

DAILY CURRENT AFFAIRS (DCA)

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TAMIL NADU ANNOUNCES \$1 MILLION PRIZE FOR DECIPHERING INDUS VALLEY CIVILISATION SCRIPT

In News

- The Tamil Nadu Chief Minister announced a \$1 million prize for experts and organisations for **deciphering the scripts of the Indus Valley Civilisation**.

About Indus Valley Scripts

- Brief:** It is one of the world's oldest and most mysterious writing systems, associated with the Indus Valley Civilization.
- Key Features:**
 - Pictographic Nature:** The script consists of pictorial symbols, with over 400 distinct signs identified. Symbols include representations of humans, animals, plants, and geometric shapes.
 - Writing media and methods:** Found on seals, pottery, tablets, and tools. Most inscriptions are short, typically no more than 5–6 characters.
 - Logo-Syllabic System:** Scholars believe the script may combine **logograms** (symbols representing words or concepts) with syllables.
 - Right-to-Left Writing:** Most inscriptions appear to be written from right to left, although some evidence suggests a **boustrophedon style (alternating directions)**.
 - Non-Decipherable Nature:** The lack of a **Rosetta Stone-like bilingual text** or extended inscriptions has hindered decipherment. The language behind the script is unknown, though many scholars hypothesize it may have been **Dravidian or a proto-Dravidian language**.

Need for Deciphering the Indus Script

- Deciphering Past:** The Indus Valley Script holds immense potential for shedding light on both historical and linguistic aspects of the ancient Indus Valley Civilization (IVC) and its connections with later cultural developments, including Vedic practices.
- Understanding Religious Practices:** Understanding the script could clarify early practices, deities, and belief systems, which might align with or influence later religious traditions, including the **worship of Shiva (evidenced by the Pashupati seal) and fire rituals**.
 - The **Pashupati seal** hints at early **forms of Shiva worship**, which later became a central part of the **Vedic and Hindu traditions**.

About Indus Valley Civilization (IVC)

- Also known as the **Harappan Civilization**, flourished around **3300-1300 BCE** in present-day Pakistan and northwest India. Discovery by **John Marshall in 1924**.
- It is one of the world's earliest urban societies, alongside **ancient Egypt and Mesopotamia**.
- The civilization is renowned for its advanced urban planning, with well-laid cities like **Harappa and Mohenjo-Daro**, featuring grid-like streets, drainage systems, and public baths.
- The people of the IVC had a highly organized economy, engaged in trade with Mesopotamia, and were skilled in crafts like bead-making, pottery, and metallurgy.
- The civilization's decline around 1900 BCE is attributed to factors like environmental changes, river shifts, and possibly internal strife.

For more details, read **Indus Valley Civilization (IVC)**

Source: TH

358TH BIRTH ANNIVERSARY OF GURU GOBIND SINGH

Context

- The 358th birth anniversary of Guru Gobind Singh is being celebrated across India On 6 January.

About

- Guru Gobind Singh** was born on **Paush Shukla Saptami in 1666** in Patna Sahib, Bihar.
- He was the **son of Guru Tegh Bahadur**, the ninth Sikh Guru, who was martyred by Mughal Emperor Aurangzeb.
 - He became the **tenth** and final Guru of the Sikhs at the age of 9 after his father's death.
- He Passed away in **1708** at the age of 41 following a battle with Mughal forces.

Role in Shaping Sikhism and Its Principles

- He founded the Khalsa Panth** in **1699** to create a spiritual and martial community.
 - The Khalsa identity** is marked by five articles of faith: Kesh, Kara, Kanga, Kachera, and Kirpan.

- **Sikh Literature:** He was a poet, philosopher, and spiritual leader.
 - ♦ He composed the **Dasam Granth**, a collection of hymns and poetry which covers topics of spirituality, ethics, and warfare.
 - ♦ He also compiled the **Zafarnama**, a letter to Emperor Aurangzeb, which is a unique blend of courage, philosophy, and dignity.
- **Promotion of Equality and Unity:** He advocated for the dismantling of caste and societal barriers. He also promoted the concept of **Sarbat da Bhala (welfare for all)**, highlighting service to humanity as a key tenet of spiritual progress.

Relevance of teachings in contemporary world

- **Courage and Resilience:** In times of political instability, conflict, and social unrest, his resilience and courage inspire individuals and communities to stand up against oppression and fight for justice.
- **Equality and Social Justice:** In a world still grappling with caste-based discrimination, racism, and gender inequality, Guru Gobind Singh's emphasis on equality is crucial.
 - ♦ Movements like **Black Lives Matter** and the fight for gender equality resonate with his teachings.
- **Religious Freedom:** The ongoing struggle for religious freedom, including the persecution of religious minorities, demands a commitment to his values of tolerance and respect.
- **Service and Compassion:** The current global crisis of poverty, healthcare access, and environmental degradation demands collective action and compassion, mirroring his teachings on serving others.

Concluding remarks

- Guru Gobind Singh's teachings continue to resonate in today's world, offering valuable lessons on equality, courage, and service.
- His emphasis on unity, justice, and human dignity provides a powerful framework for addressing contemporary challenges, inspiring individuals and societies to work toward a more inclusive and compassionate future.

Source: IE

MEITY RELEASES DRAFT DIGITAL PERSONAL DATA PROTECTION RULES, 2025

Context

- The government released the **draft of Digital Personal Data Protection Rules, 2025** for public consultations.

- ♦ Once notified, the Rules will enable the effective implementation of the **Digital Personal Data Protection Act, 2023 (DPDP Act)**.

Key Highlights of the Draft Rules

- **Data Fiduciaries:** All major tech companies including Meta, Google, Apple, Microsoft, and Amazon are expected to be classified as significant **data fiduciaries**.
- **Data Protection Officer:** It is the person authorised by the Data Fiduciary to respond to any communication from the Data Principal for the purpose of exercise. "Data Principal" means the individual to whom the personal data relates.
 - ♦ The officer should be based in India;
 - ♦ be an individual responsible to the Board of Directors or similar governing body of the Significant Data Fiduciary.
- **Transparency:** Data Fiduciaries must provide clear and accessible information about how personal data is processed, enabling informed consent.
- **Restriction on flow of Data:** The Union Government will specify the kind of personal data which can be processed by "significant data fiduciaries"
 - ♦ It is subject to the restriction that such personal data is not transferred outside the territory of India.
- **Rights to Citizens:** Citizens are empowered with rights to demand data erasure, appoint digital nominees, and access user-friendly mechanisms to manage their data.
- **For Children:** It allows tech companies to implement a mechanism for collecting "verifiable" parental consent before processing personal data of children.
- **Data Protection Board:** The Board will function as a digital office, with a digital platform and app to enable citizens to approach it digitally and to have their complaints adjudicated.
- **Data Breach:** In the event of a data breach, data fiduciaries will have to intimate impacted individuals without delay, including the measures implemented to mitigate risk.
 - ♦ The penalty for not being able to take enough safeguards for preventing a data breach could go as high as Rs 250 crore.

About Digital Personal Data Protection Act, 2023

- **Background:** In 2017, the Ministry of Electronics and Information Technology (MeitY) established the **Justice B.N. Srikrishna Committee** to develop a data protection framework for India.
 - ◆ The first draft of the Data Protection Bill came out in 2018.
 - ◆ After various rounds of amendment in 2019 and 2021, the bill was replaced with the Digital Personal Data Protection Bill, 2022.
- **Scope:** It applies to the processing of digital personal data within India where such data is collected online, or collected offline and is digitised.
 - ◆ It also applies to such processing outside India, if it is for offering goods or services in India.
- **Consent:** Personal data may be processed only for a lawful purpose upon consent of an individual.
 - ◆ Consent may not be required for specified legitimate uses such as voluntary sharing of data by the individual or processing by the State for permits, licenses, benefits, and services.
- **Obligations for Data fiduciaries:** To maintain the accuracy of data, keep data secure, and delete data once its purpose has been met.
- **Rights to Individuals:** The right to obtain information, seek correction and erasure, and grievance redressal.
- **Exemptions:** Government agencies can be exempted in the interest of specified grounds such as security of the state, public order, and prevention of offences.
- **Data Protection Board:** To adjudicate on non-compliance with the provisions of the Act. The Data Protection Board (DPB) has **civil court powers for personal data breach complaints**.
 - ◆ Board members will be appointed for two years and will be eligible for re-appointment.
 - ◆ The central government will prescribe details such as the number of members of the Board and the selection process.

Challenges in Implementation

- **Breach of Right to Privacy:** Exemptions to data processing by the State on certain grounds may violate the fundamental right to privacy.
- **Lack of Regulation in Data Processing:** It does not regulate risks of harms arising from processing of personal data.
- **Transfer of Data Abroad:** It allows transfer of personal data outside India, which may not ensure adequate evaluation of data protection standards in the countries where transfer of personal data is allowed.
- **Short Tenure of Data Protection Board Members:** The members of the Data Protection Board will be appointed for two years and will be eligible for re-appointment.
 - ◆ The short term with scope for re-appointment may affect the independent functioning of the Board.

Significance

- **Empowering Citizens:** The rules empower citizens by giving them greater control over their data.
- **Enhanced Trust on Digital Platforms:** Provisions for informed consent, the right to erasure and grievance redressal enhance trust in digital platforms.
- **Maintain Fine Balance between Growth and Rights:** Unlike restrictive global frameworks, these rules encourage economic growth while prioritizing citizen welfare.
- **Quick Grievance Redressal:** The Data Protection Board's digital office approach would ensure quick and transparent resolution of complaints.

Source: IE

PUBLIC HEALTH NUTRITION POLICIES NEED NOVELTY

In News

- The recent evaluation published in The Lancet assesses the global progress toward the **World Health Assembly's Global Nutrition Targets (GNTs)**.

Global Nutrition Targets (GNTs)

- It is set by the World Health Assembly to track the impact of public health policies on maternal and child malnutrition.
- **Key targets:** Reduce stunting by 40% in children under 5, reduce anemia by 50% in women of reproductive age, and prevent childhood overweight.



- **Recent Evaluation (The Lancet):** Analysis of global progress from 2012-2021, with projections up to 2050.
 - ♦ Slow and insufficient progress in most countries.
 - ♦ By 2030, few countries (excluding India) are expected to meet the stunting target, and no country is expected to meet targets for low birthweight, anaemia, or childhood overweight.

Challenges to Progress:

- **Anaemia in India:** Prevalence static for 20 years, despite efforts focused on iron deficiency.
 - ♦ Recent studies reveal that iron deficiency accounts for only a third of anaemia, while unknown causes make up another third.

How to reduce stunting, anaemia
The prevalence of anaemia has remained static in India for the last two decades

- The cause of anaemia in India is presumed to be iron deficiency
- But large surveys reveal that iron deficiency accounts for only a third of anaemia. Unknown causes account for a third of anaemia
- Rather than focussing on select nutrient deficiencies, the focus should to diversify diets effectively
- Measuring anaemia using capillary blood may not be correct. Venous blood-based anaemia prevalence is roughly half the capillary blood-based prevalence
- Stunting actively occurs within the first two years of life. Stunting increases from about 7-8% at birth to near 40% at two years of age
- Energy intake is the driver of growth in the first two years. The most energy-dense food is oil
- Average fat intake of poor children in India is only 7 grams per day, versus the requirement of 30-40 grams per day

A medley of nutrients prevents anaemia

- ♦ A study showed increased anaemia when school meals were stopped, but not due to iron deficiency, suggesting the need for a diverse diet.

- **Measurement Issues:** Different methods for measuring anaemia (venous vs. capillary blood) yield varying results, raising concerns about the accuracy of data.
 - ♦ Diagnostic cut-offs for anaemia and stunting may not be universally applicable, and more accurate metrics are needed.
- **Stunting:** Stunting is most prevalent in the first two years of life. Overfeeding after age 2 may lead to being overweight instead of addressing stunting.
 - ♦ In India, stunting increases from 7-8% at birth to nearly 40% by two years of age.
 - ♦ Early prevention (within the first two years) is key to addressing stunting.
- **Dietary Concerns for Stunting:** Poor children in India consume much less fat than needed (7 grams per day vs. the required 30-40 grams).
 - ♦ New POSHAN guidelines now include oil in feeding rations for children under 3, which is a positive step.
- **Childhood Overweight:** Overweight is increasing globally, but it's still lower than undernutrition rates.
 - ♦ However, "metabolic overnutrition" (risk of non-communicable diseases) affects around 50% of Indian children aged 5-19, including those who are stunted or underweight.
 - ♦ Overnutrition should be an important policy focus, alongside undernutrition.

Related Initiatives in India

- India has multiple national and local initiatives aimed at combating hunger and malnutrition, focusing on vulnerable populations like low-income families, children, and the elderly.
- **National Food Security Act (NFSA)** Provides subsidized food grains to 75% of the rural population and 50% of the urban population, covering 81 crore beneficiaries, including 16 crore women.
- **Pradhan Mantri Garib Kalyan Anna Yojana (PMGKAY)** launched to support the poor during COVID-19, extended until 2029, providing free food grains to 81.35 crore beneficiaries.
- **PM POSHAN (POshan SHAKti Nirman) Scheme** aimed at improving children's nutritional status in schools, with a budget of 130,794.90 crore for 2021-2026, targeting hunger and school attendance.
- **Antyodaya Anna Yojana (AAY)** focuses on food security for the most vulnerable, supporting over 8.92 crore individuals, including over 2 crore women.

- **Fortified rice**, enhanced with vitamins and minerals, has been distributed through the Public Distribution System (PDS), totaling 406 lakh metric tonnes by March 2024.
- The government **manages price volatility** through the **Price Stabilization Fund (PSF)** and buffers for commodities like onions, ensuring affordability for low-income groups.
- In 2023, the government launched **Bharat Dal** and subsidized grains like **Bharat Atta and Bharat Rice** through NAFED, NCCF, and Kendriya Bhandar to maintain affordability.

Suggestions and the Way Forward:

- India's food security initiatives focus on increasing agricultural productivity, improving distribution systems, and ensuring affordable food.
 - ♦ These efforts, along with **nutritional support and sustainable practices**, are crucial for long-term food security.
- India needs to fill gaps in the nutritional composition of daily diets, focusing on sustainable and nutrient-dense foods.
 - ♦ Incorporating climate-smart crops like millets into daily diets could prevent nutritional deficiencies and diet-related non-communicable diseases (NCDs).
- Additionally, India must strengthen its data management, improve food distribution accountability, enhance resource management, invest in nutrition education

Source: TH

EXPANSION OF GREAT NICOBAR PROJECT

Context

- The Union Shipping Ministry has proposed a major expansion of the 72,000 crore mega-infrastructure project on Great Nicobar Island.

The Great Nicobar project

- **Implementing authority:** The project is being implemented by the Port Blair-based Andaman and Nicobar Islands Integrated Development Corporation Ltd (**ANIIDCO**).
- **The Project involves** developing an **International Container Transshipment Terminal (ICTT)**, an international airport, township development, and a **450 MVA gas and solar-based power plant** on the island.
 - ♦ The site for the ICTT and power plant is **Galathea Bay** on the southeastern corner

of Great Nicobar Island, where there is no human habitation.

The Andaman and Nicobar Islands Integrated Development Corporation (ANIIDCO)

- **ANIIDCO is a quasi-government agency**, incorporated in **1988** under the Companies Act.
- **Its objective** is to develop and commercially exploit natural resources for the balanced and environment friendly development of the territory.
- **Its main activities** include trading of petroleum products, Indian made foreign liquor and milk, managing tourism resorts and infrastructure development for tourism and fisheries.

Significance of the Project

- **Economic Growth:** The International Container Transshipment Terminal (ICTT) will position Great Nicobar as a key hub in global maritime trade, boosting regional economic growth.
- **Strategic Importance:** The project enhances India's maritime capabilities and reduces dependence on foreign ports for cargo transshipment.
- **Sustainability:** The **450 MVA** gas and solar-based power plant will provide renewable energy, reducing reliance on fossil fuels.

What are the new additions?

- The project includes an **international cruise terminal and high-end tourism infrastructure**, aimed at transforming the island into a global port-led city with sustainable eco-tourism.
- The Shipping Ministry has also sought **100 acres** of land with a seafront for a proposed ship building and ship breaking facility, and an export-import port.

Concerns associated with the project

- **Ecological degradation:** It will lead to the destruction of around **33,000 acres** of biodiversity-rich forests and will threaten marine ecosystems, including coral reefs and nesting grounds for endangered species.
- **Humanitarian Concerns:** The project will lead to the displacement of indigenous communities, **like Payuh** with traditional rights over **Meroë and Menchal Islands**, disrupting their livelihoods and cultural heritage.
- **Transparency Issues:** Multiple requests for detailed project information were denied under **Section 8(1)(a) of the RTI Act**, citing reasons of sovereignty, integrity, and security of the nation.

Concluding remarks

- While the Great Nicobar Project aims to boost economic growth and strategic presence, it risks environmental damage and indigenous displacement.
- A transparent, consultative, and ecologically sensitive approach is crucial to balance development with biodiversity conservation and safeguard the rights of local communities.

Andaman and Nicobar Islands

- **Location:** The islands are located 1,300 km southeast of the Indian mainland in the Bay of Bengal.
 - ♦ It extends from 6° 45' N to 13° 41' N and from 92° 12' E to 93° 57' E.
- This archipelago is composed of more than 500 big and small islands, which are divided into two distinct groups of islands – **The Andaman Islands and the Nicobar Islands.**
 - ♦ **'Ten Degree Channel'** separates the Andaman Islands in the north from the Nicobar Islands in the south.

The Andaman Islands

- These islands are divided into three major sub-groups – **North Andaman, Middle Andaman, and South Andaman.**
- The capital city of the Andaman & Nicobar Islands **Port Blair** is located in **South Andaman.**

The Nicobar Islands

- These islands are divided into three major sub-groups – **Northern Group, Central Group, and Southern Group.**
 - ♦ The Great Nicobar is the largest and the southernmost island in the group located in the Southern Group.
 - ♦ India's southernmost point **'Indira Point'** is located at the southern tip of the Great Nicobar.

Other Features

- Most of these islands have a volcanic base and are made of tertiary sandstone, limestone, and shale.
 - ♦ **The Barren and Narcondam islands,** north of Port Blair, are volcanic islands.
 - ♦ Some of the islands are fringed with coral reefs.

- **Saddle Peak (737 m)** in North Andaman is the highest peak in the Andaman and Nicobar Islands.
- The names of the following three islands were changed in 2018:
 - ♦ Ross Island – renamed as Netaji Subhash Chandra Bose Dweep
 - ♦ Neil Island – renamed as Shaheed Dweep
 - ♦ Havelock Island – renamed as Swaraj Dweep



Source: TH

NANOPORE TECHNOLOGY

In News

- Nanopore technology is a revolutionary method for analyzing single molecules, particularly DNA and RNA.

How nanopore technology works?

- **Nanopore Creation:** A single or a few tiny pores are embedded in a membrane, which can be made of materials like silicon, graphene, or biological membranes (such as lipid bilayers).

- **Molecule Passage:** Molecules, such as DNA strands, are driven through these nanopores, often by applying an electric field. As the molecule passes through, it partially obstructs the flow of ions.
- **Signal Detection:** The obstruction creates a change in electrical current that is proportional to the size and structure of the molecule. This can reveal vital information such as:
 - ♦ The sequence of bases in DNA or RNA
 - ♦ The size of proteins or other large molecules
 - ♦ The conformation or shape of the molecule

Advantages of Nanopore Technology

- **High Resolution:** Offers detailed insights into molecular properties.
- **Real-time Analysis:** Molecules can be analyzed as they pass through the nanopore, providing dynamic data.
- **No PCR or Amplification Required:** Unlike traditional sequencing methods, nanopore technology can directly analyze DNA without the need for PCR amplification, making the process faster and more efficient.

Applications

- **DNA Sequencing:** It allows for the rapid, cost-effective sequencing of genomes, enabling advances in personalized medicine and genetic research.
- **Protein Analysis:** Nanopores can be used to study proteins and their interactions, providing insights into diseases and biological processes.
- **Biomarker Detection:** This technology is useful for detecting biomarkers in biological fluids, paving the way for non-invasive diagnostics.
- **Environmental and Food Safety Testing:** Nanopore technology can be applied to detect contaminants in food and water, aiding in health and safety.

Source: Earth.com

KERALA PROPOSED AMENDMENTS TO THE FOREST ACT

Context

- The Kerala government has brought in a Bill to amend the **Kerala Forest Act, 1961**.

About

- The Kerala Forest (Amendment) Bill, 2024 seeks to address environmental and forest **management issues in Kerala**, with a primary focus on preventing the dumping of waste into

rivers and other water bodies connected to forest areas.

- ♦ However, some provisions of the Bill have **raised concerns among farmer organizations and local residents**.

Key Amendments

- **Arrest and Detention Powers:** The Bill empowers forest officers to arrest or detain individuals suspected of forest-related offenses without a warrant. This power extends to areas outside forest boundaries, raising concerns about potential misuse, especially with the expanded definition of "forest officer" to include temporary staff.
- **Expanded Definition of Forest Officer:** The inclusion of beat forest officers, tribal watchers, and forest watchers—many of whom are appointed temporarily and may be influenced by political recommendations—has raised alarm about the misuse of power and potential for unjust actions.
- **Impact on Local Rivers:** By categorizing the dumping of waste into rivers that flow into forest areas as an offense, the Bill extends the scope of the Act beyond forest boundaries.
 - ♦ Many rivers in Kerala pass through populated areas before entering forests, raising fears of increased control by forest officials over non-forest regions, potentially penalizing local residents.
- **Penalty increased:** The existing fine of Rs 1,000 has been increased to Rs 25,000 for petty forest crimes.
 - ♦ Certain other fines to the tune of Rs 25,000 have been increased to Rs 50,000.

Source: TH

NEWS IN SHORT

WINTER CHAR DHAM

Context

- The Uttarakhand government inaugurated the winter Char Dham circuit to boost pilgrimage tourism in winter.

What is Char Dham?

- **Four sacred places** namely, **Gangotri, Yamunotri, Kedarnath and Badrinath** are collectively known as Char Dham.
 - ♦ **Yamunotri:** Located in **Uttarkashi** district, the Yamunotri temple is situated in a narrow gorge near the source of the Yamuna River.

- ♦ **Gangotri:** Also in **Uttarkashi** district, Gangotri is dedicated to Goddess Ganga, revered as the most sacred river in India.
- ♦ **Kedarnath:** Situated in **Rudraprayag** district, Kedarnath is dedicated to Lord Shiva and is one of the twelve Jyotirlingas.
- ♦ **Badrinath:** Located in **Chamoli** district, Badrinath houses the Badrinarayan Temple, dedicated to Lord Vishnu.

Winter Char Dham

- **Due to heavy snowfall**, the Char Dham sites become inaccessible in winter and the presiding deities of these shrines are relocated to lower-altitude, popularly known as '**Winter Char Dham**'.
- The sites are as;
 - ♦ **Yamunotri** has its winter seat at **Kharsali** in Uttarkashi.
 - ♦ **Gangotri** is relocated to **Mukhba** in Uttarkashi during the winter.
 - ♦ **Badrinath** finds its winter abode at Pandukeshwar in **Chamoli**.
 - ♦ **Kedarnath** shifts to the Omkareshwar Temple in **Ukhimath**, Rudraprayag.

Source: IE

ECUADOR

In News

- Ecuadorian President Daniel Noboa has declared a 60-day state of emergency in seven provinces and three municipalities due to escalating internal unrest and armed conflict.

Ecuador

- **Location:** It is situated in western South America, bordering the Pacific Ocean at the Equator, between Colombia and Peru.



- **Capital :** Quito
- **Highest point:** Mount Chimborazo
- **Major Rivers :** The Babahoyo, Chira, Coca, Curaray, Daule, Esmeraldas, Guayas, Napo, Pastaza and the Putumayo.

- It is known for its diverse and stunning landscapes, which include the vast Amazon jungle, the towering **Andean highlands**, and the **Galápagos Islands, a UNESCO World Heritage site** renowned for its unique wildlife.
- Ecuador has also been associated with **illegal drug trade activities**.

Source: AIR

CSIR PARACETAMOL TECHNOLOGY

Syllabus: GS 2/Health

In News

- Union Minister Dr. Jitendra Singh has announced that the Council of Scientific and Industrial Research (CSIR) has developed an **indigenous paracetamol drug**, which would help **reduce India's dependence on imported raw materials**.

Paracetamol:

- Paracetamol, chemically known as **N-acetyl-para-aminophenol**, is widely used for **pain relief and fever reduction**.
- In the United States and Japan, it is called **acetaminophen** (derived from its chemical structure), while most other countries, including India, use the name "**paracetamol**."
- It works by inhibiting prostaglandins, which amplify pain, and targets the hypothalamus for fever reduction.
- **Risk and Threats:** Paracetamol poisoning quietly causes thousands of deaths globally, with over 60,000 emergency visits and more than 500 deaths annually in the U.S. alone.
 - ♦ The issue is underreported, especially in Asia, South America, and Africa, and is rarely discussed despite its scale.

Do you know?

- CSIR's achievements include innovations like the **108-petal Lotus, hydrogen buses, biofuels, the Aroma Mission (Lavender cultivation)**, and the indigenously developed paracetamol.

Source :PIB

DECLINE IN RURAL POVERTY: SBI RESEARCH

In News

- Recently, SBI's economic research department (ERD) released a report on Rural Poverty.

About Research: Findings

- India's poverty rate has dropped significantly from **22% in 2011-12 to below 5% in 2023-24**, with minimal extreme poverty.
 - ♦ Rural poverty fell from 25.7% in 2011-12 to 4.86% in 2023-24, and urban poverty decreased from 4.6% in 2022-23 to 4.09% in 2023-24.
- **Threshold:** The report sets the new poverty line for FY24 at Rs 1,632 for rural areas and Rs 1,944 for urban areas, adjusted for inflation and the imputation factor.
 - ♦ **Suresh Tendulkar's poverty line** (estimated in 2011-12) was Rs 816 for rural areas and Rs 1,000 for urban areas.
- **Urban-Rural Consumption Disparity:** The gap in monthly per capita expenditure (MPCE) between rural and urban areas decreased to 70% in 2023-24 from 84% in 2011-12, reflecting sustained rural consumption growth.
- **Impact of Inflation and Consumption:** Rising inflation led to lower overall consumption, with a more pronounced effect in rural, low-income states.
 - ♦ Middle-income states helped sustain consumption demand.

Factors Behind Poverty Decline

- **Consumption Growth:** Higher consumption growth in the 0-5% income group.
 - ♦ Rural consumption saw a 22% increase, with MPCE reaching Rs 1,677 in 2023-24, and urban areas saw an 18.7% increase to Rs 2,376.
 - Consumption inequality decreased, with the Gini coefficient dropping to 0.24 in rural areas and 0.28 in urban areas.
- **Shift in the poverty line** from the 5-10% to the 0-5% income group.
- **Improved rural mobility** due to enhanced physical infrastructure.
- **Government schemes** like Direct Benefit Transfer (DBT) contribute to reduced rural-urban income disparity.
 - ♦ About 30% of rural monthly per capita expenditure (MPCE) is explained by factors like DBT transfers, rural infrastructure development, and support for farmers' income.

Do you know ?

- India has made significant progress in reducing poverty across multiple dimensions through various government initiatives.
- **Poshan Abhiyan and Anemia Mukt Bharat** have improved healthcare access and reduced deprivation.
- The **Targeted Public Distribution System** under the National Food Security Act serves 81.35 crore beneficiaries, providing food grains to rural and urban populations.
- **Pradhan Mantri Garib Kalyan Anna Yojana:** The government extended the free food grain distribution program for another five years, demonstrating its commitment to tackling poverty.
- **Other Welfare Programs:**
 - ♦ Ujjwala Yojana: Clean cooking fuel distribution.
 - ♦ Saubhagya Scheme: Expanded electricity coverage.
 - ♦ Swachh Bharat Mission and Jal Jeevan Mission: Improving sanitation and water supply.
 - ♦ Pradhan Mantri Jan Dhan Yojana: Financial inclusion through bank accounts for all.
 - ♦ PM Awas Yojana: Providing safe housing for the underprivileged.

Source:IE

DR RAJAGOPALA CHIDAMBARAM

Context

- Dr. Rajagopala Chidambaram, a prominent figure in India's nuclear program, passed away recently.

His Key Contributions

- He was the former Chairman of the **Atomic Energy Commission**.
- He also served as chairman of the Board of Governors of the International Atomic Energy Agency (IAEA) (1994-1995).
- **Operation Smiling Buddha:** In 1974, he was part of an operation, codenamed 'Smiling Buddha', which carried out amidst great secrecy a "peaceful nuclear test" at Pokhran, Rajasthan.
 - ♦ This made India the sixth country to test a nuclear device.

- **Operation Shakti:** In 1998, as the Chairman of the Atomic Energy Commission, he led operation shakti, which solidified India's status as a nuclear power on the global stage.
- He backed several mega science projects, including the **National Supercomputing Mission, or the mission on quantum technologies.**
- He was also the **longest serving Principal Scientific Advisor (PSA)** to the Indian government from 2002-2018.
- **Awards:** He was a recipient of the **Padma Shri (1975) and Padma Vibushan (1999).**

Source: TH

ISRO'S CROPS EXPERIMENT

Context

- A batch of cowpea seeds which were taken into orbit by an Indian Space Research Organisation (ISRO) mission has unveiled their first leaves.

About

- **CROPS payload:** The space agency sent eight cowpea seeds as part of the Compact Research Module for Orbital Plant Studies (CROPS) experiment.
- **Aim:** It is conducted by the **Vikram Sarabhai Space Centre (VSSC)** to study **plant growth in microgravity conditions.**
- **CROPS** is part of a larger initiative to evolve ISRO's capabilities in sustaining flora in extraterrestrial environments, with future phases expected to focus on **longer-term plant growth in space.**
 - ♦ The current experiment is designed to **last between five and seven days**, demonstrating seed germination and plant development up to the **two-leaf stage.**
- **Significance:** The results could play a pivotal role in ensuring food security for astronauts on extended missions.

Source: TH

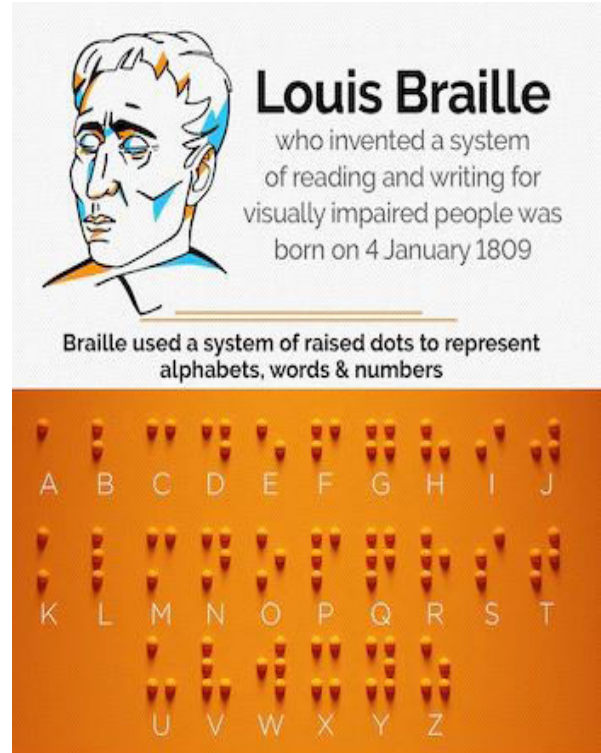
WORLD BRAILLE DAY 2025

Context

- January 4 is marked as World Braille Day.

About

- **Established:** The day was adopted in **2018** by the **United Nations General Assembly.**
- The day is a tribute to **Louis Braille who was born on January 04 1809**, the visionary behind the **braille system.**



- ♦ Due to an eye injury he was left completely blind at the age of 3.
- **Braille System:** It is used by both blind and partially sighted people worldwide to read books and periodicals.
 - ♦ It was accepted by the Institute in Paris in **1854.**
- **Significance:**
 - ♦ Braille is used in nearly every language worldwide.
 - ♦ It is not only a means of communication but also a bridge to education, employment, and social inclusion for people who are blind or visually impaired.

Source: TH

INSV TARINI

Context

- INSV Tarini embarked on the third leg of **Navika Sagar Parikrama-II.**
 - ♦ INSV Tarini is designed for long-distance ocean voyages and has covered over 66,000 nautical miles (122,223 km).
 - ♦ It participated in the first **Navika Sagar Parikrama** expedition in 2017.

Navika Sagar Parikrama-II

- Navika Sagar Parikrama-II is an **Indian Navy**

expedition aiming for a **double-handed circumnavigation** of the Earth via the three Great Capes.

- It was flagged off from Goa on October 2, 2024, with two women Navy officers leading the journey.
- ♦ **The expedition's first leg** took 38 days across the Indian Ocean, with a stop in Fremantle, Australia.

- ♦ **The second leg** covered 28 days, sailing from Fremantle to Lyttelton, New Zealand.
- ♦ **The third leg, spanning 5,600 nautical miles, will** take the vessel from Lyttelton to Port Stanley in the Falkland Islands, passing through the South Pacific Ocean and the Drake Passage.

Source: TH

