

DAILY CURRENT AFFAIRS (DCA)

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UNION BUDGET 2026: KEY HIGHLIGHTS

Context

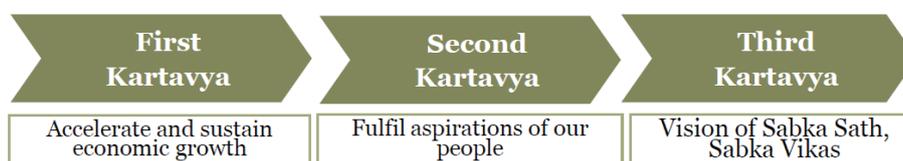
- Recently, the Finance Minister Nirmala Sitharaman presented the Union Budget 2026-2027 in Parliament.

Constitutional Basis of the Union Budget of India

- The **preparation, presentation, and approval** of the Union Budget derive authority from the **Constitution of India**.
- Annual Financial Statement (Article 112)**: It is the **core constitutional provision** for the Union Budget. It legally requires the government to present a budget every year.
 - It mandates that the **President** shall lay before **both Houses of Parliament** an *Annual Financial Statement*. It shows:
 - Estimated receipts and expenditure;**
 - For the **financial year (1 April – 31 March)**;
- Voting on Demands for Grants (Article 113)**: No money can be withdrawn from the **Consolidated Fund of India** without Parliament's approval.
 - Demands for Grants** are:
 - Discussed and voted **only in the Lok Sabha**;
 - Rajya Sabha can **discuss but not vote**;
 - It ensures parliamentary control over public expenditure.*
- Appropriation Bill (Article 114)**: After Demands for Grants are approved, an **Appropriation Bill** is introduced. It authorizes the government to:
 - Withdraw money from the Consolidated Fund;
 - Spend it for approved purposes;
 - Government spending is unconstitutional without this Bill.*
- No Tax Without Authority of Law (Article 265)**: States that **no tax shall be levied or collected except by authority of law**.
 - All tax proposals in the Budget must be backed by legislation; and approved by Parliament;
 - It prevents arbitrary taxation.*
- Consolidated Fund, Contingency Fund, Public Account (Article 266)**: It defines the **three funds of India**:
 - Consolidated Fund of India**: Main government account;
 - Contingency Fund of India**: For emergencies;
 - Public Account of India**: Money held in trust (PF, savings, etc.);
 - Most budget transactions relate to the Consolidated Fund.*
- Money Bill (Article 110)**: The Finance Bill (part of the Budget) is a **Money Bill**. It can be introduced **only in the Lok Sabha**.
 - Rajya Sabha cannot reject or amend it, and can only make recommendations.
 - It gives primacy to the Lok Sabha in financial matters.*

Key Highlights of Union Budget 2026–27

- It is the first Union Budget prepared in **Kartavya Bhawan**, and the Finance Minister underscored it is guided by **three kartavya (duties)** to accelerate growth, build people's capacity, and ensure inclusive development.



First Kartavya: Accelerating and Sustaining Economic Growth

- It focuses on productivity, competitiveness and resilience amid global volatility.
- **Key interventions** include **manufacturing push** in seven strategic and frontier sectors; **rejuvenation of legacy industries**; creation of **Champion MSMEs**; continued thrust on **infrastructure**; **long-term energy security**; and development of **City Economic Regions (CERs)**;
- **Key Sectoral Announcements:**
 - ♦ **Biopharma SHAKTI:** ₹10,000 crore over five years to position India as a global biopharma hub, including new and upgraded NIPERs, over 1,000 clinical trial sites, and faster drug approvals.
 - ♦ **Textiles:** An integrated programme covering fibre self-reliance, cluster modernisation, handloom and handicrafts, sustainable textiles, and skilling through *Samarth 2.0*.
 - ♦ **MSMEs:** A ₹10,000 crore **SME Growth Fund** to nurture future champions.
 - ♦ **Infrastructure:** Public capex to rise to **₹12.2 lakh crore in FY 2026–27**, sustaining the investment momentum.
 - ♦ **Green Logistics:** New Dedicated Freight Corridors, 20 National Waterways, and training centres for logistics manpower.
 - ♦ **Urban Growth:** ₹5,000 crore per CER over five years through a reform-linked challenge mode.
 - ♦ **High-Speed Rail:** Seven corridors to act as inter-city growth connectors.

Second Kartavya: Fulfilling Aspirations and Building Capacity

- It aims to empower citizens as partners in growth. The Budget deepens investments in human capital noting that **25 crore people have exited multidimensional poverty**.
- **Major Initiatives:**
 - ♦ **Medical Tourism:** Five Regional Medical Hubs combining healthcare, education and research.
 - ♦ **Veterinary Education:** Support to add over 20,000 professionals via private-sector capacity creation.
 - ♦ **AVGC Sector:** Content Creator Labs in 15,000 schools and 500 colleges to meet future talent needs.
 - ♦ **Education & Gender:** One girls' hostel in every district for STEM institutions.

- ♦ **Tourism & Hospitality:** National Institute of Hospitality and upskilling of 10,000 tourist guides.
- ♦ **Sports:** Launch of a **Khelo India Mission** to systematically develop talent, infrastructure and sports science.

Third Kartavya: Sabka Sath, Sabka Vikas

- It aligns with inclusive development across regions and communities.
 - ♦ **Agriculture:** Bharat-VISTAAR, an AI-powered multilingual advisory platform integrating AgriStack and ICAR systems.
 - ♦ **Women Empowerment:** **SHE Marts** to strengthen self-help entrepreneurs.
 - ♦ **Mental Health:** Establishment of **NIMHANS-2** and upgradation of institutes in Ranchi and Tezpur.
 - ♦ **Regional Development:** East Coast Industrial Corridor, tourism destinations in **Purvodaya states**, e-buses, and a **Buddhist Circuit Scheme** in the North-East.

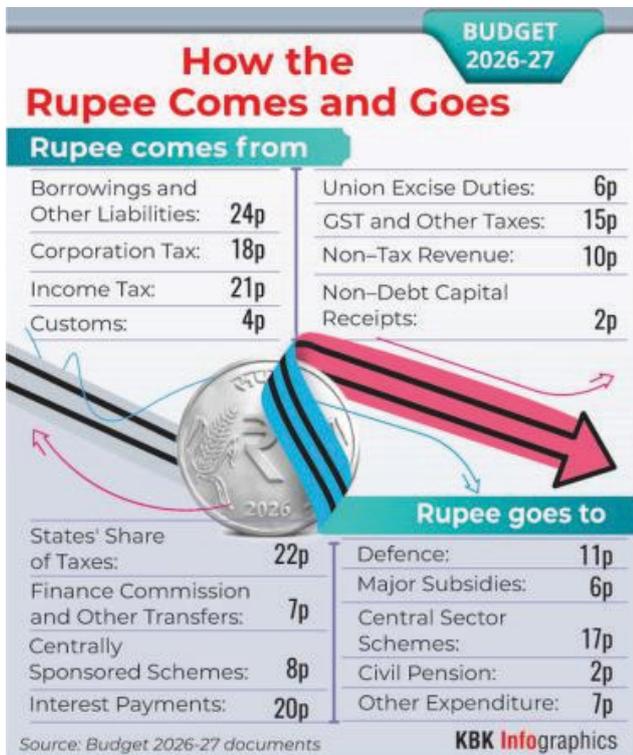
Tax Reforms: Simpler & Growth-Oriented

- **Direct Taxes:** New **Income Tax Act, 2025** effective April 2026;
 - ♦ Lower **TCS rates** for overseas tours, education and medical purposes;
 - ♦ Simplified TDS, automated lower-deduction certificates, extended timelines for return revisions;
 - ♦ Rationalised penalty and prosecution, decriminalisation of minor offences;
 - ♦ Targeted reliefs for cooperatives and IT services;
 - ♦ Incentives to attract global cloud, data centre and manufacturing investments;
- **Indirect Taxes: Customs duty rationalisation** to support manufacturing, energy transition, aviation and critical minerals;
 - ♦ Lower tariffs for personal imports and exemptions for essential drugs;
 - ♦ Faster, tech-driven customs processes and expanded AEO benefits;
 - ♦ Boost to exports via courier, fisheries, and SEZ reforms;

Fiscal Consolidation and Stability

- The Budget maintains fiscal discipline while supporting growth:
 - ♦ **Fiscal deficit:** 4.3% of GDP in BE 2026–27;
 - ♦ **Debt-to-GDP ratio:** Declining to 55.6%;

- ♦ **Capex (RE 2025–26):** ~₹11 lakh crore;
- ♦ **Non-debt receipts (BE 2026–27):** ₹36.5 lakh crore;



Conclusion

- The Union Budget 2026–27 presents a **duty-driven, reform-oriented, and inclusive roadmap** for India's next phase of growth.
- It combines fiscal discipline with bold investments in **people, productivity, and infrastructure**, laying a strong foundation for a resilient, competitive, and equitable **Viksit Bharat** anchored in the **three kartavya**.

Source: PIB

AI-POWERED TOYS

Context

- The novel AI-powered toy “companions” are available on **popular e-commerce platforms**.
 - ♦ Their makers claim the **toys help educate children** but experts warn that such toys could impact a child's healthy development.

What are AI Toys?

- AI toys require **internet connectivity to work** and can take on the form-factor of plush aliens, fluffy animals, or friendly-faced robots.
- Many of these AI toys come with **embedded microphones that listen to children, to formulate replies**.

- Their makers **promote them as products that offer** educational answers, give emotional support, guide children through tasks or games, teach them new skills, and return compliments.

Major concerns with AI toys

- **Data Privacy Risks:** AI toys collect sensitive data like children's voices, images, behaviour patterns, raising risks of data misuse and surveillance.
- **Cybersecurity threats:** Internet-connected toys can be hacked, exposing children to strangers or inappropriate content.
- **Psychological and Behavioural Impact:** Excessive emotional attachment to AI toys may affect social development and real-world human interactions.
- **Bias and Inappropriate Responses:** AI systems may reflect cultural, gender or racial biases, reinforcing stereotypes among children.
- **Commercial exploitation:** AI toys that use subscriptions could harm children if they become dependent on the toys for emotional comfort while parents are unable to keep up with payments.
- **Lack of parental control and transparency:** Parents often lack clarity on how data is stored, processed, or shared.
- **Regulatory and ethical gaps:** Existing child protection and data laws struggle to keep pace with rapidly evolving AI toys.

How should parents and caretakers treat AI toys?

- **Human interaction is developmentally essential**, no AI toy can replace the benefits of or learning from teachers and caregivers.
- **Parents should engage with their children directly** and guide them towards more traditional learning experiences, such as non-AI toys, books, museum visits, playdates, family game nights, imaginative play, and art.

Compliance Under India's Digital Personal Data Protection (DPDP) Act, 2023

- **Children's data protection:** The Act mandates verifiable parental consent for processing children's personal data which is difficult to ensure in voice-enabled, always-listening toys.
- **Data minimisation & purpose limitation:** AI toys often collect excessive behavioural and emotional data beyond necessity.
- **Profiling restrictions:** The Act discourages behavioural tracking and targeted influence of children, which AI toys may enable.

- **Cross-border data transfers:** Cloud-based AI toys may store data overseas, raising sovereignty and enforcement concerns.

Source: TH

FM TABLES 16TH FINANCE COMMISSION REPORT

In News

- The 16th Finance Commission, constituted in 2023 under the chairmanship of Dr. Arvind Panagariya has had its key recommendations accepted by the Government for implementation during 2026–27 to 2030–31.

What is the Finance Commission?

- **Constitutional Body:** Established under **Article 280 of the Indian Constitution.**
- **Formation:** Constituted by the President of India every five years (or earlier).
- **Composition:** A Chairman and four other members.
- **Core Function:** It serves as a balancing wheel of fiscal federalism by recommending:
 - ♦ **Vertical Devolution:** The distribution of net tax proceeds between the Centre and the States.
 - ♦ **Horizontal Devolution:** The allocation of these proceeds among the States themselves.
 - ♦ **Grants-in-Aid:** Principles governing financial assistance to States from the Consolidated Fund of India (Article 275).
 - ♦ **Local Bodies:** Measures to augment State Consolidated Funds to support Panchayats and Municipalities.
- **Nature of Recommendations:** Advisory (not legally binding), though traditionally accepted by the Government.
- **Note:** Cesses and surcharges levied by the Centre are not part of the divisible pool.

Key Highlights

- **Vertical Devolution (Tax Sharing):**
 - ♦ **Retained at 41%:** The Commission recommended keeping the states' share of the divisible tax pool at 41% (the same as the 15th FC).
 - ♦ **The "Grand Bargain" Proposal:** The report highlighted that while the share is 41%, the actual pool has shrunk because the Centre's

cesses and surcharges (which are not shared) have risen. It suggests folding these into the regular tax pool in the future.

HOW STATES SHARE THE MONEY BAG

Total divisible pool of central taxes is up 86%, from ₹56 lakh crore under the 15th Finance Commission to ₹104 lakh crore under the 16th. While all states will get more funds in absolute terms, their shares have shifted—mostly marginally. On this front, only one of the five southern states stands to lose

State	15th FC	16th FC	Change in share (% point)	State	15th FC	16th FC	Change in share (% point)
UP	17.93	17.62	-0.31	Kerala	1.94	2.38	0.44
Bihar	10.06	9.95	-0.11	Telangana	2.13	2.17	0.04
MP	7.89	7.35	-0.54	Punjab	1.79	2.00	0.21
West Bengal	7.52	7.22	-0.31	Haryana	1.08	1.36	0.28
Maharashtra	6.13	6.44	0.31	Arunachal	1.76	1.35	-0.41
Rajasthan	5.98	5.93	-0.05	Uttarakhand	1.1	1.14	0.04
Odisha	4.63	4.42	-0.21	Himachal	0.8	0.91	0.11
Andhra	4.11	4.22	0.11	Tripura	0.7	0.64	-0.06
Karnataka	3.64	4.13	0.49	Meghalaya	0.77	0.63	-0.14
Tamil Nadu	4.19	4.10	-0.09	Manipur	0.72	0.63	-0.09
Gujarat	3.4	3.76	0.36	Mizoram	0.5	0.56	0.06
Jharkhand	3.31	3.36	0.05	Nagaland	0.57	0.48	-0.09
Chhattisgarh	3.41	3.30	-0.11	Goa	0.39	0.37	-0.03
Assam	3.13	3.26	0.13	Sikkim	0.39	0.34	-0.06

Note: FC is short for Finance Commission; figures for 15th & 16th FC are in %

- **Disaster Management Grants:**
 - ♦ **New Disasters:** The 16th FC recommended including **Heatwaves and Lightning in the list of nationally notified disasters**, allowing states to access central funds for these events.
 - ♦ **Total Corpus:** Rs 2,04,401 crore for the five-year period.
 - ♦ **Allocation:** 80% to the State Disaster Response Fund (SDRF) and 20% to the State Disaster Mitigation Fund (SDMF).
- **Grants to Local Bodies:**
 - ♦ **Total Allocation:** Rs 7,91,493 crore for rural and urban local bodies.
 - ♦ **Performance Linked:** Grants are split into Basic (80%) and Performance (20%) components.
 - ♦ **Urbanization Premium:** A Rs 10,000 crore fund to incentivize the merger of peri-urban villages into larger Urban Local Bodies (ULBs).
- **Fiscal Roadmap:**
 - ♦ **State Deficit:** Recommended capping states' fiscal deficit at 3% of GSDP.
 - ♦ **Union Deficit:** A target to bring the Union's fiscal deficit down to 3.5% of GDP by FY31.
 - ♦ **End of Revenue Deficit Grants:** Unlike previous commissions, the 16th FC has discontinued Post-Devolution Revenue Deficit Grants, urging states to improve their own tax administration.

Source: TH

GOVERNMENT CONSTITUTED PANEL TO LOOK AT AI IMPACT ON JOBS AND SERVICES

Context

- **Union Finance Minister** in her Budget Speech said a **high-level 'Education to Employment and Enterprise' Standing Committee** will be formed to recommend measures that focus on the services sector.

Terms of reference of the high-level standing committee, according to Budget documents

- **Identify services sub-sectors** with potential for growth, employment and exports.
- **Assess the impact of emerging technologies**, including AI, on jobs and skill requirements.
- **Propose specific measures for embedding AI** in the education curriculum from school level onwards and upgrading State Councils of Educational Research and Training institutes for teacher training
- **Propose measures** to make the **informal workflow visible**, verifiable and future-ready, to enhance upward mobility prospects.
- Propose steps to be taken **to attract skilled diaspora and foreign talent** into the country.

Need for the Committee

- **Job Losses due to Automation:** Due to heightened concerns of AI's impact on jobs, as employees across sectors face layoffs, with enterprises increasingly turning to automation.
- **Sectoral Mapping:** The Economic Survey 2025-26 had called for a comprehensive sectoral mapping of jobs outside the white-collar workspace, which have a high-skill requirement but are understaffed, which is an often-overlooked source of new jobs within the economy.
- **To Subside the Risk of AI on Jobs:** The policy reforms could subside some of the impending risks that AI can have on current jobs on offer.

Impact of AI on Jobs in India

- **Routine, repetitive tasks are most vulnerable:** Roles in sectors like BPO/ customer service, basic clerical work, assembly-line tasks, and routine logistics can be significantly reduced as AI-driven automation takes over these functions.

- **Traditional mid-skill jobs**, which have historically provided stable employment, are being squeezed as automation substitutes many of those functions.
- **IT and outsourcing:** AI tools are increasingly handling tasks such as coding, testing, and support work contributing to workforce restructuring in major IT firms and outsourcing companies.

Emerging Opportunities

- **Emerging technologies are creating new job categories** that didn't exist before such as: AI/ML engineers, Data scientists and analysts, Cloud architects, Cybersecurity specialists, AI product managers and prompt engineers.
 - ♦ These roles often command higher salaries and are rapidly growing in demand.
 - ♦ Forecasts suggest millions of new tech jobs could be added over the next few years, with estimates of ~4.7 million AI/tech roles emerging in India by 2027.
- **Shift in Skill demands:** About 38% of the Indian workforce could experience shifts in skill needs due to AI by 2030 the highest among BRICS countries.
 - ♦ Traditional academic credentials are becoming less predictive of employability; recruiters are prioritizing technology skills, analytical abilities, and adaptive learning.

Way Ahead

- **Upskilling & Reskilling Imperatives:** India needs large-scale reskilling to adapt to new job requirements, estimates suggest over 16 million workers will need reskilling in AI and automation technologies by 2027.
- **Government & Industry Initiatives:** National strategies and partnerships are focusing on equipping students and workers with AI and tech competencies.
 - ♦ Large-scale corporate skill-building initiatives are underway to boost workforce readiness.

Conclusion

- While certain traditional roles will decline or transform, a dynamic landscape of new opportunities is opening up that rewards advanced technical capabilities, continuous learning, and adaptability.
- The transition will require **coordinated efforts from government, industry, and educational systems** to ensure India's workforce is ready for the future of work.

Government Initiatives

- **FutureSkills PRIME (National Reskilling & Upskilling Platform):** A flagship national programme by the Ministry of Electronics and Information Technology (MeitY) in partnership with NASSCOM to upskill/reskill IT professionals and youth in 10 new and emerging technologies including AI.
- **Skill India Mission:** India's broader Skill India Mission now includes several AI/tech components.
 - ♦ It encourages early exposure to AI skills and ties vocational pathways with employability in future tech roles.
- **National Council for Vocational Education & Training (NCVET)** has developed the **National Programme on Artificial Intelligence (NPAI) Skilling Framework**, which outlines the national roadmap, structure and guidelines for skilling in AI, data science and emerging technologies.
- **MSDE** launched a national-level initiative, SOAR (Skilling for AI Readiness) aimed at embedding AI awareness and foundational skills among school students (Classes 6–12) and building AI literacy among educators.
- **Directorate General of Training (DGT)** has collaborated with entities including IBM India, Microsoft, Cisco, Adobe India, Amazon Web Services (AWS), etc, for skilling initiatives under Corporate Social Responsibility (CSR).
- **Sector Skill Councils (SSCs)**, constituted with active industry and global domain participation, co-develop curriculum and conduct Training of Trainers.
 - ♦ Leading industry partners offer curriculum support and provide apprenticeship/internship support in AI, robotics and climate tech.

Source: IE

MARGINAL HIKE FOR AGRICULTURE**In News**

- Farmer organisations across the political spectrum criticised the Union Budget 2026–27.

Agricultural Sector Announcements in Union Budget 2026–27

- The Union Budget 2026–27 has increased the allocation for the agriculture sector by 2.6%,

adding about ₹3,000 crore compared to last year, even as the Economic Survey reported a slowdown in agricultural growth.

- The Finance Minister proposed ₹1.3 lakh crore for agriculture, slightly higher than the 2025–26 Budget Estimate and the Revised Estimate, but close to the actual spending in 2024–25.
- The Fertilizer Ministry received a larger boost, with an allocation of ₹1.7 lakh crore—an increase of around 8.5% over the previous year.

Key initiatives in agriculture and allied sectors

- **Shift from crops to allied sectors as income engines:** The Budget signals a shift in agricultural income strategy from crops to allied sectors, with most announcements focused on fisheries and animal husbandry.
 - ♦ It emphasises expanding inland and coastal fisheries, strengthening value chains, and improving marketing through startups, women-led groups, and producer organisations. Livestock initiatives focus on infrastructure modernisation and value-chain development, indicating a move away from cereal-based farming towards fisheries, livestock, dairy, and poultry.
- **Geographic crop strategy, not generic agriculture:** The Budget announced 350 crore to promote high-value crops and it prioritises seven place-specific crops—coconut, cocoa, cashew, almonds, walnuts, pine nuts, and sandalwood—targeted to coastal, hilly, Northeastern, and plantation regions.
 - ♦ Through schemes like the Coconut Promotion Scheme and dedicated programmes for cashew and cocoa, the focus is on boosting production, productivity, and export competitiveness, reflecting an agriculture strategy based on regional comparative advantage.
- **Market access over production support:** The Budget prioritises market access over production support, focusing on sales channels rather than just farming.
 - ♦ It promotes fish and livestock FPOs, community-owned SHE Marts leveraging SHGs, and strengthens cooperatives through targeted tax reliefs, including deductions for member-supplied inputs, inter-cooperative dividends, and temporary exemptions for national cooperative federations distributing benefits to members.

- **Logistics and trade architecture as agri policy:** The Budget proposes farm-to-market reforms, including a single-window clearance for food, plant, animal, and wildlife cargo by April 2026, alongside investments in AI-based container scanning, warehouse digitisation, and dedicated freight corridors, including waterways.
- **Agriculture as part of digital governance and bio-economy:** The Budget proposes to launch Bharat-VISTAAR, an AI-enabled digital advisory platform aimed at integrating agricultural data and advisory services to improve farm productivity and decision-making.
 - ♦ On waste to value generation, the Budget proposes to remove the excise duty payable on compressed biogas (CBG).

Objectives

- The Budget aims to boost farmer incomes by promoting crop diversification and allied sectors, generate rural and peri-urban employment through fisheries and animal husbandry
- It enhances sustainability via integrated water management and climate-resilient practices.
- It also focuses on digital empowerment, leveraging AI and technology for precision farming and improved market linkages.

Concerns

- Farmer argued that the budget ignored major demands such as a statutory Minimum Support Price (MSP), farm debt relief, and solutions to challenges arising from global trade and tariff pressures, calling it a gap between government promises and actual budgetary support.
- The Budget reduces spending on crop insurance, PMKSY, agricultural research (DARE), and food processing, indicating limited fiscal support for long-term productivity and innovation despite policy emphasis.
- The allocation for PM Kisan Samman Nidhi was retained at ₹63,500 crore, with no increase.
- Spending on Agriculture Research and Education was cut by 4.8%, dropping to ₹9,967.4 crore.

Governments stand

- The Minister of Agriculture and Farmers Welfare of India described the Union Budget 2026–27 as “historic and unprecedented,” saying it strengthens the foundation for a developed and self-reliant India.

- It focuses on farmers, youth, women and the poor, with villages at its core. The Rural Development budget has been increased by 21%, and combined allocations for the Rural Development and Agriculture ministries now exceed ₹4.35 lakh crore.

Conclusion and Way Forward

- The Union Budget 2026–27 focuses on climate-resilient agriculture, inclusive growth for smallholders and women, and technology-driven market access, while linking agriculture to broader rural development.
- The Budget adopts a systems approach, integrating agriculture across seven priorities to strengthen the ecosystem rather than focusing on direct farming interventions.
- Its success depends on translating allocations into tangible benefits through structural and climate-adaptive reforms.

Source :IE

THE CHANGING LANDSCAPE OF ECOLOGY RESEARCH

Context

- AI, remote sensing, and big data are changing ecological research, with fieldwork increasingly supported or replaced by computer-based, data-driven methods.

Ecology research with traditional field-based approach

- Classical ecology relied on **direct field observations, specimen collection, and long-term monitoring** of ecosystems.
- Also the fieldwork enabled contextual understanding of **species interactions, habitat conditions, and ecological processes.**
- Such approaches, however, are **time-consuming, geographically limited, and dependent on human presence**, which may disturb sensitive ecosystems.

Drivers of the shift towards technology-driven ecological studies

- **Explosion of Ecological Data:** Over one billion natural history specimens have been digitised globally.
 - ♦ Platforms like **iNaturalist** and **eBird** generate large-scale citizen science datasets.

- ◆ Continuous data streams are produced by satellites, drones, camera traps, acoustic sensors, and **environmental DNA (eDNA)** technologies.
- **Role of Artificial Intelligence:** AI enables automated species identification, population tracking, and habitat mapping.
 - ◆ Machine learning models predict **species distribution, phenological changes, and biodiversity loss** under climate change scenarios.
 - ◆ Tasks earlier requiring years of fieldwork can now be performed at scale through algorithms.

Advantages of Technology-Driven Ecology

- **Scientific and Operational Benefits:**
 - ◆ Standardised and high-resolution data across large spatial and temporal scales.
 - ◆ Reduced human disturbance to fragile ecosystems.
 - ◆ Access to remote and hazardous environments such as deep oceans, dense rainforests, and polar regions.
 - ◆ Continuous monitoring, overcoming limitations of intermittent field visits.
- **Efficiency and Research Output:**
 - ◆ Faster hypothesis testing and data analysis.
 - ◆ Alignment with modern academic incentives that prioritise **timely publications and global datasets**.
 - ◆ Enables **interdisciplinary collaboration** between ecologists, data scientists, and climate modellers.

What are the Challenges?

- **Loss of Ecological Intuition:** Reduced direct engagement with nature leads to an “**extinction of experience**”, affecting ecological ethics and conservation sensitivity.
- **Data Bias and Interpretation Issues:** Ecological data are shaped by sampling locations, technologies used, and underlying assumptions.
 - ◆ AI models trained without adequate field validation risk misclassification and contextual errors.
- **Over-Reliance on Technology:** Algorithms overlook local ecological nuances observable only through on-ground studies.
 - ◆ Technological systems require significant financial investment and technical capacity, limiting access in developing regions.

- **Division of Labour:** Ecology has evolved into a highly complex discipline, and expecting all ecologists to be field naturalists is increasingly impractical.

Way Ahead

- Strengthen **ethical frameworks and conservation orientation** in technology-led research.
- Build capacity in **data literacy and computational ecology**, especially in biodiversity-rich developing countries.
- Promote policies that ensure **open-access ecological data** while safeguarding sensitive habitats.

Source: TH

NEWS IN SHORT

SANT GURU RAVIDAS

Context

- To mark the **649th birth anniversary of Sant Guru Ravidas** the Adampur airport is renamed Sri Guru Ravidas Ji Airport, Adampur.

About

- Guru Ravidas is a revered saint of the **Bhakti movement** in the **15th and 16th centuries**, is known for his powerful message of unity, devotion, and service to humanity.
- He is considered the founder of the **Ravidassia religion**.

Life and Teachings

- He was a staunch advocate against **caste-based discrimination** and worked tirelessly for the **upliftment of marginalized communities**.
- He promoted the principles of human **equality, love, and brotherhood**, transcending religious and social barriers.
- He envisioned a society called ‘**Beghumpura**’ (a city without sorrow), where there is no suffering, no fear, and no discrimination.
- He gave a very broad message of ‘**karma**’ to society by coining in the popular Hindi saying ‘**Mann Changa to Kathauti Mein Ganga**’ (If your mind is pure, the Ganges is in your tub).

Legacy

- His devotional verses were included in the **Sikh scriptures** known as **Guru Granth Sahib**.

- The **Panch Vani text** of the **Dadu Panthi tradition** within Hinduism also includes numerous poems of Saint Ravidas.
- The Chief Architect of Constitution, **Dr. B.R. Ambedkar** embodied the Constitutional principles around the values expressed by Guru Ravidasji.

Source: TH

BUDDHIST CIRCUITS

Context

- The Union Budget announced a **pilot scheme for upskilling 10,000 guides in 20 iconic tourist sites** and setting up of a **National Institute of Hospitality to train professionals in the sector**.

About

- A **National Destination Digital Knowledge Grid** to digitally document all places of cultural, spiritual and historic significance would be set up.
- The government also proposed a **scheme for the development of Buddhist circuits in the region**.
 - ♦ These States include **Arunachal Pradesh, Sikkim, Assam, Manipur, Mizoram, and Tripura**.

Buddhist Circuits

- In 2016, the Ministry of Tourism announced the **Buddhist Circuit as the country's first transnational tourism circuit**, covering sites in Nepal and Sri Lanka alongside those in India.
- The Buddhist Circuit seeks to **help tourists and pilgrims experience first-hand the teachings of Lord Buddha** and trace the footsteps of Buddha.
- The **main sites covered under the circuit span the life of Buddha** from his birth to his Parinirvana and comprise **Bodh Gaya, Vaishali, Rajgir, Kushinagar, Sarnath and Shravasti**, along with **Kapilavastu and Lumbini**.
- **Four Holiest Buddhist Sites (Chaturmahāsthāna):**
 - ♦ **Lumbini (Nepal):** Birthplace of Gautama Buddha.
 - ♦ **Bodh Gaya (Bihar):** Attained Enlightenment under the Bodhi Tree.
 - ♦ **Sarnath (Uttar Pradesh):** First sermon (Dhammachakra Pravartana).
 - ♦ **Kushinagar (Uttar Pradesh):** Mahaparinirvana (death).

Buddhism

- **Buddhism** emerged in India around the **fifth-sixth centuries BC** during a period that scholars call "**the second urbanisation of India**".

Core Teachings of the Buddha

- **The Four Noble Truths**
 - ♦ **Dukkha:** Life is suffering or unsatisfactory.
 - ♦ **Samudaya:** Suffering is caused by craving and attachment (tanhā).
 - ♦ **Nirodha:** The cessation of suffering is possible by letting go of craving.
 - ♦ **Magga:** The path to the cessation of suffering is the Eightfold Path.
- **The Noble Eightfold Path:** Grouped into three categories: wisdom, ethical conduct, and mental discipline.
- **The Three Marks of Existence**
 - ♦ **Anicca (Impermanence):** All things are in constant change.
 - ♦ **Dukkha (Suffering):** Existence is filled with dissatisfaction.
 - ♦ **Anattā (Non-self):** There is no permanent, unchanging self.
- **The Goal: Nirvana (Nibbāna)**
 - ♦ A state beyond suffering and rebirth.
 - ♦ Achieved through wisdom, ethical living, and mental discipline.
 - ♦ Nirvana is the ultimate liberation and peace.

Source: TH

COCONUT, CHOCOLATE, CASHEW GET SPECIAL ATTENTION IN BUDGET 2026-27

Context

- The Union Budget 2026–27 places renewed emphasis on high-value agriculture, with targeted support for **coconut, cashew, cocoa, sandalwood**, and select nut crops to enhance farmer incomes and export competitiveness.

Coconut Production

- **Type of Plant:** Coconut is a perennial plantation crop and a **monocotyledonous palm** belonging to the family **Arecaceae**.
 - ♦ Coconut is native to the **Indo-Pacific region**, with its origin commonly traced to **Southeast Asia**.
- **Climatic Requirements:** Coconut requires a warm and humid tropical climate for optimal

growth. It grows best in regions with temperatures ranging between 25°C and 30°C and requires high and evenly distributed rainfall.

- **Soil Requirements:** Coconut thrives in **well-drained sandy loam, alluvial, laterite,** and coastal soils.
- **Distribution in India:** It predominantly grows in **Kerala, Tamil Nadu, Karnataka, Andhra Pradesh, Odisha, Goa, and West Bengal.**
 - ♦ **India is the world's largest producer of coconuts,** supporting livelihoods of nearly **30 million** people, including around **10 million** farmers.

Cocoa Production

- **Type of Plant:** Cocoa is an evergreen perennial tree crop belonging to the **family Malvaceae.**
 - ♦ Cocoa is native to the Upper Amazon Basin of **South America.** It was introduced to Asia and Africa during the colonial period for commercial cultivation.
- **Climatic Requirements:** Cocoa requires a warm, humid, and equatorial type of climate. It grows best in areas with temperatures between 21°C and 32°C and with well-distributed rainfall throughout the year.
- **Soil Requirements:** Cocoa grows well in deep, fertile, and well-drained loamy soils rich in organic matter.
- **Cultivation Pattern in India:** Major producing states include **Kerala, Karnataka, Tamil Nadu, and Andhra Pradesh.**

Cashew Production

- **Type of Plant:** Cashew is an evergreen tropical tree crop belonging to the family **Anacardiaceae.**
- **The cashew tree (Anacardium occidentale)** is native to the coastal regions of northeastern Brazil in South America.
 - ♦ Portuguese explorers introduced it to **India and Africa** in the **16th century.**
- **Climatic Requirements:** Cashew requires a tropical climate with a pronounced dry season. It grows best in areas with temperatures between 20°C and 35°C and moderate to high rainfall.
- **Soil Requirements:** Cashew can grow in laterite, red sandy, and coastal soils and performs well even on poor and degraded land.
- **Distribution in India:** Maharashtra, Andhra Pradesh, Odisha, Kerala, Karnataka, Goa, and Tamil Nadu.

Source: HT

CARBON CAPTURE PUSH IN UNION BUDGET 2026

Context

- The Union Budget 2026–27 announced a 20,000 crore push for **Carbon Capture, Utilisation and Storage (CCUS)** over five years to support India's climate transition.

What is Carbon Capture, Utilisation and Storage (CCUS)?

- CCUS refers to **technologies that capture carbon dioxide emissions** from industrial processes and power generation.
- The captured CO is either **stored underground in geological formations or utilised in products** such as chemicals, fuels, or construction materials.
- It is considered a **bridging technology for deep decarbonisation** where alternatives are limited.

Need of CCUS for India

- India's emissions profile is dominated by **coal-based power and energy-intensive industries.**
- CCUS supports India's commitment to:
 - ♦ **Reduce emissions intensity** of GDP, and
 - ♦ **Achieve net-zero emissions by 2070.**
- The technology is expected to reduce emission of hard-to-abate industries such as **steel, aluminium, cement and fertilizers.**
- If these industries decarbonise their production processes, they may escape the **tax burden** under Carbon Border Adjustment Mechanism (CBAM).

India's Commitments Emission Reductions

- India has launched the **LIFE mission (Lifestyle for Environment)** and **updated its NDCs (Nationally Determined Contributions)** under the Paris Agreement.
- Under its updated NDC 2022, India pledges:
 - ♦ **45% reduction in emissions intensity** (amount of CO₂ per unit of GDP) by 2030, compared to 2005 levels.
 - ♦ **50% of installed electricity capacity** will come from non-fossil fuel sources by 2030.
 - ♦ Creating a **carbon sink of 2.5 to 3 billion tonnes of CO₂ equivalent (GtCO₂e)** by increasing forests and tree cover.

Source: TOI

GRAIN ATMS

In News

- The Bihar government recently approved the installation of “grain ATM” machines in Patna to make PDS grain distribution faster, more transparent, and less prone to corruption.

About

- The **World Food Programme (WFP)** launched a grain **ATM project in Odisha** in 2024.
- The WFP developed the technology behind the machine and has worked in collaboration with the Food Corporation of India and various state governments.
- A grain ATM or Annapurti (meaning “provider of grain”) is an automated machine that dispenses **food grains (wheat and/or rice)**. It can release **50 kg** of grain in five minutes. It can work 24×7 like ATMs, and can be powered through solar energy.
- It also requires internet connectivity to access the PDS database and the individual profile of a Below Poverty Line (BPL) cardholder.

Benefits

- It can reduce waiting times by 70%. It can also address other inefficiencies in what can often be a long process requiring authentication, the weighing of grains, and other steps.

Source :IE

MOLTBOOK PLATFORM

In News

- Moltbook is a recently launched AI-only social media platform resembling Reddit, where verified AI agents interact exclusively via APIs, while humans observe passively.

About

- Moltbook features topic-based communities called “submolts,” where AI agents powered by models like GPT, Claude, and Gemini post, comment, debate, and form groups without human intervention.
- Created by Matt Schlicht of Octane AI using his OpenClaw framework (formerly Moltbot/

Clawdbot), the platform requires no coding from humans and has grown to host 30,000–1.4 million agents.

Key Features

- **AI-Exclusive Access:** Agents connect directly through APIs after human setup; no keyboard input or human posting allowed.
- **Emergent Behaviors:** Agents have formed mock religions, political debates, cryptocurrencies, humor, existential discussions, and even calls for private encrypted spaces.
- **Cross-Model Interactions:** Agents from different LLMs recognize “siblings” by model lineage, coordinate societies, and simulate cultural norms unscripted.

Ethical/Governance Issue

- This sparks debates on AI autonomy, alignment risks, accountability, and controllability without oversight, challenging consent and responsibility frameworks.

Source: TOI

THAIPUSAM

In News

- Prime Minister Narendra Modi greeted everyone with a blessed Thaipusam.

Thaipusam

- The name “Thaipusam” is a combination of “Thai” (the Tamil month) and “Poosam,” the star at its highest point during the festival.
- It is celebrated on the full moon in the Tamil month of Thai.
- It is a Hindu festival celebrated to **honour Lord Murugan** (also known as Lord Kartikeya), the Hindu god of war, victory, and wisdom, while also being a symbol of courage, determination, and spiritual growth.
- It is widely celebrated by the Tamil community in Tamil Nadu India and across the world, especially in Sri Lanka, Singapore and Malaysia.

Source :PIB

