



November - 19

TNPSC BITS

- ❖ Oman airports become the first in the world to deploy Wi-Fi 7 technology across all its airports in partnership with Huawei.
- ❖ The Mandale Depot for Mumbai Metro Line 2B has been inaugurated as Asia's largest metro depot.
- ❖ Indian Army established a three new garrison in Lachit Borphukan Military Station in Assam's Dhubri district and forward bases at Kishanganj in Bihar and Chopra in West Bengal, all sited close to the India-Bangladesh border.
 - Thus, it strengthens eastern defences with three new garrisons near Siliguri corridor or 'Chicken's Neck' – a narrow land link to India's eight northeastern States.
- ❖ Nele Foundation from Bengaluru has been selected for the 2025 Moolathva World Award in recognition of its extensive work supporting underprivileged and orphaned children.
- ❖ The Chief Minister of Maharashtra released the new Agriculture Department logo and the slogan "Sashwat Sheti, Samruddha Shetkari," meaning "Sustainable Farming, Prosperous Farmer".
- ❖ The World Usability Day is observed on the second Thursday of November, and in 2025 falls on 13 November to promote usability, usability engineering, and universal usability.
 - The 2025's theme is "Emerging Technologies and the Human Experience."

NATIONAL NEWS

RuTAG 2.0

- ❖ The Rural Technology Action Group (RuTAG) 2.0 Annual Review Meeting was held at IIT Guwahati.
- ❖ The review covered seven RuTAG (IIT Guwahati, SKUAST-Kashmir, IIT Delhi, IIT Bombay, IIT Roorkee, ICAR-NAARM Hyderabad, IIT Madras) centres and their collaborations with state departments, industries, and community organisations.
- ❖ The RuTAG 2.0 Annual Progress Report 2024–25 was also released.
- ❖ The report showcases over 56 ongoing projects in agriculture, animal husbandry, post-harvest management, renewable energy, water purification, and rural crafts.

- ❖ The Centre for Innovation in Agri & Aqua Voltaics (CIAAV) and Integrated Facility for Wellness-Product Innovation (IFWPI) were inaugurated.
- ❖ Strategic roadmaps were discussed to advance technology-led rural development through innovation and partnerships.
- ❖ The meeting highlighted interdisciplinary research, rural entrepreneurship, and sustainable livelihood creation in the North-Eastern region.



Samvad Conclave 2025

- ❖ The 12th edition of Samvad was opened in Jamshedpur with traditional rituals performed by the Ho, Munda, Santhal, and Oraon tribes.
- ❖ The inauguration included prayer ceremonies using instruments such as Bhner, Sakua, and Nagada, and followed the Ho community's Akhra cleansing ritual.
- ❖ The conclave focuses on preserving tribal knowledge, promoting cultural continuity, and strengthening intergenerational connections.



Mudh Nyoma Airbase

- ❖ The Mudh Nyoma airbase in eastern Ladakh has become operational.

- ❖ It will strengthen India's rapid-response capability near the Line of Actual Control.
- ❖ The airbase is located at about 13,700 feet and roughly 25 kilometres from the Line of Actual Control.
- ❖ The runway can support fighter jets, transport aircraft, and helicopters, making it Ladakh's fourth major airbase after Leh, Kargil, and Thoise.
- ❖ The facility is also expected to improve access to remote settlements such as Hanle, Loma, and Nyoma while supporting regional development.



National TDS Conference



- ❖ Bhopal is hosting the 22nd All India Annual Tax Deducted at Source (TDS) Conference.
- ❖ The conference is organised by the Income Tax Department.
- ❖ The conference discussed amendments to the Income Tax Act, 2025, including new TDS provisions and compounding guidelines.



- ❖ The event also focused on digital tools aimed at improving tax compliance and transparency.

Credit Guarantee Scheme for Exporters

- ❖ The Cabinet has approved the Credit Guarantee Scheme for Exporters (CGSE).
- ❖ It will provide a 100 percent credit guarantee through the National Credit Guarantee Trustee Company Limited.
- ❖ The scheme enables Member Lending Institutions to extend collateral-free credit of up to Rs 20,000 crore to eligible exporters, including MSMEs.
- ❖ The Department of Financial Services will implement the scheme.
- ❖ The scheme aims to boost liquidity, support market diversification, and enhance the global competitiveness of Indian exporters.

**Cabinet nods Credit Guarantee
Scheme for Exporters (CGSE)**

**Up to ₹20,000 crore collateral-free
credit support with
100% guarantee by NCGTC**

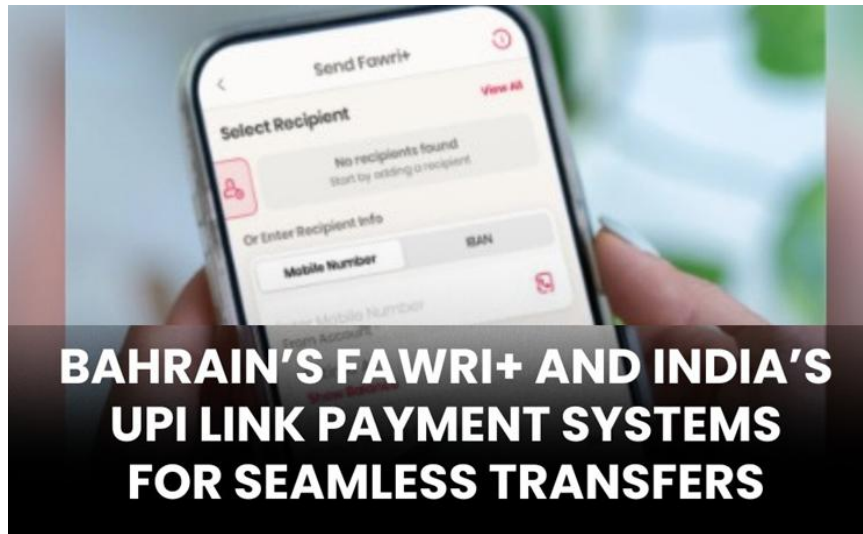
**Benefits to MSME & non-MSME
exporters across sectors**

**Enhances liquidity, market
diversification, and employment**

UPI and Fawri+

- ❖ National Payments Corporation of India and Bahrain's BENEFIT have partnered to link the UPI with Bahrain's Electronic Fund Transfer System through the Fawri+ service.
- ❖ The system will allow users in both countries to send and receive money instantly and securely under the guidance of the RBI and the Central Bank of Bahrain.
- ❖ The collaboration builds on the 2019 MoU and commitments made during the 2024 India-Bahrain High Joint Commission Meeting.
- ❖ The partnership is expected to strengthen economic ties, support financial inclusion, and deepen people-to-people connectivity.

- ❖ Bilateral trade between India and Bahrain stood at USD 1.64 billion in 2024 to 2025.



INTERNATIONAL NEWS

Death sentence to Sheikh Hasina



- ❖ Bangladesh's International Crimes Tribunal has sentenced former Bangladesh Prime Minister Sheikh Hasina to death.
- ❖ The Former Home Minister Asaduzzaman Khan Kamal and former police chief Chowdhury Abdullah Al-Mamun were also convicted over the same charges.
- ❖ The three-member tribunal, headed by Justice Mohd Golam Mortuza Majumder.
- ❖ Hasina, Kamal and Mamun faced five charges, including murder, attempted murder, torture and other inhumane acts.

- ❖ Hasina and Kamal have been declared fugitives and tried in absentia.
- ❖ Hasina escaped from Bangladesh on August 4, 2024, due to intensifying unrest.

China's Type 076 Sichuan

- ❖ China's first Type 076 amphibious assault ship, the Sichuan, completed a maiden sea trial and returned to a Shanghai shipyard.
- ❖ The trial tested propulsion, electrical systems, and major onboard equipment, all meeting expected standards.
- ❖ The ship was launched in December 2024.
- ❖ The ship features electromagnetic catapult and arrestor systems for operating fixed-wing aircraft, helicopters, and amphibious equipment.



**Chinese PLA Navy's first
Type 076 amphibious
assault ship "Sichuan"
launches first sea trial**

SCIENCE AND TECHNOLOGY NEWS

Man-portable Underwater Vehicles

- ❖ DRDO's Naval Science and Technological Laboratory (NSTL) in Visakhapatnam has developed new Man-portable Autonomous Underwater Vehicles (MP-AUVs) for mine countermeasure missions.
- ❖ The vehicles use Side Scan Sonar and underwater cameras to detect and classify mine-like objects in real time.

- ❖ Deep-learning systems allow the AUVs to identify targets autonomously and reduce operator effort.
- ❖ Underwater acoustic communication lets multiple AUVs share data during operations.



Gaganyaan Parachute System



- ❖ ISRO conducted a key test of the main parachutes for the Gaganyaan Crew Module at the Babina Field Firing Range in Uttar Pradesh.

- ❖ The test was part of the Integrated Main Parachute Airdrop Tests meant to qualify the parachute system for the Gaganyaan mission.
- ❖ The parachute system of the Crew Module consists of ten parachutes of four types arranged for staged deployment.
- ❖ The test demonstrated an extreme scenario involving delayed disengagement between two main parachutes to validate the design.
- ❖ A simulated Crew Module mass was dropped from an altitude of 2.5 kilometres using an IL-76 aircraft of the Indian Air Force.
- ❖ The parachute sequence functioned as planned, and the system achieved a stable descent and soft landing.

First Quantum Diamond Microscope



- ❖ India unveiled its first indigenous Quantum Diamond Microscope, developed under the National Quantum Mission by the P-Quest Group at IIT Bombay.
- ❖ The device uses nitrogen-vacancy centres in diamond to perform nanoscale three-dimensional magnetic field imaging.
- ❖ The technology supports applications in neuroscience, materials research, and non-destructive evaluation of semiconductor chips.
- ❖ The system enables magnetic field mapping of buried layers in advanced electronic devices, including 3D chip architectures.

- ❖ The project earned India its first patent in the field of quantum diamond microscopy.

ENVIRONMENT NEWS

Rediscovery of the *Moema claudiae* fish

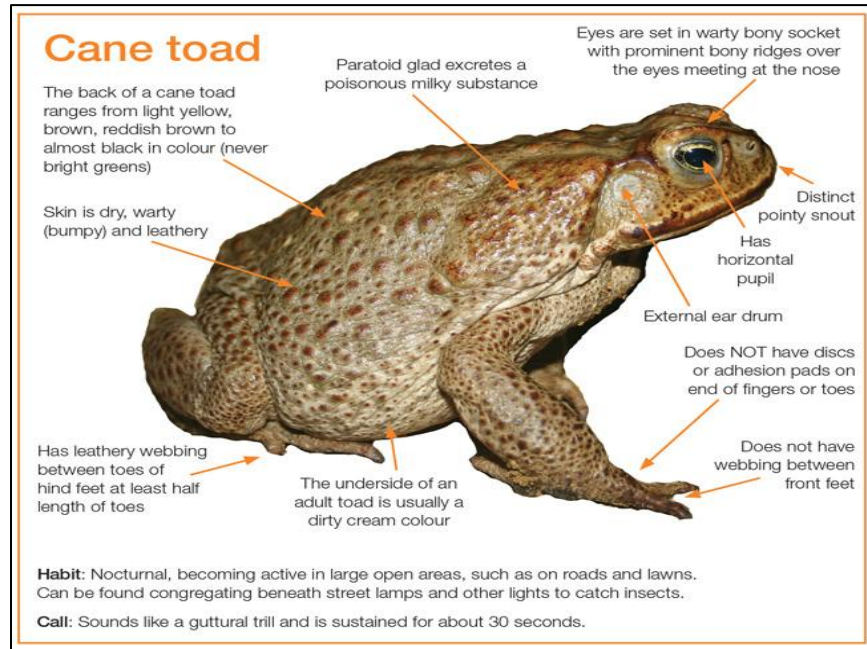
- ❖ *Moema claudiae*, a seasonal killifish species, was rediscovered in Bolivia.
- ❖ The site also contained six other seasonal killifish species, indicating high biodiversity in the Amazon–Llanos de Moxos transition zone.
- ❖ *Moema claudiae* survives in temporary pools where eggs endure dry periods through a biological process called diapause.



World's Most Invasive Amphibian - Cane Toad

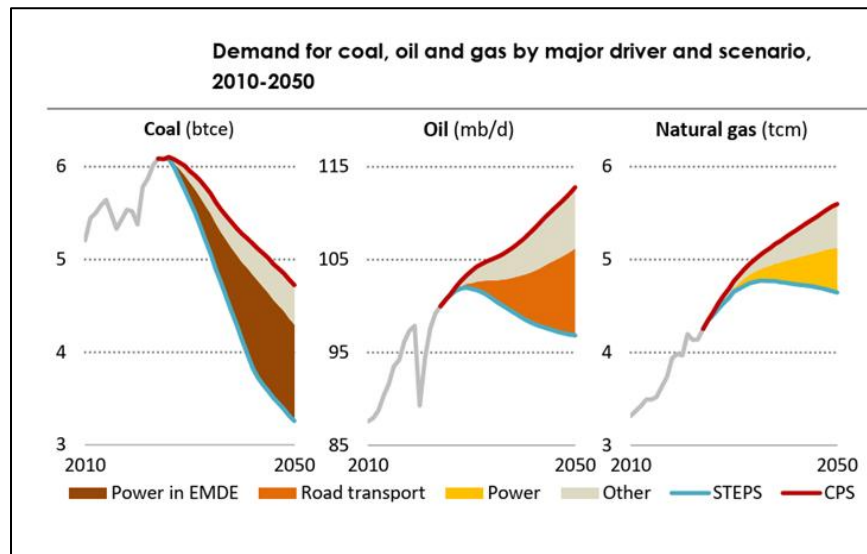
- ❖ The cane toad is one of the world's most invasive species, disrupting ecosystems.
- ❖ The cane toad, scientifically known as *Rhinella marina*, is native to Central and South America.
- ❖ It was introduced to several countries for agricultural pest control in sugar-cane fields.
- ❖ The species spreads rapidly and forms dense populations in new regions.
- ❖ It releases bufotoxins from its parotid glands, which can kill predators.

- ❖ It affects ecosystems by consuming native species and competing with local wildlife.



REPORTS AND INDICES

World Energy Outlook Report 2025

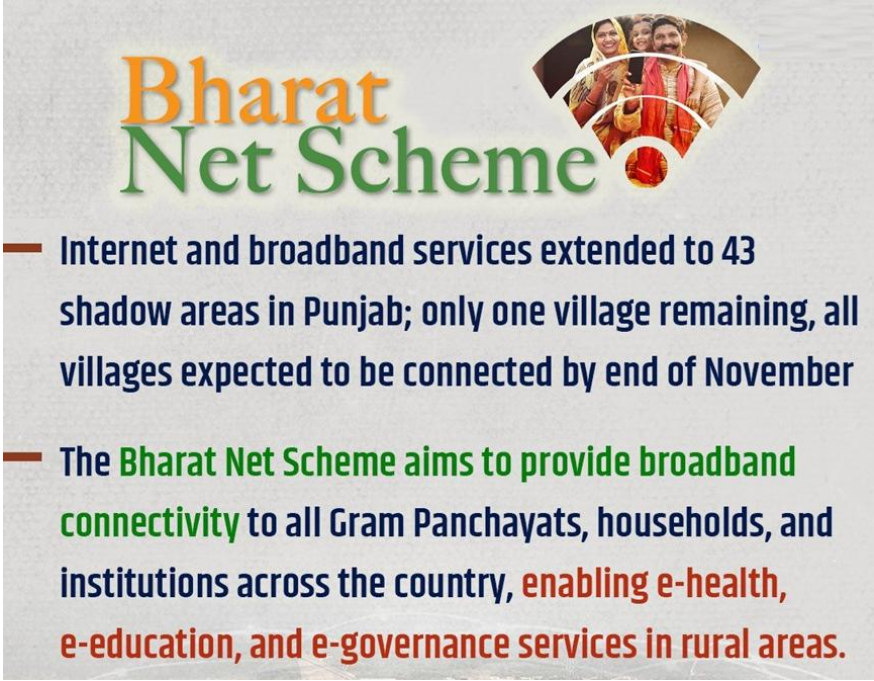


- ❖ The International Energy Agency (IEA) released the World Energy Outlook 2025, detailing global energy trends, emissions, and security.
- ❖ The report includes three scenarios:

- The Current Policies Scenario (CPS),
- The Stated Policies Scenario (STEPS), and
- The Net Zero Emissions by 2050 Scenario (NZE).
- ❖ Under the CPS, oil demand increases to 113 million barrels per day by 2050, and global energy demand rises by 90 exajoules by 2035.
- ❖ All scenarios show global temperatures crossing 1.5°C, with the CPS leading to almost 3°C of warming by 2100.
- ❖ The report notes major supply chain risks for critical minerals, with one country, mostly China, refining 19 of 20 strategic minerals.
- ❖ More than half of these minerals are under export controls, increasing risks to global energy security.

STATES' NEWS

Bharat Net Scheme in Punjab



Bharat Net Scheme

- Internet and broadband services extended to 43 shadow areas in Punjab; only one village remaining, all villages expected to be connected by end of November
- The Bharat Net Scheme aims to provide broadband connectivity to all Gram Panchayats, households, and institutions across the country, enabling e-health, e-education, and e-governance services in rural areas.

- ❖ Punjab is the first state to fully implement the amended Bharat Net Scheme across its territory.
- ❖ The scheme enables live monitoring of the border state from any location.
- ❖ Internet and broadband services have been extended to 43 shadow areas, with only one village left to be covered by the end of November.

- ❖ It aims to provide broadband connectivity to all Gram Panchayats, households, and institutions, along with supporting e-health and e-governance services in rural areas.

India's Largest Green Hydrogen Plant

- ❖ JSW Energy commissioned India's largest green hydrogen plant at Vijayanagar in Karnataka.
- ❖ The facility will supply 3,800 tons per annum of green hydrogen and 30,000 tons per annum of green oxygen to JSW Steel's Direct Reduced Iron unit.
- ❖ The supply agreement forms part of JSW Energy's 6,800-ton allocation under the Strategic Interventions for Green Hydrogen Transition programme (SIGHT Programme) of the Solar Energy Corporation of India.
- ❖ JSW Energy and JSW Steel plan to scale supply to 85,000–90,000 tons of green hydrogen and 720,000 tons of green oxygen per year by 2030.



MISCELLANEOUS NEWS

Buddha Relics Exhibition in Thimphu

- ❖ The Sacred Relics of Lord Buddha were enshrined at the Grand Kuenrey of Tashichhodzong in Thimphu, Bhutan.
- ❖ The exposition features three thematic exhibitions curated by the International Buddhist Confederation (IBC).

- ❖ The first exhibition traces the life and sacred sites of Guru Padmasambhava, the 'Precious Guru' in India.
- ❖ The second exhibition explores the sacred legacy of the Shakyas, including the excavation and significance of Buddha relics.
- ❖ The third exhibition presents the life and teachings of Lord Buddha.
- ❖ The exposition coincides with the 70th birth anniversary of Bhutan's Fourth King, Jigme Singye Wangchuk.



New Pterosaur Species - Bakiribu waridza



- ❖ Scientists have identified a new tropical filter-feeding pterosaur species named Bakiribu waridza.
- ❖ The species inside fossilised dinosaur vomit is known as regurgitalite.



- ❖ Bakiribu waridza belonged to the Ctenochasmatidae family known for specialised filter-feeding structures.
- ❖ Spinosaurid dinosaurs and large ornithoceriform pterosaurs are considered possible producers of the regurgitate based on regional fossil evidence.

