Factly Weekly

Compilation

2026

For UPSC CSE Prelims Exam

3rd Week

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INDEX

Urban Challenge Fund

News- The Union Cabinet chaired by Prime Minister Narendra Modi approved the launch of the Urban Challenge Fund with total Central Assistance of Rs.1 lakh crore.

About Urban Challenge Fund

- **Type of Scheme:** It is a new centrally sponsored scheme.
- **Ministry involved:** It is implemented by the Ministry of Housing and Urban Affairs.
- **Aim:** It aims to build resilient, productive, inclusive, and climate-responsive cities that drive the country's next phase of economic growth.
- **Funding:** The scheme provides total Central Assistance of ₹1 lakh crore, covering 25% of project cost with mandatory market-based financing.
- **Duration:** It will operate from FY 2025–26 to FY 2030–31, with an extendable implementation period up to FY 2033–34.
- **Key Features**
    - **Market-based financing:** At least 50% project funding must come from municipal bonds, bank loans and PPPs.
    - **Transparent Project Selection:** Projects will be chosen through a competitive challenge mode supporting high-impact and reform-oriented proposals.
    - **Reform-linked framework:** Funding is tied to governance, financial, operational and urban planning reforms, supported by defined KPIs and third-party verification.
    - **Private sector participation:** Structured risk-sharing frameworks and service benchmarking will encourage private investment and efficiency.
    - **Credit enhancement support:** A dedicated Rs. 5,000 crore corpus will improve creditworthiness of 4223 cities, especially Tier-II and Tier-III cities.
    - **Comprehensive urban coverage:** Major cities, capitals and eligible smaller ULBs, including those in hilly and North-Eastern regions, will receive support.

PM RAHAT Scheme

News- The Union Cabinet approved PM RAHAT on February 14, 2026, launched from Seva Teerth to strengthen emergency response after road accidents.

About PM RAHAT

- PM RAHAT (**Road Accident Victim Hospitalization and Assured Treatment**) is an emergency healthcare and social security initiative focused on **saving lives after road accidents.**
- **Launched by:** Approved by the Union Cabinet and launched from the Prime Minister's new office at Seva Teerth.
- **Aim**: It aims to ensure timely medical care, financial certainty for hospitals, and a structured emergency response system during the Golden Hour.

Key Features of the Scheme

- **Cashless Treatment:** Every eligible road accident victim receives cashless treatment up to ₹1.5 lakh.
- **Coverage Duration:** Treatment is covered for 7 days from the date of accident.
- **Golden Hour Focus:** Integration with **Emergency Response Support System (ERSS)** 112 ensures rapid hospital access during the critical first hour.
- **Stabilisation Window:** Stabilisation treatment is provided for 24 or 48 hours, depending on severity.
- **Implemented Through:** The scheme implemented through a robust, technology-driven framework amalgamating the **Electronic Detailed Accident Report (eDAR)** platform of the Ministry of Road

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Transport and Highways with the **Transaction Management System (TMS 2.0)** of the National Health Authority.

- **Reimbursement to Hospitals:** Payments are made through the Motor Vehicle Accident Fund with defined financial mechanisms.
- **Grievance Redressal:** District-level Grievance Redressal Officers ensure accountability and address complaints.

Army Ant Species

News- Researchers from Karnataka and Odisha discovered two new army ant species in Andhra Pradesh's Eastern Ghats, as reported in Asian Myrmecology.

Figure 1. Source- DH

About Army Ant Species

- **They are keystone predators** that play a critical role in regulating arthropod populations and shaping forest biodiversity by consuming large quantities of invertebrates on a daily basis.
- **Scientific name:** The scientific names of the newly discovered army ant species are **Aenictus chittoorensis** and **Aenictus lankamallensis.**
- **Location of Discovery:** They were discovered in the **Sri Venkateswara Wildlife Sanctuary** in the Southern **Eastern Ghats of Andhra Pradesh.**
- **Distribution:** They are found mainly **in tropical ecosystems.**
- **Institutions involved:** The research was conducted by scientists from **Ashoka Trust for Research in Ecology and the Environment (ATREE),** Bengaluru, and **National Institute of Science Education and Research (NISER)**, Odisha.
- **Key Features**
  - **Physical feature:** They possess large, sharp mandibles and a strong stinging ability, which help them capture and subdue prey.
  - **Nomadic Nature:** They **lack permanent nests** and are constantly on the move to find food for their massive colonies.
  - **Bivouacs:** Instead of physical structures, they form temporary living quarters called "bivouacs" using the **interlocked bodies** of worker ants.
  - **Social Structure:** They form massive colonies that carry out coordinated hunting activities.
  - **Sensory Adaptations:** These ants are **practically blind**; they navigate and coordinate mass raids using a sophisticated system of **chemical pheromones**.
  - **Keystone predators:** They regulate arthropod populations and support ecological balance.

Novel Oral Polio Vaccine Type 2 (nOPV2)

News: The World Health Organization has granted prequalification to an additional Novel Oral Polio Vaccine Type 2 (nOPV2).
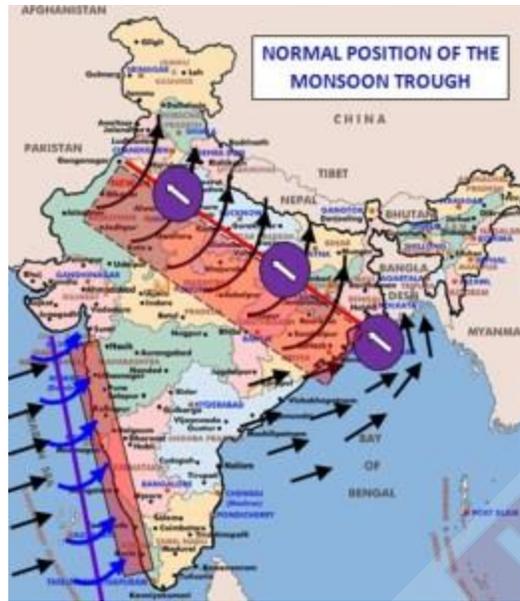**About Novel Oral Polio Vaccine Type 2 (nOPV2)**

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Figure 2. Source: TOI

- **It is an improved oral vaccine** designed **to prevent outbreaks caused by circulating vaccine-derived poliovirus type-2.**
- The vaccine is **used for active immunization in all age groups,** especially during outbreaks of poliovirus type-2.
- **Developed By:** Global Polio Eradication Initiative
- **Type:** Live-attenuated oral vaccine targeting **Polio type 2**
- **Aim of nOPV2**
  - To **stop outbreaks of poliovirus type-2** in a safer and more effective way.
  - To **reduce the risk of vaccine-derived virus mutations.**
  - To **strengthen global progress** toward the eradication of polio.
- **Key Features**
  - The vaccine is **genetically more stable** than the traditional monovalent oral polio vaccine type-2.
  - The **improved stability reduces the chance that the vaccine virus will mutate** and cause new outbreaks.
  - The vaccine **provides strong intestinal immunity**, which helps stop virus transmission quickly.
  - **It can be supplied in multi-dose vials (20- and 50-dose formats)** suitable for high-volume vaccination programs.
  - It has **a shelf life of up to 24 months** and **can be kept at routine vaccine storage temperatures,** facilitating use across a range of environments.

Monsoon Breaks

News: New research shows that dry desert winds blowing from the west and northwest of India can help predict monsoon break periods, offering an early warning system for farmers. These breaks, marked by reduced rainfall during the Southwest Monsoon, can seriously affect agricultural production.

About Monsoon Breaks

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Source: weather.com

- **About:** During the **south-west monsoon period, after having rains for a few days if rain fails to occur for one or more weeks,** it is **known as Monsoon break.**
- These dry spells are quite common during the rainy season.
- **Reasons for Monsoon Breaks:** Monsoon breaks occur **due to the shifting movement of the monsoon trough** during the Southwest Monsoon.
  - The **trough and its axis move northward or southward** for various reasons, which changes the distribution of rainfall across India.
  - When the **axis of the trough lies over the plains**, these regions receive good rainfall, but **when it shifts toward the foothills of the Himalayas,** dry spells occur in the plains.
  - The **frequency and intensity of tropical depressions forming over the Bay of Bengal also influence** the amount and duration of monsoon rainfall.
  - These **tropical depressions follow the axis of the monsoon trough**, and their variation causes irregular wet and dry spells.

Sangtam Community

News: The apex body of Nagaland's Sangtam community has passed a resolution to protect pangolins within its jurisdiction.

About Sangtam Community

Source: Indigenous Peoples Literature

- **Sangtam** are **Naga ethnic group** in Northeast India.
- **Location:** They mainly reside in **Tuensang District** and **Kiphire District** of **Nagaland**.
- Origin: According to oral traditions, their ancestors may have migrated from **Mongolia** through **China and have** been involved in the construction of the **Great Wall of China**.
- **Clan:** The Sangtam society is divided into six major clan groups, known as **Shuh.**
  - Their villages are structured around **clan systems, with strong kinship bonds** shaping social life.
  - **Community life is active and close-knit,** marked by shared customs and mutual support.

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- ○ They are **well known for their craftsmanship and indigenous architectural styles.**
- **Livelihood:** They traditionally depends on **jhum cultivation (shifting agriculture)** as their main source of livelihood.
- **Religion: Christianity** is the predominant religion among the Sangtam community.
- **Festivals: Mongmong** is one of the most important festivals of the Sangtams. Other festivals are '**vi thung'and hünapungbi**.

AI Impact Summit 2026

News: The Union Government is hosting the India AI Impact Summit 2026 in New Delhi, bringing global leaders, policymakers, and innovators together.

About AI Impact Summit 2026

Figure 3. Source – KPMG

- **Hosted by:** The **Ministry of Electronics and Information Technology (MeitY)** is hosting AI Impact Summit 2026 at **Bharat Mandapam, New Delhi**.
- **Duration:** The summit is being held from **16 to 20 February 2026**.
- **Origin:** It is the **fourth global AI summit**, after earlier meetings in the **United Kingdom, South Korea, and France, and the first hosted in the Global South**.
- **Objective:**
  - ○ The summit aims to **move beyond discussion** and **focus on practical results, stronger cooperation, and real progress** in global AI governance.
  - ○ It seeks to **promote inclusive growth, social development, people-centred innovation**, and environmental protection, while strengthening the voice of developing countries and addressing risks such as job loss, bias, and rising energy use.
- **Theme:** The official theme is *Sarvajana Hitaya, Sarvajana Sukhaya*, meaning "**welfare for all and happiness for all**".
- **Guiding Principles: Three Sutras**
  - ○ **People:** Focuses on human-centered AI that respects dignity and inclusivity.
  - ○ **Planet:** Emphasizes environmental responsibility and climate resilience in AI development.
  - ○ **Progress:** Aims for inclusive economic growth and social empowerment.
- **Areas of Cooperation: Seven Chakras**
  - ○ **Human Capital:** It focuses on building skills and workforce readiness through AI reskilling.
  - ○ **Inclusion for Social Empowerment:** It promotes shared AI solutions that strengthen citizen-centric services and last-mile delivery.
  - ○ **Safe and Trusted AI:** It develops practical governance and safety frameworks to ensure responsible use.
  - ○ **Resilience, Innovation and Efficiency:** It supports environmentally responsible and equitable AI growth..
  - ○ **Science:** advances research and improves access to data and computing resources.

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- ○ **Democratizing AI Resources:** ensures affordable and equitable access to AI infrastructure.
  - ○ **AI for Economic Growth & Social Good:** It promotes inclusive development and impactful applications.
- **Significance:** The summit promotes global collaboration and practical, people-centric artificial intelligence aligned with development priorities and inclusive growth.

Ol Chiki Script

News: Ol Chiki script is in the news due to its centenary celebrations, including commemorative initiatives and growing institutional recognition of its legacy.

About Ol Chiki Script

Source – DD News

- Ol Chiki is the **official script of the Santhali language**, a prominent tribal language with strong oral traditions.
- **Developed by:** It was **developed in 1925 by Pandit Raghunath Murmu** to provide a scientific and dedicated **writing system for Santhali.**
- **National Recognition**
  - ○ The **Constitution of India** was **officially translated into Santhali** using the Ol Chiki script and released in **December 2025.**
  - ○ The Government of India issued a **₹100 commemorative coin** and a **postage stamp to mark 100 years of the script.**
- **Key linguistic features include**
  - ○ It is designed exclusively for the Santhali language.
  - ○ It has 30 letters representing vowels and consonants.
  - ○ Each symbol corresponds directly to a specific sound.
  - ○ It accurately captures glottal stops and unique phonetic elements.
- **Significance:** It strengthened linguistic identity, enabled formal education and governance use, and affirmed the cultural heritage and intellectual traditions of the Santhal community.

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Twin Tube Road-Cum-Rail Tunnel Project

News: The Cabinet Committee on Economic Affairs has approved construction of India's first underwater twin tube road-cum-rail tunnel project.

About Twin Tube Road-Cum-Rail Tunnel Project

Figure 4. Source – Times Now

- It is **India's first underwater road-cum-rail tunnel project** designed for integrated high-capacity transport connectivity.
- **Location:** The project will be built beneath the **Brahmaputra River in Assam**.
- **Connectivity:** It will connect **Gohpur on NH-15 to Numaligarh on NH-715.**.
- **Project Details**
  - **Length:** Total project length is 34 km, including a 15.79 km underwater tunnel.
  - **Cost:** The total capital cost is Rs. 18,662 crore.
  - **Construction Mode:** It will be built under the Engineering, Procurement and Construction (EPC) mode.
  - **Distance Reduction:** The distance will **reduce from 240 km to 34 km.**
  - **Travel Time Reduction:** Travel time will reduce from about 6 hours to 20 minutes.
- **Key Features**
  - **Twin Parallel Tunnels:** Two tunnels enable smooth road and rail movement.
  - **Underwater Engineering:** It will be India's first underwater road-cum-rail tunnel and second in the world.
  - **Multimodal Integration:** Integrates key railway sections – the **Rangia-Mukongselek line under the Rangia Division of Northeast Frontier Railway (NFR)** on the Gohpur side and the **Furkating-Mariani loop line** under the Tinsukia Division of NFR on the Numaligarh side.
  - **Alternative route:** It provides an alternative to the existing route that passes through the ecologically sensitive **Kaziranga National Park**.
- **Significance:** The project will **improve connectivity, enhance freight efficiency, reduce logistics cost, boost tourism, and support economic and strategic growth** in the Northeast region.

SAHI and BODH Initiatives

News: The Union Minister of Health and Family Welfare will launch two key national initiatives SAHI & BODH at the India AI Summit at Bharat Mandapam.

About SAHI (Strategy for Artificial Intelligence in Healthcare for India)

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Source – PIB

- **SAHI** stands for **Strategy for Artificial Intelligence in Healthcare for India.**
- **About:** SAHI is a national guidance framework **to enable the safe, ethical, evidence-based, and inclusive adoption of Artificial Intelligence** across India's healthcare system.
- **Aim: To provide strategic direction on governance, data stewardship, validation, deployment, and monitoring of AI solutions along with** supporting States and institutions in responsible adoption aligned with public health priorities.
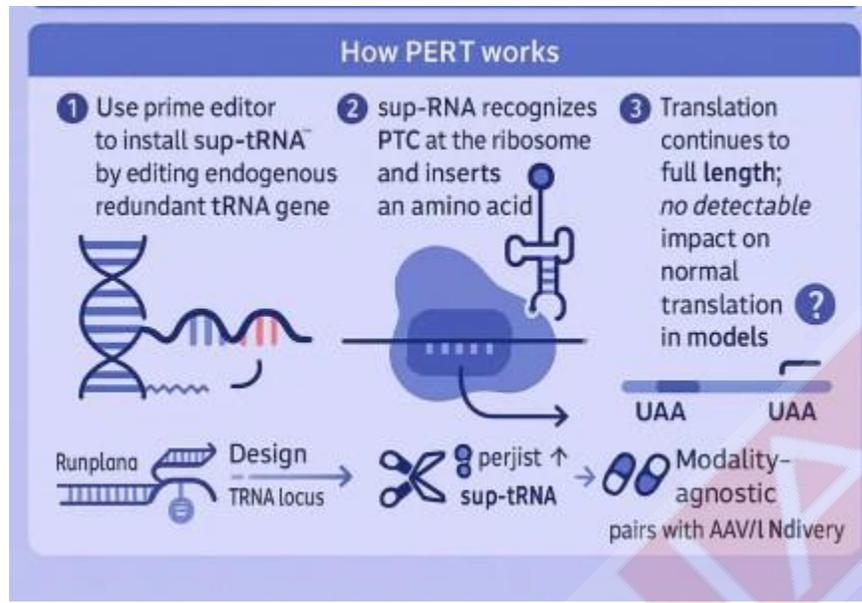
About BODH (Benchmarking Open Data Platform for Health AI)

- **BODH** stands for **Benchmarking Open Data Platform for Health AI**
- **Developed by:** Indian Institute of Technology Kanpur in collaboration with the National Health Authority
- It is a **privacy-preserving benchmarking platform** that enables **rigorous evaluation of AI models using diverse, real-world health data** without sharing underlying datasets.
- It is **designed to strengthen trust, transparency, and quality assurance in Health AI deployment** as a digital public good under the Ayushman Bharat Digital Mission.

Prime-Editing-mediated Readthrough of premature Termination codons (PERT)

News: Researchers from the Broad Institute recently reported a new gene-editing strategy called Prime Editing–Mediated Readthrough of Premature Termination Codons (PERT) that may enable a single treatment to address many genetic diseases caused by nonsense mutations.

About Prime Editing–Mediated Readthrough of Premature Termination Codons (PERT)

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Source: dcard

- PERT is a genome-editing strategy designed to treat genetic diseases caused by nonsense mutations, which prematurely halt protein production.
- **Problem addressed** – Nonsense mutations introduce premature termination codons (PTCs) in mRNA, causing early stoppage of translation and resulting in incomplete, nonfunctional proteins responsible for many inherited disorders.
- **Core technology used** – PERT is based on prime editing, an advanced CRISPR/Cas9-based system that works as a precise "search-and-replace" tool and does not create double-strand breaks in DNA.
- **Key mechanism** – PERT does not directly correct the disease-causing mutation. Instead, it inserts an engineered suppressor transfer RNA (tRNA) into the genome.
- **Role of suppressor tRNA** – The engineered tRNA recognizes premature stop codons and inserts an amino acid in place of the stop signal, enabling the ribosome to continue translation and produce a full-length functional protein.
- **Unique feature** – The suppressor tRNA is inserted at a redundant tRNA gene site, ensuring stable expression without disrupting essential genes, and making the strategy independent of the specific mutated gene.
- **Advantages & Limitation** – A single PERT-based therapy could potentially treat multiple unrelated genetic diseases caused by nonsense mutations, reducing time and cost of drug development; however, the technology is still in early research stages and requires further animal and clinical testing to establish safety and long-term efficacy.

Exercise MILAN 2026

News- Indian Navy inaugurated MILAN Village on 15 February 2026 at Eastern Naval Command as part of Exercise MILAN 2026 events.

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Figure 5. Source- Jagranjosh

About Exercise MILAN

● Exercise MILAN is a **biennial multilateral naval exercise** hosted **by the Indian Navy.**

● **Origin**: It was launched **in 1995 under the Andaman and Nicobar Command.**

● **Location**: Exercise MILAN 2026 is being **held at Visakhapatnam** from **15 to 25 February 2026.**

● **Theme**: The theme is **"Camaraderie, Cooperation, Collaboration."**

● **Aim** : It aims to foster mutual understanding, trust, and professional interaction among maritime partners for a free, open, inclusive, and rules-based maritime order.

● **Phases**: The exercise typically comprises **two Phase:**

○ **Harbor Phase:** Focuses on professional seminars, cultural exchanges, and social interactions (e.g., the MILAN Village).

○ **Sea Phase:** Involves complex maritime maneuvers including anti-submarine warfare, air defense, and search-and-rescue operations.

● **Aligned with**: It aligns with India's **SAGAR** (Security and Growth for All in the Region) and the newly conceptualised **MAHASAGAR** (Mutual and Holistic Advancement for Security and Growth Across Regions) initiatives.

Bodhan AI

News- Education Minister Dharmendra Pradhan announced integration of AI tools in teaching, following the launch of Bodhan AI at IIT Madras.

About Bodhan AI

● Bodhan AI is a **not-for-profit organisation** created **to build the Bharat EduAI Stack for AI-based education across all levels.**

● **Launched by:** It was launched by **Education Minister Dharmendra Pradhan** under the **Education Ministry.**

● **Anchoring Institute:** It is developed at the Centre of Excellence in AI for Education hosted by **IIT Madras.**

● **Funding:** It is **supported by an initial ₹500 crore** allocation announced in the Union Budget.

● **Aim:** It aims to make education equitable, high quality, affordable, and accessible by embedding AI to support students, teachers, and institutions.

Key Initiatives

● **Bharat EduAI Stack:** Bodhan AI is developing this as Digital Public Infrastructure (DPI), similar to UPI, to provide open and interoperable AI tools for large-scale educational use.

● **Target Areas:** The platform focuses on personalised student learning, AI support for teachers and parents, and data-informed institutional administration.

● **Multilingual Support:** It aims to build AI capabilities for Indian languages and dialects to ensure inclusive access.

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● **Sovereign Infrastructure:** It prioritises building sovereign AI models and infrastructure aligned with India-centric educational needs.

United Nations Office for Disarmament Affairs (UNODA)

News– The Indian Army is hosting the UN Fellowship Training Programme on Small Arms and Light Weapons Control for the Asia-Pacific region.

Figure 6. Source- UN

About United Nations Office for Disarmament Affairs (UNODA)

● It is a United Nations Secretariat office **responsible for promoting global disarmament and arms control.**

● **Established:** It was **established in January 1998** as the **Department for Disarmament Affairs under UN reforms.**

● **Headquarters:** Its headquarters is **located in New York, USA.**

● **Primary Goal:** Its main goal is the **complete elimination of weapons of mass destruction and strict control of conventional weapons.**

● **Organisation structure**

○ It is led by an Under-Secretary-General and High Representative.

○ It comprises **five branches**, including the **Weapons of Mass Destruction Branch (WMD),** the **Conventional Arms Branch (CAB)**, the **Information and Outreach Branch (IOB),** the **Conference on Disarmament Secretariat and Conference Support Branch**, and the **Regional Disarmament Branch (RDB)**, which manages three regional centres.

Key Functions

● **Support for Disarmament of Weapons of Mass Destruction:** It supports multilateral efforts for disarmament and non-proliferation of nuclear, chemical, and biological weapons.

● **Control of Conventional Weapons:** It promotes transparency, confidence-building, and practical measures to curb the flow of small arms.

● **Support to the Conference on Disarmament:** It provides organisational and substantive support to the Conference on Disarmament, which is a multilateral negotiating forum.

● **Regional and Advisory Support:** It offers advisory services to member states and coordinates regional disarmament centres and activities.

Piton de la Fournaise

News: Piton de la Fournaise on Reunion Island erupted again, marking its second eruption of the year.
About Piton de la Fournaise

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Figure 7. Source: Volcanodiscovery

- It is one of the **world's most active and productive volcanoes.**
- **Type:** It is a **typical basaltic shield volcano.**
- **Location:** It is located on the **east–southeastern edge** of the French island **La Réunion** in the western Indian Ocean.
- **Age:** It is **about 530,000 years old.**
- **Height:** 2632 meters
- It is **in a phase of frequent but short-lived eruptions** that start with lava fountains and produce large lava flows.
- **Status:** In 2010, it gained global recognition after being included in a **UNESCO World Heritage Site.**

Privileges Committee

News- Stand-up comedian Kunal Kamra and Shiv Sena leader Sushma Andhare appeared before Maharashtra Legislative Council Privileges Committee regarding alleged derogatory remarks.

About Privileges Committee
- The Privileges Committee examines cases of breach of privilege of the House, its members, or its committees and makes recommendations.
- **Origin:** Parliamentary privileges in India originated from the Charter Act, 1833 and later developed through the Government of India Act, 1935.

Sources of Parliamentary Privileges- Privileges of Parliament and State Legislatures are derived from several sources:
- **Constitution of India**: Articles 105 and 194 grant privileges to Parliament and State Legislatures.
- **Article 122 and Article 212** bar courts from questioning legislative proceedings on procedural grounds.
- **Parliamentary conventions** based on British parliamentary practices.
- **Statutory laws** enacted by Parliament.
- **Rules of Procedure and Conduct of Business** of both Houses.
- **Judicial interpretations** by constitutional courts.

State Legislatures also have their own Privileges Committees, functioning under the privileges granted to them under Article 194.

Power and Functions of the Privileges Committee
- It examines every question of breach of privilege referred by the House or the Speaker/Chairman.
- It determines, based on facts, whether a breach of privilege has occurred.
- It makes recommendations to the House regarding action to be taken.
- It states the procedure for implementing its recommendations.
- It may conduct preliminary inquiry in defection-related petitions if referred by the Speaker/Chairman.

Composition of the Privileges Committee:
- The committee has **15 members in Lok Sabha** and **10 members in Rajya Sabha**.
- Members are **nominated by the Speaker in Lok Sabha** and by the **Chairman in Rajya Sabha.**
- In Rajya Sabha, the **Deputy Chairman heads the committee.**

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Procedure

- **Initiation Stage:** A question of privilege is raised only with the consent of the Speaker or the Chairman, who decides whether the matter should proceed further.
- **Reference Decision:** After consent, the House may choose to consider the matter directly or refer it to the Committee of Privileges for detailed examination.
- **Committee Inquiry:** The Committee studies the issue carefully, examines the facts of the case, and prepares a report along with its recommendations.
- **Final Decision:** The House considers the committee's report and takes the final action in accordance with its decision.

Punishment

- If a breach of privilege or contempt of the House is established, punishment may include warning, reprimand, imprisonment, or enforcement of attendance.
- For members, penalties may include suspension or expulsion.
- Custody or punishment may be limited to the duration of the House session.

Pistol Shrimp

News– Researchers from the School of Industrial Fisheries at Cochin University of Science and Technology discovered a new pistol shrimp species in Kochi backwaters.
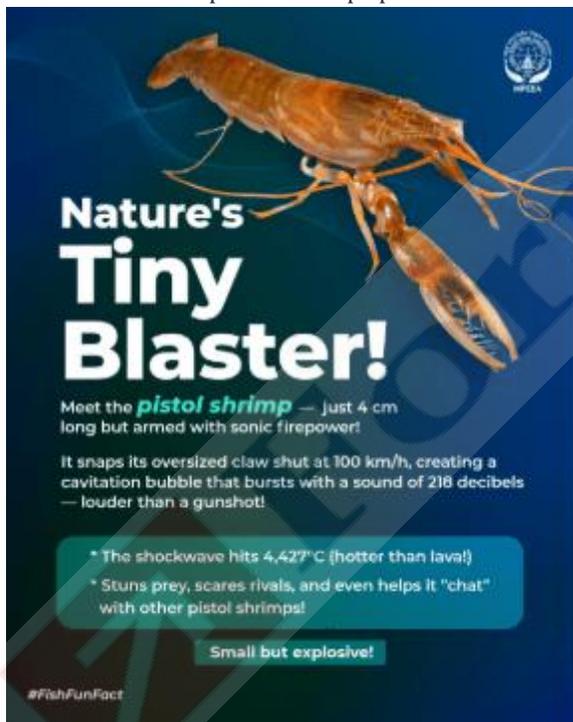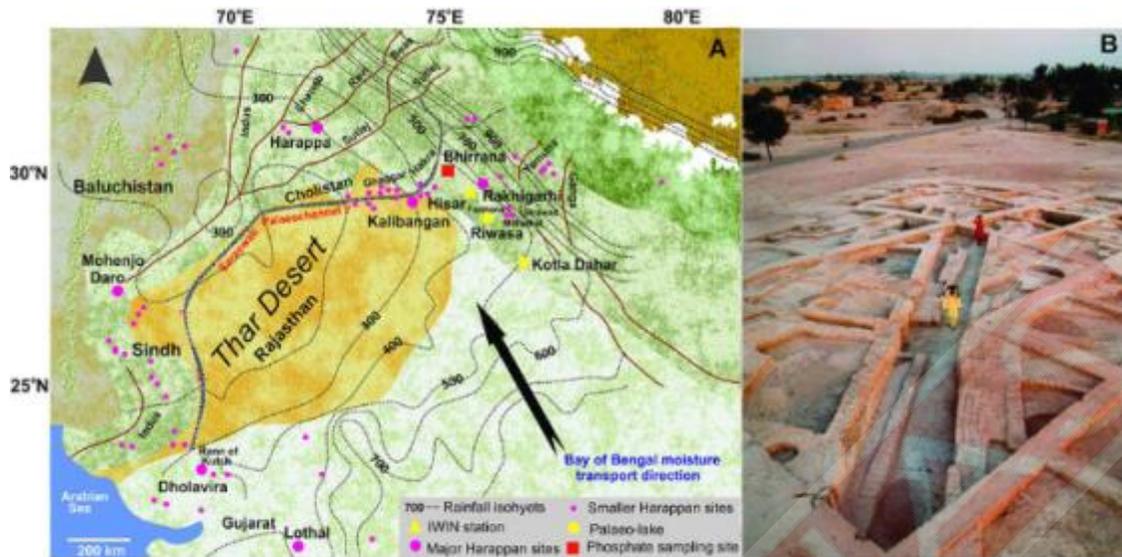

Figure 8. Source- MPEDA

About Pistol Shrimp

- The **Pistol Shrimp**, also known as the **Snapping Shrimp**, is a marine crustacean classified under the family **Alpheidae**.
- It has one disproportionately large claw that can generate an intense underwater shockwave.
- The snapping mechanism produces a **cavitation bubble** rather than firing a solid object.
- When this bubble collapses, it causes **sonoluminescence**, resulting in a brief flash of light.
- The temperature within the collapsing bubble may rise to nearly **4,400°C**, comparable to the surface temperature of the Sun.
- The snapping sound can reach approximately **218 decibels**, ranking among the loudest biological noises in marine environments.
- These shrimps are widely distributed worldwide, particularly in **tropical and temperate coral reefs and seagrass habitats**; they typically inhabit burrows and, in some species, form **mutualistic associations with goby fishes**.

Bhirrana Site

News- Researchers using radiocarbon dating at Bhirrana indicate that the Harappan Civilisation of the Indian subcontinent could be over 8,000 years old.

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Source: Harappa.com

About Bhirrana Site

- Bhirrana is an archaeological site that shows **early settlement phases of the Harappan Civilisation.**
- **Location**: It is located in **present-day Haryana** along the **paleo-channels of the Ghaggar river.**
- **Excavated by**: The site was excavated by **Shri L. S. Rao** of the Archaeological Survey of India.
- **Estimated Age**: Radiocarbon dating indicates that settlement at Bhirrana **dates back nearly 8,000 years.**
- **Evolutionary Phases (Bhirrana)-** The cultural development at Bhirrana is divided into four successive phases showing gradual settlement growth.
  - **Period-IA (Hakra Wares Culture):** This phase shows well-plastered subterranean dwelling pits dug into natural soil, along with a ceramic assemblage.
  - **Period-IB (Early Harappan):** During this phase, houses were built with mud bricks, and pottery showed six fabrics similar to Kalibanga-I.
  - **Period-IIA (Early Mature Harappan):** This phase shows transformation in the city layout, and the settlement was enclosed by a mud-brick fortification wall.
  - **Period-IIB (Mature Harappan):** This final phase shows typical Harappan antiquities, including steatite seals and associated pottery.

Key Findings

- **Material culture and artefacts:** Antiquities include beads of semiprecious stones, terracotta objects, copper bangles, and bone objects.
- **Settlement and cultural sequence:** Excavations revealed a 4.20-metre thick deposit showing a four-fold cultural sequence.

AI-Preneurs of India

News: Atal Innovation Mission under NITI Aayog launched AI-Preneurs of India at the India AI Impact Summit 2026 at Bharat Mandapam, New Delhi.

About AI-Preneurs of India

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- **Launched by:** NITI Aayog
- It is **a flagship coffee table publication** that chronicles the journeys of 45 pioneering AI startups that are shaping solutions for real-world challenges.
- The launch **marked the 7th edition of AIM's Innovations For You coffee table series.**
- **Features of the Book**
  - It features **startups working across more than 30 sector domains**, including healthcare, education, sustainability, mobility, sports analytics, deep tech, and social impact.
  - The book **draws from a nationwide network of Atal Incubation Centres** and reflects the geographic and thematic diversity of India's AI innovation landscape.

Figure 9. Source: PIB

  - The book **shows that AI innovation in India is extending far beyond traditional technology hubs.**
  - This **edition follows a founder-first storytelling approach** that captures technological breakthroughs along with motivations, challenges, and perseverance of entrepreneurs.
  - The book **highlights the human stories behind AI innovation** and **shows a shift from profit-centric narratives** to purpose-driven entrepreneurship.

Malabar Pied Hornbill

News– To protect the rare Malabar Pied Hornbill and encourage natural forest growth, the Chhattisgarh Forest Department has begun setting up six "hornbill restaurants" in the Udanti Sitanadi Tiger Reserve.

About Malabar Pied Hornbill (Anthracoceros coronatus)

- It is a member of the hornbill family (Bucerotidae) and is also referred to as the Lesser Pied Hornbill.
- **Appearance** – It is a medium-sized forest bird distinguished by its bold black-and-white coloration and a large, curved bill topped with a well-developed casque.
- **Habitat** – This species inhabits evergreen and moist deciduous forests. It is frequently

Figure 10. Source- IE

observed near human habitations, particularly where fruit-bearing trees are present.

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- **Geographical distribution** – It is found in the Western Ghats and north-eastern Himalayan foothill regions of India and Nepal, the Satpura Hills, as well as in Sri Lanka. It is confined to the Indian subcontinent.
- **Feeding behaviour** :
  - Primarily frugivorous and feeds largely on fruits.
  - During the breeding season, it may shift to a more omnivorous diet.
  - Natural predators include leopards, snakes, and the Indian Shaheen Falcon, which has recently seen an increase in population at the Udanti Sitanadi Tiger Reserve.
- **Ecological Importance** – The species serves as an important indicator of forest ecosystem health and stability, reflecting the condition of its habitat.
- **Conservation status** :
  - **IUCN Red List**: Near Threatened.
  - Estimated global population ranges between 3,000 and 32,000 mature individuals

Rajya Sabha Elections

News- The Election Commission announced biennial elections for 37 Rajya Sabha seats across 10 states, with polling scheduled on 16 March.

About Rajya Sabha Elections :

Rajya Sabha elections are indirect elections through which representatives of States and Union Territories are chosen for the Upper House.

Constitutional Provision:

- **Article 80 (1):**
  - The Rajya Sabha shall consist of the President and not more than 250 members.
  - Out of these, 12 are nominated by the President and the rest represent the States and Union Territories.
- **Article 80 (2):** The **allocation of seats in the Rajya Sabha** to the States and Union Territories shall be as specified **in the Fourth Schedule.**
- **Article 80 (3):** The members nominated by the President shall be persons having **special knowledge or practical experience in literature, science, art, or social service.**
- **Article 80 (4):** Representatives of each State are elected by the elected members of the State Legislative Assembly in accordance with **proportional representation by means of the single transferable vote.**
- **Article 80 (5):** Representatives of Union Territories are chosen in such manner as Parliament may by law prescribe.

Term: The Rajya Sabha is **not subject to dissolution**, and **one-third of its members retire every second year.**

Qualification: Article 84 of the Constitution lays down the qualifications for membership of Parliament. Qualification for the membership of the Rajya Sabha are:

  - A person must be a **citizen of India** and take an **oath or affirmation before an authorised person of the Election Commission.**
  - The person must **not be less than 30 years of age.**
  - The person must possess **other qualifications prescribed by law made by Parliament.**

Composition: At present, the Rajya Sabha has 245 seats, including elected members and nominated members.

Manner of Election:

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- ○ **Indirect Election:** Representatives of States are elected indirectly by elected members of State Legislative Assemblies.
- ○ **Voting System:** Elections follow proportional representation by means of the single transferable vote. **Representation of the People Act, 1951,** Mandates that the election is conducted through a **single transferable vote** system.
- ○ **Union Territories:** Representatives of Union Territories are chosen in a manner prescribed by Parliament.
- ○ **Polling Condition**: Polling takes place only when the number of candidates exceeds the number of vacancies.
- ○ **Open Ballot:** Voting is conducted through an open ballot under the Representation of the People Act, 1951, as amended in 2003. MLAs of political parties must show their ballot to the authorised party agent, while independent MLAs cannot show their ballot.

Anti-defection law applicability:
- ● The Election Commission clarified in July 2017 that the provisions of the **Tenth Schedule, including the anti-defection law, do not apply to Rajya Sabha elections.**
- ● Therefore, **political parties cannot issue a whip**, and members are not bound by party instructions in these elections.

Naneghat Caves

News= Over the past year, illegal constructions were reported in protected areas near = Naneghat rock-cut caves, leading to ASI criminal cases and initiation of demolition process.

About Naneghat Caves
- ● The Naneghat caves are ancient **rock-cut caves** from the **first century BCE** known for important inscriptions and trade-route significance.
- ● **Location:** They are located in a mountain pass in the **Western Ghats** between the **Konkan coast and Junna**r in **Junnar taluka of Pune district in Maharashtra.**
- ● **Commissioned by:** They were commissioned by a queen of the Satavahana dynasty, Nayanika or Naganika, likely the wife of king Satakarni.
- ● **Key features**
  - ○ **Language and Script of Inscriptions:** The caves contain Sanskrit inscriptions written in Brahmi script and in a Middle Indo-Aryan dialect.
  - ○ **Religious Affiliation and Rituals:** The inscriptions mention **Vedic and Hinduism deities** and describe **Vedic srauta rituals.**
  - ○ **Satavahana Historical Record:** They narrate details of the lives of the Satavahana royal family and record names that provide historical information about early rulers.
  - ○ **Early Numeration Symbols:** The inscriptions display the world's oldest numeration symbols for 2, 4, 6, 7 and 9 resembling modern Nagari and Hindu-Arabic numerals.

Municipal Bonds

News- The Ministry of Housing and Urban Affairs organised a high-level consultation to discuss strategies for deepening the municipal bond market.

About Municipal Bonds

A municipal bond is a debt instrument issued by municipal corporations or urban local bodies to raise funds from investors.

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Evolution in India:

- Municipal bonds **was introduced in India during the 1990s,** following the process of urban decentralisation and the reforms initiated by **the 74th Constitutional Amendment Act, 1992,** which empowered ULBs to act as independent entities.
- Municipal bonds were first issued by the **Bangalore Municipal Corporation (BMP)** in **1997**.
- **The Ahmedabad Municipal Corporation (AMC) bond of 1998 was the first issue to be rated and listed**

Concept and Mechanism: Municipal bodies borrow funds from investors and repay principal with interest over a specified period. Investors include mutual funds, banks, insurance companies, and retail investors.

Purpose: The funds raised are used to finance socio-economic development and urban infrastructure projects such as water supply, waste management, transport, and housing.

Regulatory Framework and Institutional Support

- **Regulation:** Securities and Exchange Board of India **(SEBI)** regulates issuance through the Issue and Listing of Municipal Debt Securities Regulations, 2015.
- **Policy Support:** MoHUA provides policy support and coordination with urban local bodies.
- **Financial Oversight:** RBI supervises financial transactions and ensures fiscal compliance.
- **Credit Assessment:** Credit rating agencies evaluate the creditworthiness of municipal bodies.

Types of Municipal Bonds

- **General Obligation Bonds:** Repayment is secured by overall municipal revenue, including tax income.
- **Revenue Bonds:** Repayment comes from income generated by specific projects.
- **Green Municipal Bonds:** Issued to fund environmentally sustainable infrastructure projects.

Beat the Heat

News: During Mumbai Climate Week, the Maharashtra government announced that 30 Indian cities have joined the global Beat the Heat programme.
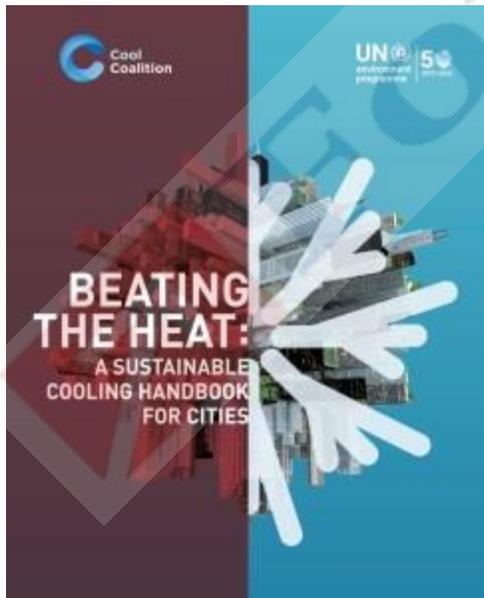
About Beat the Heat

Figure 11. Source: UNenvironment

- It is an initiative announced under COP30 Presidency (Brazil).
- **Led by:** United Nations Environment Programme (Cool Coalition)
- **Aim:** To translate global climate commitments into practical local actions to reduce extreme heat risks.
- **Features:**
  - The programme **helps cities assess heat risks and identify areas** that need cooling solutions.
  - It **promotes increasing green cover, using cool roofs, and adopting eco-friendly urban planning** practices.
  - It **supports the use of efficient and low-emission cooling technologies** through public procurement policies.
  - It **encourages long-term planning for heat resilience** instead of only emergency responses.
  - It **supports the Global Cooling Pledge,** under which 72 countries are working to reduce cooling-related emissions by over 60% by 2050 while expanding access to sustainable cooling.

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- **India's Participation:** India has 44 cities participating in this international initiative, of which Maharashtra accounts for a major share—nearly 70% of the total Indian cities involved.

VoicERA

News: Ministry of Electronics and Information Technology recently launched by VoicERA.

About VoicERA

Figure 12. Source: NewsonAir

- **VoicERA** is an open-source, end-to-end Voice AI technology stack that was launched at the India AI Impact Summit 2026.
- The platform is **deployed on the BHASHINI National Language Infrastructure** to support multilingual voice and language AI systems across India.
- **Led by:** Digital India BHASHINI Division under the **Ministry of Electronics and Information Technology.**
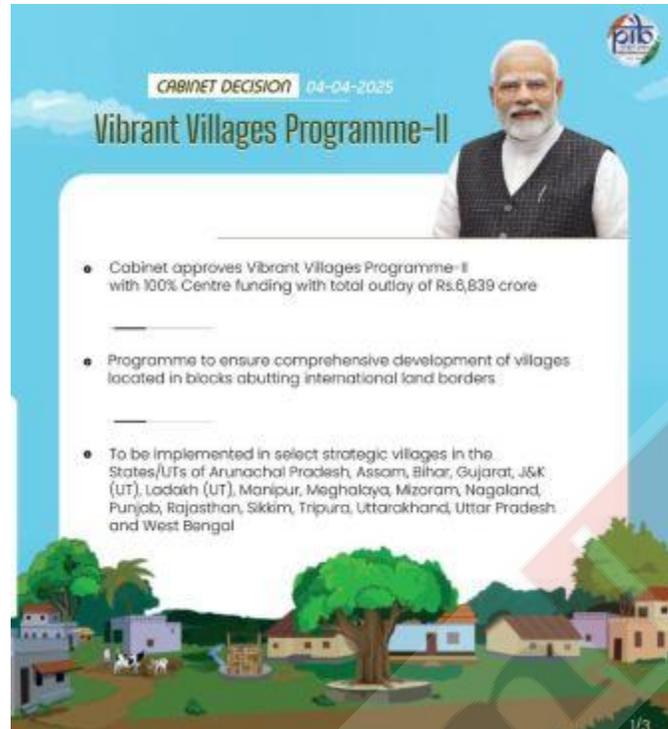- The development of VoicERA involved **collaboration with organizations such as EkStep Foundation, IIIT Bengaluru, and AI4Bharat.**
- **Features:**
  - VoicERA is **designed to be open, modular, interoperable, cloud-deployable, and on-premise ready** so that organizations can easily build scalable voice systems.
  - The platform **helps reduce duplication of development effort and prevents vendor lock-in** by allowing multiple stakeholders to build on a shared infrastructure.
  - **VoicERA expands BHASHINI's capabilities** beyond translation into real-time speech systems, conversational AI, and multilingual telephony services.
  - The system **enables government departments to quickly launch voice-based citizen services in areas** such as agriculture advice, education support, grievance redressal, and public scheme information.
- **Significance:** VoicERA strengthens India's Digital Public Infrastructure by providing a secure, scalable, and inclusive voice interface for population-scale public services.

Vibrant Villages Programme–II (VVP-II)

News: Union Home Minister Amit Shah launched Vibrant Villages Programme–II in Nathanpur village of Assam with an outlay of ₹6,839 crore.

About Vibrant Villages Programme–II (VVP-II)

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Source – PIB

- It is a programme for **comprehensive development of villages in blocks along international land borders**, expanding the **focus beyond northern border areas** to other international border regions.
- **Nodal Ministry: Ministry of Home Affairs (MoHA)**
- **Type of Scheme:** It is a **Central Sector Scheme** approved with an outlay of ₹6,839 crore.
- **Objectives:** The programme aims to **improve living conditions, create livelihood opportunities, ensure prosperous and safe borders, control trans-border crime, and integrate border populations with the nation**.
- **Implementation Period:** It will be **implemented till financial year 2028–29.**
- **Geographic Coverage:** It will cover **selected strategic villages** along international land borders in **17 states and UTs**, **excluding** northern border areas already **covered under Vibrant Villages Programme–I.**

About Vibrant Villages Programme (VVP-I)

- It was approved as a **Centrally Sponsored Scheme on 15 February 2023 for northern border villages.**
- It covered **662 villages across Arunachal Pradesh, Himachal Pradesh, Sikkim, Uttarakhand, and Ladakh.**
- It focused on **livelihood generation, connectivity, infrastructure, and basic services** to encourage people to stay in border villages.

Himalayan Salamander

News: Every monsoon in Darjeeling hills, breeding habitats of the Himalayan salamander are shrinking, prompting restoration efforts by the West Bengal Forest Department.

About Himalayan Salamander

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Figure 13. Source – East Mojo

- The **Himalayan salamander (Tylototriton himalayanus)** is a rare, semi-aquatic amphibian **found in the hilly regions of the Eastern Himalaya**.
- It is **one of only two salamander species** in India, the other **being *Tylototriton verrucosus*.**
- **Habitat:** It lives in **cold mountainous regions**, including forests, rice fields, tea gardens, and shores of mountain ponds and lakes.
- **Distribution:** It occurs from **Nepal eastwards through the eastern Himalayas to Southeast Asia**, including India, Bhutan, Myanmar, Thailand, Vietnam, and Southwest China.
  - In **India**, it is recorded from several northeastern regions, including the **Darjeeling district.**
- **Key characteristics**
  - **Body structure:** It has a **lizard-like body** with a blunt oval head, flat snout, distinct bony ridges, rows of knob-like dorsal warts, and a laterally compressed tail with a fin fold.
  - **Colouration:** Its body is **dark to light brown** on the upper side, becomes light brown on the sides, and appears creamy on the lower side
  - **Behavior:** It emerges from beneath the forest floor during the monsoon to breed, performs a **slow mating dance for about 90 minutes**, and **migrates to seasonal ponds** to lay eggs on semi-submerged vegetation.
- **Threat**
  - Habitat destruction
  - Pollution
  - Freshwater fish introduction
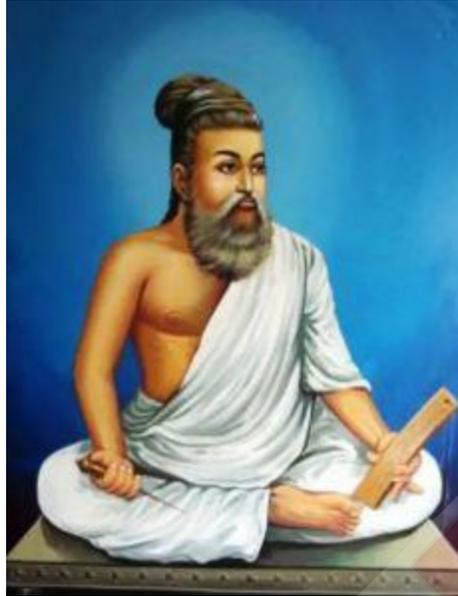 - Killing for food or medicinal use threaten survival
- **Conservation Status:**
  - **Schedule I** of the Wildlife (Protection) Act, 1972
  - **Least Concern by the IUCN**

Tirukkural

News: Thiruvalluvar was invoked by Prime Minister Narendra Modi on Thiruvalluvar Day, praising his works and urging people to read Thirukkural.

About Thirukkural

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Source – Bharat Bharati

- The *Tirukkural* (literally "Sacred Couplets") is a **classical Tamil text** consisting of 1,330 **couplets on ethics, politics, economics, and love.**
- **Authored by:** It was **authored by Thiruvalluvar.**
- **Timeline:** It was composed during the **post-Sangam period**, roughly **between 100 CE and 500 CE.**
- **The Three Pillars:** The text is **divided into three sections** reflecting the goals of life:
    - **Aram (Virtue):** Focuses on individual ethics and moral codes (Dharma).
    - **Porul (Wealth/Polity):** Discusses governance, statecraft, and economy (Artha).
    - **Inbam (Love):** Deals with personal relationships and emotional life (Kama).
- **Key Features**
    - **Structure:** It contains **1,330 stanzas arranged into 133 chapters**, each with **ten couplets**.
    - **Ethics:** It emphasizes **moral conduct** and the **realities of human life**.
    - **Equality:** It **discourages divisions based on religion, caste, creed, and race.**
    - **Wide scope:** It discusses personal conduct, **social life, governance, justice, and family life.**
    - **Universal relevance:** It is widely **applicable across communities** and is seen as a **pillar of Tamil literary heritage.**

About Thiruvalluvar
- He was a **celebrated Tamil poet–philosopher** and moral **teacher** whose ethical vision transcended religious and cultural boundaries.
- **Titles:** He is known by **several titles**, including **Mudharpaavalar and Deivappulavar.**
- His **birthplace** is believed to be **Mylapore near Chennai.**
- His ideas emphasize **morality, education, and human welfare** through ethical action.
- **Thiruvalluvar Day:** Celebrated annually on the **second day of the Tamil month Thai (January).**

Bio-AI Mulankur

News: DBT along with the Biotechnology Industry Research Assistance Council (BIRAC), will establish "Bio-AI Mulankur" hubs in 2026.
About Bio-AI Mulankur

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Source: birac

- **"Bio-AI Mulankur" hubs is to create integrated, closed-loop research platforms** where AI-based predictions, laboratory validation and data analytics operate in a unified framework.
- **Established by:** Department of Biotechnology (DBT) and the Biotechnology Industry Research Assistance Council (BIRAC)
- The initiative **aligns with the Biotechnology for Economy, Environment, & Employment Policy.**
- **Aim:** To **strengthen high-performance biomanufacturing** to drive economic growth, environmental sustainability and employment generation.
- **Objective:** To institutionalise AI as a core scientific engine within biotechnology
- **Bio-AI hubs are proposed to be established across academia and industry** to provide **critical and novel research** leads impacting **Health, Agriculture and Environment through conglomeration of AI and Biology.**
- **Focus:** The hubs will **focus on frontier domains** including **Genomics diagnostics, Biomolecular and therapeutic design, Synthetic biology and Ayurveda-based evidence research.**

Bharat GI

News: Sundar Pichai, CEO of Google and Alphabet Inc., visited the Bharat GI Coffee Lounge at the Bharat Mandapam during the India AI Impact Summit 2026.
About Bharat GI

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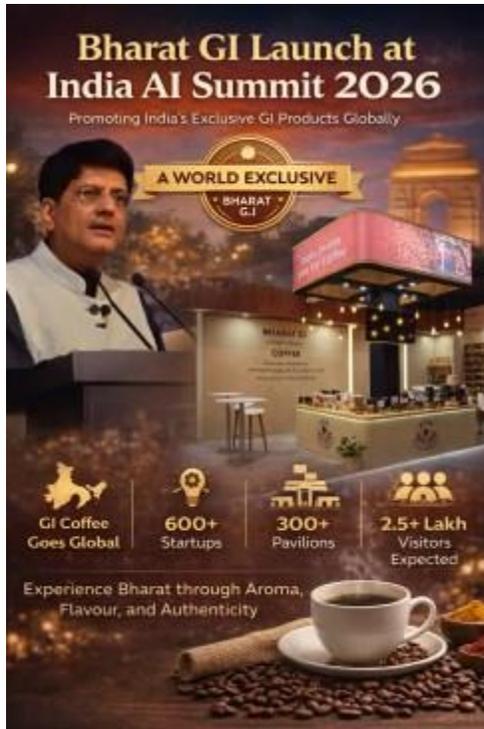**ForumIAS**

Figure 14. Source: Zee Business

● Bharat GI as a **unified national intellectual property brand** to showcase India's unique GI products to the global market.

● **Launched By:** Department for Promotion of Industry and Internal Trade (DPIIT)

● **Aim:** It is **marketed under the tagline "A World Exclusive" and aims** to **give GI products global recognition,** premium branding, and international visibility.

● **Products Covered:** It includes items such as **GI coffee, spices, handicrafts, textiles, and other region-specific products** that reflect India's cultural identity.

● **About Bharat GI Coffee**

○ Bharat GI Coffee is a **national brand** by the **Commerce Ministry.**

○ It is **to promote Geographical Indication-tagged products, and houses coffees from multiple regions** like Coorg and Araku Valley.

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