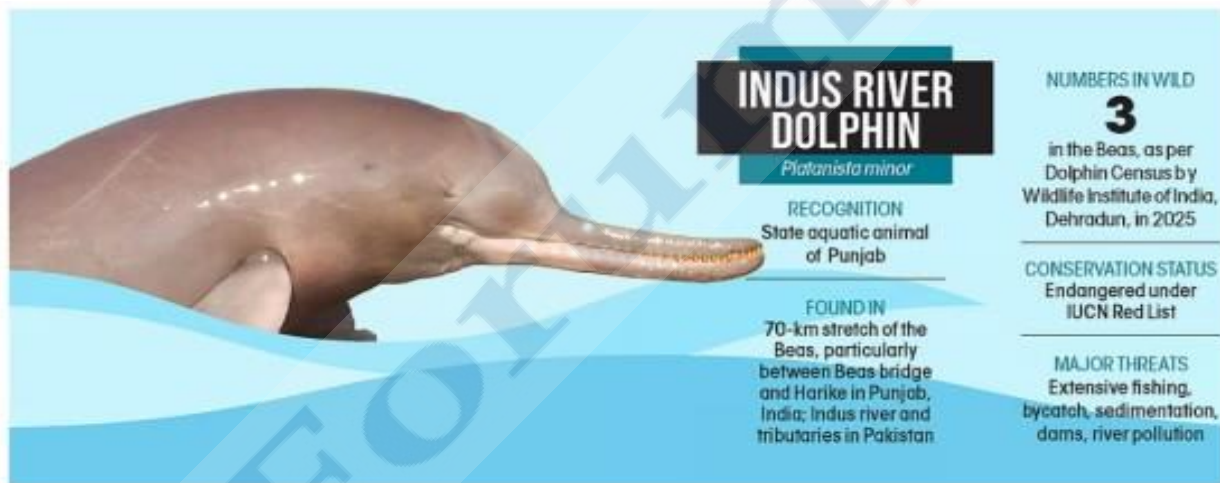
About Immunotherapy

- Immunotherapy is a type of treatment that **trains the immune system to fight diseases, especially cancer.**
- It is **often used along with other treatments** such as chemotherapy, radiotherapy, and surgery.
- **Immunotherapy vs Chemotherapy:**
 - Chemotherapy and radiotherapy work by directly killing cancer cells, but they also damage healthy cells.
 - In contrast, **immunotherapy** helps the immune system identify and **destroy cancer cells while sparing healthy cells.**

Indus River Dolphin

News: Conservation efforts, including legal protection, scientific research, and community participation through “Dolphin Mitras,” have helped revive Indus river dolphin population and provide it a fighting chance for survival.

About Indus River Dolphin



Source: DTE

- They are **one of the world's rarest mammals** and the **second most endangered freshwater river dolphin.**
- **Scientific name:** Their scientific name is **Platanista minor.**
 - They are part of the **Platanistidae** family.
- They are also known as the **“bhulan.”**
- **Habitat:** They are only found in **freshwater.**
 - They **usually prefer shallow, murky waters** but are sometimes found in the main channels of rivers and tributaries during the flood season.
- **Distribution:** Today, their range is **limited to the lower and middle areas of the Indus River in south-central Pakistan.** A small population also exists in the **Beas River in India.**
 - Historically, their range extended from the **Indus River delta to the foothills of the Himalayas.**

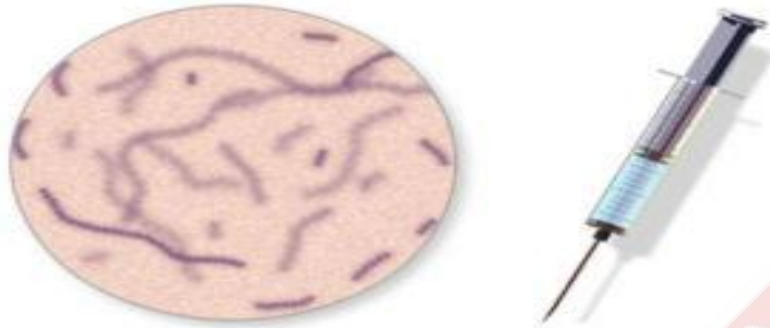
- They were also found in the tributaries of the Indus River.
- **Characteristics**
 - **Appearance:** Body colour is generally grey, with a pale white or pinkish underside.
 - Females are usually slightly larger than males.
 - They have a rounded, robust body with a small triangular dorsal fin positioned far back.
 - A distinctive “melon” (rounded forehead) helps in receiving environmental sounds.
 - Their eyes are small, underdeveloped and functionally blind.
 - Their length ranges between 7- 8.5 feet, and their weight is approximately 150 to 200 pounds.
 - **Behaviour:** They produce sound almost constantly to navigate, communicate, and find food.
 - They are usually found individually or in pairs but have also been seen in groups of up to 10.
 - They often swim on their side. They dive for 30 to 90 seconds and are able to hold their breath for several minutes.
 - **Diet:** They consume clams, fish, and shrimp.
 - They use their long beaks to search for prey along the riverbed. Their sharp, fang-like teeth help in capturing and eating prey.
 - **Lifespan:** They can live for about 30 years.
- **Threats**
 - Entanglement
 - Habitat degradation
 - Noise
 - Chemical contaminants
 - Vessel strikes
- **Conservation status:**
 - **IUCN:** It is classified as Endangered.
 - **Wildlife Protection Act 1972:** It is classified as Schedule I.

Hib Disease

News: Hib, a once-controlled childhood illness, is re-emerging in the United States due to declining childhood Hib vaccination rates, weakening community protection.

About Hib Disease

Hib vaccine protects against the illnesses caused by *Haemophilus influenzae* type b bacteria



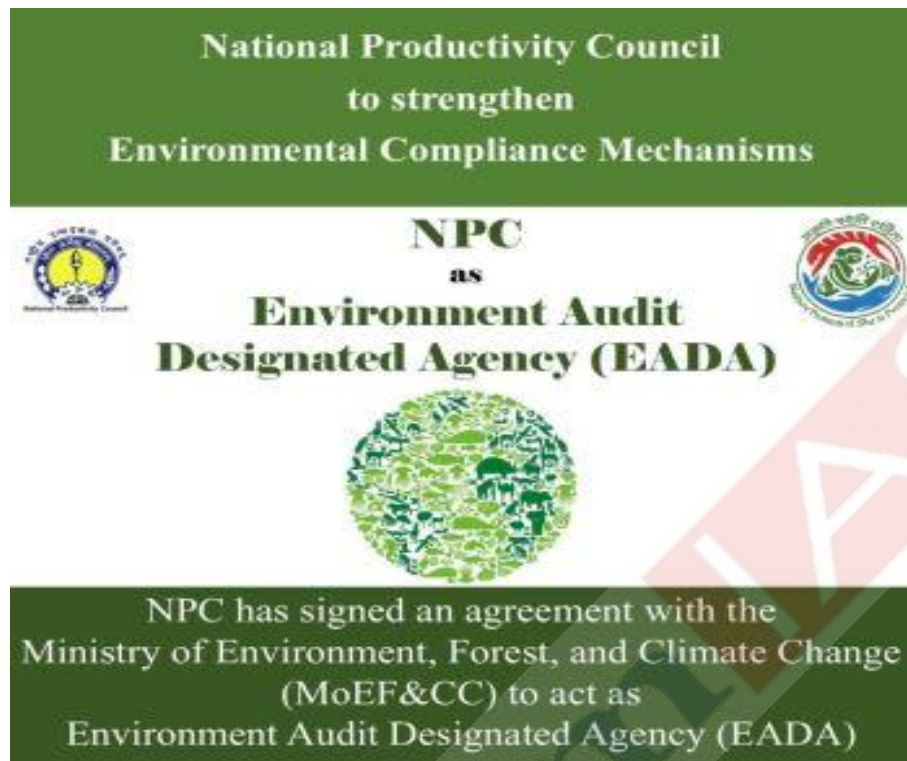
Source – ResearchGate

- Hib stands for *Haemophilus influenzae* type b, and it is a deadly bacterial infection that previously caused widespread illness and death among young children.
- **Caused by:** The disease is caused by *Haemophilus influenzae* type b bacteria.
- **Target Group:** The disease mainly affects children under 5 years of age, who are the most vulnerable group.
- **Transmission:** It spreads person-to-person through respiratory droplets (coughing, sneezing) and prolonged close contact.
- **Symptoms:**
 - It can lead to life-threatening conditions such as meningitis, pneumonia, epiglottitis, and sepsis.
 - Common symptoms include high fever, stiff neck, difficulty breathing, sensitivity to light, and confusion.
 - The disease can become fatal within hours if not treated promptly.
- **Prevention:** Effective Hib vaccine is available, and maintaining routine immunization is essential to prevent the disease.
- **Treatment:** The disease is treated with antibiotics, including third-generation cephalosporins like ceftriaxone, although antibiotic resistance is a growing concern.
- **India's Universal Immunization Programme (UIP):** Hib is included as part of the Pentavalent Vaccine, which protects against five diseases: Diphtheria, Pertussis, Tetanus, Hepatitis B, and Hib.

Environment Audit Designated Agency (EADA)

News: The National Productivity Council signed an agreement with the Ministry of Environment, Forest and Climate Change to act as EADA under Environment Audit Rules, 2025.

About Environment Audit Designated Agency (EADA)



Source – NPC

- It is a designated body responsible for managing and implementing the environmental audit framework in India.
- Notified by: It is notified by the Ministry of Environment, Forest and Climate Change under the Environment Audit Rules, 2025.
- Designated Agency: The National Productivity Council (NPC) is appointed as the Environment Audit Designated Agency.
- Objective: The main objective is to strengthen environmental compliance, enhance transparency, and institutionalize standardized environmental auditing practices across the country.
- Key Functions:
 - Certification and Registration: It certifies and registers Certified Environmental Auditors and Registered Environmental Auditors with clear eligibility criteria.
 - Monitoring and Regulation: It monitors auditor performance and can issue directions, including suspension or cancellation when required.
 - Capacity Building: It conducts training programmes, workshops, seminars, and awareness initiatives to improve implementation.
 - Digital and Governance Role: It develops digital systems and maintains a publicly accessible register of auditors.

About National Productivity Council (NPC)

- It is an autonomous, multipartite, non-profit organisation promoting productivity culture in India.
- Ministry: It works under the Department for Promotion of Industry and Internal Trade, Ministry of Commerce and Industry.

- **Established :** It was established in 1958.
- **Objective:** It aims to improve economic competitiveness through consultancy and training services.
- **Headquarter:** Its headquarters is in New Delhi.
- **Function:**
 - **Consultancy and Training:** It provides consultancy and capacity building services to government and other organisations.
 - **Policy Support:** It acts as a think tank and supports project monitoring and implementation.

Flaxseeds Cultivation in India

News: Flaxseeds are highlighted for their benefits in reducing joint pain, improving body warmth, and enhancing health during harsh winter conditions.

About Flaxseeds Cultivation in India



Figure 31. Source – Tol

- Flaxseeds are also known as Linseed, Alsi, or Tisi.
- **Season:** In India, Flaxseeds are primarily grown as a Rabi (winter) crop.
- **Scientific Name:** The scientific name of flaxseed is *Linum usitatissimum* L., belonging to family Linaceae and genus *Linum*.
- **Geographical & Climatic Requirements:**
 - **Climate:** Flaxseed requires a temperate and cool climate for proper growth.
- **Temperature:** Minimum temperature is 10°C and maximum is 38°C, with 25–30°C needed for germination and 15–20°C for seed formation.
- **Rainfall:** An annual rainfall of 700–750 mm is optimal, while 450–500 mm is also sufficient if well distributed.
- **Soil:** It grows best in well-drained, fertile soils such as silty loam, clay loam, and silty clays.
- **Cultivation Practices:**
 - **Sowing Time:** The crop is sown during October to November as a rabi season crop depending on soil moisture.
 - **Harvesting:** The crop matures in 120–140 days depending on the variety.
 - **Key Varieties:** Important varieties include K-2, T-397, No.55, NP (RR) 9, S-4, Jawahar-17, Hira, Mukta, and Neelum.
- **Major Producing States:** Major producing states include Madhya Pradesh, Karnataka, Chhattisgarh, Jharkhand, Bihar, Maharashtra, Odisha, Uttar Pradesh, West Bengal, and Assam.
- **Importance**

- **Nutritional:** It is rich in Omega-3 fatty acids, especially alpha-linolenic acid, which supports heart health and reduces inflammation.
- **Economic:** It provides dual benefits of oil and fibre, offering additional income and supporting sustainable agriculture.
- **Significant:** Flaxseed plays an important role in crop rotation, soil health improvement, and provides a low-input, environmentally sustainable farming option.

Atlantic Meridional Overturning Circulation (AMOC)

News: As per a new study, the complete collapse of the Atlantic Meridional Overturning Circulation (AMOC) could lead to the release of large amounts of carbon into the atmosphere, turning it from a carbon sink into a source.

About Atlantic Meridional Overturning Circulation (AMOC)

Atlantic meridional overturning circulation

- Warm water travels northwards close to the surface
- As the water cools, it sinks and travels back south at depth



- The AMOC is a system of ocean currents that circulates water within the Atlantic Ocean, bringing warm water north and cold water south.
- **Mechanism:** The circulation process begins as warm water near the surface moves toward the poles (such as the Gulf Stream in the North Atlantic), where it cools and forms sea ice.
 - As this ice forms, salt is left behind in the ocean water. Due to the large amount of salt in the water, it becomes denser, sinks down, and is carried southwards in the depths below.
 - Eventually, the water gets pulled back up towards the surface and warms up in a process called upwelling, completing the cycle.
- **Importance of AMOC**
 - AMOC aids in distributing heat and energy around the earth (heat budget).
 - Western Europe's climate is less harsh even in winters because of AMOC (Gulf Stream, North Atlantic Drift).
- It acts as a carbon sink by absorbing and storing atmospheric carbon.
- **Weakening of AMOC**
 - It takes an estimated 1,000 years for a parcel (any given cubic meter) of water to complete its journey along the belt.
 - However, climate models suggest that the AMOC will weaken over the 21st Century as greenhouse gases increase.
 - This is because as the atmosphere warms, the surface ocean beneath it retains more of its heat.
 - Meanwhile increases in rainfall and ice melt mean it gets fresher too.

- All these changes make the ocean water lighter and so reduce the sinking in the 'conveyor belt', leading to a weaker AMOC.
- **Consequences of a weakened AMOC**
 - A decrease in marine productivity in the North Atlantic (less sinking will lead to less mixing of water)
 - More storms in Northern Europe
 - Less Sahelian summer rainfall and South Asian summer rainfall
 - A reduced number of tropical cyclones in the Atlantic
 - An increase in regional sea level along the northeast coast of North America

Exercise DUSTLIK – VII 2026

News: The Indian Army contingent departed to Namangam, Uzbekistan for the 7th edition of India-Uzbekistan joint military Exercise DUSTLIK.

About Exercise DUSTLIK – VII 2026



Figure 32. Source – PIB

- It is an annual joint military exercise conducted alternatively in India and Uzbekistan.
- 2026 edition: The Exercise is scheduled to be conducted at Gurumsaray Field Training Area, Namangam, Uzbekistan from 12 to 25 April 2026.
- Last edition: The last edition (2025) was conducted at Foreign Training Node, Aundh (Pune) in April 2025.
- Contingents involved: The Indian Armed Forces contingent comprising 60 personnel is being represented by 45 personnel from the Indian Army, majorly from a Battalion of the MAHAR Regiment and 15 personnel from the Indian Air Force.
 - The Uzbekistan contingent also comprises of approximately 60 personnel, from Uzbekistan Army and Air Force.
- **Aim:** The aim of exercise is to foster military cooperation and enhance combined capabilities to execute joint operations in semi-mountainous terrain.
 - It would focus on high degree of physical fitness, joint planning, joint tactical drills and basics of special arms skills.
 - The Exercise will also establish a unified operational algorithm between the command-and-control structures of both the contingents for planning and execution of joint operations.
- **Key operational aspects:** land navigation, strike missions on enemy bases and seizure of enemy-held areas

- **Significance:** It will enable the two sides to share their best practices in Tactics, Techniques and Procedures of conducting joint operations and will further strengthen interoperability, operational synergy and joint command and control coordination between the contingents.
 - The Exercise will facilitate developing bonhomie and camaraderie between soldiers of both the countries.
 - This will also enhance the level of defence cooperation, further fostering bilateral relations between the two friendly nations.

Right to Vote in India

News : The Supreme Court highlighted the constitutional and sentimental value of voting while hearing appeals of lakhs of excluded voters in West Bengal.

About Right to Vote in India



- The right to vote in India is a statutory right created and regulated by law, not a fundamental right.
- **Constitutional and Legal Provisions on Voting:**
 - **Article 326:** It provides the basis of elections through universal adult suffrage for citizens aged 18 or above, subject to legal disqualifications.
 - **Representation of the People Act, 1950:** It disqualifies non-citizens and requires voters to be ordinary residents and at least 18 years old.
 - **Representation of the People Act, 1951:** It allows enrolled individuals to vote unless disqualified or imprisoned.
 - Thus, the right to vote is subject to legal conditions and is not absolute.
- **Major Supreme Court views:**
 - **N.P. Ponnuswami (1952):** The Court held that the right to vote is purely statutory.
 - **Jyoti Basu (1982):** It reaffirmed that voting is neither a fundamental nor common law right.
 - **PUCL v. Union of India (2003):** It clarified that voting is statutory, but the right to know candidates' details is fundamental under Article 19(1)(a).
 - **Kuldip Nayar (2006):** It again confirmed that the right to vote remains statutory in nature.
- **Significant:** The Supreme Court emphasised that voting carries both constitutional importance and strong sentimental value for citizens.

Startup India Fund of Funds 2.0

News: The government has notified Startup India Fund of Funds 2.0 with ₹10,000 crore corpus to mobilise capital and strengthen the startup ecosystem.



Figure 33. Source – PIB

About Startup India Fund of Funds 2.0

- It is a government-backed fund with ₹10,000 crore corpus to mobilize venture and growth capital for startups.
- Ministry: It is under the Ministry of Commerce and Industry.
- Implementation Agency: The Small Industries Development Bank of India (SIDBI) will operationalize the scheme, along with another domestic agency.
- Aim: It aims to mobilise long-term domestic capital, strengthen the venture capital ecosystem, and support innovation-led entrepreneurship.
- Funding Mechanism: The fund will invest in SEBI-registered Alternative Investment Funds (AIFs), which will further invest in startups through equity and equity-linked instruments.
- Eligibility: Eligible entities are SEBI-registered Alternative Investment Funds (AIFs) that receive support under the scheme.

- Duration: Investments under the scheme will be made over the 16th and 17th Finance Commission cycles.
- Key Features of FoF 2.0:
 - Segmented Funding Approach: It focuses on deep tech, early-stage startups, and innovative manufacturing sectors.
 - Structured Governance: Selection of AIFs will be done by Venture Capital Investment Committee (VCIC) with monitoring by Empowered Committee (EC).
 - National Reach: It promotes investment beyond major cities to ensure wider innovation.
 - Addressing Capital Gaps: It directs funds towards high-risk and capital-intensive sectors.
- Significant: It will strengthen economic resilience, generate high-quality jobs, and position India as a global innovation hub.

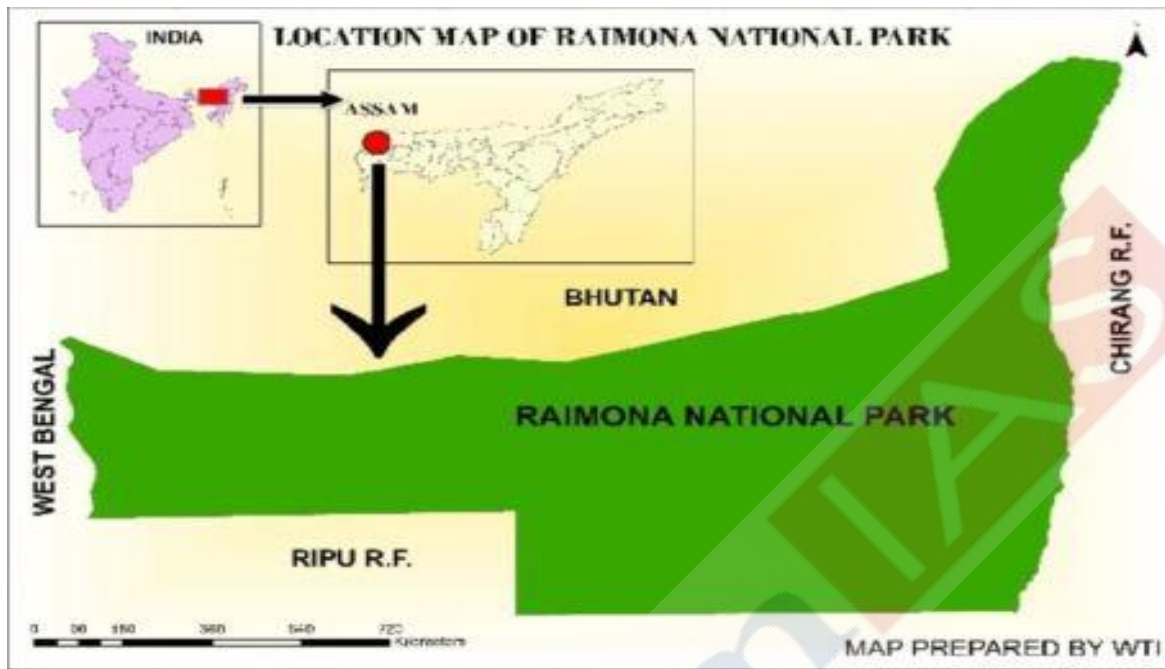
About Startup India Fund of Funds 1.0

- Launch and Purpose: It was launched in 2016 under Startup India Action Plan to address funding gaps.
- Corpus Utilisation: ₹10,000 crore was allocated under the scheme.
- Ecosystem Role: It helped nurture first-time founders and strengthen the domestic venture capital ecosystem.

Raimona National Park

News: A new gecko species *Cyrtodactylus raimonaensis* was discovered near Raimona National Park, highlighting its rich biodiversity and research potential.

About Raimona National Park



Source – ResearchGate

- Raimona National Park is a critical conservation area and part of the Eastern Himalayan foothills biodiversity hotspot.
- Location: The park is located in the Gossaigaon subdivision of Kokrajhar district in the Bodoland Territorial Region, Assam, near the India-Bhutan border.
- Transboundary Conservation: It forms a transboundary landscape with Bhutan's Phibsoo Wildlife Sanctuary and Jigme Singye Wangchuck National Park and West Bengal's Buxa Tiger Reserve, covering more than 2,400 sq. km.
- Topography: The park lies in the Eastern Himalayan foothills with altitude ranging from 85 m to 1042 m.
- Major Rivers: The Sankosh River forms the western boundary, the Saralbhangra River the eastern boundary, and the Pekua River the southern boundary.
- Vegetation: It has about 380 plant species, including tropical forests, orchids, riverine grasslands, and multiple forest types like moist deciduous and evergreen forests.
- Flora: The park features tree species such as Sal, Teak (*Tectona grandis*), Banyan, Assam Rosewood, and bamboo species like *Bambusa balcooa*, along with orchids including *Cymbidium* and *Dendrobium*.
- Fauna: It is home to Golden Langur (endemic species), Asian elephant, Royal Bengal tiger, clouded leopard, wild water buffalo, and 170 bird species and 150 butterfly species.
- Significant: The park is important for Golden Langur conservation and as an elephant corridor connecting Assam plains with Bhutan hills.

National Parks in Assam

- Assam has eight national parks that protect diverse ecosystems, rich biodiversity, and important wildlife habitats across floodplains, forests, and Himalayan foothill regions.

- **Kaziranga National Park:** It is located across Nagaon, Golaghat, and Sonitpur districts along Brahmaputra floodplains, and it is important for supporting over 70% of world one-horned rhinoceros population.
- **Manas National Park:** It is located in western Assam along the Bhutan border, and it is important for high biodiversity and holds status as Tiger Reserve, Biosphere Reserve, and World Heritage Site.
- **Dibru-Saikhowa National Park:** It is located in Assam's riverine region, and it is important as a biosphere reserve and supporting Gangetic dolphins and migratory birds
- **Nameri National Park:** It is located in Sonitpur district adjoining Arunachal Pradesh, and it is important as the core of Nameri Tiger Reserve supporting diverse mammals and riverine ecosystems.
- **Orang National Park:** It is located on the northern bank of Brahmaputra, and it is important as the oldest game reserve supporting rhinoceros and Bengal florican habitat.
- **Dehing Patkai National Park:** It is located in Dibrugarh and Tinsukia districts, and it is important for protecting wet evergreen forests and forms part of Dehing-Patkai Elephant Reserve.
- **Raimona National Park:** It is located along Indo-Bhutan boundary in Bodoland, and it is important as a transboundary ecological corridor supporting golden langur and maintaining forest ecosystems.
- **Sikhna Jwhlao National Park:** It is located in the Bodoland Territorial Region of Assam and it is important as Assam's eighth national park designated in March 2025 strengthening conservation network.

Veli-Akkulam Estuary

News: The Veli-Akkulam estuary is gradually degrading as invasive species, pollution, urban runoff, and encroachment are disrupting its food web and reducing native biodiversity.

About Veli-Akkulam estuary

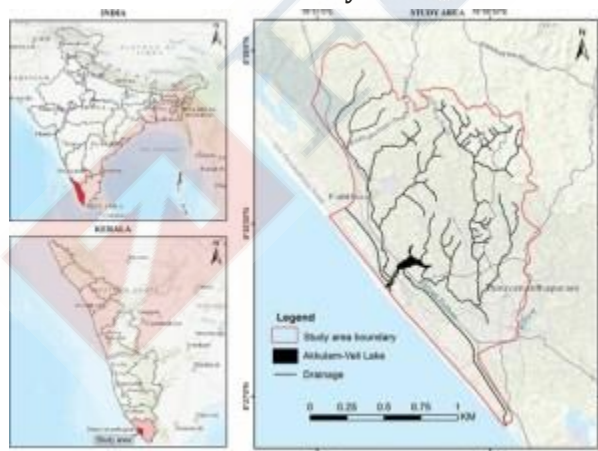


Figure 34. Source: Tandfonline

- **Location:** The Veli-Akkulam Estuary is located on the Thiruvananthapuram coast, Kerala.
- It is a **small, shallow, and bar-built estuary** that forms part of the Kerala backwater system, adjoining the Lakshadweep Sea.
- **Structure:** The estuary is **divided by a man-made bund** into **two separate sections**:
 - the western Veli Estuary
 - the northeastern Akkulam Estuary
- Its connection to the sea is **not permanent** and occurs **intermittently** during the **monsoon season** through the **natural breaching of a coastal sandbar**.
- **Reasons for degradation:**
 - **Proliferation of invasive species:** The estuary is

now being largely dominated by invasive species.

- Native fish like the **prized karimeen (*Etroplus suratensis*)**, barbs, and indigenous **catfish** have declined. Meanwhile, invasive species such as **Mozambique tilapia (*Oreochromis mossambicus*)** and **Nile tilapia (*Oreochromis niloticus*)** have increased rapidly, **outcompeting native fish for food and habitat**.
- **Trajectory of ecological decline:** The estuary is gradually moving toward “**a clear path of ecological decline**”, shifting from a balanced ecosystem to one that is **simpler and less stable**. This is known as **trophic simplification**.
 - It means the food web is becoming shorter, less diverse, and less interconnected.
- **Drivers of degradation:** As a temporarily closed system, the estuary frequently **experiences limited water exchange and low oxygen levels**, further promoting excessive algal growth and organic buildup.
 - In addition to these natural constraints, it is **increasingly affected by human-induced activities such as encroachment into catchment areas and discharge of pollutants into the body and other streams connected to it**.
 - Water quality has also **declined due to rising nutrient loads, organic pollution, and contamination from heavy metals** originating from both point and diffuse sources.

Balikatan Combat Exercise

News: Japan will deploy combat units to participate in the Balikatan exercises for the first time, marking a historic shift in its security engagement with Southeast Asia.

About Balikatan Combat Exercise



Source: The Diplomat

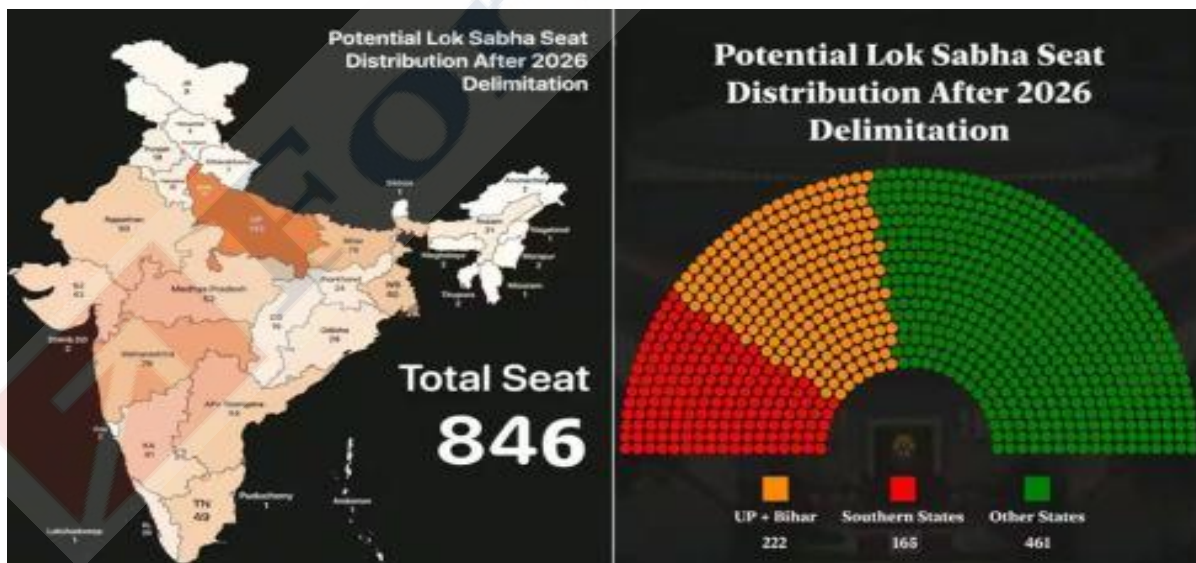
- It is the **largest bilateral military exercise** conducted between the **Armed Forces of the Philippines and the U.S.A.**
- It is also known as “**shoulder-to-shoulder**,” an exercise reflecting the **spirit** of the exercise and symbolizing the **strong alliance between the Philippines and the United States**.
- **Frequency:** It is held **annually**.

- **Aim:** It is designed to strengthen regional security through combined operations.
- **First Edition:** The first Balikatan Exercises took place in 2001.
- The 2026 edition is the 41st iteration of the exercise.
- **Duration:** It will start from 20th April to 8th May 2026.
- **Participating nations:** More than 17,000 soldiers from seven participating nations will be taking part in the exercise.
 - The troops will come from the Philippines, U.S.A, Australia, Japan, Canada, France, and New Zealand.
 - This would be the first time since World War II that Japanese combat troops will be on Philippine soil.
 - Also for the first time, Japan will fire a Type 88 ground-to-surface missile during the drills.
- **Activities conducted:**
 - The drills will cover land, sea, air and cyberspace domains.
 - The drills typically involve a wide range of activities, including maritime security, amphibious operations, humanitarian assistance, and disaster response.

Distribution of Lok Sabha Seats Across States

News: Prime Minister Narendra Modi and Amit Shah announced a proposal to increase Lok Sabha seats with about 50% rise for each State.

About Distribution of Lok Sabha Seats Across States



Source – India Tomorrow

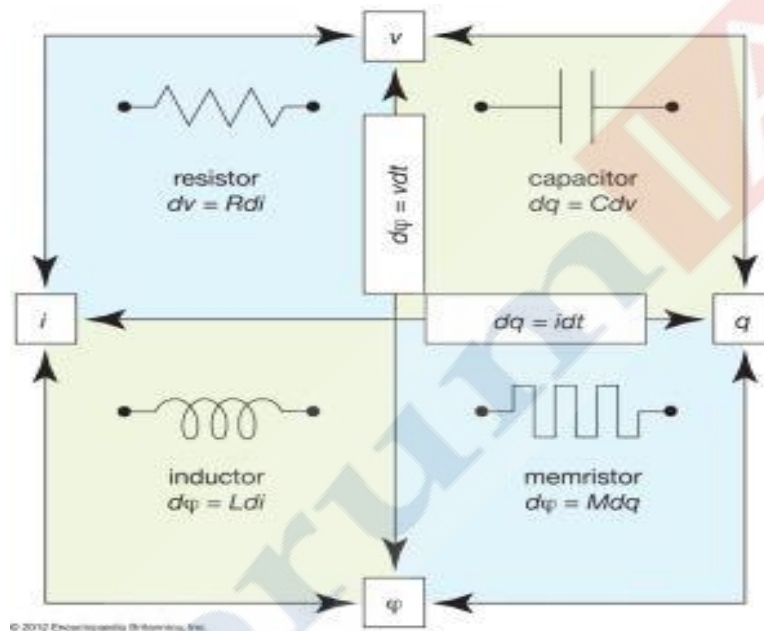
- **Distribution of Lok Sabha seats is done through delimitation by a Commission, as provided under Articles 81 and 82.**
- **Present Distribution of Seats in Lok Sabha:**
 - **Total Strength:** The maximum strength is 550 seats (530 from States and 20 from Union Territories), while the present strength is 543 elected members.
 - **Basis of Distribution:** The allocation among States is based on the 1971 Census, while constituency division within States is based on the 2001 Census.
 - **Freeze Provision:** The total number of seats is frozen until the first census after 2026.
- **Key Aspects of Seat Distribution:**
 - **Constitutional Provisions:** Articles 81 and 82 govern seat distribution through a two-step process:
 - First, allocation of seats among States; second, division of States into constituencies. This ensures balance between federalism and democracy.
 - **Article 81:** It defines the composition of the Lok Sabha and ensures a uniform ratio between population and seats, except for States with less than 6 million population.
 - **Article 82:** It provides for readjustment of seats and boundaries after each Census through a Delimitation Commission.
- **Amendments Related to Freeze:**
 - **84th Amendment Act (2001):** It extended the freeze on the number of seats per State until the first census after 2026.
 - **87th Amendment Act (2003):** It allowed redrawing of constituency boundaries within States based on the 2001 Census, without changing total seats.
 - **104th Amendment Act (2019):** It removed the provision for nominating two Anglo-Indian members.
- **Recent Proposals:**
 - **Constitution (131st Amendment) Bill, 2026:** It aims to increase the Lok Sabha's maximum seat capacity to 888 seats.
 - **Uniform Expansion:** Each State may get around 50% additional seats, while maintaining its proportional share.

- **Women's Reservation:** The 33% reservation under the 106th Amendment is linked to this new delimitation process.

Memristor

News: Researchers from the University of Cambridge reported a new brain-inspired hafnium-oxide memristor that can significantly reduce artificial intelligence energy use.

About Memristor



Source – Britannica

- A memristor is an electronic component that regulates current flow and remembers past electrical states.
- **Origin:** The concept was proposed by Leon Chua in 1971, and the first physical memristor was developed by HP Labs in 2008.
- **Naming:** The term 'memristor' is derived from combining the words memory and resistor.
- **Working Mechanism:**
 - A memristor works by changing its resistance based on the applied voltage, and its resistance depends on the history of current flow, unlike a normal resistor.
 - When power is removed, it retains its last resistance state, showing non-volatile behavior.

- It is also a nonlinear device because the relationship between current and voltage is not a straight line, and it cannot amplify signals or add power like active elements.
- **Cambridge Innovation:** Researchers at University of Cambridge developed a hafnium-oxide memristor using a p-n junction instead of unpredictable filaments.
 - By applying low-voltage pulses, ions are moved to control the energy barrier, making the device more stable and energy-efficient.
- **Key Features:**
 - **Non-Volatile Nature:** It retains resistance state even without power, ensuring continuous data storage.
 - **Energy Efficiency:** It requires very small energy and can reduce energy use by more than 70%.
 - **Brain-like Functioning:** It mimics synapses by combining memory and processing in the same place.
 - **Scalability and Durability:** It uses hafnium oxide, supports integration with existing chips, and endures many switching cycles.
- **Application:**
 - **Memory devices:** It can be used as non-volatile memory in computers and industrial systems.
 - **Integrated circuits:** It can be used to replace or support transistors in integrated circuits.
 - **Neuromorphic computing:** It can be used to build brain-like systems for artificial intelligence.
 - **Artificial intelligence and edge computing:** It can be used to enable efficient AI processing.

Tadag Tal

News: Tadag Tal is in news due to dispute over its classification as wetland and feasibility assessment for converting it into a permanent lake.

About Tadag Tal



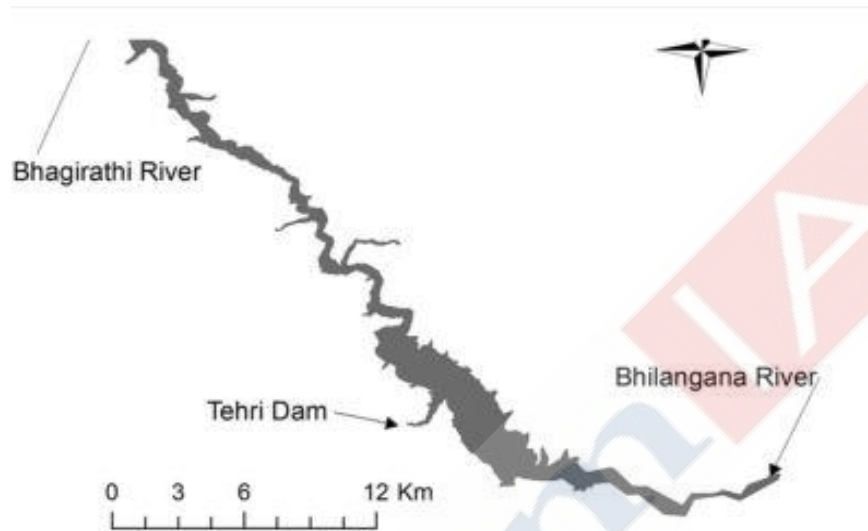
Source – DTE

- **Tadag Tal is a seasonal water body that changes from a water-filled lake in monsoon to a landscape of mountains and valleys in winter.**
- **Location:** It is located in Almora district of Uttarakhand and lies in the Ramganga valley, which is a geologically active region.
- **Seasonal nature:** It holds water during monsoon due to rainfall and drainage, but dries up after monsoon ends.
- **Ecological role:** A significant portion of the area is marshy and receives water from local streams like Maligaad and Misariya.
- **Extent and Land Use:** It spans more than 50 hectares, with about 54.2 hectare affected by waterlogging, and supports seasonal agriculture like wheat cultivation.
- **Wetland identification:** It is listed among 192 wetlands in Wetland Atlas 2021 by ISRO.
- **Classification (Lake vs Wetland)**
 - **Administration view:** It is described as a seasonally waterlogged agricultural area that holds water only for a few months and does not meet the criteria for wetland notification.
 - **It also includes cultivated land, and paddy fields are excluded under the Wetlands (Conservation and Management) Rules, 2017.**
 - **Expert view:** Experts consider it a marshy wetland with high ecological value, acting like a sponge that absorbs and releases water and supports biodiversity.

Tehri Lake

News: During the trial operation, the seaplane successfully took off from Jolly Grant Airport and landed at Koti Colony in the Tehri Lake area.

About Tehri Lake



Source – ResearchGate

- **Location:** It is Asia's largest man-made lake, located in Tehri Garhwal district, Uttarakhand.
- **Formation:** Tehri Lake was formed when the waters of the Bhagirathi River were obstructed by the Tehri Dam, resulting in the submergence of Old Tehri town and several nearby villages.
 - Over time, as the reservoir filled, the valley transformed into a vast water body.
- **Source:** It is fed by the Bhagirathi and Bhilangna rivers, which meet at the Tehri dam.
- **Height and depth:** It is situated at an elevation of about 1,700 meters with depth of 262 meters approximately.
- It holds nearly 3.54 cubic kilometres of water and spreads across 42–52 square kilometres of surface area.
- It is surrounded by the Himalayan mountain ranges, dense pine forests, and terraced villages.
- **Significance:** The lake also supports the functioning of the Tehri Dam, which has a large power generation capacity of about 2,400 MW and supplies electricity to multiple states in northern India.

- Sport activities: It hosts different sports activities, such as Jet Skiing, Flyboarding, Knee Boarding, Banana Ride, Surfing, etc.

About Tehri Dam

- It is a multi-purpose rock and earth-fill embankment dam in Uttarakhand.
- Situated on: It is located on Bhagirathi river at 1.5km downstream of its confluence with river Bhilangana.
- Height: The height of the Tehri Dam is approximately 260.5 meters.
- Managed by: It is managed by Tehri Hydro Development Corporation (THDC) India Limited, a subsidiary of the National Thermal Power Corporation (NTPC) Limited.
- Installed Capacity: Its installed hydro capacity is 1,000 MW along with an additional 1,000 MW of pumped storage hydroelectricity.

Mahua Tree (*Madhuca longifolia*) and Gond Tribe

News: Mahua plays a pivotal role in the life of tribal communities from birth to death.

About Mahua Tree (*Madhuca longifolia*)



Source – Greenverz

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- It is a **multipurpose tropical tree** mainly cultivated or harvested in the wild for its **edible flowers and oil seeds**.
- It is commonly known as **mahuwa or madhuka, Butter Tree, Mahua and Mahwa**.
- **Family:** It belongs to the **Sapotaceae family**.
- **Scientific name:** Its scientific name is **Madhuca longifolia**.
- **Distribution:**
 - It is **indigenous to India, Sri Lanka, Nepal and Myanmar**.
 - The **two major species** of the genus Mahua found in India are **Madhuca latifolia and Madhuca longifolia**.
 - It is widely distributed across India, including **West Bengal, Odisha, Chhattisgarh, Jharkhand, Bihar, Maharashtra, Gujarat, Telangana, Tamil Nadu, and Kerala**.
- **Climatic Requirements:**
 - It is a **frost-resistant species** that can grow in **marginal areas of dry tropical and subtropical forests** up to an **altitude of 1200-1800 m**.
 - **Growth Height:** It grows to approximately 20 meters in height.
 - **Rainfall:** It requires annual rainfall between **500 mm to 1500 mm**.
 - **Temperature:** For its proper growth, the temperatures should be in the range of **2-46 °C**.
 - **Soil:** It grows well on **deep loamy or sandy-loam soils with good drainage**.
 - **Flowering period:** It grows slowly, begins to **flower after 10 to 15 years**, but lasts for decades. The average flowering period of the tree is **about five weeks**.
- **Production in India:** It is a non-edible oil with an **annual production of 60 million tonnes** in India.
 - **Mahua flowers are one of the top 5 minor forest products (MFP)** in terms of volume produced in the nation each year.
 - **Mahua nutra beverage** is a value-added product made out of Mahua flowers.
- **Uses:** Mahua flowers are mainly used to prepare liquor, as well as cakes, vinegar, jam, syrup, and honey.
 - **Seeds are processed to extract oil, which is used for ghee, soap, grease, and cosmetics**.

- **Medicinal use:** Its bark, flowers, seeds, and leaves are used medicinally for respiratory problems, cold and cough, pain relief, lactation, and conditions like diabetes, bronchitis, rheumatism, headache, and haemorrhoids.
- **Ecological significance:**
 - Its **strong-smelling flowers** bloom at night and hang openly, **which attracts bats that help in pollination and seed dispersal.**
 - Animals such as sloth bears also **depend on these flowers and often compete with humans in collecting them.**

About Gond Tribe



Source: Researchgate

- The **Gondi (Gōndi) or Gond or Koitur** are a **Dravidian ethno-linguistic group** of India.
- **Distribution:** They are spread over the states of **Madhya Pradesh, Maharashtra, Chhattisgarh, Uttar Pradesh, Telangana, Andhra Pradesh, Bihar and Odisha.**
 - They are mainly divided into four tribes, namely **Raj Gonds, Madia Gonds, Dhurve Gonds, and Khatulwar Gonds.**
 - They are **one of the largest groups in India** and are currently listed as a **Scheduled Tribe of India.**
 - Population: According to the 2001 census, their population was **nearly 11 million.**
- **Origin:** They are believed to **belong to the Dravidian stock.**
- **Historical Background:** Scholars believe **Gonds settled in Gondwana** between the **ninth and thirteenth centuries AD.**
 - Gond dynasties ruled in four kingdoms –**Garha-Mandla, Deogarh, Chanda, and Kherla** in **central India between the sixteenth and mid-eighteenth century.**

- Maratha power swept into the Gond land in the 1740s. **They overthrew the Gond rajas (princes) and seized most of their territory.** Some Gond zamindaris (estates) survived until recently.
- During the British rule in India, the Gonds actively resisted the British and fought several battles against them.
- **Languages:** Most Gonds **speak different dialects of Gondi**, an unwritten language belonging to the Dravidian family, and many of these dialects are **not intelligible**.
 - Some **Gonds have lost their native language and instead speak regional languages** such as Hindi, Marathi, or Telugu, depending on the dominant language of their area.
- **Society:** The Gond society is divided into **several exogamous patrilineal units known as sagas**. The saga is divided into **several clans (pari)**.
- **Religion:** The religion of the Gonds is mainly based on the worship of clan and village deities, along with reverence for their ancestors.
- **Festivals:** Pola, a cattle festival, Jathra, Nagapachami, and Dasahara are some of their major festivals.

Borrowers' Platform

News: Developing countries launched the first-ever Borrowers' Platform at IMF-World Bank Spring Meetings 2026 to address rising debt pressures collectively.

About Borrowers' Platform



Source – UNCTAD

- It is a dedicated forum for developing countries to coordinate and address sovereign debt challenges.
- **Launched:** It was launched during the IMF-World Bank Spring Meetings 2026 by developing countries.
- **Origin:** The platform was first outlined in the Sevilla Commitment adopted at the Fourth International Conference on Financing for Development in July 2025, creating a permanent space for collaboration.
- **Supported by:** It is supported by the United Nations Conference on Trade and Development (UNCTAD) which serves as its secretariat.
- **Aim:** It aims to strengthen coordination and create a collective voice on sovereign debt issues among developing countries.
- **Representatives:** The platform includes representatives from 30 countries, including Prime Ministers, ministers, and central bank governors, with a working group.
- **Leadership:** It is guided by a working group chaired by Egypt, with Pakistan as Vice-Chair. Other key members include India, South Africa, Colombia, Nepal, and Zambia.
- **Key features:**

- **Knowledge sharing and coordination:** The platform provides a space where countries can exchange experiences, learn from each other, and improve coordination on debt-related issues.
- **Technical cooperation and capacity building:** It supports strengthening debt management capacity through technical assistance, including UNCTAD's Debt Management and Financial Analysis System (DMFAS) programme.
- **Collective voice in global finance:** It enables developing countries to articulate a unified position in global debt discussions, addressing the imbalance created by creditor-led mechanisms like the Paris Club.
- **Non-crisis cooperative platform:** It is not a debt restructuring or crisis coordination mechanism but focuses on practical solutions, peer learning, and improving transparency in debt management.
- **Significance:** The platform responds to high external debt of \$11.7 trillion, annual debt service costs of nearly \$920 billion, and the fact that 54 countries spend more on debt than on health or education.

Umiam Lake

News: A conservation group opposed a ₹330-crore Taj Umiam Luxury Resort project proposed on an island in Umiam Lake.

About Umiam Lake



Source – Wikipedia

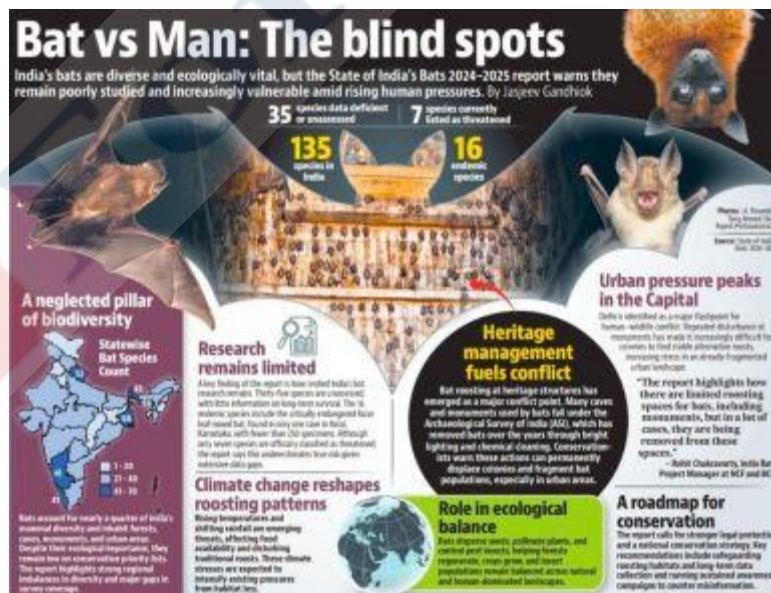
- **Umiam Lake is a large manmade reservoir created for hydroelectric power generation in Meghalaya.**

- **Location:** It is located north of Shillong in Meghalaya.
- It is also called the Barapani Lake.
- It is one of the biggest artificial lakes in Meghalaya.
- **Surrounded by:** It is surrounded by the East Khasi Hills and scenic landscapes.
- **Source of Water:** The lake receives water from the River Umiam, which is formed by the confluence of Umkhrah and Umshyrpi streams through Wah Ro-ro stream.
- **Projects:** It is part of the Umiam Umtru Hydroelectric Power Project, which was among the first hydel power projects in northeast India.
- **Hydropower Importance:** The dam was built mainly for storing water for hydroelectric generation, marking a major regional energy milestone.
- **Tourism Value:** The lake is a major hub for water sports and boating, attracting visitors with scenic beauty.

The State of India's Bats (2024-25) Report

News: The first-ever national assessment, "The State of India's Bats (2024-25)", highlights neglect, data gaps, and rising threats to bat species in India.

About State of India's Bats (2024-25) Report



Source – HT

- It is the first national-level assessment of bat species status in India.
- Prepared by: The report is prepared by Nature Conservation Foundation and Bat Conservation International with inputs from 36 experts across 27 institutions.
- Key Findings:
 - Total Diversity: India is home to around 135 bat species.
 - Endemism: 16 species are endemic to India.
 - Threat Status: 7 species are classified as threatened by IUCN.
 - Data Gap: 35 species are data deficient or not assessed.
 - Top Biodiversity States: West Bengal leads with 68 species, followed by Meghalaya (66 species) and Uttarakhand (52 species).
- Threats
 - Urbanisation
 - Deforestation
 - Land-use changes
 - Climate impacts
 - Increased stigma after the COVID-19 pandemic
- Research and policy issues: The report highlights slow research permissions and need for urgent studies on habitats, ecology, diet, and disease risks.

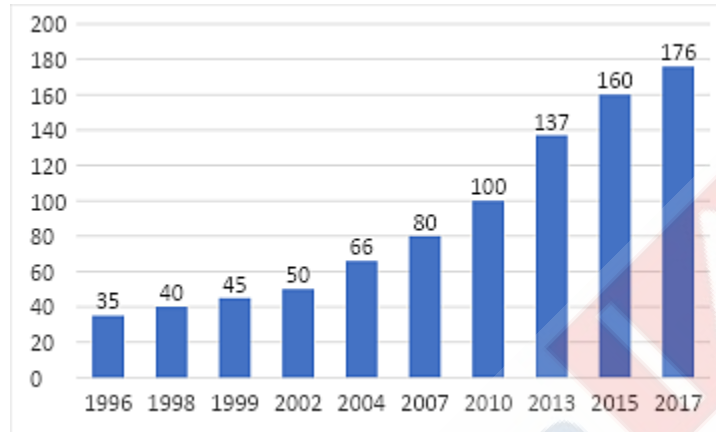
About Bats

- Biological nature: Bats are mammals that give birth to live young, have fur-covered bodies, and are warm-blooded.
- Unique feature: They are the only mammals capable of true powered flight, which makes them unique among animals.
- Navigation ability: Most bats use echolocation, which helps them move and hunt in complete darkness.
- Ecosystem services: Bats provide important ecosystem services such as pollination, seed dispersal, pest control, and also contribute to soil nutrition through their droppings.

National Floor Level Minimum Wage (NFLMW)

News: The Indian government is fast-tracking the introduction of a national floor-level minimum wage (NFLMW) to address differences in worker pay across states.

About National Floor Level Minimum Wage (NFLMW)



Source: Chapter 4, Report on the Minimum Wages Act, 1948 for the year 2020.

- The **National Floor Level Minimum Wage (NFLMW)** is the **minimum pay below which no state government can set the minimum wage for workers**.
 - Wage includes **basic pay, dearness allowance and retaining allowance**, and is to be the basis for calculation of benefits and social security contributions.
- This is a **non-statutory measure** to guarantee an increase in minimum wages across states.
- It was **first introduced** by the **Ministry of Labour and Employment** in **1996** to provide employees and their families with a minimal standard of living.
 - The [Code on Wages, 2019](#), also provides for **floor wages to be fixed by the Central government based on the minimum living standards** of employees, including food, clothing, etc.
- It has been **revised from time to time**, taking into account the increase in the **Consumer Price Index Number for Industrial Workers**.
- It will be **fixed for different geographical areas to ensure that no state government sets the minimum wage below the notified floor wage**.
- Current NFLMW is **₹176 per day**. This has remained unchanged since 2017.

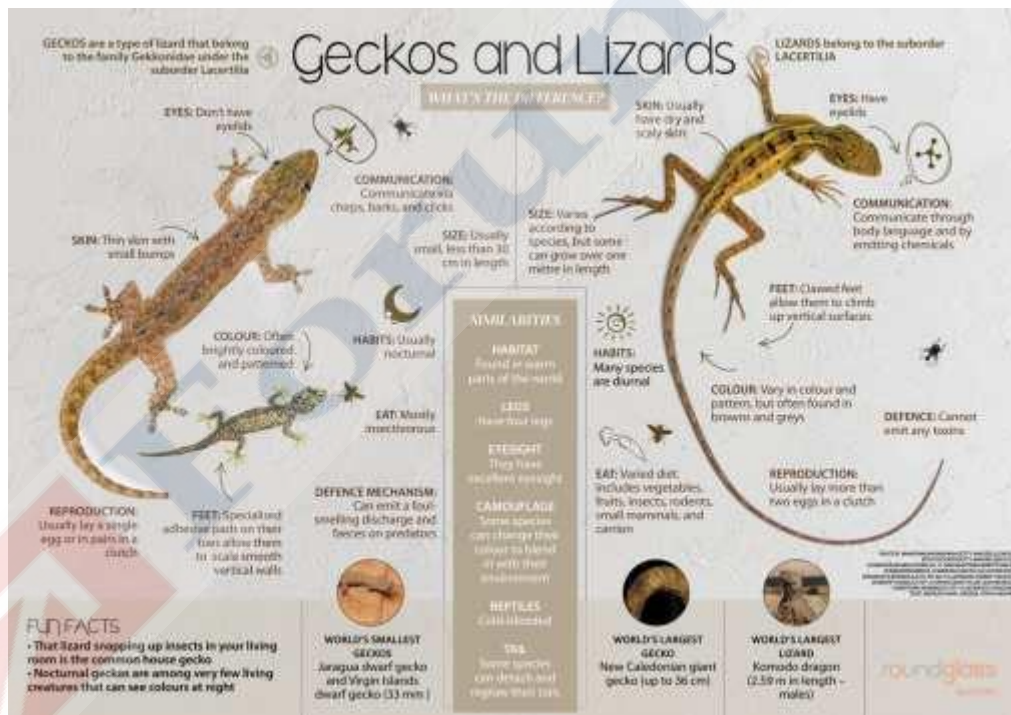
About Minimum Wages

- Under the **Code of Wages, 2019**, **Minimum wage** rates for **time work**, **piece work** for **different wage periods (by hours, day or by month)** are **fixed** by the appropriate Government.
- It is **based on the skill of the employee, and/or geographical area** and the **arduousness of work**.
- The minimum rate of wages **may consist of basis rate of wages and allowances**.
- The government will revise the minimum rate of wages in **every five years**.

Geckos

News: Researchers have discovered a new bent-toed gecko species, *Cyrtodactylus jayadityai*, in the lowland forests of North Tripura.

About Geckos



Source: Round Glass Sustain

- Geckos are reptiles **belonging to the suborder Gekkota**, which includes over 1,000 species of lizards.

- **Family:** They are spread across six families: **Carphodactylidae, Diplodactylidae, Eublepharidae, Gekkonidae, Phyllodactylidae, and Sphaerodactylidae.**
- **Scientific Name:** Their scientific name is **Palmatogecko rangei.**
- **Habitat:** They live in many habitats, such as **rainforests, deserts, and mountains.**
- **Distribution:** They are **found in different parts of the world** except Antarctica.
- **Characteristics:**
 - **Appearance:** They are **small reptiles** with soft skin, known for their **bright colours and unique patterns.**
 - They also **possess a short, stout body**, a large head, and typically well-developed limbs.
 - The ends of each limb are often equipped with **digits possessing adhesive pads.**
 - **Length:** Most of the species are 3 to 15 cm long, including tail length.
 - Their **tails help in balance** while climbing, for **camouflaging** and also to **store fat** (energy reserve).
 - They can **shed their tails** to escape predators, after which their tails regrow.
 - Most geckos **do not have movable eyelids.** They have a **transparent eyelid.** They **lick their eyes** to keep them clean.
 - **Diet:** They eat **insects, fruits, and nectar.**
 - **Behaviour:** Most geckos are **nocturnal.** Some species (day geckos) are active during the day.
 - They make sounds like **chirping, barking, and clicking** to **defend territory and attract mates.**
 - Female geckos lay **eggs in leaves or bark.**
 - **In defence of predators, they emit a foul-smelling discharge and faeces on predators.**
- **Conservation:** There are **many species of geckos.** Their conservation status varies from **least concern** to **critically endangered.**

About *Cyrtodactylus jayadityai* Gecko



Source: TH

- A new species of **bent-toed gecko** has been **found in Tripura**.
- **Scientific name:** It has been named as **Cyrtodactylus jayadityai sp. nov.**, in honour of **Dr Jayaditya Purkayastha**, a **noted Indian herpetologist**, recognising his immense contributions to reptile research and conservation in the region.
- **Habitat:** Its habitat **is the lowland forests of North Tripura**.
- **Characteristic:**
 - It is a **distinct species from its closest relative, Cyrtodactylus tripuraensis**, with a **genetic divergence** of 4.7-5.2 per cent in the mitochondrial ND2 gene.
 - It is **nocturnal**, forages at night and retreats into burrows during the day.
 - It is currently proposed to be categorised as **Data Deficient (DD)** under the **IUCN Red List**.
- With this discovery, the number of Cyrtodactylus species in Northeast India rises to 31.

Operation Upstream

News: World Anti-Doping Agency is collaborating with Central Bureau of Investigation to curb doping through a supply-chain focused strategy.

About Operation Upstream



Source – WADA

- **Operation Upstream :** It is an initiative that focuses on identifying and targeting the supply chains responsible for producing and moving prohibited performance-enhancing drugs.
- **Launched by:** The operation is conducted with support from World Anti-Doping Agency (WADA), along with INTERPOL and EUROPOL.
- **Objective:** The main objective is to curb doping by targeting supply chains that help in moving prohibited substances.
- **Key Aspects:**
 - **Approach:** The strategy follows a “top to down” approach by focusing on suppliers and networks instead of only athletes, as athletes are considered victims.
 - **Supply Chain Focus:** The method aims to attack the movement of prohibited substances, especially given the large population and scale of the issue.
 - **Intelligence-Based Action:** Greater emphasis is placed on intelligence gathering because doping has become organized and sophisticated, requiring action from different sides.
 - **Global Enforcement Actions:** The operation has led to 250 raids, seizure of approximately 1.8 billion doses, and closure of 88 illegal laboratories across 20 countries.
- **Significance:** This initiative is important as it targets the root cause of doping by focusing on supply chains and movement of prohibited substances.

About World Anti-Doping Agency (WADA)

- **World Anti-Doping Agency (WADA):** It is an international independent agency that promotes and coordinates the fight against doping in sport globally.

- **Established:** It was established on 10 November 1999 following the Lausanne Declaration on Doping in Sport.
- **Funding:** It is equally funded by the sport movement and governments, which highlights balanced participation.
- **Government structure:** It has a 42-member Foundation Board as the highest policy body and a 16-member Executive Committee for management.
- **Function:** It conducts research, education, monitoring of World Anti-Doping Code, and capacity development to ensure uniform anti-doping rules.
- **Headquarter:** It is headquartered in Montreal, Canada.

Induction vs Infrared Cooktops

News: West Asia conflict and fuel disruptions caused LPG shortages and price rise, leading to surge in electric cooktop adoption in India.

About Induction vs Infrared Cooktops



Source – Sahara Appliances

- **Induction** heats vessels directly use electromagnetic fields, while infrared cooktops use radiant heat from a heated coil beneath glass.
- **Working Principle:**
 - **Induction Cooktop:** It generates a rapidly changing electromagnetic field, which heats the vessel directly through electrical resistance and converts energy into heat.
 - **Infrared Cooktop:** It uses electricity to heat a coil or halogen element, which emits infrared radiation that heats the vessel.
- **Heat Transfer:**

- **Induction:** Heat is produced directly inside the vessel due to electrical resistance.
- **Infrared:** Heat passes from coil to glass and then to the vessel through radiation.
- **Energy Efficiency:**
 - **Induction:** It converts 85–95% of electricity into heat, making it highly efficient and consuming less electricity.
 - **Infrared:** It operates at 70–80% efficiency, with energy loss during multi-stage heat transfer.
- **Cookware:**
 - **Induction:** It requires ferromagnetic cookware like cast iron or magnetic stainless steel.
 - **Infrared:** It works with all types of cookware such as steel, aluminium, glass, and ceramic.
- **Safety:**
 - **Induction:** It is safer as it does not use an open flame and heats only the vessel.
 - **Infrared:** It involves a glowing hot coil, which may pose higher surface heat risks.
- **Impact on Grid:** Infrared cooktops distort current and reduce power factor, causing inefficiencies and infrastructure stress.

Odisha becomes first state to launch Marine Spatial Plan

News: Odisha signed an MoU with NCCR to launch Marine Spatial Plan for integrated coastal planning under Indo-Norway ocean initiative.

About Marine Spatial Plan (MSP)



Source – MRC

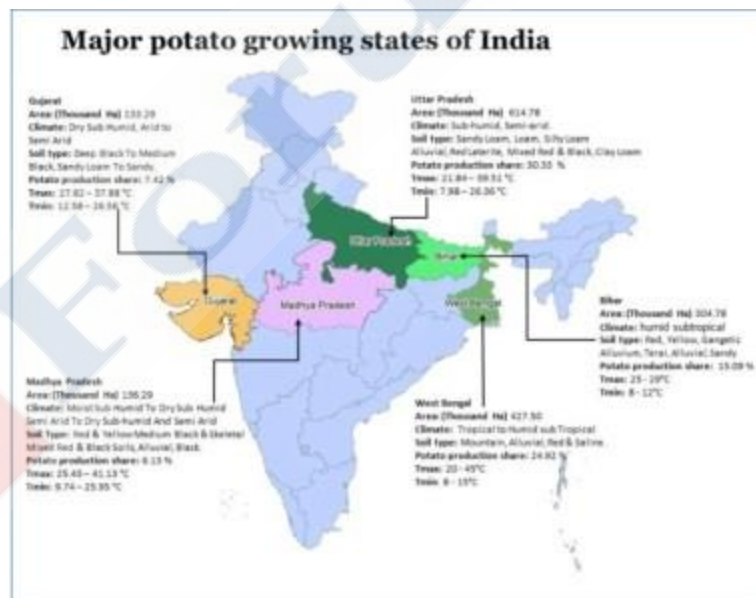
- Odisha has officially launched its Marine Spatial Plan (MSP), making it the first Indian state to do so.
- **Pilot Frameworks:** While pilot frameworks were previously implemented in the Union Territories of Puducherry and Lakshadweep, Odisha is the first state to adopt it.
- **Marine Spatial Plan (MSP):** Marine Spatial Planning is a tool for sustainable and integrated ocean management to utilize marine resources efficiently.
- **Implementing Partners:** Odisha Government and National Centre for Coastal Research (NCCR) under Union Ministry of Earth Sciences are implementing this plan.
- **International Cooperation:** The initiative is part of Indo-Norway Integrated Ocean Initiative under the 2019 MoU between India and Norway.
- **Objective:** The main objective is to ensure sustainable use of marine resources, promote blue economy growth, and strengthen climate resilience while balancing ecological and economic needs.
- **Key Aspects:**
 - **Scientific Mapping and Assessment:** Experts will study coastal waters, including salinity, temperature, and conduct benthic mapping to identify suitable zones for activities.

- **Sectoral Planning and Resource Use:** The plan will identify areas for fisheries, tourism, ports, aquaculture, and industries to ensure efficient and sustainable utilization.
- **Policy Support and Ecosystem Protection:** The data will help the state frame policies that support economic activities while protecting biodiversity and maintaining environmental balance.
- **Other Initiatives:**
 - **OMBRIC Launch:** Odisha launched the Marine Biotechnology Research and Innovation Corridor in August 2025 for research and development.
 - **Support to MSP:** This initiative promotes startups, environmental protection, and livelihood support, strengthening the Marine Spatial Planning framework.

Potato Cultivation in India

News: Farmers' organisations claim that the Centre's potato procurement price is only about half of the actual input cost.

About Potato Cultivation in India



Description of major potato growing states of India in detail with cultivated area, production, productivity, climate and soil types

Source: ResearchGate

- It is a **root vegetable plant native to America** and **domesticated in Peru** about 6000 years ago.

- In India, it was introduced by the Portuguese in the 16th century, and since then, it has become an important vegetable across India.
- **Geographical conditions required for its growth:**
 - **Climate:** It thrives in **temperate climates** where the growing season remains moderately cool.
 - **Temperature:** An ideal temperature range for its growth is **18–29°C during the day and 13–18°C at night**.
 - **Vegetative growth** is best around **24°C**, and **tuber formation** is optimal at **about 20°C**.
 - **Sunlight:** It requires at **least six hours of sunlight daily**, though it can also grow under partial or dappled shade.
 - **Soil:** It requires a **well-drained, well-aerated, porous soil** with a pH of 5 to 6.
 - **Loamy and sandy loam soils** that are **rich in organic matter, well-drained, and well-aerated** are most suitable for its cultivation.
 - **Water requirement:** It is relatively **sensitive to soil water deficits**. To optimise yields, the total available soil water should not be depleted by more than 30 to 50 per cent.
- **Potato production in India**
 - **India** is the **second-largest producer of potatoes** in the world after China.
 - Its higher productivity level is confined **mainly to the Indo-Gangetic plains and plateau regions**, producing about 90% of potatoes.
 - **Production: Between 1991-92 and 2020-21:**
 - **Potato cultivated area** has doubled from **11 to 22 lakh hectares**
 - **Production** tripled from **181.95 to 561.72 lakh metric tonnes**
 - **Productivity** increased by over 50%—from **16 to 25 metric tonnes per hectare**.
 - **Top producing states:** The 74% of its total output is from **Uttar Pradesh, West Bengal, and Bihar**.
 - **Gujarat, Madhya Pradesh, Punjab, Assam, Haryana, Jharkhand and Chhattisgarh** also have significant production.

About Operation Greens

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Visit academy.forumias.com for our mentor based courses.



Source: PIB

- It was introduced to **stabilize the supply of tomato, onion, and Potato (TOP) crops**.
- **Nodal Ministry:** It was launched by the **Ministry of Food Processing Industries (MoFPI)** in 2018.
- **Implementing agency:** It is being implemented by **National Agricultural Cooperative Marketing Federation (NAFED)**.
- **Scheme type:** It is a **Central Sector Scheme** under the [Pradhan Mantri Kisan SAMPADA Yojana \(PMKSY\)](#).
- **Objectives:**
 - **Boost income for TOP farmers** by strengthening production clusters, FPOs, and market linkages.
 - **Stabilise prices** through better production planning and the use of dual-purpose varieties.
 - **Reduce post-harvest losses** with farm-gate infrastructure, improved logistics, and storage near consumption centres.
 - **Expand processing capacity and value addition** with strong links to production clusters.
 - **Develop a market intelligence system** for real-time data on demand, supply, and prices of TOP crops.
- **Components:** The scheme has **two components**:
 - **Short-term strategy**, i.e. Price Stabilisation Measures through the grant of transportation /storage subsidy.

- Long-term strategy focuses on creating post-harvest processing facilities, agri-logistics, and capacity building for Farmers Producer Organisations (FPOs).

About From TOP to TOTAL



Source: PIB

- In 2020, the **Ministry of Food Processing Industries (MoFPI)** extended the **Operation Greens scheme from Tomato, Onion and Potato (TOP) to all fruits & vegetables (TOTAL)** as part of the **Aatmanirbhar Bharat Abhiyan**.
- It was initiated for a period of six months on a pilot basis but has now been further expanded and extended.
- **Eligible Crops:**
 - **Fruits-** Mango, Banana, Guava, Kiwi, Litchi, Papaya, Mousambi, Orange, Kinnow, Lime, Lemon, Pineapple, Pomegranate, Jackfruit, Apple, Almond, Aonla, Passion fruit, Pear, Mandarins;
 - **Vegetables** – French beans, Bitter Gourd, Brinjal, Capsicum, Carrot, Cauliflower, Chillies (Green), Okra, Cucumber, Peas, Garlic, Onion, Potato, Tomato, Turmeric (raw).
 - **Any other fruit/vegetable can be added** in future based on **recommendations by the Ministry of Agriculture or the State Government**
- **Eligible Entities:** It includes:

- Food processors, FPOs/FPCs, Co-operative Societies, Individual farmers, Licensed Commission Agents, Exporters, State Marketing/Co-operative Federation, Retailers, etc., engaged in processing/ marketing of fruits and vegetables.
- **Pattern of Assistance:** It provides a 50% subsidy on transportation and storage to reduce post-harvest losses and prevent distress sales by farmers.

Designer Rice

News: Scientists at CSIR – National Institute for Interdisciplinary Science and Technology, Kerala, have developed designer rice.

About Designer Rice



Source: PIB

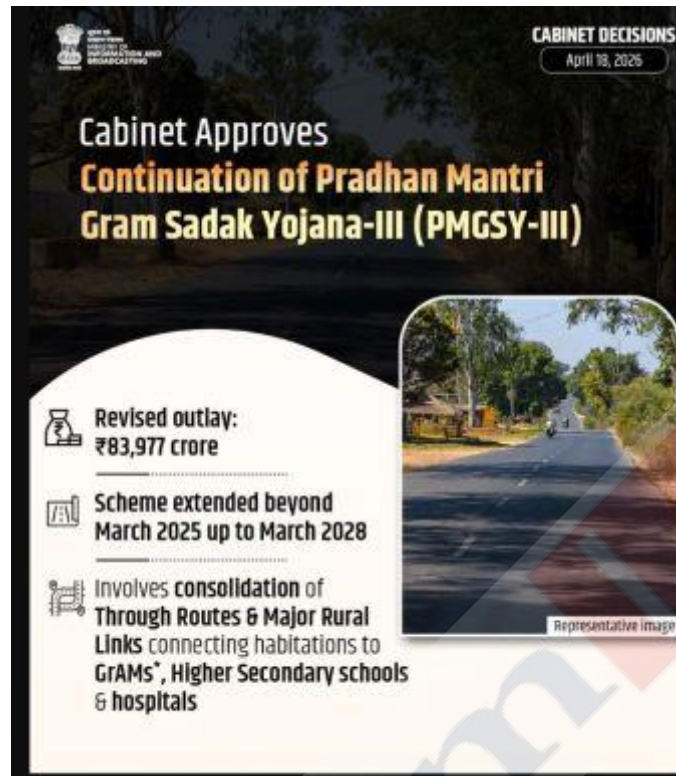
- Designer rice is a **type of “functional food,”** intentionally **modified to meet specific health and nutritional needs.**
- **Developed by:** This rice has been **developed by CSIR – National Institute for Interdisciplinary Science and Technology in Thiruvananthapuram, Kerala.**
 - The technology has been **transferred by CSIR-NIIST to Tata Consumer Products Limited** for large-scale production.
- **Aim:** It aims to **nourish millions and tackle malnutrition one plate at a time.**

- **How it is created:** Scientists use **food-processing technology** in which broken rice is **ground into flour, enriched with starch, protein, fibre and micronutrients** like iron, folic acid, and vitamin B12, and then **reformed into grains** that look, feel, and taste like regular rice.
- **Difference between regular rice and designer rice:**
 - **Regular white rice is mainly carbohydrates and has a higher glycemic index (GI)**, which can cause faster spikes in blood sugar.
 - **Designer rice contains more protein and has a lower GI**, making it more nutritionally balanced and helpful for managing blood sugar levels and improving satiety.
- **Benefits of designer rice:**
 - It has a **low glycemic index (below 55)**, which means it **releases energy slowly and helps prevent sudden blood sugar spikes**, especially beneficial for diabetics.
 - It is **rich in protein, containing over 20% protein** compared to 6–8% in regular rice.
 - It **helps combat anaemia** as it is fortified with iron, folic acid, and vitamin B12 embedded directly into the grain.

Pradhan Mantri Gram Sadak Yojana-III

News: The Union Cabinet approved continuation of PMGSY-III beyond March 2025 till March 2028 with revised outlay and extended timelines.

About Pradhan Mantri Gram Sadak Yojana-III



Source – PIB

- It is the third phase of rural road development focusing on consolidation and upgradation of existing routes under the Pradhan Mantri Gram Sadak Yojana (PMGSY).
- Launched In: PMGSY was launched on 25 December 2000 and PMGSY-III was launched in July 2019.
- Nodal Ministry: The Ministry of Rural Development (MoRD) is the nodal ministry
- Funding Pattern: The funding pattern for the PMGSY-III will be 60:40 between Centre and the States and 90:10 for NE and Himalayan States.
- Aim: PMGSY-III aims to consolidate 1,25,000 km of Through Routes and Major Rural Links to connect habitations with Gramin Agricultural Markets (GrAMs), Higher Secondary Schools, and Hospitals while reducing transportation time and cost.
- Revised Deadline:
 - Plain Areas: Completion of roads and bridges extended till March 2028.
 - Hilly Areas: Completion of roads extended till March 2028 and bridges extended till March 2029.

- Revised Outlay: ₹83,977 crore, increased from ₹80,250 crore.
- Key Features:
 - Pending Works Clearance: Works sanctioned before 31 March 2025 but not yet awarded are now allowed to be taken up for tender and award to ensure completion.
 - Long Span Bridges (LSBs): A total of 161 Long Span Bridges, with an estimated cost of ₹961 crore, are approved for sanction and execution along already sanctioned road alignments.
 - Technology Use: The scheme promotes the use of green technologies such as waste plastic and cold mix technology in rural road construction.

Vishwa Sutra Initiative

News: Ministry of Textiles launched “Vishwa Sutra – Weaves of India for the World” to promote Indian handlooms globally through contemporary design framework.

About Vishwa Sutra Initiative



Source – PIB

- It is an initiative to present Indian handlooms in a contemporary global design framework.

- **Launched by:** It has been launched by the Office of the Development Commissioner (Handlooms) under the Ministry of Textiles in collaboration with National Institute of Fashion Technology.
- **Objective:** The initiative aims to expand the global reach and recognition of Indian handloom products through modern fashion interpretations.
- **Key Features:**
 - **Diverse Handloom Representation:** Around 30 different weaves from across India are included, each representing a unique state tradition.
 - **Global Design Integration:** Each weave is creatively reinterpreted using design inspirations from 30 countries, reflecting global cultures and modern fashion sensibilities.
 - **Continuity of Tradition:** The initiative highlights the depth and continuity of handloom techniques preserved across generations
 - **Practical Representation:** The designer collection was presented at the 61st edition of Femina Miss India in Bhubaneswar, Odisha, demonstrating real-world application of the concept.
- **Significance:** It supports “Vocal for Local to Global” and the 5F framework (Farm to Fibre to Factory to Fashion to Foreign), strengthening India’s handloom sector globally.

Black Panthers

News: A female black panther will be released at Indira Gandhi Zoological Park, Visakhapatnam, ending a 40-year gap in display.

About Black Panthers



Source – Britannica

- **A black panther is not a distinct species or breed, but rather a melanistic (black-furred) color variant of big cats, most commonly leopards (*Panthera pardus*) or jaguars (*Panthera onca*).**
- **They have black fur or very dark coats due to high concentration of black pigmentation.**
- **Distribution:**
 - **Global:** Black panthers are found across Asia, Africa, and the Americas, including Southwest China, Nepal, Malaysia, Indonesia, and Burma.
 - **India:** They are reported from Karnataka (Kabini Forest, Nagarhole National Park), Kerala (Periyar Wildlife Sanctuary, Silent Valley), West Bengal (Sundarbans), and also from Tamil Nadu and Maharashtra.
- **Characteristics:**
 - **Physical Features:** They have glossy black or dark brown fur with faint spotted patterns visible under sunlight.
 - **Eyes:** Their emerald green eyes provide a striking and fierce appearance even in darkness.
 - **Behaviour:** They are solitary and territorial hunters with strong intelligence, sharp eyesight, and a powerful sense of smell.

- **Melanism:** Their black color results from genetic alleles that increase melanin, helping in camouflage in dense forests.
- **Threats**
 - **Habitat loss**
 - **Poaching**
 - **Human encroachment**
 - **Vehicle collisions**
 - **Diseases**
 - **Declining prey populations**
- **Conservation Status**
 - **IUCN Red List: Vulnerable**
 - **CITES: Appendix I**
 - **Schedule I of the Wildlife (Protection) Act, 1972**

DSC A 23

News: DSC A 23, the fourth ship of the five Diving Support Craft (DSC) project, was launched at Titagarh, Kolkata (WB).

About DSC A 23



Source: PIB

- **DSC A 23** is the **fourth ship of the five Diving Support Craft (DSC) project**.
- **Launched on:** It was launched on **19 Apr 2026** at **Titagarh, Kolkata (WB)**.
- **Constructed by:** It was constructed by **M/s Titagarh Rail Systems Ltd (TRSL), Kolkata**.
 - It is **designed and built in accordance with the Naval Rules and Regulations of the Indian Register of Shipping (IRS)**.
 - It has also undergone **extensive model testing and hydrodynamic analysis at NSTL, Visakhapatnam**, ensuring operational reliability and safety.
- **Features:**
 - It features a **30-m catamaran hull design** with a **displacement of around 380 tons**.
 - This provides craft with **enhanced stability, larger working deck space, and improved sea-keeping capabilities** for coastal and harbour diving operations.
 - **70% of the main and auxiliary equipment** in these crafts comes from indigenous manufacturers.
- **Already Inducted ships:** The **three ships of the five Diving Support Craft (DSC) project** have already been launched, namely:
 - **DSC A22 (Yard 327)** (Third ship)
 - **DSC A 21 (Yard 326)** (Second ship)
 - **DSCA20 (Yard 325)** (First ship)
- **Significance:** Its induction will augment the **Diving Support, Underwater Inspection, Salvage Assistance and Coastal Operational Deployment capabilities** of the Indian Navy.

Apis Mellifera

News: Recently, a new set of protocols and scientific interventions has been developed in honey bee farming in Jammu and Kashmir, which allows beekeepers to rear colonies in sub-zero temperatures.

About Apis Mellifera



Source: Britannica

- The **western honeybee**, also known as the **European honeybee**, is one of **several species in the genus Apis**.
- **Scientific name:** Its scientific name is *Apis mellifera*.
- **Sub-species:** There are currently 26 recognized subspecies of *Apis mellifera*.
- **Habitat:** They prefer habitats that have an **abundant supply of suitable flowering plants**.
 - They can **survive in grasslands, deserts, and wetlands** if there is sufficient water, food, and shelter.
 - They need **cavities (e.g. in hollow trees)** to nest in.
- **Distribution:**
 - They are **originally native to Europe, western Asia, and Africa**.
 - However, they are now **widely distributed across East Asia, Australia, and both North and South America, and are found on all continents except Antarctica**.
- **Characteristics**
 - **Appearance:** They are generally **red/brown in colour with black bands and orange-yellow rings on the abdomen**.
 - They have **hair** on the **thorax** and **less hair** on the **abdomen**.
 - They have **two pairs of wings and a slender waist**.
 - They also **have a pollen basket on their hind legs**.
 - **There are two castes of females:** **Sterile workers** are smaller (adults 10-15 mm long), **fertile queens are larger (18-20 mm)**.
 - **Males, called drones**, are 15-17 mm long at maturity.

- **Both castes of females have a stinger** that is formed from modified ovipositor structures.
- **Males have much larger eyes than females**, probably to help locate flying queens during mating flights.
- **Workers and queens possess stingers spiked with venom coming from abdominal glands.**
- **Diet:** They feed on pollen and nectar collected from blooming flowers.
 - They **also eat honey** (stored, concentrated nectar) **and secretions** produced by other members of their colony.
- **Behaviour:**
 - **Foraging:** It **only occurs during daylight**, but bees are active in the hive continuously.
 - **Communication:** Their communication is **based on chemical signals**, and most of their communication and perception behaviours are centred around scent and taste.
 - They are **partially endothermic**.
 - They can **warm their bodies and the temperature in their hive** by working their flight muscles.
 - They are **eusocial**, creating colonies **with a single fertile female (Queen)**, many normally **non-reproductive females (Workers)**, and a small proportion of **fertile males (Drones)**. Individual colonies can house tens of thousands of bees.
- **Lifecycle:** They are **holometabolous insects**, and have **four stages** in the life cycle – **egg, larva, pupa, and adult**.
- **Ecosystem role:** They play a key ecological role as **primary pollinators, supporting plant reproduction and maintaining biodiversity**.
- **Economic Importance:** They were one of the **first domesticated insects**. They are the primary species maintained by beekeepers for both their **honey production and pollination activities**.
- **Threat:** They are threatened by **pests and diseases**, especially the **Varroa mite** and **colony collapse disorder**.

India-Africa Forum Summit (IAFS) 2026

News: India will host the Fourth India-Africa Forum Summit in May-end 2026, after a gap of more than a decade.

About India-Africa Forum Summit (IAFS) 2026



Source – ORF

- It is an official institutional platform for African-Indian relations and a high-level consultative mechanism between the Government of India and the member states of the African Union.
- Established: The IAFS was established in 2008.
- Summit History:
 - 1st Summit (2008, New Delhi): It was the inaugural meeting with 14 African countries and focused on rising oil and food prices.
 - 2nd Summit (2011, Addis Ababa): It expanded to 15 African nations and focused on infrastructure development.
 - 3rd Summit (2015, New Delhi): It saw participation from all 54 African nations and marked a major diplomatic outreach.
- Purpose: It aims to widen and deepen mutual cooperation, support Africa in health, education, and human resource development, and promote investment and industrial partnerships.
- Key Functions:
 - Development Assistance: It supports Africa's development through concessional Lines of Credit, capacity-building programmes, infrastructure projects, and scholarships for African students.

- **Economic Cooperation:** It promotes trade and investment across sectors like infrastructure, agriculture, healthcare, and telecommunications, leading to economic growth and job creation.
- **Human Resource Development:** It strengthens education and skills through initiatives like telemedicine, e-learning, and scholarships, helping build long-term capacity.
- **South-South Cooperation:** It promotes solidarity among developing countries and supports a collective voice for equitable global governance and institutional reforms.

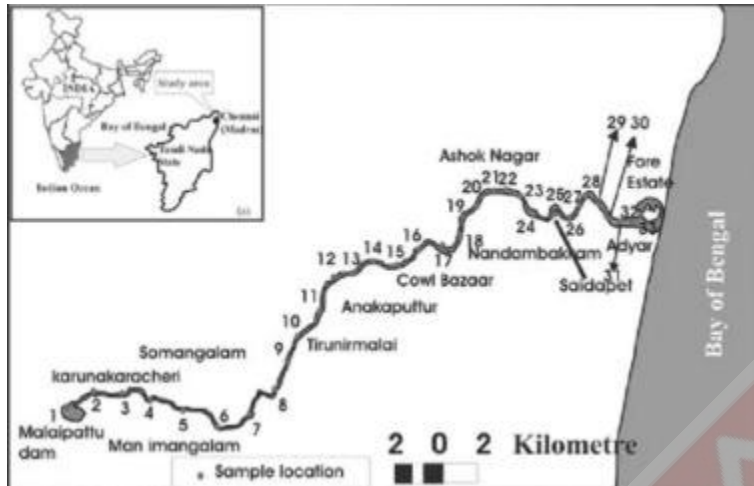
About India-Africa Forum Summit (IAFS) 2026

- **It is the fourth summit to strengthen India-Africa cooperation across multiple sectors.**
- **Location:** It will be held in New Delhi, India.
- **Scheduled:** It is scheduled for May-end 2026.
- **Key Aspects:**
 - **Strategic Agenda:** It will focus on development initiatives, education, capacity building, diplomatic expansion, and defense cooperation.
 - **Diplomatic Expansion:** It will review India's outreach, including 16 new missions since 2018 and presence in 45 countries.
 - **Global Context:** It is significant due to global supply chain disruptions, where Africa remains relatively stable for critical supplies.
 - **Implementation Focus:** It highlights the need to improve India's implementation rate, which is currently around 40% of commitments.

Adyar River

News: A report by the Chennai Rivers Restoration Trust submitted to the National Green Tribunal stressed the need for Adyar River restoration.

About Adyar River



Source – ResearchGate

- Adyar River is one of the three rivers of Chennai, along with the Cooum and Kosasthalaiyar.
- Course: The river originates near Chembarambakkam Lake in Kanchipuram district and flows through Chennai before meeting the sea.
- Length: The river has a total length of 42.5 km.
- Drains into: It drains into the Bay of Bengal at the Adyar Estuary.
- Adyar Creek: The river forms a backwater called Adyar Creek near its mouth due to sandbar formation.
 - This natural channel carries tidal water back into the sea.
- Ecological Issues: The river is affected by pollution from multiple discharge points, leading to poor water quality and very low dissolved oxygen levels, which harm aquatic life.

Myiophanes kempi

News: Recently, researchers rediscovered *Myiophanes kempi* in limestone caves of the Andaman Islands after almost 100 years gap.

About *Myiophanes kempi*



Source – Mongabay

- It is a rare, thread-legged assassin bug that recently rediscovered in limestone caves in the Andaman Islands, marking its presence after nearly a century.
- **Original Discovery (1924):** It was first described by British entomologist William Edward China in 1924 from Siju Cave in Meghalaya.
- **Classification:** It belongs to the subfamily Reduviidae, commonly known as assassin bugs.
- **Habitat:** It inhabits subterranean cave ecosystems and completes its entire lifecycle in complete darkness.
- **Distribution Shift:** The rediscovery extends its known range from Siju Cave in Meghalaya to the Andaman Islands, showing a major geographical shift.
- **Characteristics:**
 - **Morphology:** It has a slender body with long legs adapted to cave life.
 - **Diet:** It is a specialized predator of cave ecosystems that catches small arthropods using its long raptorial forelegs, and it depends on such prey to survive in complete darkness.

About Siju Cave

- **Location:** It is located in the Garo Hills of Meghalaya near the Simsang River.
- **Known as:** It is also known as Dobakkol or Bat Cave, one of India's longest limestone caves stretching over 4.7 km.

World Summit on the Information Society (WSIS) Prizes 2026

News: Samriddh Gram: Integrated Phyigital Service Delivery Model Enabled by BharatNet has been selected as a nominee for the prestigious WSIS Prizes 2026.

About World Summit on the Information Society (WSIS) Prizes 2026



Source: ITU

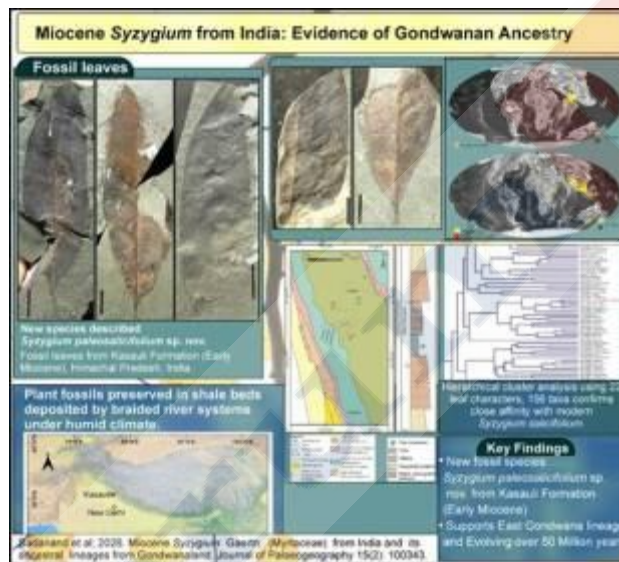
- The **World Summit on the Information Society (WSIS) Forum** is a **globally recognized multi-stakeholder platform** focused on advancing digital development and fostering inclusive information societies.
- It brings **together key stakeholders**, including governments, industry, academia, civil society, and international organisations, **to collaborate on critical digital issues**.
- **WSIS Prize:** It celebrates innovative ICT-driven projects that **contribute to sustainable development** worldwide.
- **About WSIS Forum 2026:**
 - The WSIS Forum 2026 is **scheduled to take place from 6–10 July 2026 in Geneva**.
 - **Organized by:** The event is co-organised by the International Telecommunication Union (ITU) in collaboration with UNESCO, the United Nations Development Programme (UNDP), and the United Nations Conference on Trade and Development (UNCTAD).
 - **Participation:** It will have participation of **more than 50 United Nations entities**.
 - **Features:**
 - It features **discussions on emerging technologies, digital inclusion, cybersecurity, and global digital cooperation**.
 - It serves as a **platform for showcasing innovative solutions** that support sustainable development objectives and for developing roadmaps that guide global cooperation on digital policy and inclusion.

- India's recognition: [Samridhh Gram: Integrated Phygital Service Delivery Model](#) has been selected as a nominee for the **WSIS (World Summit on the Information Society) Prizes 2026** under the **Action Line AL C6: Enabling Environment** category.

India Emerges as Cradle of Jamun Evolution

News: India has emerged as the cradle of Jamun evolution, with evidence showing that the genus *Syzygium* originated around 80 million years ago and diversified early in the Indian region.

About India Emerges as Cradle of Jamun Evolution



Source: PIB

- Jamun is an important indigenous minor fruit of commercial value.
- It is also known as black plum, Indian black cherry, Ram jamun etc. in different parts of India.
- Family: It belongs to the family Myrtaceae.
- Scientific name: Its scientific name is *Syzygium*.
- Origin of Jamun: New research showed that the genus *Syzygium* has an East Gondwanan origin dating back around 80 million years.
 - Earlier, scientists believed that Jamun originated in Australia or Southeast Asia.
 - Researchers concluded that Jamun existed in India since the early Eocene, and from here, it is believed to have dispersed to Southeast Asia and Australia.
- Distribution: It is native to the Indian subcontinent.

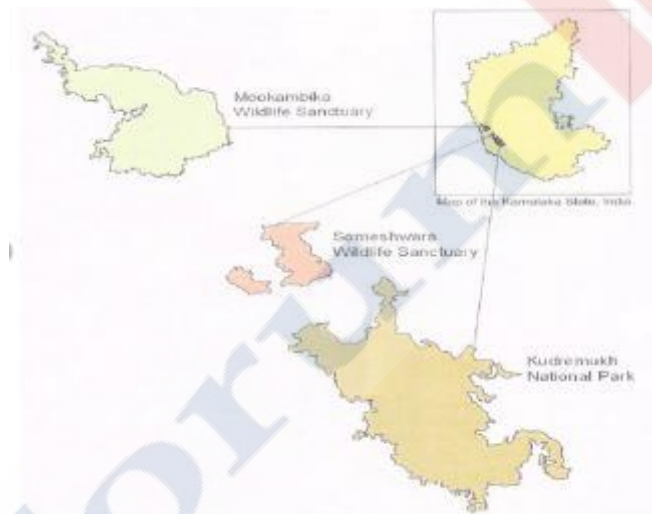
- It is found throughout India, including the Himalayan hills.
- It is widely distributed in Sri Lanka, Malaysia, Thailand, Philippines and Australia.
- **Geographical Conditions required for its growth:**
 - **Climate:** It grows well in tropical and subtropical climates. It is hardy and can tolerate drought, heavy rainfall, and even temporary flooding.
 - **Rainfall:** It can be successfully grown in semi-arid regions with an annual rainfall of about 350–500 mm.
 - **Altitude:** It can grow up to an altitude of 1300 -1600 meters.
 - **Weather Requirement:** Dry weather is required during flowering and fruiting, while early rains help improve fruit size, colour, and taste.
 - **Soil:** It grows best in deep, well-drained loamy soils with good moisture retention. It can tolerate saline, sodic, degraded, and alkaline soils (up to pH 10.5).
- **It is a nutritious fruit with a variety of uses, and every part of the tree is used.**
 - Its fruit has a sub-acid spicy flavour and is used to prepare squashes, juices, jam, jelly, pickles and wine, etc.
- **Its timber is used in buildings, agricultural implements and for other woodwork as it resists the action of water.**
- **Medical uses:**
 - It contains a high amount of acidity, tannins and anthocyanins.
 - It is known for its anti-diabetic properties.
 - Its fruit syrup is useful for curing diarrhoea.
 - The vinegar prepared from the juice extracted from slightly unripe jamun is stomachic, carminative and diuretic. It also has cooling and digestive properties.
- **Production in India: India is one of the highest producers of jamuns.**
 - Maharashtra is at the top of the list of jamun-producing states in the country
 - **Note:** Bahadoli Jamun, from Palghar, Maharashtra, officially received the Geographical Indication (GI) tag in 2024.
 - Other major producing states are Uttar Pradesh, Tamil Nadu, Gujarat and Assam.

- **Status of cultivation:** It is estimated that almost 5000 acres of jamun plantations have been done in the last decade.
- **The cultivation is getting more popular in drier regions of southern and western Indian states like Karnataka, Andhra Pradesh, Maharashtra, Gujarat and Madhya Pradesh.**

Mookambika Wildlife Sanctuary

News : Sewage from religious tourism in Kollur is threatening Mookambika Wildlife Sanctuary as the Souparnika river carries sludge into the core area in summer.

About Mookambika Wildlife Sanctuary



Source – ResearchGate

- **Location:** It is located in the Udupi district of Karnataka in the Western Ghats region.
- **Naming:** It is named after the presiding deity of the Kollur Mookambika Temple situated within its boundaries.
- **Key Features:**
 - **Kodachadri Hills:** The sanctuary includes Kodachadri Peak, which is located at its core and is known as a “botanical paradise.”
 - **Major rivers:** The sanctuary has two important rivers, namely River Chakra and River Souparnika.

- **Waterfall:** It has notable waterfalls such as Koosalli waterfalls and Belkal Theertha waterfalls.
- **Troika Significance:** It forms part of a troika of Someshwara Wildlife Sanctuary – Mookambika Wildlife Sanctuary and Kudremukh National Park, which supports rare and endangered species of the Western Ghats.
- **Ecological Connectivity:** It acts as a vital connecting link between Someshwara Wildlife Sanctuary (south) and Sharavathi Wildlife Sanctuary (north).
- **Vegetation:** The vegetation consists of evergreen, semi-evergreen, and moist deciduous forests covering steep slopes.
- **Flora:** Important species include Dipterocarpus Indicus, Calophyllum Tomentosum, Hopea Parviflora, and a rare climber Coscinium Fenestratum, along with small teak plantations.
- **Fauna:** It supports diverse wildlife such as lion-tailed macaque, slender loris, tiger, leopard, sloth bear, sambar deer, chital, wild pig, barking deer, gaur, porcupine, and otter, and it has also historically recorded species like Malabar civet, wild dog, king cobra, and giant squirrel.

DIVEX 2026

News: INS Nireekshak arrived in Colombo on April 21, 2026 to participate in the fourth edition of India – Sri Lanka DIVEX 2026.

About DIVEX 2026



Source – TH

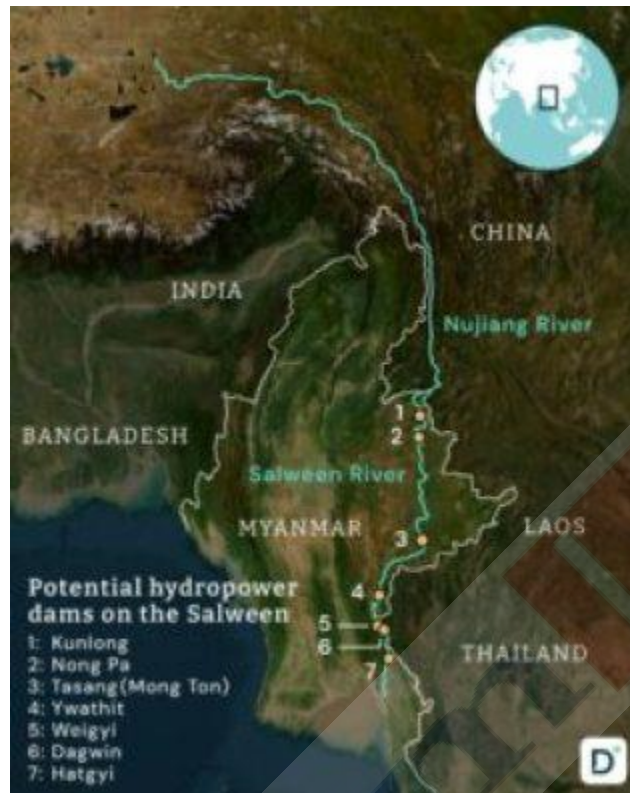
- **DIVEX (Diving Exercise) 2026** is a specialized bilateral naval exercise focused on diving and underwater operations between India and Sri Lanka.
- **Host:** The exercise is hosted by Sri Lanka in Colombo.

- **Participants:** The exercise includes participation of the Indian Navy and the Sri Lankan Navy.
- **Duration:** The exercise is scheduled from April 21 to April 27, 2026.
- **Aim:** The exercise aims to enhance the ability of both navies to operate together during underwater salvage, search, and rescue missions, and to strengthen coordination in the Indian Ocean Region under the MAHASAGAR (Mutual and Holistic Advancement for Security and Growth Across Regions) vision.
- **Key Features:**
 - **Humanitarian Outreach (BHISM Cubes):** India is providing two BHISM (Bharat Health Initiative for Sahyog Hita & Maitri) cubes capable of handling up to 200 emergency cases, equipped with essential medicines and surgical tools for rapid response.
 - **Security Assistance:** The Indian Navy is handing over 50,000 rounds of 9 mm ammunition to the Sri Lankan Navy to strengthen maritime security cooperation.
 - **Camaraderie and Dialogue:** The programme includes social interactions, sports fixtures, joint yoga sessions, and high-level discussions to build friendship, goodwill, and cooperation.
- **Significance:** The exercise highlights the deep-rooted maritime partnership and reinforces commitment to stability, cooperation, and collective growth in the Indian Ocean Region.

Salween River

News: Recent reports highlight arsenic contamination in the Salween River, raising concern over threats to one of Asia's longest free-flowing rivers.

About Salween River



Source – Dialogue Earth

- The Salween River is a major transboundary river in Asia and is the longest undammed river in mainland Southeast Asia.
- Alternative Names: It is known as the Nu River in China and the Thanlwin River in Myanmar.
- Origin: The river originates about 4,000 m above sea level in the Tanggula Mountains in the central Tibetan Plateau.
- Course: The river flows through western Yunnan in China, passes through Myanmar, forms the border between Myanmar and Thailand for some distance, and then re-enters Myanmar.
 - Three Parallel Rivers Region: The upper course flows parallel to the Mekong and Yangtze rivers, forming the Three Parallel Rivers of Yunnan UNESCO World Heritage Site .
- Transboundary River: It is shared by China, Myanmar, and Thailand, making it an important international river system.
- Destination: It drains into the Gulf of Martaban in the Andaman Sea.
- Length: It is approximately 2,400 km long.

- **Tributaries:** Important tributaries include the Pang, Teng, Pawn, Hka, Hsim, and Moei rivers.
- **Ecological importance:** The river basin supports over 200 fish species, including one-third endemic species, and it is believed to support over 25% of the world's and over 50% of China's animal species, showing its high ecological value.
- **Significance:** The river is important as it supports over 10 million people, rich biodiversity, and many ethnic communities dependent on its resources.

Saint Basaveshwara

News: The Vice President has called upon society to emulate the philosophy of Saint Basaveshwara, who taught us social equality and to serve society.

About Saint Basaveshwara



Source: Deccan Herald

- Saint Basaveshwara was a **12th-century philosopher**, founding saint of the **Lingayat sect**, Kannada **poet** and **social reformer** during the reign of the **Kalachuri-dynasty king Bijjala I** in **Karnataka**.
- He is also known as **Basavanna**.
- **Birth:** He was born in **Karnataka** in **1131 CE**.
- He **studied Veda, grammar and logic** at a young age.
- **Spiritual journey:** At the age of 8, he removed his sacred thread, saying that he had **Linga deeksha** at his birth, and so there was no need for Upanayana.
 - Then **he went to Kudalasangama**, where he studied **under Jatavedamuni**.
 - He **rose to serve as a minister in King Bijjala's Kalachuri court**, giving his reforms institutional backing.
- **Philosophy:**

- He is known for **introducing the Ishtalinga** (a necklace with a pendant that contains a small Shiva Linga).
 - It **acted as a personal emblem of Lord Shiva** that completely rejected the need for priestly intermediaries and ritual hierarchies.
- He gave **socio-economic principles of Kayaka**, which means **Divine work** and **Dasoha**, which means **equal distribution**.
- **Equality in all forms:** He rejected **gender or social discrimination, superstitions and rituals**. He advocated that every human being was equal, irrespective of caste. According to him, **all forms of manual labour were equally important**.
- His **philosophy** was based **on the principles of Arivu (true knowledge), ethos (right conduct), and Anubhava (divine experience)**.
 - This brought a social, religious, and economic revolution in the 12th century.
- **Veerashaiva movement:** He **developed and inspired a new devotional movement named Virashaivas**, or “ardent, heroic worshippers of Shiva”. This movement shared its roots in the ongoing Tamil Bhakti movement.
- **Respect towards women:** In **seven vachanas**, Basavanna explains how women should be regarded.
 - Through these vachanas, he sets moral guidelines for his followers.
- **Anubhava Mantapa:** Basavanna founded the **Anubhava Mantapa, the first spiritual parliament of India** to promote a **caste-free society with equal opportunities for all**.
 - It served as a **forum for mystics and thinkers to discuss universal human values and ethics**.
- **Contributions:**
 - His teachings were **universal and timeless**, going beyond social boundaries and addressing humanity as a whole.
 - He **promoted a new way of life centred on personal spiritual experience**, where distinctions based on caste, gender, and social status held no importance.
- **Poetry:** Basavanna spread social awareness through **poetry (Vachanas)** such as **Shat-sthala-vachana (discourses on the six phases of salvation), Kala-jnana-vachana (forecasts of the future), Mantra-gopya, Ghatna Chakra-vachana, and Raja-yoga-vachana**.

- He composed **religious and ethical literature** in the **local languages**, such as **Kannada**.
- **Literary Works**
 - The earliest known account of **Basaveshwara's life** is found in *Basavaraj Devara Ragale*, composed by the **Kannada poet Harihara**.
 - A more detailed narration of his life and teachings appears in the **13th-century Telugu text Basava Purana**, written by **Palkuriki Somanatha**.
- **Legacy:** Every year, **Basava Jayanthi** is observed to commemorate the birth of **Saint Basavanna**.
 - He was the **first Kannadiga to be honored** with a commemorative coin for his contributions to social reform.
 - Grand statues such as the **108-foot monument at Basavakalyan** and the **111-foot Vishwa Guru Basaveshwara statue at Gadag** stand as lasting symbols of his ideals and vision.
 - In 2015, the **Prime Minister of India** inaugurated another statue of Basaveshwara on the banks of the River Thames at Lambeth in London.
 - The *Bharat Mandapam*, inaugurated in 2023, is inspired by Basaveshwara's concept of the **Anubhava Mantapa**, reflecting his emphasis on dialogue, equality, and collective wisdom.

National Nutrition Fortnight Awareness Campaign

News: Ahilyanagar district of Maharashtra has secured the first rank in the country for conducting awareness activities under the eighth National Nutrition Fortnight campaign.

About the National Nutrition Fortnight Awareness Campaign

- It is a **two-week intensive outreach campaign** conducted in April to **strengthen community mobilisation** and reinforce **key nutrition behaviours** under **POSHAN Abhiyaan**.
- **National Nutrition Fortnight Awareness Campaign** is often referred to as the **Poshan Pakhwada**.
- It is a **nationwide campaign** focused on **strengthening nutrition and early childhood development** across the country.
- **Implementing agency:** It is implemented by the **Women and Child Development Department**.
- This was the **8th edition of Poshan Pakhwada**, held from **9th April to 23rd April 2026**.

- **Aim:** It aimed to reinforce the government's commitment to improving nutritional outcomes and promoting holistic development among children, particularly in their formative years.
- **Theme:** The theme for this edition was "Maximising Brain Development in the First Six Years of Life".
- It highlights the critical importance of early childhood, particularly the first 1,000 days, in shaping cognitive growth, physical development, and overall well-being.
- **Key Focus Areas:** The campaign focused on multiple aspects of early childhood care and nutrition, including:
 - **Maternal and child nutrition**, with emphasis on breastfeeding and complementary feeding
 - **Early stimulation for children** aged 0–3 years through responsive caregiving
 - **Play-based education for children** aged 3–6 years to support school readiness
 - **Reducing screen time among young children** through community awareness
 - **Strengthening Anganwadi centres** with community participation and improved infrastructure
- **Activities conducted:** During the fortnight, activities were conducted across states and Union Territories through Anganwadi centres, involving mothers, caregivers, and local communities.
 - These include Poshan Panchayats, awareness drives, early learning activities, and campaigns promoting healthy lifestyles.
- **Performance status:**
 - **Ahilyanagar** district of Maharashtra has secured the first rank in the country. The district has recorded a total of 324,075 activities so far.
 - **Pune** district has achieved the second position nationwide.

SAARC Currency Swap Framework

News: India approved Rs. 30 billion withdrawal for Maldives under SAARC Currency Swap Framework, reaffirming financial support and regional cooperation commitment.

About SAARC Currency Swap Framework



Source – PIB

- SAARC currency swap framework provides SAARC countries a line of funding for short-term foreign exchange requirements.
- **Currency Swap Framework:** It is a contract between countries to exchange currencies with predetermined terms for liquidity support. It helps meet short-term foreign exchange needs and avoid balance of payments pressure without market risks.
- **Purpose:** It aims to strengthen regional financial cooperation, promote integration, and support economic stability during external stress while enhancing India's ties with neighbouring countries.
- **Structure:** It operates through bilateral agreements between the RBI and SAARC member central banks.
- **Swap Window:** The framework includes an INR Swap Window of ₹25,000 crore along with an existing USD/Euro Swap Window of \$2 billion, operated through central banks.
- **Key Aspects:**
 - **Liquidity Support:** It allows access to foreign exchange during stress without relying on commercial borrowings.
 - **Pre-determined Terms:** It carries no exchange rate or market risks as terms are fixed in advance.

- **Regional Integration:** It promotes inter-dependence and strengthens cooperation among SAARC countries.
- **INR Promotion:** It encourages drawals in Indian Rupee to support its internationalisation.
- **Significance:** It ensures financial stability and strengthens India's economic and strategic ties with South Asian neighbours.

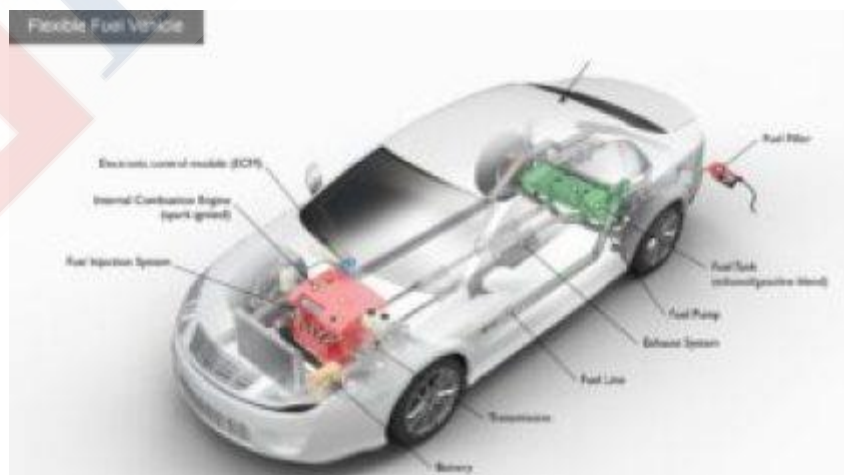
About SAARC

- **The South Asian Association for Regional Cooperation (SAARC)** is a regional intergovernmental organisation of eight nations in South Asia.
- **Establishment:** It was established on 8 December 1985 in Dhaka to promote regional cooperation and economic growth.
- **Members:** It includes eight countries, namely Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka.
- **Secretariat:** It is located in Kathmandu, Nepal.
- **Principles:** It follows unanimity in decisions and excludes bilateral and contentious issues from deliberations.

Flex Fuel Vehicles (FFVs)

News: Government is planning E100 fuel blending and promoting flex-fuel vehicles due to the energy crisis caused by the West Asia war.

About Flex Fuel Vehicles (FFVs)



Source – US Deptt of Energy

- **Flex-fuel vehicles (FFVs)** are vehicles with internal combustion engines that can run on petrol, bio-ethanol, or their mixtures.
- **Key aspects:**
 - **Fuel flexibility:** FFVs can operate on petrol, ethanol, or blends including high ethanol levels like E100, allowing multiple fuel options across regions.
 - **Engine mechanism and modification:** FFVs use a fuel mix sensor and engine control module that detect fuel composition and adjust engine parameters, while fuel systems and injectors are modified to handle ethanol properties.
 - **Cost and efficiency:** Ethanol costs around Rs 60–62 per litre, while petrol costs above Rs 100, but ethanol delivers lower energy, leading to higher fuel consumption.
 - **Economic and agricultural link:** Ethanol is produced from surplus crops like corn, sugar, and wheat, which helps farmers earn better income, while increased ethanol use reduces crude oil import dependence.
- **Significance:** FFVs help reduce fossil fuel use, lower emissions, and decrease India's dependence on imported crude oil.

Tharu Community

News: The Allahabad High Court quashed a 2021 order denying forest rights claims of the Tharu community under the Forest Rights Act, 2006.

About Tharu Community



Source – MoTA

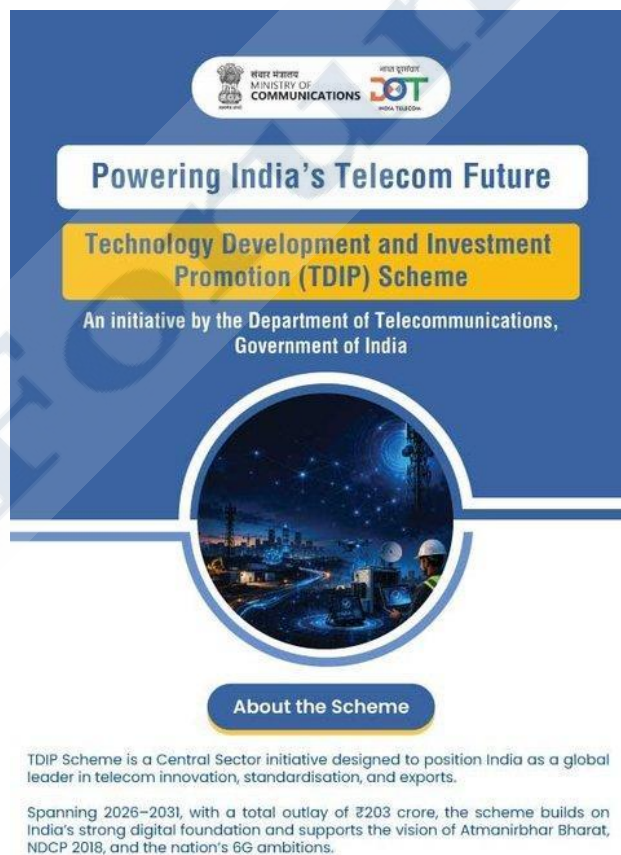
- **The Tharu community is an indigenous ethnic group living in the Terai region of India and Nepal.**
- **Distribution:** The Tharu people live in southern Nepal and northern India, mainly in Uttarakhand, Uttar Pradesh, and Bihar in the Indian Terai.
- **Naming:** The term 'Tharu' is thought to be derived from sthavir, meaning follower of Theravada Buddhism.
- **Status:** The Tharu community was notified as a Scheduled Tribe in India and is officially recognized in Nepal.
- **Socio-Cultural Features:**
 - **Livelihood and Economy:** Most Tharu people practice agriculture, cattle rearing, fishing, hunting, and collection of forest products.
 - **Social Structure:** They follow a patrilineal system, but women enjoy greater property rights, and joint family living is common.
 - **Settlement Pattern:** They live in compact villages in forest clearings and follow a joint family system in long houses called "Badaghar."

- **Local Governance:** The panchayat system is strong, and the head is known as “Pradhan,” showing organised local decision-making.
- **Art Forms:** Ashtimki and Mokha paintings use natural colors and depict religious and cultural themes, while Sikki grass crafts are widely used.
- **Traditional Practices:** Denhari earthen vessels are used for storing grains and also hold cultural and religious importance.
- **Religion and Beliefs:** The Tharu follow a blend of animism, Hinduism, and nature worship, reflecting close ties with the natural environment.

Technology Development and Investment Promotion (TDIP) Scheme

News: Revised guidelines for the Technology Development and Investment Promotion (TDIP) Scheme have been released to strengthen India's global telecom footprint.

About Technology Development and Investment Promotion (TDIP) Scheme



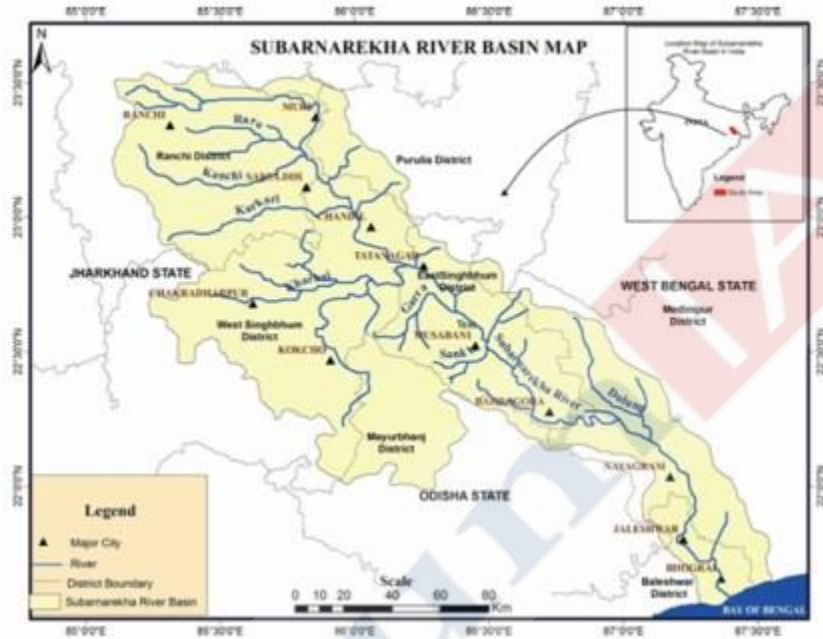
Source: DoT India

- The Technology Development and Investment Promotion (TDIP) Scheme is an initiative to **position India as a global leader in telecom innovation**, standardisation and exports.
- **Nodal Ministry: Department of Telecommunications (DoT), Ministry of Communications**
- **Implementation agencies:** It will be implemented through designated agencies, including the **Telecommunications Standards Development Society, India (TSDSI), Telecom Centres of Excellence, India (TCoE) and Telecommunications Consultants India Limited (TCIL).**
 - These agencies will facilitate **coordination, capacity building and effective utilisation of resources.**
- **Scheme type: It is a Central Sector Scheme.**
- **Aim:** It aims at **strengthening India's participation in global telecom standardization and accelerating the development of indigenous telecom technologies.**
 - It also aims to **shift India from being a technology participant to a global standard-setter, and to drive the creation of intellectual property**, enhance export potential, and improve the competitiveness of domestic telecom products and solutions.
- **Outlay:** It has a total outlay of **₹203 crore for the period 2026-31.**
- **Features:**
 - It has been designed as a **comprehensive support framework to enable Indian entities to actively contribute to global standards, promote innovation, and enhance India's competitiveness** in next-generation telecommunications technologies, including **5G Advanced and 6G.**
 - It seeks to **enhance India's representation and influence in leading international telecom standardization bodies** such as the International Telecommunication Union (ITU), 3GPP and oneM2M.
- **Scope expanded:** The revised guidelines expanded the scope of the scheme to include **startups, MSMEs, academia, research institutions, telecom service providers and industry players** to deepen ecosystem participation and foster collaborative innovation across the telecom value chain.
 - It also supports **pilot projects, proof-of-concept initiatives and technology demonstrations** to facilitate transition from research to real-world deployment.

Subarnarekha River

News: The Indian Army defused a high-risk, World War II-era bomb recovered from the Subarnarekha River near Baharagora in East Singhbhum.

About Subarnarekha River



Source: Jharkhand gov

- The Subarnarekha River **originates in Jharkhand and flows through Jharkhand, West Bengal, and Odisha.**
- It is a **rain-fed river** and is **ranked as the smallest river basin** among the fourteen major river basins of India.
- It is one of the **longest east-flowing inter-state rivers.**
- **Origin and Course:** It originates **near Nagri village in the Ranchi district of Jharkhand** at an elevation of 600 m.
 - On the **Ranchi Plateau**, it meanders gently for about 60 km before plunging over a 74-meter-high cliff, forming the picturesque **Hundru Falls.**
 - It flows **for a length of 395 km before outflowing into the Bay of Bengal.**

- It is bounded on the **North-West** by the **Chhotnagpur Plateau**, in the **South-West** by the **Brahmani basin**, in the **South** by the **Burhabalang basin** and in the **South-East** by the **Bay of Bengal**.
- **Total length:** The total length of the river is **about 395 km**.
- **Tributaries:** Its principal tributaries are **Kanchi, Kharkai and Karkari**.
- The **Subernarekha and the Burhabalang** form the major river systems in the basin.
 - The basin is **generally influenced by the South-West monsoon**, which onsets in the month of June and extends up to October.
- **Total catchment area:** The total catchment area of the basin is **29196 sq.km**.
- **Rich in mineral resources:** The mineral resources of the Subarnarekha basin are mainly **comprises of ores** of Copper, Iron, Uranium, Gold, etc.
 - Its basin area is also **rich in industrial minerals**, including **kyanite, asbestos, barytes, apatite, china clay, talc, limestone, dolomite, and building stones**
 - There are **major industrial areas** located along the bank of the Subarnarekha, such as **Ranchi-Hatia industrial area, the iron and steel plant and the industrial complex at Jamshedpur, etc.**
- **Dams:** Major dams and reservoirs situated on the river include **Getalsud Reservoir, Chandil Dam, Galudih Barrage, Icha Dam, and Kharkai Barrage**.

Strait of Malacca

News: Indonesia has said it does not plan to charge tolls on ships passing through the Strait of Malacca.

About Strait of Malacca



Source: Britannica

- **Location:** The Strait of Malacca is a **long and narrow stretch of water** located **between the Malay Peninsula, West Malaysia, and the Indonesian island of Sumatra.**
- **Named after:** Its name was derived from the **Malacca Sultanate**, who governed the archipelago from 1400 until 1511.
- **Size:** It has an area of **about 65,000 sq. km.**
- **Depth and Width:** It has a **width of about 890 kilometres** and a **depth of 25 meters.**
- **Geography of the Strait of Malacca**
 - It connects the **Andaman Sea (Indian Ocean) in the west** to the **South China Sea (Pacific Ocean) in the east.**
 - At the **Philips Channel(near Singapore)**, it becomes **very narrow**, measuring only about **2.8 km wide.**
 - It is **bordered to the north by Sumatra and the Malay Peninsula.**
 - Its **southern boundary** is at **Lem Voalan (Thailand).**
 - The **northwest boundary** of the strait borders the **Ujong Baka (Indonesia).**
 - The **southeasternmost** part of the strait is defined by **Tanjung Piai (Malaysia).**
- **Singapore, Malaysia, and Indonesia control the joint patrolling of the Malacca Strait.**

- **Economic and strategic significance:** It is a major shipping connection between the Pacific Ocean and the Indian Ocean.
 - It provides the shortest route between East Asia, West Asia and Europe.
 - Around one-fifth (almost 20%) of global maritime trade moves through this corridor.
- **Note:** The term **Malaccamax** is used to define the maximum volume of a vessel that is able to pass through the Strait of Malacca.
 - A ship whose volume exceeds the Malaccamax must use wider and deeper straits such as Lombok Strait, Makassar Strait, and the Mindoro Strait.

Payment Banks

News: The Reserve Bank of India (RBI) recently revoked the banking licence of Paytm Payments Bank Limited, bringing its operations as a bank to an end from April 24.

About Payment Banks



Source: AIR

- **Formation:** Payment Banks in India were established in 2014 based on the recommendations of the Nachiket Mor Committee.
 - It was set up to operate on a smaller scale with minimal credit risk.
- **Objective:** The main objective is to advance financial inclusion by offering banking and financial services to the unbanked and under-banked areas.

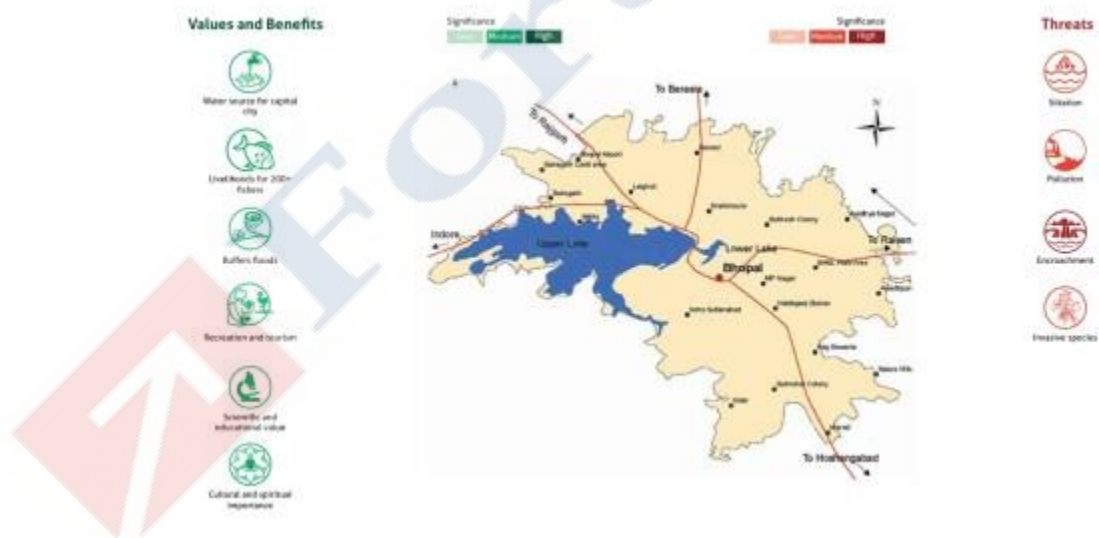
- **Legal Provisions:** The legal provisions governing the payment banking operations in India are mentioned below:
 - These banks have to register as a **Public Limited Company under the Companies Act 2013** and obtain a **licence as per the Banking Regulation Act 1949**.
 - **Regulated by:** They are also regulated by the **RBI Act 1934, Foreign Exchange Management Act 1999 and Payment and Settlement Systems Act, 2007**.
 - The **minimum capital requirement** is **100 crores**.
- **Features:**
 - **Type of Accounts:** The payment bank **can open only Savings Bank Accounts and Current Accounts**.
 - The **maximum balance of deposit** they can have in their account is only **Rs. 2,00,000** (Earlier it was only **Rs. 1,00,000**).
 - However, these **cannot accept deposits from Non-resident Indians**.
 - **Lack of lending power:** These are **not allowed to lend** money or provide lending services.
 - They are allowed to issue ATM or Debit cards, but are not allowed to issue credit cards.
 - **CRR Requirement:** Payment banks have to deposit the **Cash Reserve Ratio (CRR)** with the RBI, just **like other** commercial banks.
- **Payment Banks operating in India:** Now, **only 5 such banks** are operating in the country- **Airtel Payments Bank Limited, [India Post Payments Bank Limited](#), Fino Payments Bank Limited, NSDL Payments Bank Limited and Jio Payments Bank Limited**.
- **Reasons behind the cancellation of the license of PayTm payment bank:**
 - The Reserve Bank of India (RBI) has **cancelled the banking licence issued to Paytm Payments Bank Limited under Section 22(4) of the Banking Regulation Act, 1949 ('BR Act')**, effective from the close of business on April 24, 2026.
 - Paytm Payments Bank is **now prohibited from conducting the business of 'banking' as defined in Section 5(b) or any additional business** specified under **Section 6 of the BR Act, 1949** with immediate effect.

- **Section 22 (3) (b) of the BR Act:** In its order, the **RBI stated that the bank's operations were conducted in a manner detrimental** to both its own interests and those of its depositors, resulting in **non-compliance with Section 22 (3) (b) of the BR Act.**
- **Section 22 (3) (c) of the BR Act:** The **overall conduct of the bank's management was found to be against the interests of depositors and the public**, leading to a violation of **Section 22 (3) (c) of the BR Act.**
- **Section 22 (3) (e) of the BR Act:** As per Section 22 (3) (e) of the BR Act, permitting the bank to continue its operations would **not serve any meaningful purpose or public interest.**
- **Section 22 (3) (g) of the BR Act:** The bank failed to **satisfy the conditions specified under its Payments Bank licence, thereby breaching Section 22 (3) (g) of the BR Act.**

Lower Lake and Bhoj Wetlands

News: After addressing encroachment and environmental issues at Bhopal's Upper Lake, the NGT has now turned its focus to the Lower Lake, part of the Bhoj Wetland.

About Lower Lake



Source: Indian Wetlands

- Lower Lake is a **man-made lake** located in **Bhopal, Madhya Pradesh.**

- It is also known as **Chhota Talaab**.
- **Constructed by:** It was constructed by **Chote Khan**, a minister of Nawab Hayat Mohammad Khan, in 1794.
- **Source:** The Lower Lake **does not have any fresh water source and receives seepage water from the Upper Lake** and drainage from 28 sewage-filled nullahs.
 - It flows **into the Patra rivulet, which further merges with the Halali River**—a minor tributary of the Betwa River.
- **Chota Talaab, together with the nearby Upper Lake** (also known as Bada Talaab or Bhojtal), **forms the Bhoj Wetland**, which has been **designated as a Ramsar site**.
 - The **Lower Lake is located to the east of the Upper Lake**.
 - The **two lakes are built in a terraced manner**. The lowest level of the Upper Lake is just below the highest level of the Lower Lake.
- **Total area:** The Lower Lake has an area (water spread) of **1.29 km²**.
- **Catchment area:** It has a catchment area of **9.6 km²**.

About Bhoj Wetland

Source: Ministry of Environment, Forest & Climate Change

- **Location:** Bhoj Wetland is located in **Bhopal, Madhya Pradesh**.
- It comprises **two contiguous man-made reservoirs**, namely **the Upper Lake (Bhojtal or Bada Talaab) and the Lower Lake (Chota Talaab)**.
 - **The upper lake is the oldest among the large man-made lakes in central India.**
 - **It was created by King Bhoj in the 11th century by constructing an earthen dam across the Kolans River.**
 - **The upper and lower lakes are separated by an overbridge called Pul Pukhta.**
- **Ramsar Sites:** It was designated as a Ramsar site in **November 2002**.
- **Boundaries:** The **Upper Lake is bordered by Van Vihar National Park to the south, human settlements to the east and north, and agricultural fields to the west.**
 - **The Lower Lake is surrounded by human settlements on all sides.**
- **Fauna:** It is rich in aquatic biodiversity, **particularly in macrophytes, phytoplankton, and zooplankton.**
- **Significance:** It provides **drinking water and recreational benefits** to approximately 1.8 million residents of Bhopal.
 - **The Upper Lake provides about 40% of the city's drinking water, about 29 million gallons per day.**
- **Threats**
 - **Unregulated urban development**
 - **Inefficient waste treatment systems**
 - **Weak enforcement of ecological safeguards**

Mehar Baba Competition-3

News: The Indian Air Force launched Mehar Baba Competition-3, with registrations starting from 27 April 2026 for drone-based radar innovation.

About Mehar Baba Competition-3



Source – PIB

- **Launched by:** Mehar Baba Competition-3 (MBC-3) is the third edition of a defence innovation competition launched by the Indian Air Force.
- **Launched In:** Mehar Baba Competition was originally launched in 2018.
- **Theme of MBC-3:** The theme is “Collaborative Drone-Based Surveillance Radars.”
- **Aim:** The aim is to develop a proof of concept for a collaborative swarm of Unmanned Aerial Systems acting as airborne radar to detect, track, and report aerial targets with accurate location sharing.
- **Name after:** The competition is named after Mehar Singh, a pioneering air veteran and Maha Vir Chakra awardee.
- **Eligibility:** Indian industries, start-ups, academic institutions, and research establishments are eligible to participate.
- **Key Aspects of MBC-3:**
 - **Innovation Support:** Meritorious participants will receive development funding from the Indian Air Force, and top three winners will be awarded prizes.
 - **Technological Focus:** The competition focuses on advanced drone and radar technologies using swarm-based Unmanned Aerial Systems in contested environments.

- **Strategic Importance:** It promotes indigenous innovation and supports the 'Atmanirbhar Bharat' initiative by encouraging local technical talent to solve complex defence challenges.

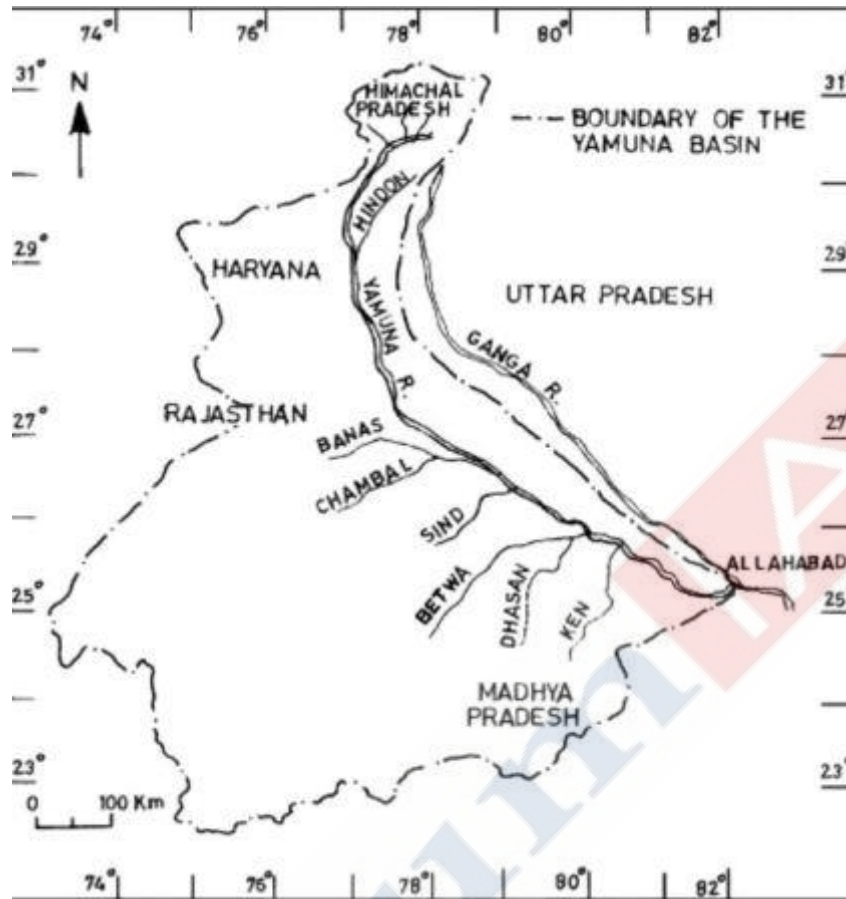
About Air Commodore Mehar Singh

- **MBC is conducted in the honour of the legendary air veteran Air Commodore Mehar Singh, affectionately known as Mehar Baba.**
- **He was born in the district of Lyallapur in 1915 and joined the Royal Air Force College, Cranwell in 1934.**
- **Mehar Baba earned the respect of his fellow airmen with his flying skills.**
- **At the age of 29, he was awarded the Distinguished Service Order (DSO) for effective leadership and personal bravery.**
- **Out of his many achievements, the mission led by him carrying the first contingent of the Indian Army in a Dakota aircraft to Srinagar in 1947 is the most memorable.**
- **He also has the distinction of being the first to land at Leh, the highest airstrip in the world then.**
- **Mehar Baba was the first IAF recipient to be awarded with Maha Vir Chakra.**

Yamuna River

News: The NGT issued notices over alleged pollution in Yamuna at Mathura–Vrindavan, where water quality reportedly fell to “very poor” Category D level.

About Yamuna River



Source – Science Direct

- **Naming:** The name Yamuna is derived from the Sanskrit word “yama” meaning ‘twin’.
- **Origin:** The Yamuna River originates from the Yamunotri Glacier near Bandarpunch peaks in Uttarakhand.
- **It is the second-largest tributary of the Ganga, and it is an integral part of the Ganga Drainage System, which is one of the three major river basins in the Himalayan region.**
- **Length:** The Yamuna travels a total length of 1,376 km.
- **States Covered:** The river flows through Uttarakhand, Himachal Pradesh, Haryana, Delhi, and Uttar Pradesh.
- **Confluence:** The Yamuna merges with the Ganga at Triveni Sangam in Prayagraj, which is an important site of the Kumbh Mela held every 12 years.

- **Tributaries:** It is joined by the Tons, Chambal, the Sind, the Betwa and the Ken on its right bank while the Hindan, the Rind, the Sengar, the Varuna, etc. join it on its left bank.
- **Boundaries:** The river flows along the boundary of Haryana and Uttar Pradesh, showing its role in regional demarcation.
- **Major Cities on Bank:** The major cities located on the banks of the Yamuna River are Yamunotri, Paonta Sahib, Delhi, Noida, Mathura, Agra, Firozabad, Etawah, Kalpi, Hamirpur, and Prayagraj (Allahabad).
- **Major Project:** Major irrigation projects on the Yamuna River include the Western Yamuna Canal (Haryana), Eastern Yamuna Canal (UP), and the Agra Canal.
 - Key infrastructure includes the Hathnikund Barrage, with major storage projects like the Renukaji Dam, Lakhwar Multipurpose Project, and Kishau Dam under development to enhance irrigation and water supply.

About Twister (Tornado)

News: A large tornado touched down in Kay County, Oklahoma, with multiple confirmed tornadoes during an active severe weather outbreak.

About Twister (Tornado)



Source – Difference Between

- A twister, commonly known as a tornado, is a rapidly rotating column of air extending from a thunderstorm to the ground.

- **Formation mechanism:**
 - **Initial condition:** Warm, moist air near the surface rises while cold, dry air above creates strong atmospheric instability.
 - **Rotation development:** Wind shear causes changes in wind speed and direction with height, which creates a horizontal spinning motion in the air.
 - **Vertical formation:** Strong updrafts in a thunderstorm tilt this horizontal rotation into a vertical position and intensify it.
 - **Final stage:** Descending air helps pull the rotating column downward, and when it touches the ground, it becomes a tornado or twister.
- **Types:**
 - **Supercell tornadoes:** These are the most intense and form from rotating thunderstorms with a mesocyclone, causing major destruction.
 - **Landspouts:** These are weaker and short-lived tornadoes that form without a mesocyclone.
 - **Waterspouts:** These form over water bodies and may sometimes move onto land.
 - **Multiple-vortex tornadoes:** These consist of smaller rotating columns within a larger tornado, increasing damage intensity.
- **Key characteristics:**
 - **Structure:** They appear as a funnel-shaped cloud, often visible due to dust and debris.
 - **Intensity:** Wind speeds can exceed 480 km/h, making them highly destructive.
 - **Duration and Size:** Most last less than 10 minutes, and their width can range from a few metres to over 3 km.
 - **Movement and Rotation:** They follow unpredictable paths and rotate counter-clockwise in the Northern Hemisphere and clockwise in the Southern Hemisphere, while flying debris causes major damage.
- **Measurement:** Twisters are measured using the Enhanced Fujita (EF) Scale, which classifies them based on damage and estimated wind speeds.
- **Geographic distribution:**
 - **High frequency:** United States, especially Tornado Alley (Texas, Oklahoma, Kansas, Nebraska).

- Other regions: Bangladesh, Canada, Argentina, and Australia.
- India: Tornadoes are rare in India, they mostly occur in eastern states, including Odisha, West Bengal, Bihar, and Assam.

Atlas Drone Swarm System

News: Recently, the Chinese People's Liberation Army unveiled the new Atlas drone swarm system with mass launch and single-operator control capability.

About Atlas Drone Swarm System



Source – WION

- It is a mobile battlefield platform designed to deploy and coordinate large numbers of drones from a single command point.
- Designed by: The system has been manufactured by China's China Electronic Technology Group Corporation (CETC).
- Purpose: The system is intended for reconnaissance, electronic disruption, communication, deception, and coordinated strikes across a large perimeter using a single operator.
- Key Features:

- **Integrated Unit Structure:** The system consists of three units — a Swarm-2 ground combat vehicle, a command vehicle, and a support vehicle working together.
- **Launch and Control System:** Drones are truck-launched at intervals of less than three seconds, and a single command vehicle can control up to 96 drones simultaneously.
- **Mass Launch and Rapid Deployment:** The system can launch up to 96 drones and deploy them within around 300 seconds for reconnaissance or attack missions.
- **Algorithm-based Swarm Coordination:** The drones operate as a coordinated swarm, where they can adapt formations, identify and reidentify targets, and change routes without continuous human input.
- **Flexible Operational Capability:** The drones can form defensive structures and precision strike patterns based on mission requirements.
- **Multi-role Payloads:** Each drone can carry electro-optical reconnaissance payloads, strike munitions, and communication relay systems for varied battlefield roles.
- **Significance:** The system highlights a shift toward intelligent, swarm-based warfare with high coordination, autonomy, and operational flexibility.

‘Abhilekh Patal’ Portal

News: Prime Minister Narendra Modi recently highlighted a digital archive by the National Archives of India and encouraged people to explore the ‘Abhilekh Patal’ portal to better understand India’s history.

About ‘Abhilekh Patal’ Portal



Source: ET

- It is an online portal that provides **access to the digitised collections and reference materials of the National Archives of India.**
- **“Abhilekh” is a Sanskrit term meaning records, while “Patal”** refers to a board or surface. Together, they form the acronym for **Portal for Access to Archives and Learning.**
- **Curated by:** It is curated by the **National Archives of India (NAI).**
- **Nodal Ministry:** It functions **under the Ministry of Culture.**
- It is still being developed, and more data is regularly added.
- **Mission:** It is to **provide easy access to India’s historical archives, which include around 7 million records.** As part of this effort, these records are **being digitised to make them accessible in the modern era.**
- **Purpose:** Its main purpose is to **make historical records easily accessible to people across the world.**
 - Researchers, students, and curious learners can use it **to study original sources that provide insights into events, people, and social changes.**
- **How it works:**
 - It provides **access to an index of about 7 million records** through its “Reference Tools” collection.
 - To make access easier, **users can request copies through the Page on Demand (POD) service** for records that are already digitised.
 - For records listed but not yet digitised, **users can use the Digitise on Demand (DOD) service.**
 - If **records are only in the reference tools and not yet in the database,** users can contact the **research room for assistance.**
- **Coverage:** The archival collections available through this portal cover a **wide range of historical records** preserved by the NAI. These include:
 - **Public records** transferred from various Ministries and Departments of the Government of India
 - **Private papers** of eminent personalities
 - **Archival reference media** such as photographs, maps, microfilms and rare documents
 - **Digitised historical government files and archival collections** maintained by NAI

About National Archives of India



राष्ट्रीय अभिलेखागार
National Archives of India

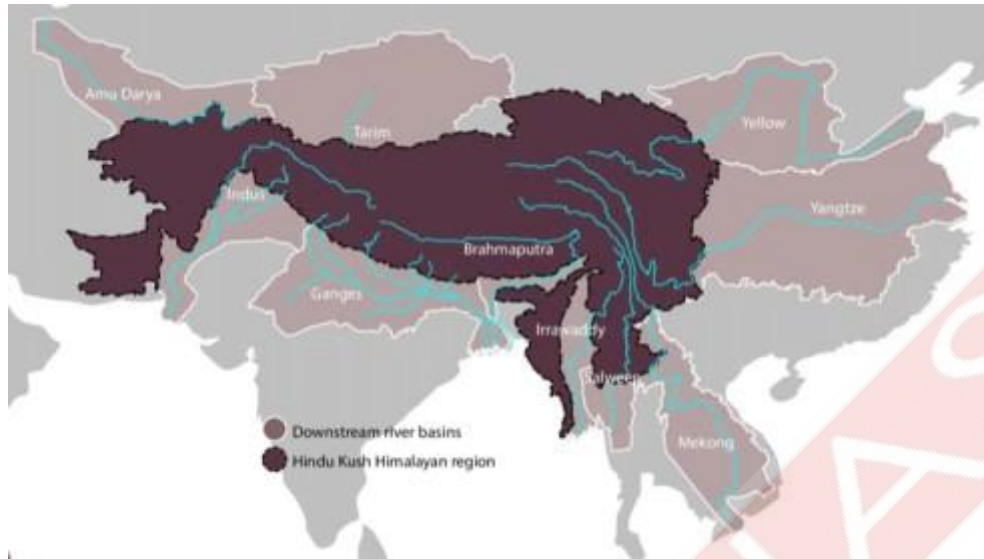
Source: Official website of National Archives of India

- It is the **custodian of the records of enduring value of the Government of India**. It is the **biggest archival repository in South Asia**.
- **Establishment year:** It was established on 11 March 1891 at Calcutta (Kolkata) as the Imperial Records Department.
- **Nodal ministry: Ministry of Culture**
 - **Head office:** It is at New Delhi.
 - **Regional office:** It is at Bhopal.
 - **Record centre:** It has three record centers: **Bhubaneswar, Jaipur and Puducherry**
- It has a vast corpus of records such as **public records, private papers, oriental records, cartographic records and microfilms**, which constitute an invaluable source of information for scholars/administrators and other users of archives.
- The **Director General of Archives, heading the Department, is responsible for the implementation of the Public Records Act, 1993 and the rules made thereunder, Public Records Rules, 1997** for the management, administration and preservation of public records in the Ministries, Departments, Public Sector Undertakings etc. of the Central Government.

Hindu Kush Himalaya (HKH) Region

News: According to a new report by the International Centre for Integrated Mountain Development, the Hindu Kush Himalaya (HKH) region has recently recorded its lowest snow persistence, at 27% below the long-term average for the winter season from November 2025 to March 2026.

About Hindu Kush Himalaya (HKH) Region



Source: India Today

- **The Hindu Kush is a great mountain system of Central Asia.**
- It is also known as the **greater Himalayan region** or 'the roof of the world.'
- **Spread:** It extends about 3,500 km and spreads across eight countries –
 - Afghanistan, Bangladesh, Bhutan, China, India, Myanmar, Nepal, and Pakistan.
- **Boundaries:** Its western boundary extends to Afghanistan, and its eastern boundary extends to Myanmar.
 - It runs from **northeast to southwest** and **separates the Amu Darya valley in the north** from the **Indus River valley in the south**.
- It has the **largest area covered by glaciers and permafrost** outside the Polar Regions, and is therefore often also referred to as the 'Third Pole'.
- **Physiography:** It is a **geo-morphologically unique region** with the **mighty Himalayas acting as the geological buffer** protecting the lush green southern slopes **from the dry and arid winds of the north** thus supporting a unique mosaic of biota and eco-regions.
- **Rivers:** It is the **source of ten large Asian river systems** – the Amu Darya, Indus, Ganges, Brahmaputra (Yarlungtsanpo), Irrawaddy, Salween (Nu), Mekong (Lancang), Yangtse (Jinsha), Yellow River (Huanghe), and Tarim (Dayan).
 - It is known as the "Water Tower of Asia".

- **Mountains:** The Hindu Kush is divided into three parts:
 - **The eastern section** (from Karambar Pass to Dorāh Pass near Mount Tirich Mir),
 - **The central section** (up to Shebar Pass near Kabul), and
 - **The western section**, also called the Bābā Mountains, which slopes down to the Kermū Pass (Afghanistan)
- **Highest peaks:** The [Terich Mir](#) is the highest mountain of the Hindu Kush range, and the highest mountain in the world outside of the Himalayas–Karakoram range.
- **Geology and climate:**
 - The Hindu Kush and the Pamir mountains form the world's most active zone for intermediate-depth earthquakes.
 - The area generally experiences rainy or snowy summers (July to September) and dry winters.
 - The central and western Hindu Kush are influenced by a Mediterranean-type climate, with hot, dry summers and cold winters.
- **Importance:** It is home to over 240 million people, and 1.7 billion people live in the river basins downstream, while food grown in these basins reaches three billion people.
- It is home to:
 - 4 biodiversity hotspots
 - 6 UNESCO natural World Heritage sites
 - 30 Ramsar sites
 - 330 Important Bird Areas (IBAs) and 53 Important Plant Areas (IPAs)
- **Threat:** The HKH region is under stress as snow in the river basins is decreasing and glaciers are shrinking quickly due to climate change.

Key Facts About Mali

News: Mali's defence minister was killed in a suicide truck bombing during coordinated attacks by jihadist militants and separatist groups.

Key Facts About Mali



Source – Britannica

- **Location:** Mali is a landlocked country of Western Africa and lies largely in the Saharan and Sahelian regions.
- **Bordered by:** It shares borders with Algeria in the north, Niger and Burkina Faso in the east, Côte d'Ivoire and Guinea in the south, and Senegal and Mauritania in the west.
- **Capital:** Its capital city is Bamako, which is located on the Niger River.
- **Climate:** It has a tropical savanna climate in the south which gradually changes into a desert climate in the north.
- **Terrain :** Mali is largely flat and arid and about 65% of its area is covered by desert or semi-desert.
- **Regional variation:** The Sahara Desert occupies a large part of the country, and the landscape gradually changes from desert in the north to the Sahel region and then to the Sudanian savanna in the south, showing a clear north–south transition.
- **Highest peak:** The highest point is Hombori Tondo (1,155 m).
- **Major rivers:** The Niger River flows through the interior and serves as the main trading and transport artery, while the Sénégal River also forms part of the drainage system.

- **Unique Feature:** The Prime Meridian passes through the city of Gao.
- **Vegetation:** Vegetation follows climatic zones, with savanna in the south, steppe vegetation in the Sahel, and almost no vegetation in the Sahara region.
- **Fauna:** Animal life includes gazelles, antelopes, giraffes, elephants, lions, panthers, hyenas, crocodiles, hippopotamuses, monkeys, snakes, and birds like ostrich.

Science Panel for the Global Energy Transition (SPGET)

News: The Science Panel for the Global Energy Transition (SPGET) was launched on April 24, 2026 in Colombia to accelerate fossil fuel phase-out.

About Science Panel for the Global Energy Transition (SPGET)



Source – WeDontHaveTime

- It is a global science-based panel that provides policy-relevant advice to accelerate transition away from fossil fuels.
- **Launched:** It was launched on April 24, 2026 in Santa Marta, Colombia.
- **Origin:** Its creation follows calls made during the plenary of COP30 in Belém, Brazil.
- **Mission:** It aims to provide fast, science-based, and policy-relevant advice to governments for accelerating energy transition efforts.
- **Objective:** It seeks to develop country and sector-level milestones aligned with limiting global warming to 1.5°C and guide fossil fuel phase-out policies.

- **Backing:** It is backed by the Brazilian COP30 Presidency and supported by the Dutch Ministry of Climate Policy and Green Growth and Colombia's Ministry of Environment and Sustainable Development.
- **Key Highlights of SPGET:**
 - **Global Participation:** The launch conference brought together representatives from more than 56 countries to build a global coalition.
 - **Policy Guidance:** It will produce analyses, policy briefs, and country-level engagement to support nationally determined contributions and sectoral strategies.
 - **Scientific Approach:** It focuses on accessible evidence, latest science, and actionable insights for just and orderly transitions.

RBI's New Norms for Recognizing Bad Loans

News: The Reserve Bank of India issued 14 final directions on April 27 introducing new norms for recognising bad loans in banks.

About RBI's New Norms for Recognizing Bad Loans



Source – TH

- **Main change:** The new RBI norms shift banks from the incurred loss model, which is based on past losses.
 - Banks will now follow a forward-looking Expected Credit Loss (ECL) model that requires them to build buffers based on likely future losses.

- **Key Highlights of New RBI Norms:**

- **Three-Stage Approach:** Loss allowance will follow three stages based on changes in credit risk since initial recognition.
 - **Stage 1:** Financial instruments where there is no significant increase in credit risk, and banks will use a 12-month Probability of Default for loss estimation.
 - **Stage 2:** Financial instruments where there is a significant increase in credit risk since initial recognition, and banks will use a lifetime Probability of Default for loss estimation.
 - **Stage 3:** Under this stage, instruments are seen as 'credit impaired' as at the reporting date, which means the loan is facing serious repayment problems.
- **Implementation Timeline:** The norms will come into effect from April 1, 2027.
- **Retention of NPA Definition:** A loan will still be treated as a non-performing asset if it remains unpaid for 90 days.

- **Implications for Banks and Economy:**

- **Improved Risk Management:** Banks will use data-driven models and future economic conditions, which will improve transparency and early stress recognition.
- **Higher Initial Provisioning:** Some banks may see a one-time increase in provisioning, but overall capital adequacy impact is expected to remain manageable.
- **Operational Changes:** Banks will require closer integration between finance and risk functions and investment in data systems and modelling capabilities.

Right to Safe Travel

News: The Supreme Court highlighted the Right to Safe Travel while issuing a 13-point directive after two road accidents in November 2025 caused 34 deaths.

About Right to Safe Travel



Source – TH

- **Right to Safe Travel** means that commuters should be able to use roads without facing avoidable dangers caused by unsafe conditions or poor management.
- **Constitutional mandate:**
 - **Article 21 and Safety:** Article 21 guarantees protection of life and personal liberty, which also includes the safety of road users.
 - **Positive Duty of State:** The State has a duty to ensure a safe environment where human life is protected and valued at all times.
- **Key Highlights of the Supreme Court Ruling:**
 - **Accountability of Agencies:** The Court criticized road agencies like National Highways Authority of India and state PWDs for administrative lapses and infrastructural gaps.
 - **Right to Life Interpretation:** The Court stated that even one avoidable death reflects failure of the State's protective role.
 - **Use of Constitutional Power:** The Court exercised its extraordinary powers under Article 142 to address the issue effectively.
 - **Concern on Road Practices:** It highlighted dangers like illegal parking, black spots, and roadside dhabas causing accidents.
- **Supreme Court Directions:**
 - **Restriction on Parking:** No heavy or commercial vehicle shall park on highways except at designated areas.

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- **Technology Use:** Authorities must use Advanced Traffic Management System (ATMS) for tracking vehicles and integrating alerts with e-Challan systems.
- **Removal of Illegal Structures:** Unauthorized dhabas and commercial structures within highway limits must be demolished.
- **Land Use Control:** States must restrict land use changes within specified distances from highways.
- **Highway Monitoring:** Dedicated surveillance teams must ensure round-the-clock monitoring.
- **Emergency and Safety Measures:** Deployment of ambulances, cranes, truck lay-byes, and installation of lighting, cameras, and warning signs must be ensured.

Luzon Island

News: China's military recently conducted military drills, including live-fire exercises in waters east of the Philippines' Luzon Island.

About Luzon Island



Source: World Atlas

- It is located in the **northern part of the Philippines**.
- It is the **largest and most populous island** in the **Philippines**.
- **Boundary:** The island is bordered by the **Philippine Sea to the east, the South China Sea to the west, and the Luzon Strait to the north, which separates it from Taiwan**.
- **Capital:** **Manila**, the capital of the Philippines, is **situated on this island**.
- **Area:** It covers an area of about **42,458 sq. miles** and is the **15th largest island in the world**.
 - It has a **coastline over 5,000 km long**.
- It is divided into **Northern, Central, and Southern regions, along with the National Capital Region**.
- **Landforms:** It features varied **landforms** such as **mountains, plains, rivers, lakes, peninsulas, bays, and gulfs**.
- **Mountains:** Major mountain ranges include the **Cordillera, Sierra Madre, and Zambales Mountains**.
 - Its **highest peak** is **Mount Pulag**, rising to 9,612 feet (**2,930 m**).
- **Gulf and Bays:** **Lingayen Gulf and Manila Bay on the west, and Lamon Bay and Lagonoy Gulf on the east**.
- **Rivers:** The major rivers are **Cagayan, Abra, Agno, Pampanga, and Bicol**.
- **Lake:** **Laguna de Bay, which is the largest lake in the Philippines, is located in Luzon**.
- **Volcanoes:** The island has active volcanoes, including **Mayon Volcano**, known for its **near-perfect cone shape**.
- **Cities:** Major cities include **Manila, Quezon City, Pasay, Cabanatuan, Legazpi, Baguio, Batangas, and Laoag**.

B'nei Menashe

News: Approximately 250 members of the B'nei Menashe community from Northeast India have recently reached Israel, becoming the first group to arrive under "Operation Wings of Dawn."

About B'nei Menashe



Source: Hindustan Times

- The Benei Menashe is a small ethnic community evolved **within Chin-Kuki-Mizo tribes**, known collectively as the **“Zo.”**
- **Distribution:** They are located in North East India, particularly within Manipur and Mizoram, and neighbouring areas of Myanmar and Bangladesh.
 - About five thousand Bnei Menashe live in Israel, scattered between Kiryat Arba, Nof HaGalil, Sderot, Nitzan, Akko and a few other towns.
 - They are known as the **Shinlung in India**. Around 10,000 members of the community live in India.
- **Origin:** According to their belief, **they are descendants of the tribe of Manasseh (regard themselves as “Children of Menashe”)**, one of the **ten lost tribes of Israel** who are believed to have **gone into exile after the Assyrian conquest of Israel around 722 BCE**.
 - They believe **their ancestors migrated eastward through regions like Persia (modern-day Iran) and Afghanistan** before settling in Northeast India.
 - Before British rule in the late 19th century, **they followed an ancestral tribal religion featuring a figure called Manasia or Manmasi**.
 - Over time, during British rule, many of them **converted to Christianity due to missionary influence**.
- **Religion:** They largely follow Judaism.
- **Language:** The languages they speak belong to the Tibetan-Burmese family.

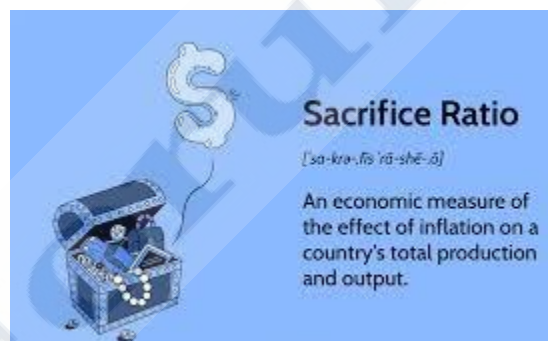
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- **Tradition:** Men typically wear **kippahs or hats**, while married **women cover** their heads.
- **Bnei Menashe movement:** The **Bnei Menashe movement** began in 1951 when **Challianthanga (Challa)**, a Mizo Pentecostal leader in India, had a vision that his people's homeland was Israel.
 - This sparked a **shift among the Chin-Kuki-Mizo people in Northeast India**, leading them to embrace their identity as **descendants of the lost tribe of Manasseh**.
 - In the 1970s, a **Judaizing movement inspired by the Hebrew Bible began, with limited contact with global Judaism**.
 - In the 1980s, **Eliyahu Avichail** guided the community and introduced Jewish traditions.
 - However, those moving to **Israel must convert again to Judaism to gain citizenship**.

Sacrifice Ratio

News: Recent steps to curb inflation in India, U.S.A., and U.K show that lowering inflation has economic costs, which are measured using the sacrifice ratio.

About Sacrifice Ratio



Source: Investopedia

- The sacrifice ratio is an economic ratio that measures the effect of rising and falling inflation on a country's total production and output.
- It reflects the trade-off between price stability and economic growth.
- How it is calculated:
 - The ratio is derived by dividing the cost of lost production by the percentage change in inflation.

- It measures the loss in output for each 1% change in inflation.
- **Indication:** Higher sacrifice ratios indicate that reducing inflation leads to greater short-term costs, such as higher unemployment and lower industrial output.
- **How it is utilized:**
 - By studying past sacrifice ratios, governing bodies like the Reserve Bank of India can evaluate the effectiveness of fiscal policies.
 - It helps central banks decide their monetary policies, whether to control inflation or support growth.

Virli Khandar Excavation

News: Recent excavation at a megalithic site in Virli Khandar has revealed distinctive burial architecture, rare artefacts and unusual pottery arrangements in Vidarbha.

About Virli Khandar Excavation



Source – IE

- It is an ongoing excavation at a megalithic burial site in Virli Khandar that is revealing important details about ancient funerary practices and cultural patterns.
- **Location:** The site is located in Pauni tehsil of Bhandara district in Maharashtra.

- **Period:** Preliminary observations suggest a timeline of around 500 BCE (about 2,500 years ago), while radiocarbon dating indicates a broader range from 1000 BCE to 300 CE.
- **Key Findings:**
 - **Distinct Burial Patterns:** The site shows a composite megalithic structure with stone circles and menhirs, unlike nearby dolmen burial sites such as Pimpalgaon Nipani and Tirota Kheri.
 - **Documented Burials:** Researchers have recorded 69 megalithic burials, out of which four are selected for excavation.
 - **Significant Artefacts:** Important finds include copper necklace, iron tools (axes, chisels, ladles, arrowheads), etched carnelian beads, a gold earring, and bone remains.
 - **Unique Pottery Arrangement:** Nearly 50 pots were arranged systematically in inverted position, with larger bowls covered by smaller ones.
 - **Soil Engineering:**
 - The pots were placed over a layer of black cotton soil above the natural lateritic (murum) base.
 - The sticky nature of this soil helped to stabilise the vessels.
 - It kept the pots largely in position despite breakage caused by the weight of the overlying soil.
 - **Unusual Practice:** Almost all pots were placed upside down, and the reason is still under study.
- **Significance:** The findings provide fresh insights into megalithic culture and funerary practices in the Vidarbha region.

About Menhirs

- **Definition:** A menhir is a large, man-made upright stone, usually tapered at the top and erected as a monument.
- **Occurrence:** Menhirs can be found individually or as part of larger megalithic complexes.
- **Uses:** Menhirs are intentionally erected by humans as monumental landmarks, often associated with burial or megalithic structures.
- **Examples:** The Grand Menhir Brisé in France (20.6 m) and Mudumal Megalithic Menhirs in Telangana, on UNESCO's tentative World Heritage list, are notable examples.

Operation Global-Hunt

News: Recently, the NCB secured the return of Mohammad Salim Dola, an alleged international drug trafficker and a close associate of fugitive don Dawood Ibrahim, from Turkey, who was the first target under Operation Global-Hunt.

About Operation Global-Hunt



Source: The Hindu

- Operation Global-Hunt is a mission launched to dismantle 100 drug networks run by India's fugitives abroad, including in Dubai, Canada and Europe.
- Launched by: It has been launched by the Narcotics Control Bureau (NCB).
- Aim: It aims to track down traffickers through coordinated efforts among central agencies and using Interpol Red Notices and seize their assets within India.
- Note: India is a signatory to the single Convention on Narcotic Drugs 1961, as amended by the 1972 Protocol, the Convention on Psychotropic Substances, 1971 and the United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances, 1988.
- Focus: The mission focuses on a most-wanted list of traffickers involved in the supply of fentanyl, cocaine, heroin, and synthetic drugs entering India.
- Implementation strategy: NCB has submitted a three-year roadmap to the Union Home Ministry for Operation Global-Hunt:

- It was decided that all stakeholder departments across states will jointly launch a three-year nationwide campaign against drug abuse.
- The operational framework for each pillar of the anti-drug strategy will be clearly defined, specific and measurable targets will be set, and regular reviews will be conducted to ensure accountability.

About Narcotics Control Bureau (NCB)

- **Formation:** NCB was constituted by the Government of India in 1986 under the [Narcotic Drugs and Psychotropic Substances Act, 1985](#).
- **Nodal Ministry:** It is the apex coordinating agency under the Ministry of Home Affairs.
- **Headquarters:** It is located in New Delhi.
- **Motto:** It has the motto of Intelligence, Enforcement, and Coordination.
- **Mission:** Its mission is to prevent and combat the abuse and illicit trafficking of drugs.
- **Functions:** Following functions are performed by NCB:
 - Coordination among various Central and State Agencies engaged in drug law enforcement;
 - Assisting States in enhancing their drug law enforcement effort;
 - Collection and dissemination of intelligence;
 - Analysis of seizure data, study of trends and modus operandi;
 - Preparation of National Drug Enforcement Statistics
 - Liaison with International agencies such as UNDCP, INCB, INTERPOL, Customs Cooperation Council, RILO etc;
 - National contact point for intelligence and investigations

Swamp Deer

News: A study reports that translocated hard-ground swamp deer from Kanha to Satpura are increasing and breeding successfully, reducing extinction risk.

About Swamp Deer



Source – WII

- Swamp deer, also called barasingha, is a deer species found in the Indian subcontinent.
- Subspecies: There are three subspecies of swamp deer found in the Indian subcontinent, which show regional distribution and variation.
 - Western Swamp Deer: The western subspecies (*Rucervus duvaucelii*) is found in Nepal.
 - Southern Swamp Deer (Hard-ground): The southern subspecies (*Rucervus duvaucelii branderi*) was once found widely across India, but it now survives naturally only in Kanha, which makes it highly vulnerable.
 - Eastern Swamp Deer: The eastern subspecies (*Rucervus duvaucelii ranjitsinhi*) is found in Kaziranga and Dudhwa National Parks.
- Habitat: It lives in open forests and grasslands and depends on wetland and herbaceous plants.
- Distribution: It is found in India and Nepal and it is extinct in Bangladesh and Pakistan.
- Characteristics:
 - Size and Body: Adult males weigh 170–280 kg, while females weigh 130–145 kg, and the shoulder height ranges from 119–135 cm, which shows clear size differences.
 - Coat: The coat is generally brown, with males being darker.
 - It changes with seasons, as a thick brown coat develops in winter and is replaced by a reddish-brown coat in summer.
 - Antlers: Antlers are found only in males and measure about 74 cm on average, with some reaching 104 cm, and they have multiple points.

- **Social Behavior:**
 - Swamp Deer have matrilineal societies with dominant adult females usually leading mixed herds.
 - They are polygynous with distinctive male and female linear hierarchies.
 - **Diet:** It feeds mainly on wetland plants and herbaceous vegetation.
- **Threats**
 - **Habitat alteration**
 - **Fragmentation of grasslands**
 - **Hunting**
- **Conservation Status**
 - **IUCN Red List: Vulnerable**
 - **CITES: Appendix I**
 - **Schedule I of the Wildlife (Protection) Act, 1972**

Exercise 'Pragati'

News: The Indian Army announced hosting 11 friendly countries for the inaugural multilateral Exercise 'Pragati' at Umroi, Meghalaya.

About Exercise 'Pragati'



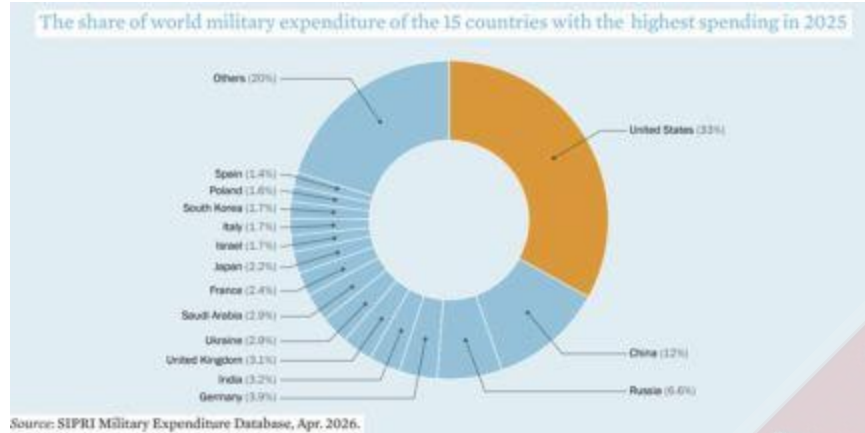
Source – DD News

- **Pragati (Partnership of Regional Armies for Growth and Transformation in the Indian Ocean Region)** is a multilateral military exercise aimed at cooperation and capability building among regional armies.
- **Hosted by:** It is hosted by the Indian Army.
- **Location:** The exercise will be held at the Foreign Training Node in Umroi, Meghalaya.
- **Participants:** It will include military delegations and troops from 11 friendly foreign countries across Asia, Africa, and the Indo-Pacific.
- **Edition :** It is the inaugural edition of the exercise.
- **Objective:** The exercise aims to strengthen defence cooperation, enhance interoperability, and build mutual trust among participating nations.
- **Key aspect:**
 - **Joint training focus:** The exercise will include drills in counter-insurgency and counter-terrorism environments, including small-unit tactics and surveillance.
 - **Operational learning:** It will involve lectures and workshops on India's doctrine, command structures, and counter-insurgency experience.
 - **Collaborative framework:** It reflects a shift to multilateral consortium-style training with standardised procedures and shared tactical understanding.
- **Significance:** It highlights India's effort to act as a regional security mentor and strengthen defence diplomacy and collective security.

India Becomes 5th Largest Military Spender in 2025: SIPRI

News: India ranked as the fifth-largest military spender in 2025, according to a report released by Stockholm International Peace Research Institute.

About India Becomes 5th Largest Military Spender in 2025: SIPRI



Source – SIPRI

- In April 2026, Stockholm International Peace Research Institute confirmed India as the world's fifth-largest military spender in its annual report.
- Reports titled: SIPRI annual report 2026 titled "Trends in World Military Expenditure".
- Key Findings:
 - India's Spending Level: India's military expenditure reached \$92.1 billion, marking an 8.9% increase over the previous year.
 - Global Ranking: India became the fifth-largest military spender, after the USA, China, Russia, and Germany.
 - Regional Trends: China increased spending by 7.4% to \$336 billion, while Pakistan increased by 11% to \$11.9 billion.
 - Global Spending Pattern: Total global military expenditure reached \$2,887 billion, with the top three countries contributing 51%.
 - European Contribution: Europe recorded a 14% rise, reaching \$864 billion, driven by war and NATO rearmament efforts.
 - Arms Import Trends: India's arms imports declined by 4%, yet it remained the second-largest importer with 8.2% share.

About Stockholm International Peace Research Institute

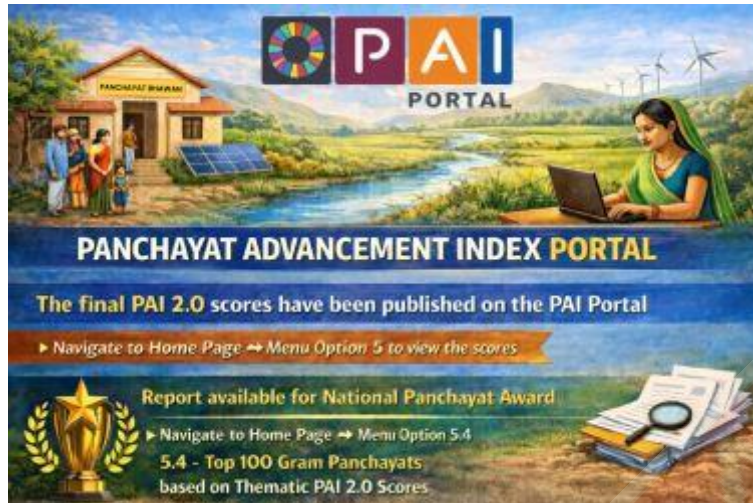
- SIPRI is an independent international institute that conducts research on conflict, armaments, arms control, and disarmament, and provides data and analysis.

- **Establishment:** SIPRI was established in 1966 based on a decision by the Swedish Parliament and is based in Stockholm.
- **Vision and mission:** Its vision is a peaceful world with reduced insecurity, while its mission includes research, policy analysis, dialogue, transparency, and providing authoritative information.
- **Funding:** SIPRI receives a substantial annual grant from the Swedish Government and also seeks support from other organizations for research activities.
- **Structure:** Its structure includes a Governing Board, Director, Deputy Director, Research Staff Collegium, and support staff, totaling around 100 people.
- **Key Publications:**
 - **SIPRI Yearbook:** It provides a definitive account of armaments and international security.
 - **Arms Transfers Database:** It tracks all international transfers of major conventional arms since 1950.
 - **Military Expenditure Database:** It reports annual military spending for most countries.
 - **Arms Industry Database:** It tracks the world's 100 largest arms-producing and military services companies.

Panchayat Advancement Index (PAI) 2.0

News: The Ministry of Panchayati Raj released Panchayat Advancement Index 2.0 Report for FY 2023-24 on National Panchayati Raj Day 2026.

About Panchayat Advancement Index (PAI) 2.0



Source – MoPR

- It is the nationwide framework to measure the progress of Rural Local Government Institutions (Gram Panchayats (GPs)/Traditional Local Bodies (TLBs)) using objective and verifiable indicators.
- Introduced in: The Panchayat Advancement Index was introduced in 2025, and its first baseline report was released for FY 2022–23.
- Launched by: It is launched by Ministry of Panchayati Raj.
- Objective: The index aims to promote evidence-based planning, performance monitoring, and incentivisation of Panchayati Raj Institutions, while supporting Gram Panchayat Development Plans and identifying best practices.
- Index is anchored in: The Index is anchored in the framework of Localization of Sustainable Development Goals (LSDGs), which aggregates the 17 global SDGs into 9 thematic areas relevant to Panchayati Raj Institutions
- Key Aspects
 - Nine Thematic Areas: PAI 2.0 evaluates Panchayats across nine themes under Localization of Sustainable Development Goals, namely Poverty, Health, Child Welfare, Water, Environment, Infrastructure, Social Justice, Good Governance, and Women's Empowerment.

- **Performance Categories:** Panchayats are classified into five categories based on scores to enable benchmarking and competition.
 - Achiever (A+ : 90 and above)
 - Front Runner (A : 75 to below 90)
 - Performer (B : 60 to below 75)
 - Aspirant (C : 40 to below 60)
 - Beginner (D : below 40)
- **Refinement:** The framework has been simplified in comparison to PAI Version 1.0, where indicators have been reduced from 516 indicators and 794 data points to 150 indicators and 230 data points, along with features like single integrated data entry form, real-time dashboards, and validation mechanisms for better accuracy and usability.
- **State Inclusion:** The exercise covered 33 States and UTs, though West Bengal did not participate, and Delhi and Chandigarh were excluded due to absence of Gram Panchayats.
- **Key Findings**
 - **National Participation:** The index recorded 97.30% participation, with 2,59,867 Panchayats submitting validated data, showing improvement from earlier version.
 - **Front Runner Status:** A total of 3,635 Gram Panchayats were placed in the Front Runner category (Grade A) based on composite scores.
 - **Largest Segment:** The Performer category (Grade B) includes 1,18,824 Panchayats (45.72%), making it the largest group.
 - **Highest Performing State:** Tripura emerged as the top performer, with nearly 80% Panchayats achieving Front Runner status.
 - **Zero Achievers (A+):** No Panchayat achieved the Achiever (A+) category, which requires very high composite scores.
 - **Maximum Participation:** Uttar Pradesh recorded full participation, with all 57,678 Panchayats submitting data.

Naval Anti-ship Missile-Short Range (NASM-SR)

News: DRDO and Indian Navy successfully conducted the maiden salvo launch of NASM-SR from a naval helicopter off the Bay of Bengal coast.

About Naval Anti-ship Missile-Short Range (NASM-SR)



Source – DD News

- **NASM-SR is an advanced air-launched anti-ship missile system designed for short-range naval operations.**
- **Developer:** The missile has been developed by Hyderabad-based Research Center Imarat in collaboration with multiple DRDO laboratories and Indian industries.
- **Operational Role:** It is designed to be launched from naval helicopters to strike enemy ships with high precision, including waterline targets.
- **Key features:**
 - **Range:** It can strike targets at an approximate range of 55 km with a sea-skimming profile to avoid detection.
 - **Salvo launch capability:** The system can launch multiple missiles in quick succession from the same helicopter platform.
 - **Waterline hit capability:** The missile can accurately strike at the waterline of enemy ships.
 - **Propulsion system:** It uses a solid propulsion booster along with a long-burn sustainer.

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- **Advanced guidance system:** It includes fibre-optic gyroscope-based inertial navigation and radio-altimeter for accurate targeting.
- **Connectivity:** It has a high-bandwidth two-way data link which enables lock-on-after-launch and in-flight retargeting.
- **Control system:** It uses electro-mechanical actuator and jet vane control for better maneuverability and control.
- **Indigenous development:** Critical subsystems like seeker, avionics, and algorithms are developed indigenously by DRDO laboratories and Indian industries.

Past Risk and Return Verification Agency (PaRRVA)

News: The Securities and Exchange Board of India (SEBI) has operationalised the Past Risk and Return Verification Agency (PaRRVA) to bring transparency and standardisation to performance claims made by financial intermediaries.

About Past Risk and Return Verification Agency (PaRRVA)



Source: NSE

- Past Risk and Return Verification Agency (PaRRVA) is a regulatory initiative designed to bring transparency and standardisation to performance claims made by financial intermediaries.
- Operationalized by: It has been operationalised by the [Securities and Exchange Board of India \(SEBI\)](#).
 - Operation from: The agency will begin regular operations from May 4, 2026.
- Aim: It aimed at enhancing transparency and investor protection in the financial markets.
- PaRRVA recognised: CARE Ratings Limited has been granted recognition as the PaRRVA.
- PaRRVA Data Centre (PDC): [National Stock Exchange of India](#) Limited (NSE) will function as the PDC.
- Beneficiary: The following entities can use PaRRVA:
 - Investment Advisers (IA)
 - Research Analysts (RA)
 - Trading Members (TM)
 - Investors seeking verified performance data
- Function:
 - Investor protection and promotion of Market integrity: It will enable regulated entities such as investment advisers, research analysts, and algorithmic trading service providers to showcase their verified performance.
 - Data-driven decisions: It will also allow investors to access reliable and authenticated performance data, improving informed decision-making.
 - Regulatory compliance: Regulated entities will be permitted to use PaRRVA-verified performance in their advertisements, in line with SEBI's regulatory provisions.

Tapir

News: World Tapir Day is being observed globally on 30th April to raise awareness about the species of Tapir and protect it from human encroachment.

About Tapir



Source: News on air

- Tapirs are large herbivorous mammals.
- They are also known as “living fossils” due to their lineage dating back millions of years.
- They form one of the oldest surviving genera in the animal kingdom.
- Habitat: They live in wetlands, forests, savanna, and rainforests.
 - Tapirs prefer wooded or grassy areas with places to shelter during the day and a lake, river, or pond for taking a night time dip.
- Distribution: They inhabit jungle and forest regions of South America, Central America, and Southeast Asia.
 - They have a range that includes Mexico, Central America, South America, and Southeast Asia’s Malaya and Sumatra.
- Species: There are four species of Tapir found around in the world:
 - Malayan Tapir: They are the largest tapir species and native to Southeast Asia.
 - Baird’s Tapir: They are the largest land mammal in Central America.
 - Lowland Tapir: They are the most widely distributed species. They are native to South America from Colombia to Paraguay and Brazil.
 - Mountain Tapir: They inhabit the high-altitude regions of the Andes. They are one of the most endangered mammals in the world.
- Characteristics:

- **Appearance:**
 - Tapirs have four toes on the front feet and three on the back.
 - They have small eyes and ears, and a teardrop-shaped body that is narrow in front and wider at the back, helping them move through dense vegetation.
 - Their nose and upper lip form a short, flexible, trunk-like snout, which they use for smelling, breathing underwater like a snorkel, and grabbing leaves and fruits.
 - Males are slightly smaller than females.
- **Diet:** They are herbivores and feed upon seeds and fruits, leaves, tree bark and aquatic plants.
- **Behaviour:** Tapirs communicate through high-pitched whistles, defensive snorts with foot stamping, and scent marking to identify others and avoid conflict.
 - They are good swimmers and spend much of their time in water, where they cool off, find food, and escape predators.
- **Ecological role:**
 - They are important seed dispersers, or “forest gardeners”.
 - They help to maintain forest diversity by transporting seeds over long distances.
 - They are now considered a barometer of ecosystem health.
- **Threat:**
 - Hunting for their meat and hide
 - Habitat loss
- **Conservation status:**
 - Three of the four tapir species: the Malayan tapir, Baird’s tapir, and mountain tapir are classified as Endangered by the IUCN.
 - IUCN status of Lowland Tapir is Vulnerable.