

SANSKRITI IAS DAILY CURRENT AFFAIRS

25-10-2026

Fund for Responding to Loss and Damage (FRLD)

 The Indian Express

Nepal becomes first beneficiary of global funding for loss & damage

The Fund for Responding to Loss and Damage (FRLD), created in 2022, convened an emergency board meeting on Thursday at the request of Nepal...



Why in News

- The **FRLD** provisionally allocated **\$21.6 million** for Nepal's August 2026 floods, marking its first response to a specific disaster.

Institutional Framework

- **Purpose:** It supports climate-vulnerable developing countries in addressing **economic and non-economic losses and damage**, including those caused by extreme weather and slow-onset events.
- **Establishment:** It was established at **COP27 (2022), Sharm el-Sheikh, Egypt**, and operationalised at **COP28 (2023), Dubai, UAE**.
- **International framework:** It operates under the financial mechanism of the **United Nations Framework Convention on Climate Change (UNFCCC)**.

Governance and Administration

- **Board:** Its **26-member Board** comprises **14 representatives from developing-country Parties and 12 from developed-country Parties**.
- **Host and trustee:** The **Philippines** was selected to host the Board in 2024, while the **World Bank** was selected to host the Secretariat and serve as trustee.

Climate Governance Significance

- **Country-led approach:** The Fund promotes locally driven recovery solutions aligned with national priorities.
- **Policy relevance:** It strengthens climate finance for vulnerable countries facing climate-related disasters.

China Zorrilla

Why in News

- **China Zorrilla**, described as the world's largest battery-electric

 Marine Insight

[World's Largest Battery-Electric Ship, China Zorrilla, Enters Service On River Plate For Buquebus](#)

The world's largest battery-electric vessel, China Zorrilla, has entered commercial service after completing its maiden trip on the Rio de la...



vessel, entered commercial service after its maiden voyage between **Buenos Aires, Argentina, and Colonia, Uruguay**.

Vessel Profile and Technical Features

- **Builder:** It was built by **Incat Tasmania, Australia**, for ferry operator **Buquebus** and was previously known as **Incat Hull 096**.
- **Flag and name:** It sails under the **Uruguayan flag** and is named after Uruguayan actress and theatre personality China Zorrilla.
- **Dimensions and capacity:** It is approximately **130 metres long and 32 metres wide**, accommodating **2,100 passengers and 225 vehicles**.
- **Energy system:** It uses more than **40 MWh** of battery capacity and over **250 metric tonnes of batteries**.
- **Propulsion:** Eight electric motors connected to waterjets provide a reported maximum speed of **25 knots**.
- **Facilities:** It has three decks and a **2,300 sq. m duty-free retail complex**.

Environmental and Transport Significance

- **Route:** It covers approximately **55–60 km in 90 minutes**.
- **Environmental benefits:** Battery-electric propulsion eliminates direct exhaust emissions during operation and reduces engine-related noise and vibration.
- **Strategic relevance:** The vessel demonstrates the potential of electric propulsion in large passenger and vehicle ferries.

Bonin Islands

 Inshorts

[6.3-magnitude quake hits Japan's Bonin Islands | Tap to know more | Inshorts](#)

A 6.3 magnitude earthquake struck Japan's Bonin Islands region early Sunday, Reuters reported, citing EMSC. Details on depth, damage,...

Why in News

- A **magnitude 6.5 earthquake** struck the Bonin Islands region of Japan.

Geographical and Historical Features

- **Alternative name:** The **Ogasawara Islands** comprise around 30 volcanic islands and islets in the central Pacific, approximately **800 km southeast of Japan**.
- **Geology:** They originated from submarine volcanoes and have **never been connected to a continental landmass**.
- **Topography:** Only about **73 sq. km** is arable; most of the terrain is hilly and forested.

- **Principal island: Chichi-jima**, historically called Peel Island, is a major island in the group.
- **History:** Japan claimed the islands in **1875**, placed them under Tokyo Prefecture in **1880**, and they came under US military administration after occupation in **1945**.
- **Return to Japan:** US administration ended in **1968**, when the islands were returned to Japan.
- **Nickname:** They are called the **“Galapagos of the Orient”** because of their distinctive, independently evolved flora and fauna.
- **UNESCO recognition:** The **Ogasawara Islands** were inscribed on the **UNESCO World Natural Heritage List in July 2011**.

Lake Untersee

toi The Times of India

A 2019 flood raised an Antarctic lake by 2 metres after water escaped from a neighbouring glacier-fed lak

In January 2019, a rare glacial flood caused an Antarctic lake to rise by two metres after a neighbouring lake released 17.5 million cubic...

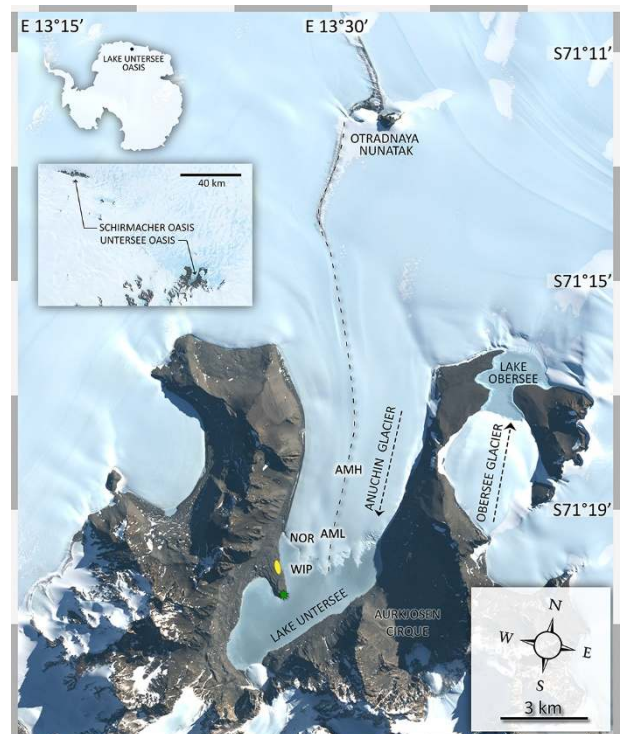


Why in News

- In **January 2019**, a glacial flood raised Lake Untersee's water level by approximately **two metres** after a neighbouring lake released **17.5 million cubic metres of water**.

Geographical and Physical Features

- **Location:** Lake Untersee is an isolated freshwater lake in **Antarctica**; its German name means “lower lake.”
- **Depth:** Its maximum depth is estimated at nearly **170 metres**.
- **Temperature:** The region's mean annual temperature is around **-10°C**, and the lake remains frozen throughout the year.
- **Water source:** It receives seasonal meltwater mainly from the **Anuchin Glacier**, flowing south from the Gruber Mountains.
- **Ice cover:** Thick ice covers the lake, while cold temperatures, wind and evaporation or sublimation limit significant melting.



Distinctive Water Chemistry

- **Dissolved gases:** Its water contains high levels of **dissolved oxygen** and very low levels of dissolved carbon dioxide.
- **Alkalinity:** The water has a strongly **alkaline pH**.

Stromatolites and Microbial Life

- **Stromatolites:** The lake contains large, conical microbial structures formed mainly by photosynthetic microorganisms such as **cyanobacteria**.
- **Formation:** Microbes trap sediment and accumulate mineral layers, including calcium carbonate.
- **Evolutionary significance:** Stromatolite fossils date back more than **3 billion years**.
- **Growth conditions:** Permanent ice, clear water, low sediment and limited grazing favour their growth.
- **Other organisms:** **Tardigrades**, also called water bears, are among the lake's largest organisms.

Scientific Significance

- **Extreme environments:** Its unusual chemistry and microbial ecosystems help scientists study life under extreme conditions.
- **Astrobiology:** The lake may serve as an analogue for investigating potentially habitable environments on other worlds.

Girdling



The Indian Express

Chhattisgarh seeks expert help for 'surgery' to save over 500 damaged trees

The process involves grafting a healthy branch across the girdled portion to reconnect the damaged tissues. As part of a conservation...



Why in News

- The Chhattisgarh Forest Department sought expert assistance to save over **500 trees allegedly girdled by encroachers** in Karka village inside the **Udanti Sitanadi Tiger Reserve (USTR)**.

Meaning and Mechanism

- **Definition:** **Girdling** is a forest-management technique that kills a tree without felling it.
- **Method:** It involves removing the bark and **vascular cambium** through cuts encircling the trunk.

- **Effect:** It disrupts nutrient and carbohydrate transport, potentially starving the roots and killing the tree.
- **Recovery:** A tree may survive if the damaged area heals and vascular tissues reconnect.

Uses and Ecological Implications

- **Vegetation management:** Girdling controls unwanted woody species when felling or removing biomass is undesirable or expensive.
- **Wildlife habitat:** Dead standing trees, called **snags**, can provide wildlife habitat.
- **Reduced disturbance:** It avoids major soil disturbance and allows vegetation changes to occur gradually.



Vascular Cambium

- **Definition:** The vascular cambium is a layer of actively dividing cells between the **xylem and phloem**.
- **Function:** It produces secondary xylem inward and secondary phloem outward, increasing stem and root thickness.
- **Stem arrangement:** From outside to inside, the main tissues are **bark, phloem, vascular cambium and xylem**.

Bridge-Grafting

- **Purpose:** **Bridge-grafting** repairs established trees damaged by girdling, animals or mechanical injury.
- **Method:** Scions taken from dormant, one-year-old stems connect cambium above and below the damaged area.
- **Benefit:** The graft restores carbohydrate transport from leaves to roots, helping the tree resume normal functions.

Vanuatu

TOI The Times of India

6.2-magnitude earthquake hits Vanuatu in Pacific Ocean

A magnitude 6.2 earthquake struck the Vanuatu islands in the Pacific Ocean on Sunday, October 25, according to the German Research Centre...



Why in News

- A preliminary **magnitude 6.9 earthquake** struck off Vanuatu, prompting a tsunami warning that was later withdrawn.

Geographical Features

- **Location:** Vanuatu is a **Melanesian archipelago in the South Pacific Ocean**.
- **Islands:** It comprises **83 islands**, of which around **65 are inhabited**.
- **Largest island:** **Espiritu Santo**.
- **Relative location:** It lies approximately **800 km west of Fiji** and **1,800 km east of Australia**.
- **Relief:** Its landscape includes rugged mountains, plateaus, coastal terraces and coral reefs.
- **Volcanism:** It has several active volcanoes, including **Mount Yasur**, one of the world's most accessible active volcanoes.

Historical and Political Background

- **Colonial administration:** France and the United Kingdom jointly administered the islands under the **New Hebrides Anglo-French Condominium**, established in **1906**.
- **Independence:** The **Republic of Vanuatu** became independent in **1980**.
- **Government:** It follows a **parliamentary democracy**.
- **Capital:** **Port Vila**, located on Efate Island.
- **Currency:** **Vatu**.

Society and Economy

- **Population:** The source reports that approximately **94%** of the population is indigenous Melanesian.
- **Languages:** **Bislama** is the national language; **Bislama, English and French** are official languages.
- **Economic activities:** Agriculture, tourism, fishing and offshore financial services are important.
- **Agricultural exports:** **Kava** is a significant export product.
- **Taxation:** Vanuatu is known for a favourable tax regime, while VAT and other charges contribute to public revenue.
- **Citizenship by investment:** The country operates a programme offering citizenship in exchange for a financial contribution.

Sri Ranganathaswamy Temple

Why in News: The **Sri Ranganathaswamy Temple, Srirangam**, is known for its architectural and religious significance.

Location and Geography

THE Hindu

[Vaikunta Ekadasi celebrations to begin on December 9 at Srirangam temple](#)

The 22-day Vaikunta Ekadasi festival at the Srirangam Sri Ranganathaswamy Temple will begin on December 9 with the Thirunedunthandagam.

- The temple is located on **Srirangam Island**, between the **Cauvery and Kollidam rivers**, near Tiruchirappalli, Tamil Nadu.
- It is dedicated to **Lord Ranganatha**, a reclining form of Lord Vishnu.

History and Architecture

- The temple developed under the patronage of the **Cholas, Pandyas, Hoysalas, Vijayanagara rulers and Nayaks**.
- It is a major centre of the **Sri Vaishnavism tradition** and is associated with **Ramanujacharya**.
- Its Dravidian architecture features **seven concentric enclosures, 21 gopurams** and the prominent **Rajagopuram**.

Cultural Significance

- The temple is among the most important **Vaishnavite pilgrimage centres** in India.
- Its annual **Vaikunta Ekadashi** festival attracts large numbers of devotees.

Other Important News of the day

Places in News	Zuqar Island
	Why in News ➤ Yemen's Houthi rebels claimed they were attempting to rescue a boat carrying 14 Indian nationals near Zuqar Island in the Red Sea, alleging that it had been targeted by Saudi Arabia. Geographical and Strategic Significance ➤ Location: Zuqar is a Yemeni island in the southern Red Sea, forming part of the Hanish Islands archipelago. ➤ Area: It covers approximately 130 sq. km. ➤ Maritime connectivity: It lies between mainland Yemen and Eritrea, near the Bab-el-Mandeb Strait, connecting the Red Sea with the Gulf of Aden. ➤ Continental location: Despite its proximity to Africa, it is considered part of Asia because it lies on the Asian continental shelf.



	➤ Strategic importance: Its proximity to a major international shipping route makes it significant for maritime trade and security. International Maritime Linkages ➤ Bab-el-Mandeb Strait: This strategic chokepoint connects the Red Sea with the Gulf of Aden and the wider Indian Ocean. ➤ Regional relevance: Instability around the island can affect shipping and maritime security in the Red Sea. Territorial History and Geology ➤ Dispute: Eritrea captured the island in 1995; an international court placed it under Yemen's custody in 1998. ➤ Volcanism: Features a shield volcano, pyroclastic cones and coastal formations from phreatic eruptions.
Environment	Amur Falcon  India Today <u>23 countries, 6,000 km and a sea crossing: Amur falcons return to Manipur</u> Satellite-tagged Amur falcons Apapang and Alang have returned to Manipur after crossing 23 countries. Nearly a year of tracking is revealing...  Why in News: The Amur Falcon, a long-distance migratory bird, is important for understanding bird migration and conservation in India. Distribution and Migration ➤ The Amur Falcon (<i>Falco amurensis</i>) breeds in eastern Asia and migrates to southern Africa. ➤ During migration, it passes through Northeast India, particularly Nagaland and Manipur. ➤ It undertakes a remarkable long-distance migration across the Indian Ocean.  Conservation ➤ The species is listed as Least Concern on the IUCN Red List. ➤ Community participation and protection from hunting have supported its conservation in Northeast India. ➤ It feeds mainly on insects and helps regulate insect populations.

Defence

Filin Missile

 The Indian Express

What is Russia's Filin missile, and why are Ukrainian experts worried?

Two Ukrainian drone experts say Russia's cheap Filin cruise missile is faster and hits harder than its jet-powered Shaheds, and could soon...



Why in News

- Ukraine's military intelligence agency, **HUR**, released details of Russia's reported **Filin cruise missile**, including a 3D model and information on its components and electronic systems.

Origin and Classification

- **Type:** The Filin is a reported **low-cost, ground-launched, jet-powered cruise missile** developed by Russia.
- **Manufacturer:** **NPO Molniya**, part of Russia's **Tactical Missiles Corporation**.
- **Construction:** It uses carbon-fibre and glass-fibre reinforced composites, with some components manufactured through **3D printing**.

Technical Features

- **Dimensions:** Approximately **3.5 metres long**, with a wingspan of around **3 metres**.
- **Launch mechanism:** A **solid-propellant booster** launches the missile before its main engine takes over.
- **Engine:** uses an **R500 turbojet engine**.
- **Speed and range:** Its maximum speed is **800 km/h**, with a range of up to **1,200 km**.
- **Flight altitude:** It is designed for low-altitude flight but can reportedly climb to approximately **6 km**.
- **Warhead:** It carries a **50 kg or 100 kg warhead**.

Navigation and Strategic Significance

- **Navigation systems:** It uses a **Chinese-made inertial navigation system** and a **16-channel Kometa satellite-navigation module**.
- **Operational relevance:** Its reported range and low-altitude flight capability are important for assessing modern cruise-missile threats.

Science and Technology

Advanced Emergency Braking System (AEBS)

BS Business Standard

What is AEBS, the auto-braking system govt wants in all new cars from 2030?

The Ministry of Road Transport and Highways (MoRTH) has proposed making Advanced Emergency Braking Systems (AEBS) mandatory for all new car...



Why in News

- The **Ministry of Road Transport and Highways (MoRTH)** proposed making **AEBS mandatory for all new car models from 1 October 2030**.

Technology and Working Mechanism

- **Definition:** AEBS is an active vehicle-safety technology that prevents collisions or reduces their severity and forms part of **Advanced Driver Assistance Systems (ADAS)**.
- **Sensors:** It uses **radar, cameras and/or LiDAR (Light Detection and Ranging)** to assess obstacles, relative speed and collision risk.
- **Warning stage:** It alerts the driver through visual or audio signals when a collision is likely.
- **Braking stages:** If the driver fails to respond, the system may prepare the brakes, apply partial braking and ultimately initiate emergency braking.



Road Safety Applications

- **Collision prevention:** AEBS can mitigate rear-end, head-on, turning and pedestrian collisions.
- **Safety objective:** It reduces dependence on driver reaction time and can lower accident severity.

International Adoption

- **European Union:** AEBS requirements were introduced for new commercial vehicles and trucks from **2015** and later extended to passenger vehicles.
- **Japan:** It made AEBS mandatory for new passenger vehicles from **2021**.

	➤ United States: A voluntary agreement between the National Highway Traffic Safety Administration (NHTSA) and major automakers led to widespread adoption. ➤ United Kingdom and China: The UK requires AEBS as standard on newly registered passenger cars, while the source reports widespread adoption in China.
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Uttar Pradesh in News

TechSangam 2026: AI and Quantum Forensics

 Bhaskar English

[Yogi says he would kick mafia twice: Cites CID serial, says cases were solved using a strand of hair](#)

Yogi Adityanath launches Quantum Forensics Centre in Lucknow. Follow Bhaskar English Latest Updates. The LEXQ Centre of Excellence for...



Why in News: Uttar Pradesh Chief Minister **Yogi Adityanath** inaugurated the second day of **TechSangam** at the **Uttar Pradesh State Institute of Forensic Science (UPSIFS), Lucknow.**

Key Developments

- The **LEXQ Centre of Excellence** was launched for quantum forensics and legal compliance.
- The book *Artificial Intelligence in Construction* was released.
- Discussions covered **AI, cyber forensics, quantum technology, data security and legal compliance.**

Applications and Risks

- AI can support fingerprint and DNA-data analysis, CCTV examination, digital-evidence processing and pattern recognition.
- Risks include **deepfakes, cyber fraud, biased data and inaccurate outputs.**
- AI-generated evidence is not automatically admissible in court; reliability, **chain of custody, expert oversight and corroboration** remain important.

Strategic Significance

- Mission-mode efforts in AI and quantum technology aim to strengthen domestic capabilities, computing infrastructure and innovation.
- The **IndiaAI Mission** supports AI development and adoption, with emphasis on safe and responsible AI.