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22-10-2026

SUVIKALP Tool



Press Information Bureau

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CCO's SUVIKALP Initiative Advances Sustainable Mine ...

1 day ago — The innovation and utility of **SUVIKALP** received national recognition through the **SKOCH Gold Award 2026** under the category "Digital Operational ... [Read more](#)

Why in News?

- SUVIKALP received the **SKOCH Gold Award 2026** for digital operational efficiency and data-driven decision-making.

Key Features

- Developed by the **Coal Controller Organisation (CCO)** under the **Ministry of Coal**, SUVIKALP evaluates mine-repurposing projects using technical, environmental, social and economic criteria.
- **PRISM (Post-Mining Repurposing Implementation Strategy Model)** provides project concepts, case studies, sample **DPRs** and tender documents.

Coal Controller Organisation

- Established in **1916**, the CCO collects monthly coal-production data and regulates coal grading, stock disposal and mine-opening permissions.
- It inspects collieries and acts as an appellate authority in disputes over coal grade and size.

SKOCH Award

- **About:** The **SKOCH Award** is an independent Indian award instituted by the **SKOCH Group**, a socio-economic think tank established in **1997**.
- **Purpose:** It recognises individuals, institutions and projects contributing to **inclusive growth, digital transformation and governance reforms**.
- **Evaluation:** The process includes research-based shortlisting, jury assessment, peer evaluation, field validation and popular voting.
- **Award Categories:** Recognition includes **Order-of-Merit, Silver, Gold, Platinum and Challenger** levels.
- **Recent 2026 Recipients:**
 - **Odisha's SAMS Portal:** Platinum Award for Digital Higher Education.
 - **Central Bank of India:** Platinum Award for Green Finance under the PM Krishak Mitra Surya Mitra Yojana.

- **Chennai Petroleum Corporation Ltd. (CPCL):** Gold Award for Net Water Reduction and Resource Efficiency.
- **Cantonment Board Kamptee:** Gold Award for Municipal Governance.

Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA)

TH The Hindu

India to mandate 1% SAF blending for international flights from January

India is expected to mandate 1% blending of Sustainable Aviation Fuel (SAF) in conventional jet fuel for international flights,...



Why in News?

- India had reportedly not finalised a comprehensive **Sustainable Aviation Fuel (SAF) policy** ahead of CORSIA's mandatory phase.

Objectives and Implementation

- Adopted in **2016** by the **International Civil Aviation Organization (ICAO)**, CORSIA is a global market-based mechanism addressing CO₂ emissions from **international flights**.
- Airlines covered by the scheme monitor, report and verify emissions and purchase eligible **carbon-offset units** to compensate for specified emissions growth.
- Its pilot phase (**2021–2023**) and first phase (**2024–2026**) are voluntary, while the mandatory phase is scheduled for **2027–2035**, subject to exemptions.

Baseline and Carbon Offsets

- The baseline was revised from the average of **2019 and 2020** emissions to **2019-only emissions** following the COVID-19 aviation downturn.
- Eligible offsets may come from renewable energy, clean cooking, methane capture and forestry projects.

ICAO: Key Facts

- Established in **1944** under the **Chicago Convention**, ICAO is a UN specialised agency headquartered in **Montreal, Canada**.
- It has **193 Member States**, an Assembly that meets every three years and a **36-member Council**.

Badr Memorandum of Understanding

Why in News?

- **Pakistan, Türkiye, Qatar and Indonesia**

F. Firstpost

[Pakistan, Turkey, Qatar, Indonesia sign new defence deal. Why India should pay close attention to Badr pact](#)

Badr MoU: A new defence axis is taking shape: Pakistan, Turkey, Qatar, and Indonesia have signed the Badr Memorandum of Understanding (MoU)...



reportedly signed the **Badr MoU** to strengthen defence cooperation.

Objectives and Mechanism

- The agreement covers **joint military production, research and development, technical training and military exercises**.
- An **executive board** will develop proposals, while a **strategic board** will decide budgets and production locations.
- Joint production facilities are expected in **Türkiye**, and the agreement may expand to other countries under agreed criteria.

eMudhra Limited

TH The Hindu

Eight web security keys of eMudhra firm used by Govt. and PSUs leaked

Eight private keys used to issue web security certificates by Bengaluru-headquartered eMudhra Ltd. have been leaked, sending security teams...



Why in News?

- **MeitY** reportedly formed a special team to investigate leaked private keys associated with web-security certificates issued by **eMudhra Limited**.

Institutional and Technical Facts

- **eMudhra** is an Indian digital-trust company and a **Certificate Authority (CA)** providing digital certificates and electronic-signing services.
- The **Controller of Certifying Authorities (CCA)** licenses and regulates certifying authorities in India.
- **HTTPS** uses **Transport Layer Security (TLS)** to encrypt communications, while digital certificates link a website's identity to its **public key**.

Cybersecurity Significance

- A compromised **private key** may enable impersonation or undermine trust in affected certificates.
- A valid HTTPS certificate does not guarantee that a website is genuine or that its content is safe.

Low Level Light Weight Radar (LLLR-I)

Why in News?

- The **Ministry of Defence** signed a contract with **Bharat**

Press Information Bureau

MOD INKS ₹ 770 Cr CONTRACT TO PROCURE IMPROVED LOW LEVEL LIGHT WEIGHT RADARS FOR INDIAN ARMY

The Ministry of Defence has signed a contract with M/s Bharat Electronic Limited (BEL) to procure Improved Low Level Light Weight Radar...



Electronics Limited (BEL) to procure the **Improved Low Level Light Weight Radar (LLLR-I)** at a reported cost of approximately **₹770 crore**.

Technical Design and Surveillance Capabilities

- LLLR-I is a lightweight, multi-mission radar designed to detect and track different types of aerial targets.
- It uses **four fixed phased-array antenna panels** to provide **360-degree surveillance** without mechanically rotating the antenna.
- The system uses **Active Electronically Scanned Array (AESA)** technology, **Gallium Nitride (GaN) amplifiers** and digital beamforming.
- Its three-dimensional processing helps distinguish aerial targets from unwanted radar returns and reduce the effects of multipath interference.

Operational and Defence Significance

- The radar is designed for deployment in **plains, deserts and high-altitude terrain**.
- It can detect and track fighter-sized aircraft as well as **mini and micro drones**, including targets with a low radar cross-section.
- Its capabilities can strengthen low-level air surveillance and support the detection of emerging aerial threats.

Tracking and Electronic Protection

- The radar supports **Track While Scan (TWS)**, allowing it to track detected targets while continuing to scan the surrounding airspace.
- It can prioritise aerial threats and uses **monopulse tracking** for accurate elevation measurement.
- It can transmit target information to weapon systems through wired or wireless communication links.
- Its **Electronic Counter-Countermeasure (ECCM)** capabilities help maintain performance in the presence of electronic interference.
- A built-in self-test function assists in identifying technical faults, while a control and display unit enables remote operation and monitoring.

Kushiyara River

Why in News?

- The **Kushiyara River**, along parts of the India–Bangladesh border, witnessed gatherings for Durga idol immersion on Vijayadashami.

The Times of India

[Devotees gather on both sides of Kushiyara: A river, two countries & one festive farewell](#)

Silchar: The banks of Kushiyara river, which separates India and Bangladesh along Sribhumi district, came alive on Wednesday as thousands of...



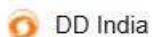
Geographical Features

- The Kushiya is a **transboundary tributary of the Barak River**, originating near the **Amlshid bifurcation point**.
- It flows through areas of Assam and Bangladesh before joining the **Meghna River** and has an approximate length of **160 km**.
- Important tributaries include the **Juri, Manu (Monu) and Itakhola rivers**.

Water-Sharing Agreement

- India and Bangladesh signed the **Kushiya River Water Agreement on 6 September 2022**.
- The agreement permits Bangladesh to withdraw **153 cusecs** for irrigation, including dry-season **Boro rice cultivation**, through the **Rahimpur Canal project**.
- It addresses seasonal water requirements and flooding concerns in Assam and Sylhet.

Agrivoltaics



India Hosts Agrivoltaics World Conference 2026 for First Time in Global South; Next Phase of PM-KUSUM to Boost Agrivoltaics

India is set to expand the integration of solar power generation with agriculture, with the next phase of the PM-KUSUM scheme expected to...



Why in News?

- The Union Minister for New and Renewable Energy stated that using **10% of agricultural land suitable for agrivoltaics** could meet India's projected electricity demand for 2050.

Concept and Technology

- **Agrivoltaics**, also called **AgriPV, agrisolar or dual-use solar**, combines agricultural production and solar electricity generation on the same land.
- Systems include elevated panels, row-based panels, vertical panels and greenhouse-integrated solar installations.

Benefits and Indian Potential

- Panel shading can reduce evaporation and heat stress; studies cited in the source report water savings of up to **30%** in some systems.
- India reportedly has nearly **50 pilot installations** testing crop-panel combinations.
- The **Ministry of New and Renewable Energy (MNRE)** estimates that solar panels on **1% of India's agricultural land** could add **630 GWp** of solar capacity.

Other Important News of the day

Environment

Mussel

TH The Hindu

CMFRI launches open-sea mussel longline farming unit at Vizhinjam

The ICAR-Central Marine Fisheries Research Institute (ICAR-CMFRI) unit at Vizhinjam here has launched its first full-fledged open-sea mussel...



Why in News?

- The **ICAR-Central Marine Fisheries Research Institute (ICAR-CMFRI)** unit at Vizhinjam launched an open-sea mussel longline farming unit.

Biological Features

- Mussels are **bivalve molluscs** belonging to the marine family **Mytilidae** and freshwater family **Unionidae**.
- They attach to surfaces using protein-based **byssus threads** and feed by filtering particles from water.
- They can accumulate pollutants, including **microplastics**, making them useful indicators of aquatic pollution.

Economic Importance

- Mussels provide **protein, omega-3 fatty acids, vitamins and minerals**, while some freshwater species support pearl cultivation.
- Open-sea farming can strengthen marine aquaculture and coastal livelihoods.

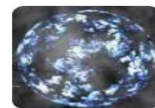
Space

Centaurus X-3

PIB Press Information Bureau

Pulsing signals reveal hidden structure around a famous neutron star

Scientists have discovered that one of the brightest X-ray pulsars, Centaurus X-3 is gobbling up material through an accretion disk,...



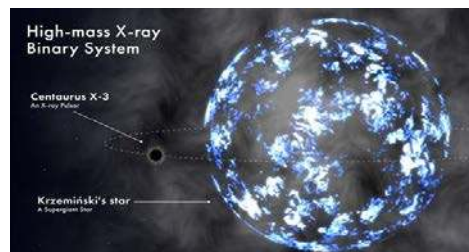
Why in News?

- Scientists observed **Centaurus X-3**, a bright X-ray pulsar, accreting matter through an **accretion disk**.

Key Astronomical Facts

- It is a **high-mass X-ray binary (HMXB)** located approximately **24,000 light-years** from Earth in the constellation Centaurus.

- Its neutron-star pulsar has a rotation period of **4.84 seconds** and an orbital period of **2.087 days** around an O-type companion star.



Pulsars and X-ray Emission

- **Pulsars** are rapidly rotating, highly magnetised neutron stars that emit radiation in regular pulses.
- Matter drawn from a companion star heats up during accretion and emits **X-rays**.

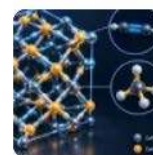
Science and Technology

Diamondiyne

TOI The Times of India

Scientists create diamondiyne, a porous 3D carbon material proposed 35 years ago, by linking diamond-like

Diamond and graphite are the 2 forms of carbon most people know, but carbon atoms can arrange themselves into many different structures.



Why in News?

- Scientists synthesised a new three-dimensional carbon allotrope called **diamondiyne**.

Structure and Composition

- Diamondiyne is a more open, diamond-like carbon network described as a **carbo-mer of diamond**.
- Its ideal model has a **face-centred cubic crystal structure** and an **8:1 ratio of sp-hybridised to sp³-hybridised carbon atoms**.

Scientific Significance

- **sp-hybridised carbon** forms triple bonds, while **sp³-hybridised carbon** forms single bonds.
- The reported method produces a thin film where two liquids meet, using relatively inexpensive equipment.

Uttar Pradesh in News

Sādhana Śhrinkhla 2026

 News On AIR

CBC to organise third regional workshop of Sādhana Śhrinkhla 2026 in UP on October 23 and 24

The Capacity Building Commission (CBC) will organise the third regional workshop of Sādhana Śhrinkhla 2026 in Uttar Pradesh on 23 and 24...



Why in News?

- The **Capacity Building Commission (CBC)** will organise the third regional workshop of **Sādhana Śhrinkhla 2026** in **Lucknow, Uttar Pradesh**.

Sādhana Śhrinkhla: Key Factss

- **Sādhana Śhrinkhla** stands for **Strengthening Adaptive Development and Humane Aptitude for National Advancement**.
- It comprises **four regional consultative workshops** aimed at strengthening institutional capacity and governance.
- The series began in **Vijayawada in September 2026**, followed by the **North Eastern Region workshop in Guwahati in October 2026**.
- The Lucknow workshop will involve **eight States and four Union Territories** of the Northern Region.

Capacity-Building Focus

- The workshops focus on **institutional governance and leadership, operational effectiveness, faculty competencies and institutional competencies**.
- **Digital transformation**, including the use of **Artificial Intelligence (AI) in training**, is another major focus area.

UNNATI Portal

- **UNNATI** stands for **Unified New-Age National Training Initiatives**.
- The portal connects **more than 700 training institutes** on a common platform.
- It facilitates **resource sharing, institutional collaboration and data-driven improvements** in training.