

DAILY CURRENT AFFAIRS (DCA)

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AI TO POWER INDIA'S NEXT AGRICULTURAL TRANSFORMATION

Context

- The Union Minister of Science and Technology, at the **AI4Agri 2026 Summit** in Mumbai said that India's next agricultural revolution will be driven by artificial intelligence.

How is AI in Agriculture Critical for India?

- Indian agriculture faces structural constraints such as **fragmented landholdings, climate variability, price volatility, and low productivity**.
- Climate change** has **increased the frequency of extreme weather events**, making predictive technologies essential.
- Small and marginal farmers (over **85% of total farmers**) require affordable, data-driven advisory systems.
- Efficient risk management and market access** are necessary to enhance farmer incomes in line with national development goals.

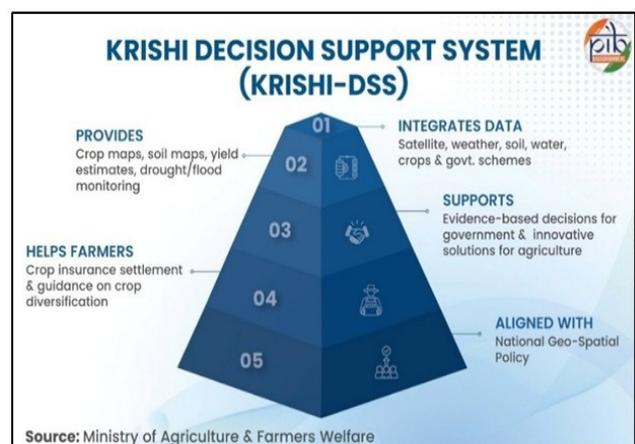
Role of Artificial Intelligence in Agriculture

- Soil Health Diagnostics:** AI uses deep learning and image recognition to monitor soil health by **analysing signals from satellite imagery**, drone-based observations, and farm-level images.
- Farm Mechanisation Efficiency:** AI technologies, such as **machine learning, drone applications, and remote sensing**, are revolutionizing farming efficiency.
 - In horticulture, where crops require continuous monitoring across multiple growth stages, AI-based systems offer **round-the-clock surveillance** of high-value crops.
- Price Realisation for Farmers:** AI-driven predictive analytics leverage large datasets from platforms such as **e-NAM, AGMARKET, the Agricultural Census**, and the **Soil Health Card programme** to assess price movements, arrival trends, and regional demand patterns.
- Climate-Smart Agriculture:** AI can predict weather patterns and provide early warnings for extreme weather events, enabling farmers to take preventive measures.
 - Integration with platforms like **WINDS (Weather Information and Network Data System)** strengthens risk assessment.

Government Initiatives in AI-Driven Agriculture

- Kisan e-Mitra**, launched in 2023, is a voice-enabled, AI-powered chatbot designed to support farmers by answering queries on key government schemes, including **PM Kisan Samman Nidhi, the Kisan Credit Card, and the Pradhan Mantri Fasal Bima Yojana**.

- The platform operates in **11 regional languages** and currently addresses over 8,000 farmer queries each day.
- The National Pest Surveillance System (NPSS)**, launched in **2024**, utilises AI and Machine Learning (ML) to enable early detection of pest infestations and crop diseases.
- The Union Budget 2026-27 proposed **Bharat-VISTAAR**, a multilingual AI tool to integrate the **AgriStack portals** and the **ICAR package** with AI systems.
 - AgriStack** is a core component of the **Digital Agriculture Mission**, providing farmers with a **unique digital identity (Farmer ID)** linked to land records, livestock ownership, crops cultivated, and benefits availed, enabling secure identification and access to agricultural services.
 - The **ICAR (Indian Council of Agricultural Research)** package refers to scientific, evidence-based farming practices and crop management advice.
- AI-Enabled Crop Insurance:**
 - CROPIC (Collection of Real-Time Observations and Photographs of Crops)** uses geotagged, time-stamped images uploaded via mobile apps, enhancing transparency in crop damage assessment.
 - YES-TECH (Yield Estimation System based on Technology)** uses remote sensing and AI analytics for scientific yield estimation.
- The Krishi Decision Support System (KDSS)** integrates data from multiple sources, to generate comprehensive analytical outputs such as digital crop maps, soil maps, yield estimates, and drought and flood monitoring assessments.



Challenges in AI Adoption in Indian Agriculture

- Rural Connectivity Gaps:** Small and marginal farmers often lack access to smartphones, IoT devices, or digital infrastructure, creating an access asymmetry.

- ◆ Power supply disruptions in rural areas further constrain the effective use of AI-enabled devices.
- **Data Privacy:** AI systems rely on large datasets including land records, crop patterns, financial details, and yield data collected under platforms like AgriStack.
 - ◆ Absence of a clearly defined farmer-centric data ownership framework may lead to misuse or commercial exploitation of farm-level data.
- **High Cost of Advanced Technologies:** Precision agriculture tools such as drones, AI-based sensors, robotics, and automated machinery involve high initial capital investment.
 - ◆ **Small landholdings (average size ~1–1.2 hectares)** reduce economies of scale, making individual adoption financially unviable.

Way Ahead

- Artificial intelligence has the **potential to transform** Indian agriculture from a risk-prone livelihood into a **data-driven, resilient, and profitable enterprise**.
- If supported by inclusive policies, robust infrastructure, and farmer-centric implementation, AI could usher in a new agricultural revolution comparable in impact to the **Green Revolution**, this time powered **not by seeds and fertilizers, but by data and intelligence**.

Source: PIB

INDIA AI IMPACT SUMMIT 2026

Context

- The **India AI Impact Summit 2026** concluded in New Delhi recently.

Background of AI Summits

- **2023 Bletchley Park Summit (UK):** The first global AI summit was held at Bletchley Park and focused on safety. It brought together countries and experts to discuss AI risks and resulted in the Bletchley Declaration.
- **2024 Seoul Summit (South Korea):** The second summit was held in Seoul in May 2024, building on the discussions from the Bletchley Park meeting and broadening to include innovation and inclusivity alongside safety.
- **2025 AI Action Summit (Paris, France):** In February 2025, the AI Action Summit took place at the Grand Palais in Paris. It was co-chaired by France and India and followed the earlier Bletchley Park and Seoul events.
- **2026 India AI Impact Summit (New Delhi):** This is the next major summit in the series, held in India in February 2026.

India–AI Impact Summit 2026

- **Hosted by the Ministry** of Electronics and Information Technology (MeitY).
- The India–AI Impact Summit 2026, was **announced by the PM at the France AI Action Summit** and it will be the first-ever global AI summit **hosted in the Global South**.
- It will strengthen **existing multilateral initiatives** while advancing new priorities, deliverables, and cooperative frameworks.
- **The Three Sutras:** Three foundational pillars, known as ‘Sutras’ i.e. **People, Planet and Progress**, define how AI can be harnessed through multilateral cooperation for collective benefit.



India-hosted Summit Goals

- AI's capabilities must be available **to as many people as possible**;
 - ◆ more work must be done to **make it relevant in the Global South**, such as by expanding representation for languages that have been under-represented in the training of western LLMs (large language models);
 - ◆ and that the technology should be **“safe and trusted”**.
- **On the domestic front**, the government sought to **project India as an attractive destination for AI infrastructure and research**, and for encouraging the technology's adoption in India.

Outcomes of the summit

- **Wide Participation:** The summit attracted over five lakh visitors, a record that easily surpassed the attendance of the G20 summit in 2023.

- ◆ The event also hosted over 500 individual discussions, with speakers from around the world.
- **Investments:** The government also mentioned **\$250 billion in investment commitments**, as well as **\$20 billion in commitments for frontier deep tech research**.
- **Delhi Declaration:** India also achieved **broad consensus among 88 countries and international organisations** for the New Delhi Declaration on AI.
 - ◆ It was signed by the **U.S., China, France, and several other countries** who are key for the development and deployment of AI at present.
 - ◆ Nearly all commitments are described in the statement as **“voluntary” and “non-binding,”** encouraging wider participation.
 - ◆ These include a charter for the **“democratic diffusion” of AI;** a **“Global AI Impact Commons,”** which would serve as a database of use cases for countries to draw inspiration from; a **“Trusted AI Commons,”** described as a “repository of tools, benchmarks, and best practices; an **“International Network of AI for Science Institutions”** which would link technical institutes around the world.
- **India Joined Pax Silica:** During the summit, India joined the U.S.-led Pax Silica initiative, which seeks to build a network of like-minded countries opposed to concentration of power in electronics manufacturing and critical minerals.
- **Sarvam AI:** The event saw the long-anticipated launch of India’s first domestically trained **multi-billion parameter LLMs by Sarvam AI**.
- **Investment commitments:**
 - ◆ Reliance Industries Ltd. announced commitments of ₹10 lakh crore in domestic AI, only slightly more than the Adani Group’s similar commitment.
 - ◆ Google gave a few fresh details about its existing \$15 billion investment in data centre and AI projects in India, such as a subsea cable system that would directly connect India and the U.S.

Conclusion

- The summit is expected to catalyse long-term international partnerships and position AI as a key driver of economic growth.
- The government mentioned there was “broad-based global consensus on leveraging AI for economic growth and social good”.

Source: TH

INDIA'S GLOBAL CAPABILITY CENTRE REVOLUTION

Context

- For the Indian population, **the Global Capability Centres (GCCs) boom has catalysed high-value employment and regional development.**

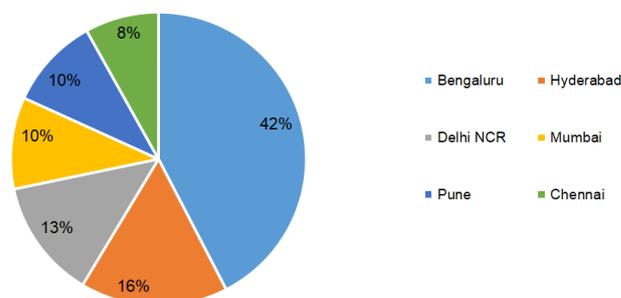
What are Global Capability Centres?

- **Global In-house Centres or Captives (GICs) or Global Capability Centres (GCCs),** are mainly offshore centres established by **global level firms/MNCs to provide various services to their parent organisations.**
- These centres operate as **internal organisations within the global corporate** structure, providing specialised solutions such as **IT services, Research and Development (R&D), customer support and other business tasks.**
- GCCs have evolved from being **cost-saving centres** that were largely **set up to gain from lower labour costs** to becoming **strategic hubs** that encourage innovation and lead to value creation, over the past couple of decades.

India's GCC Landscape

- India already hosts **more than 1,800 GCCs** employing **2.16 million professionals** and contributing about **\$68 billion** in direct gross value addition (GVA), which roughly works out as **1.8% of GDP.**
- According to The Confederation of Indian Industry (CII) framework, **by 2030** the number of centres **could rise to 5,000,** generating **\$154–199 billion in direct GVA.**
 - ◆ Including indirect and induced effects, **the overall impact could touch \$470–600 billion.**

GCCs in India as per cities



- **Employment potential:** By 2030, it could translate into **20–25 million jobs,** including **4–5 million high-quality direct roles** in areas such as artificial intelligence, engineering R&D, cybersecurity and digital platforms.

Drivers of GCC Growth in India

- **Talent Hub:** India is known globally for its diverse pool of talent with expertise in domains ranging from IT, engineering, analytics, and finance.
 - ♦ The availability of a skilled workforce has enabled GCCs to implement high-value and complex projects in India.
- **Technological innovations:** ML, AI, Internet of Things (IoT) and blockchain are some of the advanced technologies that have been adapted rapidly.
 - ♦ This in turn has enabled GCCs in India to deliver innovative solutions and digitally transform their parent companies.
- **Strategically focused:** From being known as a cost-saving centre to becoming a strategic hub, over the years, MNCs have recognised the potential of setting up GCCs in India.
 - ♦ These centres are now viewed as a strategic asset that enables businesses to drive growth, improve operational efficiency and gain competitive advantages.
- **Government support:** Various reforms of the Indian government, such as the Digital India Campaign aimed at enabling ease of doing business, have contributed to making a favourable environment in India for the growth of GCCs.

Challenges

- **Widening Talent Gap:** Although India produces millions of engineers, the demand for niche skills in AI security, cloud architecture and quantum-resistant cryptography vastly outstrips the supply.
 - ♦ This has triggered a fierce war for talent, leading to wage inflation that could eventually erode the value proposition of multinational corporations (MNC).
- **Cyber Attacks:** India-based centres now handle 13.7% of global cyber-attack incidents, the threat of state-sponsored espionage and intellectual property theft has made cybersecurity the most expensive operational mandate for modern GCCs.
- **Organisation for Economic Co-operation and Development's Global Minimum Tax (Pillar Two):** The introduction of the OECD's Global Minimum Tax (Pillar Two) reduces the tax advantages that many multinational companies earlier enjoyed.
 - ♦ With a minimum global tax rate of 15%, and ongoing concerns over India's 24% Safe Harbour markup for software R&D, companies are now more worried about tax certainty and fiscal stability.

- **Geopolitical Volatility:** Geopolitical volatility and protectionism pose long-term risks to investment.
 - ♦ As of early 2026, global trade professionals are increasingly wary of United States tariff volatility and reshoring policies that encourage MNCs to return critical data operations to their home markets.
- **Digital Sovereignty:** While India remains an attractive destination, owing to its scale, any shift toward digital sovereignty in western nations could slow the pace of new GCC setups.

Way Ahead

- To secure India's position as the world's innovation capital, policymakers must transition from **regulators to active facilitators**.
 - ♦ **The National GCC Policy Framework**, proposed in the **2026-27 Budget cycle**, is a step in the right direction, but execution is the key.
 - ♦ **A national framework will be formulated** as guidance to states for promoting Global Capability Centres in **emerging tier 2 cities**.
- The government should introduce a **"Single-Window Clearance" system** specifically for GCCs **to streamline the establishment of legal entities**.
- Additionally, **rationalising transfer pricing norms and providing tax safe harbours** for R&D-intensive operations will provide the **fiscal certainty that global boards demand**.

Conclusion

- By fostering **deeper industry-academia collaborations** to upskill the workforce in deep tech and offering capital subsidies for Tier-II expansion, India can ensure that its GCC revolution remains sustainable for the next decade.

Source: TH

INDIA REGISTERS LANDMARK PROGRESS IN ORGAN DONATION & TRANSPLANTATION

Context

- Recently, the Prime Minister of India, through his *Mann Ki Baat* address, has repeatedly highlighted the importance of organ donation, giving renewed momentum to the organ donation movement in India.

About Organ Transplantation/Donation

- It is a surgical procedure in which an organ, tissue or a group of cells are removed from one person and surgically transplanted into another person.

- ♦ One person can save up to 8 lives by donating heart, lungs, liver, kidneys, pancreas and intestines.
- In India, the organ transplantation is one of the lowest in comparison with the western nations.
 - ♦ India's organ donation rate remains under 1% relative to the population.
 - ♦ India ranks third globally in organ transplantation.

India's Milestone in Organ Transplantation

- India has achieved a significant milestone in organ donation and transplantation under the **National Organ and Tissue Transplant Organization (NOTTO)**.
- **Key Achievements:**
 - ♦ Transplants increased from **less than 5,000 in 2013** to **nearly 20,000 in 2025** – a fourfold rise.
 - ♦ Around **18% of transplants** are now from deceased donors.
 - ♦ Over **1,200 families** donated organs of their loved ones in 2025.
 - ♦ More than **4.8 lakh citizens** registered for organ donation through an Aadhaar-based verification system since September 2023.
 - ♦ India has developed expertise in complex transplants such as **Heart, Lung, and Pancreas**.
 - ♦ India leads globally in **hand transplants**, performing the highest number worldwide.
- It reflects improvements in governance, technology integration, and public trust.

National Organ and Tissue Transplant Organisation (NOTTO)

- It is a **National level organization** set up under the **Directorate General of Health Services, MoH&FW**.
- It develops policy guidelines, conducts training, monitors transplant activities, maintains a national databank, and coordinates inter-regional organ allocations.

Role of NOTTO

- **Real-time organ allocation system** enabling inter-state cooperation.
- Expansion of the **National Organ & Tissue Transplant Registry** ensuring transparency and traceability.
- Capacity building of **SOTTOs (State)** and **ROTOs (Regional)** organizations.
- Standardized transplant protocols aligned with global best practices.
- Digital integration for donor and patient registration.

- Promotion of **Green Corridors** for rapid organ transport across states.

Key Laws and Rules Governing Organ Transplantation in India

- **Transplantation of Human Organs Act (THOA), 1994:** To regulate removal, storage, and transplantation of human organs for therapeutic purposes.
 - ♦ To prevent commercial dealings in human organs.
 - ♦ **Key Provisions:**
 - Legal recognition of **brain death**;
 - Allows organ donation from **living donors (near relatives)**;
 - Establishment of **Authorization Committees** for approval in cases of non-near relatives; and
 - Strict prohibition of organ trade with penal provisions.
- **Transplantation of Human Organs (Amendment) Act, 2011:**
 - ♦ **Major Changes:** Expanded scope to include **tissues** (renamed as Transplantation of Human Organs and Tissues Act – THOTA).
 - ♦ Broadened definition of 'near relative' (includes grandparents and grandchildren).
 - ♦ Mandatory **registration of hospitals** conducting transplants.
 - ♦ Stronger penalties for commercial organ trade.
 - ♦ Provision for **swap transplantation (paired exchange)**.
- **Transplantation of Human Organs and Tissues Rules, 2014:** These Rules operationalize the Act.
 - ♦ **Key Features:**
 - Brain death certification (by a board of medical experts).
 - Consent process for deceased donation.
 - Registration and regulation of transplant hospitals.
 - Establishment of a national registry and allocation system.
 - Guidelines for **Authorization Committees**.
 - Transparency and documentation requirements.

- **Brain Death Certification:** It was defined under THOTA, 1994. It requires certification by a **board of four medical experts**, including treating physician, neurologist/neurosurgeon, medical administrator, and another registered medical practitioner.

Technology-Enabled and Ethical Ecosystem

- India's transplant ecosystem is increasingly:
 - ♦ **Digitalized:** Aadhaar-based verification and online registries.
 - ♦ **Transparent:** Standardized allocation protocols.
 - ♦ **Efficient:** Improved coordination between hospitals and authorities.
 - ♦ **Ethical:** Emphasis on fairness and preventing organ trade.
- The system demonstrates good governance through accountability and citizen-centric service delivery.

A People-Centric Movement: Drivers of Change

- The organ donation movement has evolved into a **mass social initiative**. It includes public awareness campaigns, engagement of Panchayati Raj Institutions, youth and school outreach programs, participation of district and block-level administration, hospital readiness and improved organ retrieval systems.
- Families are increasingly viewing organ donation as a final act of compassion, transforming grief into hope.

Challenges Ahead

- Despite progress, challenges remain, like:
 - ♦ Low deceased donor rate compared to developed countries.
 - ♦ Regional disparities in transplant infrastructure.
 - ♦ Need for sustained public awareness.
 - ♦ Ethical vigilance against commercialization.

Road Ahead

- The Government aims to increase deceased organ donation rates, expand transplant infrastructure in underserved regions, deepen digital integration and national coordination, and sustain mass awareness campaigns.
- The success of NOTTO reflects India's commitment to placing **human dignity, compassion, and equity at the centre of public health policy**.

Source: PIB

SATELLITE-BASED COMMUNICATION IN INDIA AND EMERGING THREATS

In News

- Recently, Security agencies have raised alarms over the illegal use of satellite communication devices in Indian waters, citing potential national security threats.

About

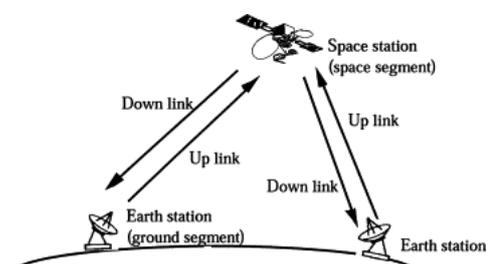
- In an era defined by digital connectivity, terrestrial networks (fiber optics, mobile towers) often face limitations due to difficult geographical terrains and vulnerability to natural disasters.
- **Satellite-Based Communication (SATCOM)** has emerged as the critical infrastructure bridging these gaps.
- For a vast and diverse nation like India, SATCOM is not just a technological convenience but a strategic necessity, underpinning disaster management, remote connectivity, tele-education, and national security.

What is Satellite-Based Communication?

- Satellite communication involves the use of artificial satellites in orbit around the Earth to relay radio signals between different points on the ground.
- The satellite acts as a "mirror in the sky," receiving signals from one earth station, amplifying them, and re-transmitting them to another earth station or user terminals.

How it Works: The Mechanism

- **Uplink:** A ground station (earth station) transmits a signal (carrying voice, data, or video) up to the satellite.
- **Transponding:** The satellite receives the signal. Its onboard equipment, called a transponder, shifts the signal's frequency (to avoid interference between incoming and outgoing signals) and amplifies it.
- **Downlink:** The satellite re-transmits the amplified signal back down to Earth, over a specific geographical area known as its "footprint."
- **Reception:** Receiving dishes on the ground (like DTH antennas or VSAT terminals) capture the signal.



Satellite-Based Communication in India Current Status

- India has over **1 billion internet subscribers**, yet rural penetration remains limited (about 46 per 100 people).
- Satellite internet is being positioned as a solution to bridge this digital divide.
- The government has allowed **100% FDI in satellite internet services**, enabling private participation alongside ISRO.
- India is **moving towards LEO (Low Earth Orbit) and MEO (Medium Earth Orbit) satellite systems**, which provide faster and more reliable broadband compared to traditional GEO satellites.
- **Global players like SpaceX (Starlink) and Eutelsat OneWeb (backed by India's Bharti Enterprises)** are vying to enter the Indian broadband market using LEO constellations.

Advantages of SATCOM for India

- **Digital Inclusion:** Satellite communication can connect remote villages, border areas, and disaster-prone regions where fiber networks are unfeasible.
- **National Security:** Secures satellite communication is vital for defense, maritime safety, and disaster response.
- **Economic Growth:** Expanding connectivity supports e-governance, online education, telemedicine, and digital commerce.
- **Strategic Autonomy:** Indigenous satellite systems reduce dependence on foreign operators and enhance India's global standing in space technology.

Issues and Challenges

- **Security Concerns:** Illegal use of satellite phones in Indian waters has raised alarms, as they can bypass monitoring systems and pose risks to national security.
- **High Costs:** Satellite internet remains expensive compared to terrestrial broadband, limiting affordability for rural populations.
- **Regulatory Barriers:** Licensing, spectrum allocation, and coordination with international operators require streamlined policies.
- **Technical Limitations:** Weather disruptions, latency issues (though reduced in LEO/MEO systems), and infrastructure for ground stations remain challenges.
- **Geopolitical Dependencies:** Reliance on foreign-owned LEO constellations for critical national

infrastructure could be risky during diplomatic tensions or conflicts, as services could be denied.

Government Steps

- **Security Measures:** The Directorate General of Shipping (DGS) has proposed stricter penalties to curb the unauthorised use of satellite phones and messaging devices, including Zoleo devices linked to Iridium systems.
 - ♦ While Iridium-based equipment is permitted solely for distress and safety communications under the Global Maritime Distress and Safety System (GMDSS), Thuraya devices remain banned.
 - ♦ Personal devices must be declared and sealed by authorities.
- **Space Sector Reforms:** In 2020, the Government introduced Space Sector Reforms to open the doors for private sector participation in space activities. Building on this momentum, the Indian Space Policy, 2023 established a level playing field for Non-Government Entities (NGEs) in the space sector by enabling their participation across the entire value chain of space activities in an end-to-end manner.
 - ♦ ISRO partnering with private firms for satellite launches and communication payloads.
- **Indian National Space Promotion & Authorisation Centre (IN-SPACE):** It plays a pivotal role in enabling satellite internet in India. It is responsible for promoting, authorizing and supervising various space activities of the non-governmental entities (NGEs).
 - ♦ This nodal agency acts as an interface between ISRO and NGEs, facilitating the growth of space-based activities including the use of India's satellite resources for broadband connectivity.

Source :TH

CHALLENGES FOR INDIA'S ELECTRICITY GRID FROM DATA CENTRE EXPANSION

Context

- India's power system is headed towards a "paradigm shift" as artificial intelligence (AI)-driven data centres are emerging as large, complex, and electricity-intensive infrastructure.

Rising Power Demand from Data Centres

- India has an installed data centre capacity of **1.2 GW**, which will grow to about **10 GW by 2030**, with investments of over **\$200 billion**.
- **Power Demand by Data Centres:** AI workloads use large numbers of **Graphic Processing Units (GPUs)** with individual racks consuming **80-150 KW** compared to **15-20 KW** for traditional enterprise servers.
 - ♦ This computational intensity drives an insatiable demand for electricity, making AI the most significant driver of increased energy consumption within the data centre sector.
- **Continuous yet Highly Variable Demand:** Data centres operate round the clock with a stable base load due to uninterrupted computing and cooling needs.
 - ♦ However AI-driven workloads can cause sudden spikes in electricity consumption during peak processing periods, **leading to rapid load fluctuations** that challenge grid balancing and frequency stability.

Implications for Grid Infrastructure

- **Pressure on Transmission Systems:** Existing sub-transmission infrastructure may not be capable of meeting the massive power requirements of hyperscale facilities.
 - ♦ Therefore, new high-capacity transmission corridors, ultra-high-voltage substations, and dedicated connectivity will be required.
- **Resource Adequacy Challenges:** Meeting data centre demand involves more than installing additional generation capacity. The system must also maintain adequate reserves, balancing power, and ancillary services to ensure reliability during sudden fluctuations.
- **Difficulty in Demand Forecasting:** AI-driven computing demand is inherently unpredictable. This makes load forecasting and scheduling significantly more complex for system operators, thereby increasing the risk of supply-demand mismatches.

Measures to Address Data Centre Power Demand

- **Demand-Side Measures:**
 - ♦ **Energy-efficient computing infrastructure:** Adoption of advanced chips, efficient cooling systems, and optimized hardware reduces electricity consumption per unit of computation.
 - ♦ **Heterogeneous computing:** Using a mix of CPUs, GPUs, and specialized accelerators ensures that energy-intensive processors are used only when necessary.

- ♦ **On-site energy storage:** Battery systems can supply short-term power during spikes, reducing sudden draw from the grid.
- **Supply-Side Measures:**
 - ♦ **Expansion of reliable baseload generation:** Stable sources such as coal, hydro, gas, and nuclear power are required to ensure uninterrupted electricity supply.
 - ♦ **Hybrid energy systems:** Combining grid supply with captive generation and renewable installations enhances reliability and reduces dependence on a single source.
 - ♦ **Development of high-voltage** substations and transmission corridors is essential to deliver large quantities of power.

Way Ahead

- AI-driven data centres represent both a major opportunity for economic growth and a significant challenge for India's power system.
- India must adopt a **forward-looking strategy** to integrate digital infrastructure expansion with energy planning.
- **This strategy should include** a dedicated policy framework for data centre power supply, updated grid codes for large dynamic loads, and accelerated development of low-carbon power sources such as nuclear and hydro energy.

Source: IE

NEWS IN SHORT

UNEARTHING THE SILENT SPLENDOUR OF HOYSALAS

Context

- In the rural parts of Hassan, Mandya and Mysuru in Karnataka, overlooked **Hoysala-era temples** reveal a thriving medieval kingdom's sculptural mastery.
 - ♦ These were built between the 11th and 13th centuries.

About

- **Temple architecture style:** The Hoysala temples are constructed in **Vesara style** of architecture.
 - ♦ The temple has a Dravidian morphology along with substantial influences from the **Bhumija style** prevalent in Central India, and the **Nagara traditions** of northern and western India.
- **The material used** in temple construction is chloritic schist also known as **soapstone**.

- ♦ The temple has a distinct style following a **stellate plan** built on a raised platform.

Hoysala Empire

- The Hoysala Empire was a Kannadiga power that ruled most of what is now Karnataka, between the **10th and the 14th centuries**.
- The Hoysala rulers were originally from **Malenadu**, an elevated region in the Western Ghats.
- By the 13th century, they governed most of Karnataka, entire northwestern parts of Tamil Nadu and parts of western Andhra Pradesh in the Deccan Plateau.
- The capital of the Hoysalas was initially located at **Belur**, but was later moved to **Halebidu**.



Source: TH

INDIA'S INDIGENOUS TETANUS AND ADULT DIPHTHERIA (Td) VACCINE

Context

- The Union Minister for Health and Family Welfare launched the indigenously manufactured **Tetanus and Adult Diphtheria (Td) Vaccine** at the Central Research Institute (CRI), Kasauli in Himachal Pradesh.

What is the Td Vaccine?

- The **Td vaccine protects** against **tetanus and diphtheria**, two potentially fatal **bacterial** diseases.
- It replaces the earlier **Tetanus Toxoid (TT) vaccine**, expanding protection to include **diphtheria**.
 - ♦ In 2006, the **World Health Organization (WHO)** recommended that countries transition from Tetanus Toxoid (TT) vaccine to Td vaccine.
 - ♦ India's **National Technical Advisory Group on Immunization (NTAGI)** also advised this shift for all age groups.

Tetanus

- Tetanus is a **non-contagious infection** that **affects the nervous system**, leading to painful muscle stiffness and spasms.
- **Cause:** It is caused by the **bacterium Clostridium tetani**, which is commonly found in soil, dust, and animal manure.
- **Transmission:** The bacteria typically enter the body through a break in the skin, such as a deep cut, puncture wound (like stepping on a rusty nail), or burn.

Diphtheria

- Diphtheria is a **highly contagious infection** that primarily **affects the mucous membranes of the nose and throat**.
 - ♦ The toxin released by the bacteria can travel through the bloodstream and damage the heart (myocarditis), kidneys, and nerves.
- **Cause:** It is caused by **Corynebacterium diphtheriae** bacteria.
- **Transmission:** It spreads from person to person **through respiratory droplets** (coughing or sneezing) or by touching contaminated objects.

Source: PIB

FRONTIER NAGALAND TERRITORIAL AUTHORITY (FNNTA)

Context

- On February 5 2026, the Union Government signed a **tripartite agreement** with the Government of Nagaland and the Eastern Nagaland Peoples' Organisation (ENPO) to create the **Frontier Nagaland Territorial Authority (FNNTA)**.

About

- The ENPO had demanded a separate State, "**Frontier Nagaland**", since **2010**.
- The demand stems from **colonial-era policies** that treated the **eastern hills as a minimally administered frontier**.
- After **Nagaland was carved out of Assam as a State in 1963**, eastern tribes felt politically and economically marginalised compared to western Nagaland.
 - ♦ The eight tribes inhabiting the region argued that development gaps widened due to **limited infrastructure, poor connectivity, and weaker political representation**.

Key Features of the FNTA

- The FNTA grants **semi-autonomous governance** to **six eastern districts** of Nagaland, allowing local administration to function with reduced dependence on the State capital.
- **Districts Covered Under FNTA:** Mon, Tuensang, Longleng, Kiphire, Noklak and Shamator.
- **A mini-Secretariat** will be established within the region, headed by a senior officer, to improve administrative efficiency.
- The authority will exercise legislative and executive powers over **46 subjects**, enabling local leaders to make decisions on matters such as:
 - ♦ Land use and management
 - ♦ Agriculture and allied activities
 - ♦ Rural development
 - ♦ Infrastructure and local planning
 - ♦ Welfare schemes suited to tribal needs.
- **Development funds** will be allocated proportionately **based on population and geographical area**.
- The FNTA arrangement **does not alter Article 371(A)** of the Constitution, thereby **preserving Naga customary laws, traditional institutions, and social practices**.

Source: TH

PRASHAD SCHEME

In News

- Union Civil Aviation Minister announced plans to enhance pilgrimage tourism in Andhra Pradesh under the **PRASHAD scheme**.

Pilgrimage Rejuvenation and Spiritual Augmentation Drive (PRASAD) Scheme

- It is a **Central Sector Scheme launched in 2014–2015** by the Ministry of Tourism, Government of India.
 - ♦ A Central Sector Scheme (CS) is an initiative fully funded and implemented by the Union Government.
- It focuses on **developing and identifying pilgrimage sites across India** to enrich the religious tourism experience.
- It improved **infrastructure in tourism areas**—roads, transport, sanitation, and utilities—and enhanced both residents' quality of life and the overall experience for tourists.

Benefits

- **Increase Employment Opportunities & Tourism Revenues:** Tourism development under the

PRASHAD Scheme generates local employment across hospitality, transport, guiding, handicrafts, and retail, boosting livelihoods and economic empowerment.

- **Income Generation:** Tourism boosts income for local artisans, vendors, homestays, and small businesses by increasing demand for their goods and services, improving livelihoods and living standards.
- **Preservation of Cultural Heritage:** PRASHAD-funded preservation of heritage sites helps communities maintain cultural identity while fostering education and cultural exchange with visitors.
- **Promotion of Local Culture and Traditions:** The PRASHAD Scheme promotes local culture through festivals, exhibitions, and traditional performances, enhancing community pride and cohesion.
- **Skill Development and Capacity Building:** The PRASHAD Scheme supports skill development and capacity-building programs for local communities, enabling them to engage in tourism and drive sustainable development.

Source: Air

PRIME MINISTER LAUNCHES FULL DELHI-MEERUT RRTS CORRIDOR

In News

- The Prime Minister inaugurated **India's first Namu Bharat Regional Rapid Transit System (RRTS)** and dedicated the 82-km Delhi-Meerut Namu Bharat Corridor to the nation.

Namu Bharat

- It is **India's first Regional Rail connecting key urban nodes** across the National Capital Region via high-speed rail corridors (82-km long corridor).
- It is a **rail-based, high-speed, high-frequency and sustainable transit system** with a design speed of 180 Kmph and an average speed of 100 Kmph which aims at bringing people and places closer to NCR.
- **National Capital Region Transport Corporation (NCRTC)** is the **implementing agency**.
- Namu Bharat will provide fast, safe, and comfortable regional commute and encourage more people to switch to public transport by way of seamless integration among public transit systems in the region.

Source :DD

BIOPHARMA SHAKTI

Context

- India announced a massive investment of 10,000 crore in the Union Budget **2026-27 for the biotechnology sector**.
 - ♦ The aim is to focus on boosting the production of biologics and biosimilars through a **new initiative called the Biopharma Shakti**.

About

- The initiative aligns with the **aim of transforming India into a leading global biopharma industry** and capturing **5% of the global biopharmaceutical market** share.
 - ♦ **The National Biopharma Mission and other schemes** launched over the past few years are working towards the same goal.

- **The initiative is designed to** support domestic development and manufacturing of high-value biopharmaceutical products and medicines, reduce import dependence, and enhance India's competitiveness in global biologics supply chains.
- **Biopharma involves** production, manufacturing, or extraction of therapies through biological organisms, such as human cells, fungi, or microbes.
 - ♦ **Some examples of biopharmaceuticals include** vaccines, antibody treatments, gene therapies, cell implants, modern insulin, and recombinant protein drugs.

Source: TH

