VETRII IAS STUDY CIRCLE
Current Affairs

(A book for TNPSC Examination)

APRIL 2025 - PART 1

Preface

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My Dear Aspirants,

Greetings to all of you! "What we think we become" Gautama Buddha. We all have dreams. To make dreams come into reality it takes a lot of determination, dedication, self discipline and continuous effort.

We at VETRII IAS Study Circle are committed to provide the right guidance, quality coaching and help every aspirants to achieve his or her life's cherished goal of becoming a civil servant.

The class room coaching at VETRII IAS Study Circle is meticulously planned to equip the aspirants with all the relevant facts and fundamentals of the subjects. Further the VETRII IAS Study Circle Study materials aim to support the candidate by providing the most relevant study material in a comprehensive manner.

We also thank other family members of Vetrii for making this effort a reality.

We wish the aspirants ALL THE VERY BEST for their journey in Civil Services !

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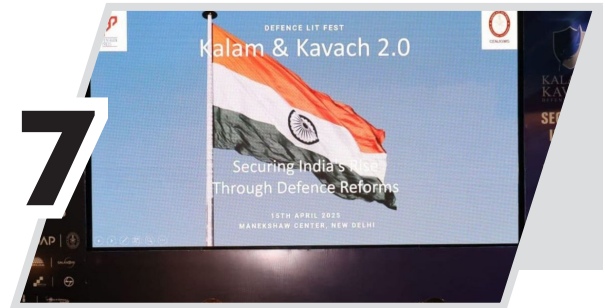
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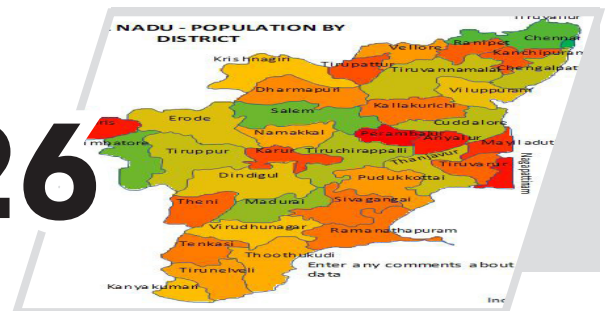
1. HISTORY

1.1 IMPORTANT DAYS

Date	Day	Theme / Remark
April 2	*World Autism Awareness Day*	▪ The United Nations (UN) observes **World Autism Awareness Day** (WAAD) on **2 April 2025** ▪ **Theme -** "Advancing Neurodiversity and the UN Sustainable Development Goals (SDGs)". ▪ **World Autism Awareness Day (WAAD)** was established by the **United Nations General Assembly (UNGA)** in 2007 through Resolution A/RES/62/139, with the objective of promoting awareness and understanding of autism.
April 7	*World Health Day*	▪ **World Health Day** 2025 is being observed globally on **April 7**, marking the anniversary of the founding of the World Health Organization (WHO) in 1948. ▪ This year, the theme is **"Healthy Beginnings, Hopeful Futures".** ▪ It puts a spotlight on maternal and newborn health, launching a year-long global campaign to reduce preventable deaths and improve health outcomes for women and infants.

1.2 DEFENCE, NATIONAL SECURITY AND TERRORISM

HADR Exercise - Tiger Triumph

▪ Tiger Triumph – a tri-service (Army, Navy, Air Force) Humanitarian Assistance and Disaster Relief (HADR) exercise between India and the U.S.

▪ **Schedule**: April 1 to 13, 2025.

▪ **Objective:**

　• Improve interoperability for HADR operations.

　• Develop Standard Operating Procedures (SOPs) for a Combined Coordination Centre (CCC) to ensure effective cooperation between Indian and U.S. Joint Task Forces (JTF) in crises.

▪ **Location**: Visakhapatnam

Training for 44 Foreign Officers Under the "SAGAR" Project

▪ Under the Indian Navy's **"SAGAR"** project, personnel from 9 countries are being trained at naval training schools in Kochi, Kerala. The countries include Comoros, Kenya, Madagascar, Maldives, Mauritius, Mozambique, Seychelles, Sri Lanka, and Tanzania.

▪ The **Indian Ocean Ship (IOS)** SAGAR project ensures cooperation among countries in the Indian Ocean region. Under this project, the coastal patrol vessel INS Sunayna has been renamed IOS SAGAR, with both Indian naval personnel and foreign personnel stationed on it.

▪ India has announced its new **"MAHASAGAR"** vision (Comprehensive Advancement for Inter-Regional Security and Development) for the southern world.

▪ The **"Africa-India Key Maritime Cooperation Exercise"** will be held in April to enhance multilateral maritime cooperation with African countries.

▪ This exercise is being jointly conducted by India and Tanzania and will take place in the coastal area of Dar es Salaam, Tanzania.

INS Sunayna

▪ the Indian Navy launched the Offshore Patrol Vessel INS Sunayna as part of the Indian Ocean Ship (IOS) SAGAR initiative. This event took place in Karwar, Karnataka

▪ It coincides with the 10th anniversary of the SAGAR (Security and Growth for All in the Region) initiative and the National Maritime Day.

IOS SAGAR Initiative

▪ The IOS SAGAR initiative aims to enhance maritime cooperation among nations in the IOR.

New Naval Base for Nuclear Submarines - INS Varsha

▪ The Navy's Eastern Regional Headquarters operates in Visakhapatnam, Andhra Pradesh.

▪ A new naval base named INS Varsha is being established in Rambilli. This naval base will function as a special facility for nuclear submarines.

▪ The Indian Navy currently has 16 diesel-powered submarines. Additionally, there are

- 3 nuclear-powered submarines: INS Arihant, INS Arighat, and INS Aridhaman.
- The INS Varsha naval base will be commissioned next year.
- INS Kadamba naval base operates in Karwar, Karnataka. Being a natural harbor, this base accommodates large warships.

Laser Weapon System to Destroy Drones Instantly

- The Defense Research and Development Organization (DRDO) have successfully tested a laser weapon system that can destroy drones instantly.
- DRDO tested the 30-kilowatt laser-guided MK-2 energy weapon system in Kurnool, Andhra Pradesh.
- This indigenously developed weapon system successfully targeted and destroyed drones from a distance.

- It also intercepted multiple drone attacks and destroyed surveillance sensors.

Maha-Sagar

- Naval joint exercise between India and 9 African countries begins in Tanzania, lasting 6 days.
- Mutual, Comprehensive Advancement for Regional Security and Growth in All Regions (Maha-Sagar) is the Prime Minister's new vision.
- For the first time, India and 9 African countries have begun naval joint exercises in the Dar-es-Salaam maritime area of Tanzania.
- This 6-day joint exercise is being conducted by the Indian Navy and Tanzanian Defense Forces.

1.3 EMINENT PERSONS

Bankim Chandra Chattopadhyay

- The death anniversary of **Bankim Chandra Chattopadhyay** was observed on **8th April,** remembering his contributions to Indian literature, nationalism, and the cultural awakening of Bengal during the 19th century.
- **Nationalism and Literature**: Through works like **Anandamath** (banned by the British), which narrates the **Sanyasi Rebellion**, Bankim became synonymous with India's struggle for independence.
- The national song of India, **Vande Mataram,** originated from Bankim's Anandamath, becoming a symbol of the freedom movement.

- **Famous Works**: Rajmohan's Wife (1864) (first novel in English by an Indian). His novels Durgeshnandini (1865), Kapalkundala (1866), and Vishabriksha (1873) addressed social issues like women's rights, child marriage, and caste discrimination.

Jyotiba Phule

- Jyotiba Phule was born on April 11, 1827.
- His vision remains a foundational pillar for social justice movements in India today.

Education & Women's Rights:

- Along with wife Savitribai, founded India's first girls' school in 1848.

- Opened 18 more schools in 3 years; also launched night schools for workers and farmers.

- Advocated universal primary education and financial incentives for schooling.

Social Reform Movements:

- Founded the **Satyashodhak Samaj (Society of Truth Seekers)** in 1873 to counter caste-based reform monopolies like Brahmo Samaj.

- Championed rights of Dalits, women, and the poor, working with the British while opposing Hindu orthodoxy.

Views on 1857 Revolt:

- Opposed the **sepoy mutiny**, seeing it as a return to upper-caste theocracy under the Peshwas.

- Focused instead on **social transformation and education.**

Major Works & Ideas:

- In Gulamgiri (Slavery), he equated caste oppression with **American slavery.**

- Advocated economic upliftment of lower castes and land reforms in Shetkaryanche Asud (Farmer's Whip).

1.4 PLACES IN NEWS

Nagarahole National Park

- **Context :** The issue of land grants within the core area of Nagarahole National Park and Tiger Reserve has sparked concern among environmentalists and forest officials.

- It is located in Karnataka. It derives its name from the Nagarahole River, which means **'Serpent River'.**

- It connects to the Western Ghats through Brahmagiri Wildlife Sanctuary. It extends towards the Eastern Ghats through Bandipur Tiger Reserve.

- Hosts the world's largest herd of Asiatic elephants.

- The park is known for its high-density tiger population (one of India's premier Project Tiger sites), ranking third in the country after Corbett and Kaziranga Tiger Reserves (As per All India Tiger Estimation -2022).

- It shares its borders with Wayanad Wildlife Sanctuary in Kerala to the south and Bandipur Tiger Reserve to the southeast.

Veera Kovil sacred grove

- Located in **Kasampatty**, near **Alagar Kovil**, in Dindigul district.

- Entry is highly restricted; only men from a particular family can enter for rituals, Women are not allowed.

- Recently notified as a **Biodiversity Heritage Site** by the Tamil Nadu government.

- **Forest Department** clarifies the grove is on revenue land, not under forest control.

- Acts as a **natural gene bank**; surrounding lands are also rich due to seed dispersal..

1.5 SPORTS AND GAMES

The seventh edition of the Khelo India Youth Games

- The seventh edition of the Khelo India Youth Games will be staged in five cities of Bihar from May 4 to 15.

- There would be 14 different types of Khelo India Games through the season.(Tribal Games, beach games, martial arts games, water games etc.)

1.6 AWARDS AND HONORS

Abel Prize

- The prestigious **Abel Prize for mathematics** was recently awarded to Japanese mathematician **Masaki Kashiwara** for his fundamental contributions to algebraic analysis and representation theory, in particular the development of the theory of D-modules and the discovery of crystal bases.

About Abel Prize

- The Abel Prize recognises pioneering scientific achievements in mathematics.

- It is named after Norwegian mathematician Niels Henrik Abel (1802-29), who in his short life made pioneering contributions to multiple fields.

- The prize was established by the Norwegian Parliament in 2002, on Abel's 200th anniversary.

Prime minister received Mitra Vibhushana

- The Sri Lanka Mitra Vibhushana is the highest civilian honour awarded by Sri Lanka. It recognises foreign leaders who have encourageed strong ties with the nation. Prime Minister of India Narendra Modi received this award during his state visit to Sri Lanka.

- The Sri Lanka Mitra Vibhushana was established in 2008 by then-President Mahinda Rajapaksa.

- It aims to honour Heads of State and government officials who have shown solidarity with Sri Lanka.

Bharatiya Bhasha Award

- Tamil writer S. Ramakrishnan has been announced as the recipient of the Bharatiya Bhasha Award.

- S. Ramakrishnan, who has written more than a hundred books, received the Sahitya Akademi Award for 2018 for his novel **"Sancharam".**

- He has received various awards including the Tagore Literary Award, Iyal Award, Maxim Gorky Award, and Gnanvani Award.

- Bharatiya Bhasha Parishad is a renowned literary organization established in 1975 in Kolkata to promote Indian languages.

- Founded by Sitaram Sekhasaria and Bhagirath H. Kanodia, it plays an important role in developing Indian literature through book publishing and implementing various literary projects.

- The organization presents awards under the name **"Bharatiya Bhasha"** to honor writers who have made outstanding contributions to Indian languages.

- This award consists of a prize money of one lakh rupees, a memento, and other recognitions.

1.7 INDIA AND ITS NEIGHBOURS

India and Sri Lanka sign 7 MoUs

- Covers defence, energy, digitisation, health, and multi-sectoral assistance.

- The MoUs signed were on the topics of energy sector cooperation

- The relics of the Buddha, found in 1960 in the Aravali region in Gujarat, would be sent to Sri Lanka for an exposition during the Vesak festivities — commemorating the birth, enlightenment and the death of the Buddha — in May this year.

- India has decided to reduce the interest rates on loans extended to Sri Lanka to support the country's external debt treatment.

2. POLITICAL SCIENCE

2.1 LATEST COURT VERDICTS

Supreme Court Upholds Due Process In Prayagraj Demolition Case

▪ The Supreme Court of India condemned the 2021 bulldozing of homes by the Prayagraj Development Authority as "inhumane and illegal," ordering Rs 10 lakh compensation for each affected individual.

SC's Judgment on Demolitions in Prayagraj

▪ **Right to Shelter:** The SC reiterated that the right to shelter is intrinsic to the right to life and personal liberty under **Article 21.**

▪ Arbitrary demolition without due process violates both procedural fairness and human dignity.

▪ **Precedents and Legal Framework:** The SC cited its 2024 ruling (In Re Directions In The Matter Of Demolition Of Structures), which laid down guidelines against **"bulldozer justice,"** mandating 15 days' prior notice, clear mention of violations, and a fair chance for occupants to challenge demolition orders.

▪ **Bulldozer justice** refers to the practice of demolishing properties, often belonging to those accused of crimes, sometimes without following proper legal procedures.

Supreme Court's verdict on Governor's power over bill and pocket vetoes

▪ Fixed Timelines Set by the Court

▪ **1 month to grant or withhold assent** on the aid and advice of the State Cabinet.

▪ **3 months to reserve a Bill for the President.**

▪ If a re-passed Bill under (Article 200) is sent again, the Governor must assent within 1 month.

▪ The Governor cannot reserve such Bills for President's consideration in the second round.

▪ The phrase in the Constitution **"shall not withhold assent there of"** makes it mandatory for the Governor to assent after reconsideration.

▪ The governor 'must' grant assent to a Bill re-passed by the State Legislature under Article 200 within a maximum of one month.

▪ Failure to comply with these limits can be subject to judicial review.

▪ No room for **'pocket veto'** or indefinite delay.

▪ Governors must reflect on whether their actions align with the Constitution and people's aspirations.

▪ The SC pointed out that the phrase **"in his discretion",** which existed in Section 75 of the Government of India Act, 1935, was

intentionally removed when drafting Article 200.

▪ This shows that the **Governor no longer has personal discretion** in these matters under the Constitution of India.

2.2 PUBLIC AWARENESS & GENERAL ADMINISTRATION

Waqf (Amendment) Bill, 2024

▪ The Waqf (Amendment) Bill, 2024 was passed by the Lok Sabha and Rajya Sabha.

▪ The Bill amends the Waqf Act, 1995, allowing the government to regulate Waqf properties and settle related disputes.

▪ The bill aims to improve Waqf board efficiency, update Waqf definitions, streamline registration, and boost use of technology in record management.

What is Waqf?

▪ **Waqf:** It refers to an endowment made by a Muslim for charitable or religious purposes, such as building mosques, schools, hospitals, or other public institutions. It is inalienable i.e., it cannot be sold, gifted, inherited or encumbered.

What are the Key Provisions of the Bill 2024?

▪ **Separation of Trusts from Waqf:** Muslim-created trusts under any law will no longer be considered Waqf, ensuring individuals retain full control over their trusts.

▪ **Eligibility for Waqf Dedication:** Only practicing Muslims (for at least five years) can dedicate their property to Waqf.

▪ **Article 200 of the Constitution** – Article 200 gives the power to governors to grant assent/ withhold assent or reserve the bill for the president's consideration.

▪ Properties already registered with Waqf Boards will remain so unless disputed or identified as government land.

▪ **Women's Rights in Family Waqf**: Women must receive their inheritance before Waqf dedication, with special provisions for widows, divorced women, and orphans.

▪ **Ending Arbitrary Property Claims**: Section 40 of the original Waqf Act (1995) has been removed, preventing Waqf Boards from arbitrarily declaring properties as Waqf.

▪ Section 40 of the Waqf Act (1995) gives the Waqf Board the authority to decide whether a property is a Waqf property or not.

▪ **Waqf Tribunals**: The Waqf tribunals consist of 3 members i.e., a district judge, a state government officer (joint secretary level), and an expert in Muslim law and jurisprudence.

  • Aggrieved parties can appeal directly to the concerned High Court within 90 days of receiving the Waqf tribunal's order.

▪ **Reduced Annual Contributions:** Waqf institutions' mandatory contribution to Waqf Boards reduced from 7% to 5% allowing more funds to be allocated for charitable purposes.

2.3 GOVT – WELFARE ORIENTED GOVT SCHEMES

5 years of National Technical Textiles Mission (NTTM)

▪ **The National Technical Textiles Mission (NTTM),** launched in 2020 by the Ministry of Textiles, aims to position India as a global leader in technical textiles by 2025-26 has completed 5 years.

▪ **NTTM:** The mission focuses on promoting research, market growth, exports, and skill development in key sectors like agriculture, healthcare, and infrastructure in technical textiles.

▪ **Technical Textiles**: Technical textiles are functional fabrics made from natural and synthetic fibers, used across industries like defense, healthcare, infrastructure, automotive, medicine etc.

  • **Examples:** Mosquito nets, seat belts, helmets, fireproof jackets, and sanitary napkins.

10th anniversary of the Pradhan Mantri MUDRA Yojana

▪ **Launch Year**: 2015

▪ **MUDRA** - Micro Units Development and Refinance Agency

▪ **Type**: Central Sector Scheme.

▪ **Objective:** To provide collateral-free credit up to Rs.10 lakh to non-corporate, non-farm micro and small enterprises (MSEs)

▪ **Nodal Agency**: Department of Financial Services, Ministry of Finance. (implemented by MUDRA Ltd under SIDBI)

▪ **Eligible Beneficiaries**: Eligible borrowers include individuals, proprietary concerns, partnership firms, private and public limited companies, and other legal entities.

▪ **Loan Limits Under Various Categories:**

  • **Shishu Category**: Loan Limit: Up to Rs.50,000

  • **Kishore Category**: Loan Limit: Rs 50,000 to Rs 5 lakh

  • **Tarun Category**: Loan Limit: Rs 5 lakh to Rs 10 lakh

  • **Tarun Plus Category**:Loan Limit: Rs.10 lakh to Rs. 20 lakhs (Raised Union Budget 2024-25)

New scheme to modernise irrigation network

▪ The Union Cabinet on Wednesday approved "Modernisation of Command Area Development and Water Management (M-CADWM)" as a sub-scheme of the Pradhan Mantri Krishi Sinchayee Yojana (PMKSY).

▪ This initiative, with an initial outlay of Rs,1,600 crore, is set to run from 2025-26 and is designed to enhance the irrigation infrastructure in India.

▪ Its key goal is to modernise the irrigation water supply network, ensuring that water reaches the designated farming clusters from existing canals or other water sources.

▪ This will help farmers with small land-holdings, by improving water-use efficiency through the use of advanced technologies such as Supervisory Control and Data Acquisition and the Internet of Things.

▪ In addition to modernising the irrigation systems, the scheme aims to build sustainable farming practices in the country.

Electronics Components Manufacturing Scheme

▪ The Ministry of Electronics and Information

Technology (MeitY) recently notified the Electronics Components Manufacturing Scheme.

- It is the first dedicated production-linked incentive (PLI) scheme to promote the manufacturing of select passive electronic components, including resistors, capacitors, speakers, microphones, special ceramics, relays, switches, and connectors.

- The scheme will offer three incentive structures:

- Turnover-linked incentive (based on revenue)

- Capex-linked incentive (for investments in plants & machinery)

- Hybrid incentive model (a combination of both)

- This scheme has a tenure of six years, with a one-year gestation period.

- The scheme focuses particularly on passive electronic components. In contrast, active components fall under the purview of the India Semiconductor Mission (ISM).

PM POSHAN Scheme

- Cabinet Committee on Economic Affairs (CCEA) has approved the continuation of '**National Scheme for PM POSHAN in Schools'** for the five year period 2021-22 to 2025-26.

- This is a Centrally-Sponsored Scheme.

- The earlier name of the scheme was 'National Scheme for Mid Day Meal in Schools' popularly known as Mid Day Meal Scheme.

- It is considered as the world's largest school meal programme aimed to attain the goal of universalization of primary education.

- It aims to provide one hot cooked meal in Government and Government-aided schools from 2021-22 to 2025-26.

- It will cover all school children studying in Classes I-VIII of Government, Government-Aided Schools.

- **Extension of Coverage**: The scheme is proposed to be extended to students studying in pre-primary or Bal Vatikas of Government and Government-aided primary schools, in addition to all the children from elementary classes.

Pradhan Mantri Khanij Kshetra Kalyan Yojana

- The Central Mining Department has ordered the establishment of a project management unit to facilitate constructive coordination with states for the smooth implementation of the Prime Minister's Mineral Sector Welfare Scheme (Pradhan Mantri Khanij Kshetra Kalyan Yojana) for the development of people affected by mineral mining activities throughout the country.

- In 2015, the central government implemented the Prime Minister's Mineral Sector Welfare Scheme (PMKKKY) by the Ministry of Mines to improve the welfare of areas and people affected by mining operations.

- Central, state government institutions, or private companies engaged in mineral mining must contribute 30 percent of the royalty payment from the granted leases to PMKKKY.

- This fund is added to the DMF account. Of this, 70 percent of the funds should be spent directly on various development and welfare schemes in mining-affected areas to improve the living standards of people in these areas.

3. GEOGRAPHY

3.1 POLICY ON ENVIRONMENT AND ECOLOGY

Tigers Outside Tiger Reserves project

- Recent reports indicate that nearly 30% of the country's estimated **3,682 tigers** reside outside designated reserves.

- To address this, the Ministry of Environment, Forest and Climate Change is working on a project called **"Tigers Outside Tiger Reserves."**

- The main goals of the project include monitoring tiger populations outside reserves, reducing poaching, and addressing human-animal conflict. Community outreach will also be a focus area.

- The **National Tiger Conservation Authority (NTCA)** will implement the project in 80 forest divisions across ten states.

- These areas have been identified based on the all-India tiger estimation of 2022 and recent conflict trends.

- The initiative will supplement existing funding under Project Tiger, enhancing conservation efforts.

Agasthyamalai Biosphere Reserve

- The Supreme Court has directed the Central Empowered Committee (CEC) to carry out a detailed survey of the Agasthyamalai landscape to identify any non-forestry activities and encroachments.

- Aim of the Survey: To identify all instances of non-forestry activities that violate statutory laws like the Forest Conservation Act, 1980 and Wildlife (Protection) Act, 1972.

- To provide comparative forest cover data to reveal the extent of degradation.

- **Key Areas Under Survey:**

- Periyar Tiger Reserve

- Srivilliputhur Grizzled Squirrel Wildlife Sanctuary

- Meghamalai Wildlife Sanctuary

- Thirunelveli Wildlife Sanctuary

- Agasthyamalai:

- It is part of a **3,500 sq.** km biosphere reserve recognised by UNESCO.

- It stretches across Tamil Nadu and Kerala in the southernmost stretch of the Western Ghats.

- The **Neelakkurinji flower, which blooms once every 12 years**, grows in this landscape.

- The region is inhabited by indigenous communities, especially the Kani tribe.

3.2 MISCELLANEOUS

Bird Flu

- A casualty was observed in Andhra Pradesh from bird flu virus marking **India's second recorded human fatality from H5N1 since 2021.**

About Bird flu

- Bird flu, or avian influenza, is a highly contagious viral disease that affects both wild and domestic birds.

- It is caused by **avian influenza A viruses,** with subtypes such as H5N1 and H5N8 being particularly significant.

- **Transmission:** H5N1 spreads primarily through direct contact with infected live or dead birds or contaminated environments (e.g., live bird markets).

- Rarely, transmission from infected mammals to humans has been observed. Though human infections are rare, H5N1 has a high fatality rate (~60%), much higher than the peak fatality of Covid-19 (~3%). Also, airborne transmission has not been confirmed in humans.

- Human-to-human transmission remains extremely rare. The virus continues to evolve, and if it mutates to allow sustained human-to-human transmission, it could trigger a global pandemic.

- Hence, H5N1 is listed as a priority disease under WHO R&D Blueprint.

- **Treatment**: Antiviral drugs like **oseltamivir** are effective, especially when administered early in high-risk or severe cases.

- **Vaccination**: Current seasonal flu vaccines do not protect against H5N1.

- Some countries have developed H5N1-specific vaccines for emergency use.

4. ECONOMICS

4.1 CURRENT TRENDS IN INDIAN ECONOMY

RBI cuts repo rate by 0.25%

▪ The RBI reduced the repo rate by 25 basis points to 6%.

▪ India's GDP growth forecast lowered from 6.7% to 6.5% for 2025-26.

▪ The **Monetary Policy Committee (MPC)** shifted stance from neutral to accommodative, signaling a focus on supporting growth.

About Repo rate

▪ Repo rate (Repurchase Agreement Rate) is the interest rate at which commercial banks borrow money from the central bank.

▪ Higher repo rate → Costlier loans for banks → Higher interest rates for consumers & businesses → Slower borrowing & spending.

▪ Lower repo rate → Cheaper loans for banks → Lower interest rates for borrowers → Increased borrowing & spending.

4.2 REPORTS AND INDICES

Energy Statistics India 2025

▪ The N**ational Statistics Office (NSO)** has released its annual Energy Statistics India 2025 report providing key data on energy reserves, capacity, production, and consumption across different energy sources.

▪ India's **Total Primary Energy Supply (TPES)** grew by 7.8% in 2023-24 despite global uncertainties.

▪ TPES is a country's total available energy, including domestic production and imports, exported energy (subtracted off) and international transport use.

▪ The industrial sector is India's largest energy consumer, with demand rising from 2.42 lakh KToE in 2014-15 to 3.12 lakh KToE in 2023-24.

▪ **Renewable Energy Growth:** India's renewable energy potential stands at around 21 lakh MW, with wind power (55%) as the largest contributor, followed by solar and large hydropower projects.

▪ **State-wise Renewable Energy Statistics:** Rajasthan (20.3%), Maharashtra (11.8%), Gujarat (10.5%), and Karnataka (9.8%) accounts for over 50% of the total renewable energy potential.

India's Key initiatives for Sustainable Energy Transition

- National Solar Mission
- National Green Hydrogen Energy Mission
- Faster Adoption and Manufacturing of Electric Vehicles (FAME)
- Perform, Achieve & Trade (PAT) Scheme
- Energy Conservation Building Code (ECBC)

WCD Report on Climate Change Impact on Women and Children

- Union Ministry of **Women And Child Development (WCD)** recently released the report titled "How Does Climate Change Impact Women and Children Across Agroecological Zones".

- According to the report, women and children face higher risk of death during disasters compared to men.

- Women and children are 14 times more likely to die in disasters than men (UNDP).

- This disparity is exacerbated by existing societal roles and responsibilities.

- It highlighted the need for gender-disaggregated data is crucial for developing effective disaster management strategies.

26th edition of Women and Men in India 2024

- The Ministry of Statistics and Programme Implementation (MoSPI) of India has released its 26th edition of Women and Men in India 2024 – Selected Indicators and Data.

Gender Disparities in Financial Inclusion

- Women own 39.2% of all bank accounts in India. In rural areas, this figure rises to 42.2%. Women contribute to 39.7% of total bank deposits.

Female Entrepreneurship Growth

- The number of startups with at least one woman director increased from 1,943 in 2017 to 17,405 in 2024.

Political Participation and Voter Turnout

- The total number of electors in India has increased dramatically from 173.2 million in 1952 to 978 million in 2024. Female voter turnout reached 65.8% in 2024.

Education and Gender Parity

- The Gender Parity Index (GPI) for primary and higher secondary education remains high, indicating robust female enrolment.

Labour Force Participation Rate

- The Labour Force Participation Rate (LFPR) for individuals aged 15 and above rose from 49.8% in 2017-18 to 60.1% in 2023-24.

5. SCIENCE

5.1 LATEST INVENTIONS ON SCIENCE & TECHNOLOGY

National Gene Bank

- The Government of India has announced the creation of a Second National Gene Bank to conserve 10 lakh crop germplasm. This initiative aligns with the **"Investing in Innovations"** theme of the Union Budget 2025-26.

India's First National Gene Bank

- It was established in 1996 by the Indian Council of Agricultural Research – National Bureau of Plant Genetic Resources **(ICAR-NBPGR)** in **New Delhi.**

- It is the **second-largest Gene Bank globally,** following the Svalbard Global Seed Vault in Norway.

- It supplies plant genetic resources to both public and private entities engaged in crop improvement and genetic conservation.

About Gene Bank

- A Gene Bank is a specialized storage facility designed to preserve seeds, pollen, and plant tissues to safeguard plant species from extinction and ensure their availability for future needs.

5.2 SPACE

First human spaceflight in a polar orbit

- Recently, SpaceX successfully launched a private astronaut crew on a historic polar-orbiting mission aboard a Falcon 9 rocket from NASA's Kennedy Space Centre in Florida.

- **First human spaceflight in a polar orbit**: Unlike traditional missions that follow an equatorial orbit, this mission will orbit Earth from pole to pole.

- This trajectory allows full observation of Earth's surface over time, making it crucial for climate studies, global surveillance, and research.

- **Polar Orbit (PO)** - A Polar Orbit (PO) is a type of **Low Earth Orbit (LEO)** that ranges between 200 km to 1,000 km in altitude.

- Unlike equatorial orbits, satellites in a polar orbit travel from one pole to the other rather than from west to east.

- Polar orbits allow satellites to cover the entire Earth's surface over time as the planet rotates below them.

Chandrayan's ChaSTE

- Chandrayan's ChaSTE becomes the first mission to successfully penetrate the soil of a celestial body (at Shiv Shakti landing site of Moon) to deploy a thermal probe.

About ChaSTE (Chandra's Surface Thermophysical Experiment)

- It is one of the payloads aboard the Lander (named Vikram) of the Chandrayaan-3 mission.

- **Developed by**: The instrument was designed by the **Physical Research Lab, Ahmedabad** and the **Space Physics Lab (SPL), VSSC.**

- **Objective**: It has the objectives of measuring lunar surface temperatures, thermal conductivity, and the temperature gradient to a depth of 100 mm.

- **Significance**: The findings of the study will provide a comprehensive understanding of the moon's thermo-physics and its near-surface and sub-surface water-ice distribution, laying the groundwork for future exploration and habitation strategies.

Biomass Satellite Mission

- It is a European Space Agency (ESA) mission to provide more accurate measurements of forest biomass to enhance our understanding of the carbon cycle.

- It will provide detailed 3D maps of the world's most dense and remote tropical forests.

- It is the first space satellite to carry a long-wavelength radar, called P-band.
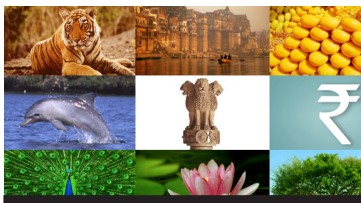
Green Credit Programme (GCP)

- The Environment Ministry launched the **Green Credit Programme (GCP)** to enhance forest cover, promote sustainable practices, and incentivize pro-environmental actions.

- Green Credit (GC) is a unit of incentive provided for engaging in environmentally positive activities.

- These credits can be traded on a dedicated exchange, similar to carbon credits.

- The Green Credit Programme (GCP) operates under the Environment (Protection) Act, 1986.

- Who can earn Green Credits - Individuals, communities, and industries that engage in eco-friendly activities.

- Green credits can be traded on a domestic platform, enabling entities to meet their legal obligations, such as compensatory afforestation for industrial projects.

Uttarakhand government has sealed madarasas

- The Uttarakhand government has sealed over 136 such institutions so far. This has put a spotlight on the State for its actions on issues related to the minority community — from laws such as the Uniform Civil Code to removal of Mazars.

Uniform Civil Code

- The Uniform Civil Code refers to a single set of laws governing personal matters such as marriage, divorce, adoption, inheritance, and succession for all citizens of India.

- The concept of UCC is mentioned in Article 44 of the Indian Constitution as a Directive Principle of State Policy, which states that the state shall endeavor to secure a uniform civil code for citizens throughout the territory of India.

- However, it's important to note that this is not a legally enforceable right but a guiding principle for the state.

"NITI NCAER States Economic Forum" portal

- It was developed by **NITI Aayog**, in collaboration with the **National Council of Applied Economic Research (NCAER).**

- It is a comprehensive repository of data on social, economic, and fiscal parameters, research reports, papers, and expert commentary on state finances for a period of about 30 years from 1990-91 to 2022-23.

- The portal has **four main components -** State Reports , Data Repository , State Fiscal and Economic Dashboard, Research and Commentary.

- The portal will facilitate an understanding of macro, fiscal, demographic and socio-economic trends; easily accessible data and a

user-friendly format; and will also address the ongoing need for consolidated sectoral data in one place.

Sangama Dynasty - copper plates found

- A set of rare copper plates dating back to the early 15th century, from the reign of Devaraya I of the Sangama Dynasty, has been unveiled in Bengaluru by Falcon Coins Gallery in collaboration with the **Archaeological Survey of India (ASI).**

- These copper plates are written in Sanskrit and Kannada, using Nāgarī characters and are particularly significant as they were issued during the coronation of King Devaraya I.

- The plates are dated Saka 1328 (1406 CE), confirming the coronation date of Devaraya I.

About Sangam Dynasty

- The Sangama Dynasty was the founding dynasty of the Vijayanagara Empire, ruling from 1336 to 1485 AD.

- Established by Harihara I and Bukka Raya I, this dynasty laid the foundation for one of the most powerful empires in South India.

- The rulers of this dynasty significantly strengthened administration, military power, and territorial expansion, making Vijayanagara a dominant political and cultural center.

Mitathal and Tighrana Harappan Sites

- The Haryana Government has officially declared Mitathal and Tighrana, two Harappan civilisation sites in Bhiwani district, as protected archaeological sites under the Haryana Ancient and Historical Monuments and Archaeological Sites and Remains Act, 1964.

- Shows uninterrupted human settlement from Pre-Siswal to Post-Harappan periods.

- Offers rich insights into early agricultural practices, craftsmanship, and community structure in Indo-Gangetic divide.

Mitathal Site:

- Yields Copper-Bronze Age material dating back to 3rd–2nd millennium BCE.

- Evidence of Harappan town planning, sturdy red pottery with black painted motifs (e.g. pipal leaf, fish scale).

- **Artefacts**: beads, copper tools, bangles, terracotta, and bone items.

- Excavations from 1965–68 and four more since 2016 by Central University of Haryana.

Tighrana Site:

- Rich in post-Harappan and pre-Harappan layers, showing cultural continuity.

- Associated with Sothian culture (Chalcolithic farmers).

- Houses made of mud bricks, possibly fortified; early use of bichrome wheel-made pottery.

- **Artefacts**: green carnelian bangles, indicating active bead and jewellery industry.

Krishi Nivesh Streamlines Agricultural Investments

- The Government of India has launched a unified digital platform named Krishi Nivesh to streamline investments in the agriculture sector.

- It serves as a one-stop source for information on various agricultural schemes.

- This initiative aims to enhance transparency and accessibility for investors.

- The platform is intended to help investors navigate the complexities of multiple government initiatives.

- It integrates information from multiple ministries, including agriculture, food processing and renewable energy.

- The platform currently provides details on 11 major agricultural schemes, these include the Agriculture Infrastructure Fund and PM KUSUM.

- The goal is to simplify the investment process and improve the overall efficiency of agricultural financing.

Operation Brahma

- A 7.7 magnitude earthquake hit Mandalay, Myanmar, killing over 140 people and causing structural damage across Myanmar and neighbouring countries.

- India has launched Operation Brahma, sending humanitarian aid and relief supplies to the affected region.

- It was Launched by the Indian Air Force using C-130J aircraft.

- **Neighbouring Countries:**
  - India, China, Bangladesh, Thailand, Laos.
  - Bordered by Andaman Sea and Bay of Bengal to the south.

Seaweed

- Seaweed farming is gaining global recognition as a sustainable and profitable industry.

What is Seaweed

- Seaweed is a nutrient-rich marine plant, packed with vitamins, minerals and amino acids.

- It contains **54 trace elements and essential nutrients** that help fight diseases like cancer, diabetes, arthritis, heart problems and high blood pressure.

- Seaweed is a sea plant that grows in the ocean and seas.

- Seaweed cultivation requires no land, freshwater, fertilizers or pesticides, making it sustainable.

- The **$5.6 billion seaweed** industry is booming, with India's production increasing steadily.

- Under one of its components, the **Pradhan Mantri Matsya Sampada Yojana (PMMSY)** aims to boost seaweed production to 1.12 million tonnes in five years.

- Japan, China and South Korea are the biggest consumers of seaweed.

- The government, along with the **National Fisheries Development Board (NFDB)**, is working to boost this sector through policies, infrastructure support and collaborations with states and research institutes.

Key Seaweed Developments in India

First National Conference on Seaweed Cultivation (Jan 2024) in Kutch, Gujarat, promoted seaweed as a job creator, especially for fish farmers. The Kori Creek Pilot Project was launched to boost seaweed farming.
PMMSY Scheme: Aims to increase seaweed production. Since K. alvarezii (a common seaweed) is disease-prone, India now allows the import of new seaweed varieties through guidelines issued in October 2024.
Seaweed Clusters in Lakshadweep: Promotes collaboration among small and large businesses to improve seaweed production, processing, and exports.
Centre of Excellence (Mandapam, Tamil Nadu): Launched on 9th January, 2025, Centere of Excellence in Mandapam focuses on seaweed research, better farming techniques, seed banks and creating 5,000+ jobs for 20,000 farmers.
Coastal Aquaculture Authority Act (2023 Update): Supports eco-friendly practices like seaweed farming, simplifying rules to encourage business growth.
Guidelines for Import of Live Seaweeds into India: On 31st October 2024, the Department of Fisheries announced guidelines to import live seaweeds, aiming to boost seaweed farming, create jobs, and support coastal communities.
Seaweed Farming in Gujarat: The government promotes seaweed cultivation in the Gulf of Kutch (Kori Creek area) to boost local livelihoods.

India's Aquaculture Growth:

- India is **3rd largest aquaculture** producer globally.

- 2nd in prawn production, with **Andhra Pradesh** leading the pack, followed by **West Bengal, Tamil Nadu, Odisha, and Gujarat.**

Protected archaeological sites and monuments

- The Haryana government has officially declared two Harappan civilization sites located in Bhiwani district — Mitathal and Tighrana — as protected archaeological sites and monuments.

- These sites, dating back over 4,400 years, hold immense historical and cultural value, shedding light on the evolution of early agricultural societies, town planning, craft industries, and trade during the Harappan and post-Harappan periods.

World Tea Exports

- In the 2024 calendar year, India is in third place in global tea exports. In the assessment year, India has captured 13.55 percent of the world market.

- Kenya and China have secured the first two positions in tea exports. The International Tea Committee has released these statistics.

ZooWIN Portal

- The Union Health Ministry recently launched the ZooWIN portal to monitor the availability of anti-rabies and anti-snake venom vaccines in real time.

- **ZooWIN (Zoonoses-WIN)** is a digital portal to monitor stocks of **Anti-Rabies Vaccine (ARV)** and **Anti-Snake Venom (ASV)** across India.

- It ensures better coordination among healthcare systems, especially in rural and underserved areas.

Developed By:

- The portal is developed by the **National Centre for Disease Control (NCDC)** under the Ministry of Health and Family Welfare (MoHFW).

- It is technically supported by the **United Nations Development Programme (UNDP).**

India Skills Accelerator (ISA)

- The **Ministry of Skill Development and Entrepreneurship (MSDE),** in collaboration with the **World Economic Forum (WEF),** launched the **India Skills Accelerator (ISA).**

- It is a national public-private collaboration platform aimed at fostering cross-sectoral cooperation to address complex challenges in India's skilling ecosystem, with a focus on innovation, knowledge sharing, and policy reform.

- It supports India's **demographic** dividend and aims to make **India the Skill Capital of the World.**

- With 65% of organizations citing skill gaps as a major barrier, the initiative aims to close these gaps through inclusive **upskilling, reskilling** and aligning education with industry needs.

India's First-Ever Climate Change Station

- India has inaugurated the Himalayan High Altitude Atmospheric and Climate Research Centre at Nathatop, Jammu & Kashmir, marking a major milestone in global climate science.

- Strategic Location: The centre is located at an altitude of 2,250 meters above sea level in Nathatop, chosen for its clean air and minimal pollution.

- Which makes the centre Awards & Honours ideal for high-accuracy atmospheric and climate measurements.

- The centre will facilitate cutting-edge studies on cloud formation, aerosol interactions, and weather patterns.

- It will enhance India's leadership in climate science and support efforts to meet global climate targets, including the country's commitment to net-zero emissions (by 2070).

- **ICE-CRUNCH**: The inauguration marked the launch of the Indo-Swiss Joint Research Project, ICE-CRUNCH (Ice Nucleating Particles and Cloud Condensation Nuclei Properties in the North-Western Himalayas).

- It focuses on understanding Ice-Nucleating Particles (INPs) and cloud condensation nuclei (tiny suspended particles, either solid/liquid), pivotal to climate modelling and precipitation patterns in the region.

National Critical Mineral Mission (NCMM) in 2025

- The Government of India launched the National Critical Mineral Mission (NCMM) in 2025 to boost self-reliance in the critical minerals sector and support India's clean energy goals.

- It is a strategic initiative by the Ministry of Mines aimed at ensuring long-term availability, security, and processing of critical minerals that are vital for clean energy technologies, economic development, and national security.

▪ It aligns with India's commitments to net-zero emissions by 2070 and reducing the emissions intensity of GDP by 45% by 2030 (from 2005 levels).

▪ Critical minerals are those that are essential for modern technologies and national security, but have supply chain risks due to their limited availability or geographical concentration.

▪ Their 'criticality' changes over time depending on technological demand and supply dynamics.

▪ 30 critical minerals were identified by a Ministry of Mines committee in 2022- Antimony, Beryllium, Bismuth, Cobalt, Copper, Gallium, Germanium, Graphite, Hafnium, Indium, Lithium, Molybdenum, Niobium, Nickel, PGE, Phosphorous, Potash, REE, Rhenium, Silicon, Strontium, Tantalum, Tellurium, Tin, Titanium, Tungsten, Vanadium, Zirconium, Selenium, and Cadmium.

▪ Applications of Critical Minerals - Solar Panels, Wind Turbines, Electric Vehicles (EVs), Energy Storage Systems, Also used in electronics, defence, aerospace, and medical technologies.

'Blue Category' - The Central Pollution Control Board (CPCB)

▪ The **Central Pollution Control Board (CPCB)** has recently introduced a new category of industries called the 'Blue Category', which falls under Essential Environmental Services (EES).

▪ The **'Blue Category'** is introduced as part of a subset of EES activities like composting, biogas plants, sewage treatment, and material recovery facilities.

▪ **Waste-to-Energy (WTE)** incineration, previously under the 'Red Category' with a PI of 97.6, is now reclassified as a **'Blue Category'** industry.

About Pollution Index (PI)

▪ The Union Ministry of Environment, Forest and Climate Change (MoEFCC) introduced a Pollution Index (PI) to categorise industries based on pollution levels.

▪ PI is calculated on the basis of emissions (air pollutants), effluents (water pollutants), hazardous waste, and resource consumption.

▪ PI ranges from 0 to 100, with industries classified as:
  • **White Category (0–20):** Least polluting
  • **Green Category (21–40)**
  • **Orange Category (41–59)**
  • **Red Category (60–100):** Most polluting

The Indian Council for Cultural Relations (ICCR)- 75th anniversary

▪ **The Indian Council for Cultural Relations (ICCR)** marked its **75th anniversary with a grand celebration hosted by the Indian Cultural Centre under the High Commission of India in Dhaka.**

▪ The event highlighted ICCR's legacy since its establishment in 1950, its crucial role in cultural diplomacy, and its deep contributions to India-Bangladesh cultural ties.

▪ The celebrations included traditional performances and showcased the vibrant

exchange of artistic and educational initiatives between the two nations.

Purpose of ICCR

- Promote India's rich cultural heritage globally.
- Strengthen international cultural diplomacy.
- Facilitate people-to-people and educational exchange.

National Task Force

- Three research groups have been established under the National Task Force on preventing suicide incidents in higher education institutions, including Indian Institutes of Technology (IITs).

- This national task force, headed by former Supreme Court Justice S. Ravindra Bhat, includes 15 members including advisors from various scientific and research institutions and mental health doctors.
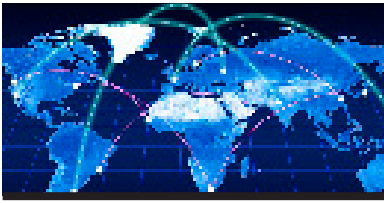
7. INTERNATIONAL AFFAIRS

75 Years of India and China Relations

- On 1st April 2025, India and China marked 75 years of diplomatic ties, established on 1st April 1950. The Chinese President described India-China ties as a **"Dragon-Elephant Tango",** symbolizing coexistence, shared growth over rivalry.

75 Years of India-China Diplomacy

- **India-China** relations have evolved from ancient cultural and trade exchanges, including the spread of Buddhism via the Silk Road, to post-independence (1950s) symbolised by the **"Hindi-Chini Bhai-Bhai"** spirit.

- The Sino-Indian War (1962) led to a diplomatic freeze, but ties normalized in the 1980s–2000s through 1993 Agreement on Peace and Tranquility, 1996 Agreement on Military Confidence Building Measures (CBMs) and growing trade.

- India and China maintain robust economic ties, with bilateral trade reaching USD 118.4 billion in 2023–24, and investments of over USD 3.5 billion in Indian unicorns.

- Cultural ties are reinforced through academic exchanges, and events like Tagore's centenary seminar in 2025.

- Multilaterally, they collaborate in BRICS, SCO, G-20 and support initiatives like the **International Solar Alliance (ISA).**

- Key issues include the undefined 3,488 km LAC causing frequent clashes such as Doklam (2017) and Galwan (2020) and strategic concerns over China's BRI and CPEC through PoK.

6th BIMSTEC Summit

- The **Indian Prime Minister** participated in the **6th BIMSTEC Summit,** hosted by **Thailand** under its chairmanship.

Key Initiatives Announced by India

- **BIMSTEC Centres** of Excellence.

- **BODHI Program:** India introduced BODHI Program (BIMSTEC for Organized Development of Human Resource Infrastructure) for skill development, providing training, scholarships, and capacity-building for various professionals across BIMSTEC nations.

About BIMSTEC

- BIMSTEC (Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation) is a regional organization comprising 7 member states as Bangladesh, Bhutan, India, Myanmar, Nepal, Sri Lanka, and Thailand.

- It aims to foster multifaceted technical and economic cooperation among countries in the Bay of Bengal region.

- It was founded in 1997 with the adoption of the Bangkok Declaration.

- Initially comprising 4 members, it was known as BIST-EC (Bangladesh, India, Sri Lanka, and Thailand Economic Cooperation). In

1977, Myanmar joined, and the grouping was renamed BIMST-EC.

▪ With the inclusion of Nepal and Bhutan in 2004, the name was further changed to BIMSTEC.

Inter-Parliamentary Union

▪ Lok Sabha Speaker recently delivered the keynote address on **'Parliamentary Action for Social Development and Justice'** at the 150th Assembly of Inter-Parliamentary Union in Tashkent.

About Inter-Parliamentary Union

▪ The IPU is the **global organization of national parliaments.**

▪ It was founded in 1889 as the first multilateral political organization in the world, encouraging cooperation and dialogue between all nations.

▪ The **slogan** of IPU is **"For democracy For everyone."**

▪ The headquarters of IPU is in Geneva, Switzerland.

▪ Today, the IPU comprises **181 national Member Parliaments.**

▪ The Governing Council is made up of three MPs from each Member Parliament.

Japan Created 3D-Printed Train Station

▪ Japan has constructed the world's first 3D-printed railway station (Hatsushima Station), completed in just 6 hours using additive manufacturing (3D printing) technology.

▪ The station's 3D-printed parts, made with special mortar reinforced with concrete, were transported by separate trucks to the construction site, reducing labor needs and on-site construction time, which was then assembled in short time.

▪ **3D printing or Additive Manufacturing (AM),** is a process that creates 3-dimensional objects by adding material layer by layer based on a digital design.

India votes in favour of first global carbon tax on shipping

▪ India, China, Brazil and 62 other countries voted in favour of the world's first-ever global carbon tax imposed on the shipping industry by the shipping agency of the United Nations.

▪ The decision, taken at the International Maritime Organisation (IMO) headquarters in London aims to reduce maritime greenhouse gas emissions and promote cleaner technologies.

▪ This is the first time global carbon tax has been imposed on an entire industry. Starting 2028, ships will have to shift to lower-emission fuels or pay a fee for the pollution they generate.

▪ The deal was supported by 63 countries, including China and Brazil, but opposed by oil-rich nations such as Saudi Arabia, the UAE, Russia, and Venezuela.

Tolukudi Research Project Certificate for Students

- The Department of Adi Dravidar and Tribal Welfare has launched the Tolukudi Research Project to research the tribal people of Tamil Nadu. This project has an annual budget allocation of Rs. 250 crore.

- For the first time in India, the Tolukudi Research Project is being implemented to conduct research on tribal lifestyle, art, language, handicrafts, and heritage. Accordingly, 70 students have been selected for undergraduate, postgraduate, and doctoral research studies.

- Postgraduate students receive Rs. 10,000 per month and doctoral research students receive Rs. 25,000 per month.

15th Century Perumal Statue Discovered

- Archaeological enthusiasts have discovered a 15th-century Perumal (Vishnu) statue in Vadamalapuram, Pudukkottai district. During the 15th and 16th centuries AD, this area was ruled by Pallava kings. The statue has been carved in Pallava style with artistic precision.

Women Beneficiaries of Dream Home Project in Self-Help Groups

- The Tamil Nadu government has ordered that women beneficiaries of the Dream Home project must be ensured membership in self-help groups. Following this, Additional Chief Secretary of Rural Development and Panchayat Department, Gagandeep Singh Bedi, has issued guidelines for the project.

- If a hut is located on unobjectionable government poramboke land and the encroachment has been regularized by the Revenue Department, providing a house will be considered. From the total unit cost for each house, funds for 90 person-days for house construction and 10 person-days for toilet construction will be provided under the Mahatma Gandhi National Rural Employment Guarantee Scheme.

- Under the Swachh Bharat Mission, Rs. 12,000 will be provided as unit cost for building toilets. All houses should be provided with gas, electricity connections for huts.

- Drinking water connections should be provided under the 15th Finance Grant. If beneficiaries wish, they can obtain loans up to Rs. 50,000 through the Tamil Nadu Rural Livelihood Mission or from cooperative and commercial banks.

Kumbakonam betel leaf - GI tag

- The Kumbakonam betel leaf, which is renowned for its remarkable tenderness (Kozhundhu Vettrilai), owing to its early harvest, has secured the Geographical Indication (GI) tag.

- Unique Harvesting Process: Unlike other regions where betel leaves are harvested every 30 days, Kumbakonam betel leaves are

harvested every 15 to 18 days, making them exceptionally soft.

- The 'Vellaikodi' variety has a pale yellowish-green hue and elongated leaves, while 'Pachaikodi' variety of leaves are greenish and heart-shaped.

- The Kumbakonam betel leaf finds references in literary works and poems.

- Freedom fighter Subramania Bharathiyar, in one his poems, referred to the betel leaves grown on the banks of the Cauvery river as follows: Gangai nadhi purathu gothumai pandam, Cauveri vettrilaikku maaru kolvom.

Hornbill Conservation Initiative

- Tamil Nadu is developing a blueprint to conserve four species of hornbills – Great Hornbill, Malabar Pied Hornbill, Indian Grey Hornbill, and Malabar Grey Hornbill.

- **Centre of Excellence:** A Centre of Excellence for Hornbill Conservation will be established in the **Anamalai Tiger Reserve (ATR) to study** and protect hornbills.

- **Ecological Role:** Hornbills are frugivorous birds that help in seed dispersal, contributing to ecological restoration.

- No one has estimated the population of hornbills in the entire mainland so far. That is why, the initiative of the Tamil Nadu government is significant.

- These trees are very important for the hornbills to nest. They are rare species. Among them, Dipterocarpus indicus and Cryptocarya anamalayana are 'endangered', according to the IUCN Red List, while Myristica malabarica is 'vulnerable'

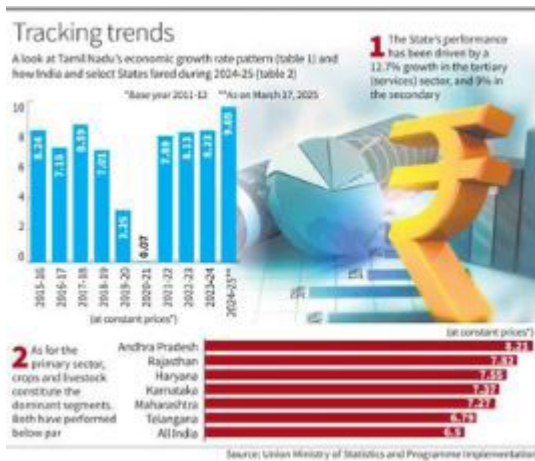*Key conservation areas identified include:*

- **Anamalai Tiger Reserve (ATR)** – Great Hornbill, Malabar Grey Hornbill

- **Athikkadavu-Pilloor-Bhavanisagar Valley** – Malabar Pied Hornbill

- **Sathyamangalam forests** – Indian Grey Hornbill

IUCN Red List Status

- **Great Hornbill & Malabar Grey Hornbill –** Vulnerable

- **Malabar Pied Hornbill –** Near Threatened

- **Indian Grey Hornbill (widespread distribution in the country) –** Least Concern

Tamil Nadu's economic growth

- Tamil Nadu's real economic growth rate of 9.69% for 2024-25 marks the highest for any State in the country, besides being the highest for the State in the past 10 years.

- The previous high was 8.59% during 2017-18. The lowest (0.07%) was recorded during 2020-21, the year of the COVID-19 pandemic.

- The term, real growth rate, denotes the rate that is exclusive of inflation.

- The one that includes inflation is called nominal economic growth rate. For instance, Tamil Nadu's nominal growth rate for 2024-25 is 14.02%, also the highest among States.

- The State's performance has been driven by a 12.7% growth in the tertiary (services) sector and 9% in the secondary.

- The primary sector's performance is abysmally poor, with 0.15%.

- The tertiary sector's contribution to the State's Gross State Value Added is around 53%, followed by the secondary with 37% and the primary with 10%.

Tracking trends

A look at Tamil Nadu's economic growth rate pattern (table 1) and how India and select States fared during 2024-25 (table 2)

individuals), followed closely by the long-billed vulture (31 individuals), the red-headed vulture (11), and the Egyptian vulture (5).

▪ The census report was released in the presence of Supriya Sahu, Additional Chief Secretary, Environment, Climate Change, and Forests Department; Srinivas R. Reddy, Principal Chief Conservator of Forests (HoFF); Rakesh Kumar Dogra, Principal Chief Conservator of Forests and Chief Wildlife Warden; and members of the Tamil Nadu State-Level Committee for Vulture Conservation.

Synchronised survey reveals steady rise in vulture population in State A total of 157 vultures were recorded in Tamil Nadu

▪ Minister for Forests on Friday released the report of the Synchronised Vulture Survey, 2025, in Tamil Nadu. It revealed a steady rise in the number of vultures.

▪ The survey was carried out in Tamil Nadu, Kerala, and Karnataka by the Tamil Nadu Forest Department, in coordination with the Forest Departments of Kerala and Karnataka, an official release said.

▪ The survey covered the Mudumalai Tiger Reserve, the Sathyamangalam Tiger Reserve, and the Nellai Wildlife Sanctuary in Tamil Nadu; the Wayanad Wildlife Sanctuary in Kerala; and the Bandipur Tiger Reserve, the Biligiri Rangaswamy Temple Tiger Reserve, and the Nagarhole Tiger Reserve in Karnataka.

▪ A total of 157 vultures were recorded in Tamil Nadu, showing an increase in the vulture population in the State. The white-rumped vulture is the most abundant species (110

2 sanctuaries in T.N. part of study to track diseases

▪ Tamil Nadu is among three States taking part in a first-of-its-kind study led by the Indian Council of Medical Research to build a surveillance model for tracking zoonotic diseases in increased bird-human interaction settings.

▪ It is the inter-Ministerial, first-of-its-kind study will be carried out at select sanctuaries and wetlands in Sikkim, Maharashtra, and T.N. using the One Health approach to monitor health of human populations and migratory bird species.

▪ In Tamil Nadu, the study will be conducted at the Point Calimere bird sanctuary in Nagapattinam and Vaduvur bird sanctuary in Tiruvarur.

▪ This project, involving collaboration between multiple Ministries, including the Ministry of Environment, Forests and Climate Change, the Ministry of Health and Family Welfare, and the Ministry of Agriculture will establish an early warning system for zoonotic spillovers.

New Pamban Sea Bridge

- PM inaugurates India's first vertical lift sea bridge built over the Palk Strait at a cost of ₹531 crore

- Connects Ramanathapuram with Rameswaram Island.

- Replaces the British-era over-a-century-old cantilever bridge (commissioned in 1914).

Technology & Design:

- New bridge features a vertical lift span (72.5 metres) – first of its kind in Indian Railways.

- Designed by Spanish firm TYPSA; proof-checked by IIT-Madras, altered by IIT-Bombay for added stability.

Make-in-India Highlights:

- 97–98% materials sourced domestically.

Tamil Nadu Green Initiatives

- Tamil Nadu's Chief Minister launched the Green Tamil Nadu Movement in 2021, marking the first such initiative in India, with the aim of increasing the state's green cover from 23.7 percent to 33 percent.

- In 2021, an announcement was made to establish 100 Maragatha Pooncholai (village tree parks) at a cost of Rs. 25 crores. So far, 83 Maragatha Pooncholai projects have been completed, while work is ongoing at 17 locations. This program is being implemented only in Tamil Nadu across all of India.

- Forests around major cities like Chennai, Madurai, Trichy, and Coimbatore are being significantly affected by urbanization. To reclaim these areas, the **Athivanam Development Project** (Native Forest Development Project) has been announced.

Kerala and T.N. to conduct joint Nilgiri tahr census from April 24

- The survey will span 89 census blocks in Kerala and 176 blocks in Tamil Nadu over the four-day period.

- The synchronised survey of the mountain ungulate is being conducted to commemorate the 50th anniversary of the establishment of the Eravikulam National Park.

- The Kerala and Tamil Nadu's Forest departments have begun preparations to conduct the census across the contiguous Nilgiri tahr habitats, covering areas both inside and outside protected forest zones.

- The data collected will be analysed using the 'bounded count' method to estimate the population in each block.

"Nimirndhu Nil" Project

- The Minister for Micro, Small and Medium Enterprises announced that awareness and training programs called "Nimirndhu Nil" (Stand Tall) will be implemented at a cost of Rs. 19 crores for 6 lakh students studying in 2,000 educational institutions to encourage innovation and entrepreneurial thinking among youth.

- The maximum limit of the 10 percent additional investment subsidy provided to micro manufacturing enterprises has been increased from Rs. 5 lakhs to Rs. 10 lakhs.

- A Coconut Fiber Value-Added Product Development Center will be established at a cost of Rs. 9.86 crores.

Supreme Court: Governor's withholding of 10 bills passed for the second time is illegal

▪ Bill to appoint the Chief Minister as Chancellor of universities

▪ Tamil Nadu Dr. Ambedkar Law University Amendment Bill

▪ Tamil Nadu Dr. MGR Medical University Amendment Bill

▪ Tamil Nadu Agricultural University Amendment Bill

▪ Tamil Nadu Mother Teresa Women's University Amendment Bill

▪ Tamil Nadu Fisheries University Amendment Bill

▪ Tamil University Amendment Bill

▪ Tamil Nadu Veterinary and Animal Sciences University Bill

▪ Anna University Amendment Bill

▪ Bill for establishing a new Siddha Medical University in Tamil Nadu

Underwater Acoustics Testing

▪ The National Institute of Ocean Technology in Chennai has received global recognition and international certification for underwater acoustics testing facilities.

▪ This system installed at the National Institute of Ocean Technology has been recognized by the International Bureau of Weights and Measures in Paris.

▪ It came into effect on January 30 last year.

▪ It is the only institution in the country with national standards for underwater acoustic measurements.

Heat index maps for Tamil Nadu

▪ The Regional Meteorological Centre (RMC), Chennai, is now using the Heat Index on an experimental basis in the State to forecast how

temperature and humidity could affect human discomfort.

▪ The heat index maps for Tamil Nadu, which are now being used by weather forecasters, provide information about the impact of humidity on high temperature and real-feel temperature.

▪ With colour codes like red, yellow, and orange for experimental heat index,

▪ The RMC also provides inputs to the State Disaster Management Authority and the State Planning Commission for heat-action plan and heat-mitigation strategy.

▪ The RMC is equipping itself to improve forecast accuracy and increase the density of observational network, under Mission Mausam.

▪ A total of 22 agro-meteorology automatic weather stations would be set up across the State.

▪ Tamil Nadu would also get two more Doppler weather radars, including one at Kanniyakumari.

Impact of telemedicine in STEMI care system: A five-year experience from Tamil Nadu, India'

▪ The Tamil Nadu Government Heart Attack Management Programme — operationalised in a hub-and-spoke model, networking 18 government medical college hospitals and 188 district/taluk government hospitals.

▪ A study analysing the five-year (2019-2023) experience of the programme has found that WhatsApp groups are a cost-effective way of networking larger and smaller hospitals in a hub-and-spoke model to provide telemedicine

guidance for early diagnosis and treatment of major heart attacks (STEMI — ST-segment elevation myocardial infarction).

Study results

▪ There was a 67% annual increase in the total number of individuals treated for STEMI.

▪ The proportion of individuals receiving pharmaco-invasive therapy increased from 7.9% to 31.7%.

▪ The number of individuals who did not receive guideline-directed treatment decreased by 20%.

Thooimai Mission

▪ The Tamil Nadu government has issued an order to form a State-level mission titled 'Thooimai Mission' for sustainable waste management in the State.

▪ The **Clean Tamil Nadu Company Limited (CTCL)** be brought under this mission.

▪ The mission shall serve under the Special Programme Implementation Department.

▪ It will ensure alignment with State priorities, facilitate collaboration among key departments, oversee technical guidance, and monitor overall mission progress to achieve its objectives

Governing body

▪ The Mission Secretariat will function with a Governing Body and a State-Level Committee.

▪ The Chief Minister will be the Chairperson of the Governing Body, while the Deputy Chief Minister will be the Vice-Chairperson.

▪ Minister for Water Resources, Minister for Municipal Administration, Minister for Rural Development, Minister for Finance and Environment and Climate Change, Minister for School Education, Minister for Higher Education, and Minister for Health will be the members of the Governing Body.

▪ The body will also have two to three experts as members, besides 10 ex-officio members.

▪ It shall meet at least once in six months or as and when situation warrants.

▪ The Chief Secretary will be the Chairperson of the State-Level Executive Committee, while the Additional Chief Secretary/Principal Secretary/Secretary to Government, Special Programme Implementation Department, will be its convenor.

▪ Secretaries from departments including Finance, and Municipal Administration and Water Supply Department will be members of the State-Level Executive Committee.

Thovalai Flower Garland - GI Tag

▪ The Thovalai flower garland of **Kanyakumari** have been granted **Geographical Indication (GI) Tags** by the Government of India.

▪ Famous in southern Tamil Nadu and Kerala.

▪ Handcrafted using white, red, and green flowers woven like a mat.

▪ Recognized for its artistic floral arrangements.

Six new - GI Tag

▪ Six new products from Tamil Nadu have been awarded the Geographical Indication (GI) tag, bringing the state's total to 69.

▪ These products, renowned for their unique qualities, include Panruti Jackfruit, Panruti Cashew, Puliyankudi Acid Lime, Virudhunagar Samba Vathal, Chettikulam Small Onion, and Ramanadu Chithiraikar Rice.