

SANSKRITI IAS DAILY CURRENT AFFAIRS

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ASEAN-India Maritime Exercise 2026

 News On AIR

INS Sahyadri and INS Kulish conclude participation in ASEAN-India Maritime Exercise 2026

Indian Naval Ships (INS) Sahyadri and Kulish have concluded their participation in the ASEAN-India Maritime Exercise (AIME 2026),...



Why in News

- Indian Naval Ships **Sahyadri and Kulish** are participating in the second **ASEAN-India Maritime Exercise (AIME-2026)** in the Philippines.

Exercise Profile

- **AIME-2026** is the **second edition** of the ASEAN-India Maritime Exercise.
- It is being conducted in **Subic Bay, Philippines**, under the theme **“Anchored in Trust, United at Sea.”**
- The exercise involves Indian naval ships and maritime forces from **ASEAN Member States**.

Strategic Linkages

- AIME-2026 contributes to India's **Act East Policy** and the vision of **MAHASAGAR - Mutual and Holistic Advancement for Security and Growth Across Regions**.

Operational Dimensions

- The **Harbour Phase** includes professional engagements, Subject Matter Expert Exchanges, cultural and sporting activities, community engagement and operational synchronisation.
- The **Sea Phase** involves coordinated maritime exercises and operational serials.
- The exercise seeks to improve **mutual understanding, cooperation and interoperability** among participating maritime forces.

Jawahar Dweep Declared Plastic-Free

Why in News

- **Jawahar Dweep Marine Oil Terminal** in Mumbai was declared **plastic-free**

on 2 October 2026, becoming India's first oil terminal reported to have completely eliminated **single-use plastics**.

 Swarajya

Mumbai Port's Jawahar Dweep Becomes India's First Plastic-Free Oil Terminal

The Mumbai Port Authority declared its Jawahar Dweep Marine Oil Terminal plastic-free yesterday (2 October), marking a significant...



Location and Port Significance

- **Jawahar Dweep**, also known as **Butcher Island**, is an offshore facility located approximately **4 km from Mumbai's coast**.
- The terminal has **five jetties** and handles **crude oil and petroleum products**.
- It serves major organisations including **BPCL, HPCL, IOC and ONGC**.
- Petroleum cargo accounts for nearly **three-fifths of Mumbai Port's total traffic**.

Plastic-Free Operations

- The declaration was made during **Swachhata Abhiyan 2026** at **Grey Gate, Indira Dock**, on **2 October**, observed as **Gandhi Jayanti**.
- The initiative covers single-use plastic reduction across **docks, residential colonies and coastal areas** under the Mumbai Port administration.
- **Single-use plastics** are products designed primarily for one-time use before disposal.

Marine Pollution Management

- Union Minister **Sarbananda Sonowal** dedicated new **Oil Spill Response facilities** at the port on **2 October 2026**.
- **Oil Spill Response systems** facilitate the **containment, recovery and control of marine oil pollution**.

NABKISAN's WASH Social Bond

 ET Government

NABKISAN raises ₹180 crore through India's first WASH-focused social bond

Discover how NABKISAN Finance Ltd raised ₹180 crore through India's inaugural WASH-focused social bond, enhancing access to water,...



Why in News

- **NABKISAN Finance Ltd**, a subsidiary of **NABARD**, listed India's first social bond dedicated exclusively to **Water, Sanitation and Hygiene (WASH)** on the **National Stock Exchange** on **2 October 2026**.

Bond Structure

- The issue raised **₹180 crore** through a **five-year bond** carrying an **8.10% coupon rate** and maturing in **September 2031**.
- The bond was **oversubscribed 1.8 times**, indicating demand higher than the amount offered.
- It received **CRISIL AAA (Stable)** and **CARE AAA (Stable)** ratings.

- **Water.org** served as the technical advisor and knowledge partner for the transaction.

WASH and Social Finance

- **WASH** refers to **Water, Sanitation and Hygiene** and focuses on access to safe water, sanitation facilities and hygiene services.
- **Social bonds** are debt instruments that raise funds for projects with defined **social objectives**.
- Social bonds form part of the broader **sustainable finance** ecosystem alongside **green bonds and sustainability bonds**.

Use of Proceeds

- The proceeds will finance projects aimed at expanding access to **safe water, sanitation and hygiene services in rural areas**.
- The investments are intended to improve **health outcomes, livelihoods and quality of life** through WASH infrastructure and services.

India-Specific Sickle Cell Anaemia Severity Score

TH The Hindu

CSIR-CCMB develops India-specific tool to predict Sickle Cell severity

Doctors may soon have a more reliable way to predict how severely sickle cell anaemia (SCA) will affect Indian patients, thanks to a new...



Why in News

- Scientists at **CSIR-Centre for Cellular and Molecular Biology (CCMB)** developed an India-specific disease severity assessment tool for **sickle cell anaemia** using clinical data from **171 Indian children**.

Disease and Research Context

- **Sickle cell anaemia** is an inherited blood disorder caused by abnormal haemoglobin and belongs to the group of **haemoglobinopathies**.
- It can cause **anaemia, pain episodes and organ-related complications**, with disease severity varying among populations.
- The study used data from children aged up to **18 years** treated at **Government Medical College and Hospital, Nagpur**.

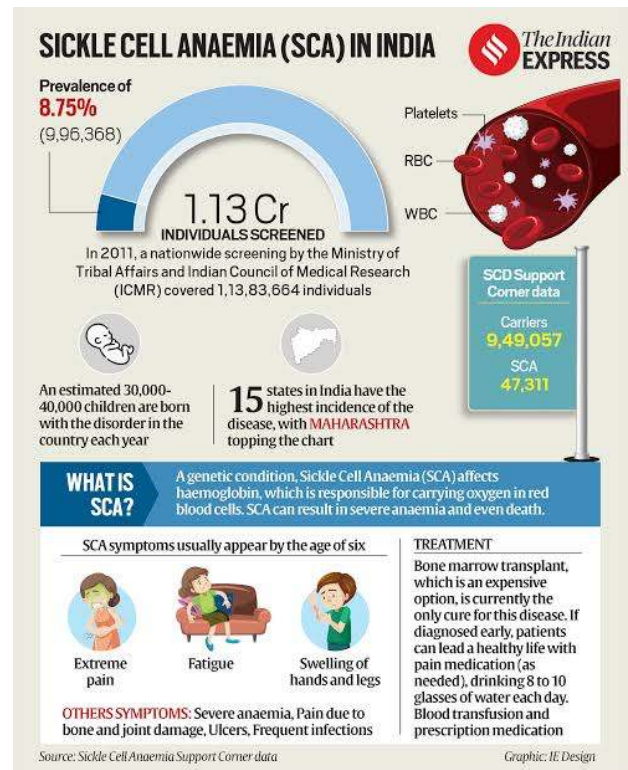
India-Specific Severity Scores

- **ISS1 (India-specific Severity Score)** achieved nearly **83% clinical assessment accuracy**.

- **ISS2** uses observable clinical indicators instead of laboratory measurements and achieved approximately **85% concordance**.
- ISS2 correctly identified all patients belonging to the **mild disease category**.
- The tool could assist clinical decision-making where extensive laboratory investigations are not readily available.

Comparison and Mission Linkage

- The international **Paediatric Severity Score (PSS)** matched expert clinical assessments in approximately **67%** of cases in the Indian study.
- The research forms part of the **CSIR-Sickle Cell Anaemia Mission**.
- **Hydroxyurea** is an important medicine used in sickle cell disease to reduce complications and improve clinical management.
- CSIR-CCMB has also developed an affordable **PCR-based molecular test**, validated by **ICMR**, with reported **100% sensitivity and specificity**.



Other Important News of the day

**Places
News**

Anak Krakatau: Two New Islands

TH The Hindu

New islands appear after Indonesia's Anak Krakatau volcano erupts

Two new islands spotted near Anak Krakatau after a major eruption; scientists seek to confirm their formation and future stability.



Why in News

- Two new land formations emerged near Indonesia's **Anak Krakatau volcano** following a **25-hour continuous eruption** between **4 and 6 September 2026**.

Geographical and Geological Features

- **Anak Krakatau**, meaning "**Child of Krakatoa**," is a volcanic island in the **Sunda Strait**, which separates **Java and Sumatra**.
- Anak Krakatau emerged after the catastrophic **1883 Krakatoa eruption**, which generated destructive tsunamis.

	➤ The 2026 eruption expanded Anak Krakatau's land area by approximately 32.8 hectares (0.2 sq km) through lava flows and pyroclastic material. ➤ Pyroclastic material includes ash, lapilli, volcanic bombs and fragmented rock ejected during explosive eruptions. New Island Formation ➤ One new formation was located about 760 metres northwest of Anak Krakatau, while the other was about 495 metres southeast of the volcano. ➤ The two formations lie along a northwest–southeast axis passing through the volcano's crater. ➤ Their exact nature remains unconfirmed, with preliminary interpretations suggesting possible new eruption vents or accumulations of secondary eruptive material. ➤ Volcanic islands can form when lava and ash accumulate above sea level, but their survival depends on erosion, waves and tidal forces. Volcanic Monitoring and Hazards ➤ Indonesia's Geological Agency raised Anak Krakatau's alert level to Level III on 2 July 2026 and subsequently lowered it to Level II on 21 September 2026. ➤ A 2-km exclusion zone has been maintained around the main crater, while a 1-km exclusion zone applies around the two new formations. ➤ The formations were initially observed by mariners and volunteers and subsequently verified using Sentinel satellite imagery on 23 September 2026. ➤ Sentinel satellites form part of the European Union's Copernicus Earth Observation Programme.
Person in News	Shubman Gill's Fastest ODI Double Century THE Hindu <u>Gill breaks Kishan's record for fastest ODI double hundred</u> Shubman Gill breaker fastest ODI double hundred in 117 balls, surpassing Kishan, with Rohit Sharma nearing 12000 ODI runs.  Why in News ➤ Indian captain Shubman Gill became the fastest player to score a double century in ODI cricket, reaching 200 runs in just 117 balls against the West Indies in the second ODI at Guwahati.

	Record-Breaking Performance ➤ Gill scored an unbeaten 223 runs from 133 balls, including 26 fours and 8 sixes. ➤ He surpassed Ishan Kishan's previous record of 126 balls, achieved against Bangladesh in 2022. ➤ This was Gill's second ODI double century, after his 208 against New Zealand in Hyderabad in 2023. Major ODI Records ➤ Gill became only the second batter after Rohit Sharma to score multiple double centuries in men's ODI cricket. ➤ He became only the second batter after Glenn Maxwell to score an ODI double century while chasing. ➤ Maxwell had scored an unbeaten 201 against Afghanistan during the 2023 ODI World Cup in Mumbai. ➤ Gill became the first captain to score a double century in both Test and ODI cricket. Match and Team Records ➤ India chased a target of 406 runs, defeating the West Indies by 8 wickets with 39 balls remaining. ➤ The successful chase was the second-highest successful run chase in ODI cricket. ➤ The West Indies scored 405/7, their first 400-plus total in ODI cricket. ➤ John Campbell, Shai Hope and Amir Jangoo scored centuries for the West Indies in the same innings.
Environment	Gegeneophis chandgadi: New Caecilian Species Why in News ➤ Scientists identified a new subterranean amphibian, Gegeneophis chandgadi, from the Chandgad region of Kolhapur, Maharashtra, in September 2026. Taxonomic and Biological Profile ➤ Caecilians belong to the order Gymnophiona under the class Amphibia. ➤ They are limbless, burrowing amphibians with cylindrical bodies and are often mistaken for earthworms or snakes.  The Times of India Finding of new species makes north Western Ghats caecilian biodiversity hotspot New caecilian species Gegeneophis chandgadi found near homes in north Western Ghats, boosting biodiversity hotspot status and highlighting...

	➤ Gegeneophis chandgadi was discovered at Buzawade village in Chandgad, Kolhapur. ➤ The species name refers to the Chandgadi dialect of Marathi spoken in the region. Western Ghats and Endemism ➤ The Western Ghats is a UNESCO World Heritage Site and one of the world's eight major biodiversity hotspots. ➤ India has 12 species of the genus Gegeneophis, of which 11 are endemic to the Western Ghats. ➤ The Western Ghats hosts 26 endemic caecilian species, highlighting its importance for amphibian diversity. ➤ Gegeneophis valmiki was previously discovered on the Valmiki Plateau of Satara district, Maharashtra, in January 2026. Conservation Context ➤ Caecilians are difficult to study because their subterranean lifestyle makes them rarely visible on the surface. ➤ The source notes that undocumented species in fragmented habitats may face "silent extinctions" before they are scientifically recorded. ➤ Globally, approximately 41% of amphibian species are reported as threatened with extinction.
Science and Technology	Radio Signals from Exoplanet Beta Pictoris b  The New York Times <u>Radio Waves Coming From an Alien Planet May Be a Cosmic First</u> Beta Pictoris b appears to have an aurora caused by a powerful magnetic field. If confirmed, it would be the first such field known outside...  Why in News ➤ Scientists reported the first direct detection of radio signals from an exoplanet, Beta Pictoris b, using South Africa's MeerKAT radio telescope array on 23 September 2026. Exoplanet and Astronomical System ➤ An exoplanet is a planet that orbits a star outside our Solar System. ➤ Beta Pictoris b is a massive gas giant orbiting the young star Beta Pictoris in the constellation Pictor.

- The planet completes one rotation in approximately **8–9 hours**, indicating very rapid rotation.
- It lies approximately **63–64 light-years from Earth**.

Magnetic Field and Auroras

- The detected radio emissions are associated with powerful **auroral activity** on Beta Pictoris b.
- **Auroras** occur when charged particles interact with a planet's **magnetic field**.
- The radio bursts exhibited strong **circular polarisation**, a characteristic associated with magnetic radiation.
- The study estimated Beta Pictoris b's magnetic field to be at least **1,250 times stronger than Earth's**.

Scientific Significance

- Researchers compared radio images with precise positions of distant **quasars** to establish that the signal originated from Beta Pictoris b rather than its host star.
- The observation provides a direct measurement of an **exoplanetary magnetic field**, offering insights into planetary magnetism beyond the Solar System.
- **MeerKAT** is a radio telescope array in **South Africa** and forms part of the **Square Kilometre Array (SKA) pathfinder** programme.
- **Jupiter** is the Solar System planet particularly known for strong auroral radio emissions.

Uttar Pradesh in News

Sugarcane Varieties Resistant to Red Rot in Uttar Pradesh

TOI The Times of India

Scientists develop new sugarcane varieties to beat red rot fungal in UP

Scientists in Uttar Pradesh developed four new red rot-resistant sugarcane varieties, including early-maturing CoS.23232, to boost yield and...



Why in News

- Agricultural researchers in **Uttar Pradesh** have developed **four new sugarcane varieties** with higher yield and resistance to **red rot**, a fungal disease affecting the widely cultivated **Co.0238** variety.

Agricultural Innovation

- **Uttar Pradesh Council of Sugarcane Research (UPCSR)** developed three varieties, while **Indian Institute of Sugarcane Research (IISR)** developed the fourth.
- **CoS.23232** is the early-maturing variety, producing about **95.56 tonnes per hectare**, nearly **10% higher** than the existing variety.
- The new varieties combine traits such as **higher sugar content, strong stalks, early or late maturity, and red rot resistance**.

Red Rot and Crop Protection

- **Red rot** is a fungal disease of sugarcane that can substantially reduce cane yield and sugar recovery.
- The disease has particularly affected **Co.0238**, creating economic losses for both farmers and sugar mills.
- Disease-resistant varieties can reduce dependence on crop replacement and help stabilise **sugar production**.

Variety Development Process

- Development of a commercial sugarcane variety can take up to **11 years** from breeding to release.
- Scientists initially **cross-breed selected male and female plants** to combine desirable traits such as high sugar content and disease resistance.
- The resulting plants undergo multi-year testing for **yield, sugar content, disease resistance and ratooning performance**.
- **Ratooning** refers to the practice of obtaining subsequent crops from the regrowth of sugarcane after harvesting the first crop.