SANSKRITI IAS DAILY CURRENT AFFAIRS

01-11-2026

BIMSTEC Maritime Security Exercise

News On AIR

India hosts BIMSTEC Maritime Security Exercise in Andaman and Nicobar Islands



India is hosting the BIMSTEC Maritime Security Exercise in Sri Vijaya Puram, Andaman and Nicobar Islands. The exercise is a key initiative...

Why in News

- The inaugural BIMSTEC Maritime Security Exercise is being conducted in the **Bay of Bengal**.

About the Exercise

- It is the first maritime security exercise of **BIMSTEC**, announced by the Prime Minister of India at the **6th BIMSTEC Summit in Thailand**.
- It aims to strengthen maritime cooperation, operational coordination and regional security.
- All seven member countries are participating: **Bangladesh, Bhutan, India, Myanmar, Nepal, Sri Lanka and Thailand**.
- It promotes the vision of **"Shared Seas, Shared Security and Shared Prosperity"** for a secure and inclusive maritime domain.

Institutional Mechanism

- **Secretariat:** Dhaka, Bangladesh.
- **Summits:** Once every two years.
- **Ministerial Meetings:** Annually.
- **Senior Officials' Meetings:** Twice a year.
- Its primary objective is to promote technical and economic cooperation among member states.

About BIMSTEC

- The **Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation** is a regional grouping of seven countries located around the Bay of Bengal.
- It was established on **6 June 1997** through the **Bangkok Declaration**.
- **Historical Evolution:**
  - 1997: Formed as **BIST-EC** (Bangladesh, India, Sri Lanka and Thailand).
  - 1998: Renamed **BIMST-EC** after Myanmar joined.
  - 2004: Became BIMSTEC after its full transformation.

National Institute of Plant Genome Research (NIPGR)



Why in News

- Researchers at **NIPGR** identified a previously uncharacterised protein, **CNGC13**, which helps plants warn undamaged leaves when insects attack another leaf.

About NIPGR

- It is an autonomous institution under the **Biotechnology Research and Innovation Council (BRIC)**, Department of Biotechnology, Ministry of Science and Technology.
- It began functioning in **1998** and is located in **New Delhi**.
- Its mandate is to promote and coordinate plant genomics research, train researchers and provide information resources in this field.

Research Areas and Objectives

- It undertakes research in **plant genomics and molecular biology** for crop improvement.
- **Major areas include:**
  - Genome analysis and computational biology.
  - Plant immunity and molecular breeding.
  - Abiotic stress responses and nutritional genomics.
  - Plant development, transgenics and crop improvement.
- It develops molecular markers, tests transgenic and gene-edited plants, and identifies genes useful for pathogen resistance.
- It also promotes advanced training, scientific collaboration, publications and patents.

Biotechnology Research and Innovation Council (BRIC)

- BRIC is an apex autonomous body established as a registered society under the **Ministry of Science and Technology**.
- It was formed by subsuming **14 autonomous institutes** of the Department of Biotechnology.
- It provides a unified governance mechanism and promotes multidisciplinary biotechnology research.
- Its objectives include indigenous technology development, innovation and research aligned with **Atmanirbhar Bharat**.

Mekedatu Reservoir Project

The New Indian Express

Karnataka sets up panel to monitor Mekedatu reservoir project



Karnataka, for its part, maintains the reservoir would help regulate flows without violating existing awards. Karnataka has proposed to...

Why in News

- Karnataka has identified **2,500 acres** for the Mekedatu project, of which approximately **500 acres of private agricultural land** need to be acquired.

About the Project

- It is a multipurpose **drinking-water and hydropower project** involving a balancing reservoir near Kanakapura in Karnataka's Ramanagara district.
- The site is approximately **90 km from Bengaluru** and 4 km from the Tamil Nadu border.
- It is proposed at the confluence of the **Cauvery River and its tributary, Arkavathi**.
- The project includes a **99-metre-high and 735-metre-long concrete gravity dam**, an underground powerhouse and a water conductor system.
- Proposed storage capacity: **67 TMC feet**.

Objectives and Environmental Impact

- It envisages using **4.75 TMC of water annually** for drinking-water supply to Bengaluru and surrounding areas.
- It is expected to generate approximately **400 MW of hydropower**.
- The project would submerge more than **5,000 hectares of protected area** in the Cauvery Wildlife Sanctuary.

Cauvery Water Dispute

- The project is linked to the broader **Cauvery water-sharing dispute** between Karnataka and Tamil Nadu.
- Tamil Nadu, as the lower riparian state, opposes the project, arguing that it could affect the unrestricted flow of Cauvery water into the state.
- It considers Mekedatu the last free-flow point in Karnataka before the river enters Tamil Nadu.

Dysphaea assamensis

Research Matters

New damselfly species from Assam clarifies decades of confusion



Researchers have formally described a new damselfly species, Dysphaea assamensis, from the Karbi Anglong District of Assam, India.

Why in News

- Researchers formally described a new damselfly species, ***Dysphaea assamensis***, from **Karbi Anglong district of Assam**.

Key Features

- It is a newly described damselfly species distinguished by an extensive and intricate **blue dorsal pattern** across its abdominal segments.
- Its discovery brings the total number of recognised global *Dysphaea* species to **10**.
- It inhabits undisturbed, shaded forest streams, highlighting the biodiversity of the **Indo-Burma region**.

About Damselflies

- Damselflies are predatory aerial insects belonging to the order **Odonata**.
- They are generally found near shallow freshwater habitats.
- Compared with dragonflies, they are usually smaller, more delicate and weaker fliers.
- **Spreadwing damselflies** can be identified by their wings held in a V-shape over the abdomen.

Sinhagad Fort

The Indian Express

Pune civic body to erect 100-foot tall saffron flag at Sinhagad fort

A 100-foot tall saffron flag will be erected by the Pune Municipal Corporation (PMC) at Sinhagad Fort in honour of Chhatrapati Shivaji...



Why in News

- Pune Municipal Corporation plans to erect a **100-foot saffron flag** at Sinhagad Fort in honour of **Chhatrapati Shivaji Maharaj** and the Maratha Empire.

Location and Historical Background

- Earlier known as **Kondhana**, Sinhagad Fort is located near Pune, Maharashtra.
- It stands at an elevation of approximately **1,312 metres** on an isolated cliff of the **Bhuleswar range of the Sahyadri Mountains**.
- Its strategic location was supported by nearby forts such as Torna, Purandar and Rajgad.
- It was originally named after the sage **Kaundinya**.
- ***Important historical developments:***
  - **1340 CE:** Captured by Muhammad bin Tughlaq from Koli tribal chieftain Nag Naik.
  - **1496 CE:** Captured by Malik Ahmad, founder of the Nizam Shahi dynasty.
  - **1647 CE:** Held by Shivaji.
  - **1665 CE:** Handed over to the Mughals under the Treaty of Purandar.
  - **1670 CE:** Recaptured by the Marathas in the Battle of Sinhagad.

- **1818 CE:** Surrendered to the British after the Third Anglo-Maratha War.

Battle of Sinhagad (1670)

- The battle was led by **Tanaji Malusare**, a trusted general of Chhatrapati Shivaji Maharaj.
- Tanaji and his warriors scaled the steep cliffs under the cover of darkness.
- Tanaji died during the battle, but the Marathas successfully recaptured the fort.
- Shivaji Maharaj famously remarked, **"Gad ala, pan Sinha gela"** (The fort is won, but the lion is lost).
- The fort was renamed **Sinhagad (Lion's Fort)** in honour of Tanaji's sacrifice.

Architecture

- The fort features fortified walls extending nearly **2 miles**, along with bastions, ramparts and strategic gates.
- Its two main entrances are **Pune Darwaza** and **Kalyan Darwaza**.
- It has an advanced water-storage system based on traditional rainwater harvesting and natural reservoirs.
- Other structures include a temple dedicated to Goddess Kali and the tombs of **Tanaji Malusare and Rajaram Chhatrapati**.

BioSentinel Mission

Hindustan Times

NASA's BioSentinel probe flew past the Moon with yeast to measure deep-space radiation; the cells failed to grow, likely expiring before launch



Imagine sending a tiny lab to deep space, only to learn the experiment never woke up. That's pretty much what happened to NASA's BioSentinel...

Why in News

- NASA's BioSentinel probe recently flew past the Moon carrying yeast to study the effects of deep-space radiation.

About the Mission

- BioSentinel is a **6U CubeSat** launched on **16 November 2022**.
- It was developed by **NASA Ames Research Center, California, USA**.
- It is the first biological CubeSat designed to travel beyond **Low Earth Orbit (LEO)**.
- It was selected as a secondary payload and the sole biological experiment aboard **Artemis I**.

Objectives

- To develop capabilities for supporting biological organisms in deep interplanetary space.
- To study the deep-space radiation environment and its effects on living organisms.

Components and Experiment

- The spacecraft consists of a scientific payload section and a spacecraft bus.
- The bus contains solar panel arrays, batteries, a micropropulsion system, star tracker navigation system, transponder, antennas and command-and-data handling systems.
- **Its two scientific payloads are:**

- **BioSensor Instrument:** A microfluidic-based instrument carrying budding yeast (*Saccharomyces cerevisiae*) to study biological responses to accumulated radiation.
- **Radiation Detector:** Measures the radiation environment in deep space.

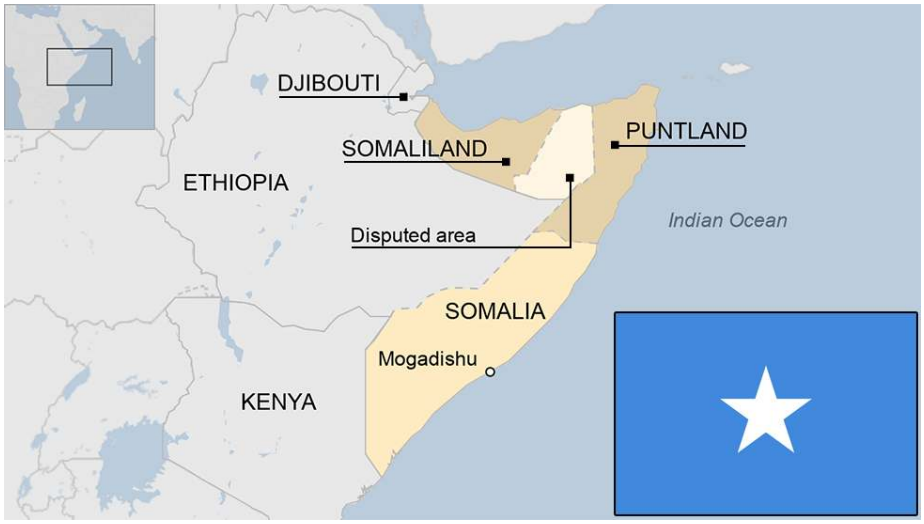
Other Important News of the day

Places in News

Somalia

Why in News

- The United Nations political mission in Somalia recently ended after a two-year transition.



Geographical Location

- Somalia is located in the **Horn of Africa**, with the Equator passing through its southern region.
- **Neighbouring Countries:** Djibouti (northwest), Ethiopia (west) and Kenya (southwest).
- **Maritime Boundaries:** Gulf of Aden and Indian Ocean.
- **Capital:** Mogadishu.

- **Highest Peak:** Mount Shimbiris (2,460 metres).
- **Rivers:** Jubba and Shabeelle.
- It has an arid or semi-arid climate and a predominantly limestone and sandstone tableland.
- The **Guban** is a narrow coastal plain along the Gulf of Aden in the north.
- Major mineral resources include iron ore, uranium, copper, tin, bauxite, gypsum and salt.

United Nations Assistance Mission in Somalia (UNSOM)

- UNSOM was established by the **UN Security Council in 2013**.
- It supported Somali authorities in strengthening democracy and the rule of law following decades of conflict.
- Its mandate ended on **31 October 2024**, and its functions were subsumed under the **United Nations Transitional Assistance Mission in Somalia (UNTMIS)**.

Environment

Pench Tiger Reserve

DH Deccan Herald

Tiger cub from Umred-Karhandla Wildlife Sanctuary sighted in Maharashtra's Pench

Nagpur: A cub born to a tigress from Umred-Karhandla Wildlife Sanctuary has moved into Pench Tiger Reserve (PTR) in Maharashtra's Nagpur...



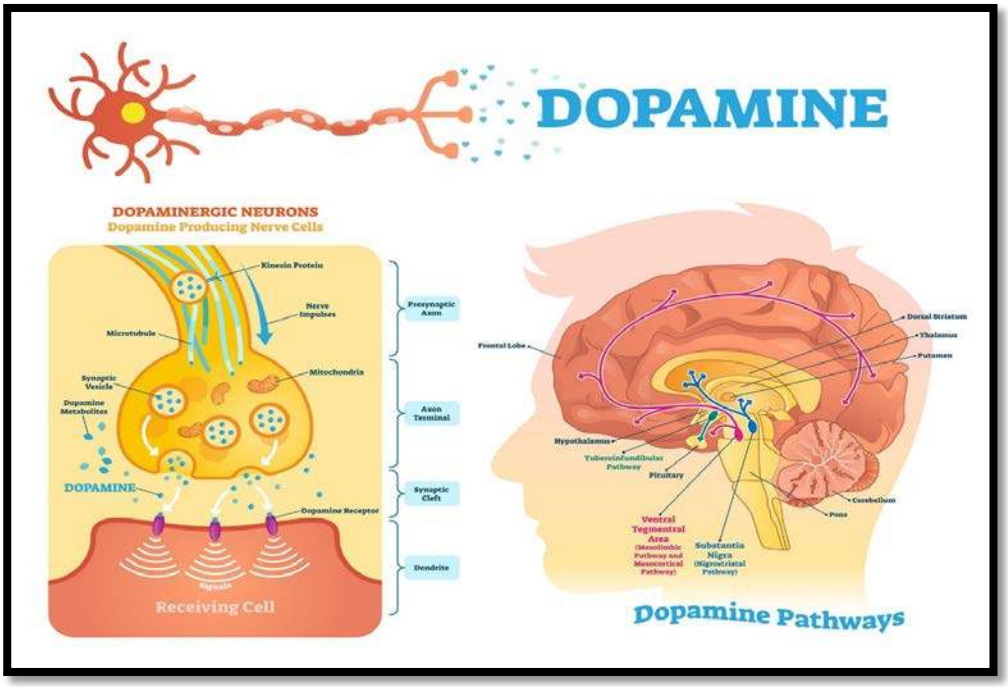
Why in News

- A cub born to a tigress from **Umred-Karhandla Wildlife Sanctuary** has moved into Pench Tiger Reserve in Maharashtra.

	Location and Status ➢ Pench Tiger Reserve lies in the southern Satpura hills, covering **Seoni and Chhindwara districts of Madhya Pradesh** and sharing its southern boundary with Maharashtra. ➢ It was declared a **National Park in 1983** and a **Tiger Reserve in 1992**. ➢ It derives its name from the **Pench River**, which flows from north to south. ➢ It includes **Indira Priyadarshini Pench National Park** and **Pench Mowgli Sanctuary**. **Vegetation and Biodiversity** ➢ **Its forest types include:** • **South Indian Tropical Moist Deciduous Forests.** • **Southern Tropical Dry Deciduous Teak Forests.** • **Southern Dry Mixed Deciduous Forests.** ➢ Major flora includes **teak, saag, mahua, grasses and shrubs**. ➢ Important fauna includes **chital, sambar, nilgai, gaur (Indian bison) and wild boar**.
Defence	**INS Kesari** The Hindu Water ingress onboard INS Kesari reported at Vizag Naval Dockyard; no casualties Water ingress reported on INS Kesari at Vizag Naval Dockyard; no injuries, investigation underway and hull-sealing operations in progress.  **Why in News** ➢ Indian Navy vessel **INS Kesari** recently experienced water ingress while berthed at the Naval Dockyard in Visakhapatnam.

	Key Features ➢ **INS Kesari (L15)** is a **Shardul-class Landing Ship Tank (LST)** of the Indian Navy. ➢ It was built by **Garden Reach Shipbuilders and Engineers (GRSE), Kolkata**, and commissioned on **5 April 2008**. ➢ It is the second ship of the Shardul class, after INS Shardul. INS Airavat is the third ship.  **Capabilities and Role** ➢ It is designed for **amphibious operations**, including transporting and landing troops and military equipment. ➢ It can carry tanks, armoured vehicles, stores and approximately **500 personnel**, deploying them directly onto beaches. ➢ Its large cargo deck also makes it useful for **Humanitarian Assistance and Disaster Relief (HADR)** operations. ➢ **Displacement:** Approximately 5,650 tonnes. ➢ **Length:** Approximately 125 metres.
Science and Technology	**Dopamine** **Why in News** ➢ A study found that exhaustive training without adequate rest can alter dopamine regulation in the **hippocampus**,

a brain region associated with memory and emotional regulation.



About Dopamine

- Dopamine is a **nitrogen-containing organic compound** that functions as both a neurotransmitter and a hormone.
- It acts as a chemical messenger transmitting signals between nerve cells.
- It is often called the **"feel-good" chemical** because of its role in reward, pleasure and motivation.
- Its release is associated with rewards and even the anticipation of rewards.

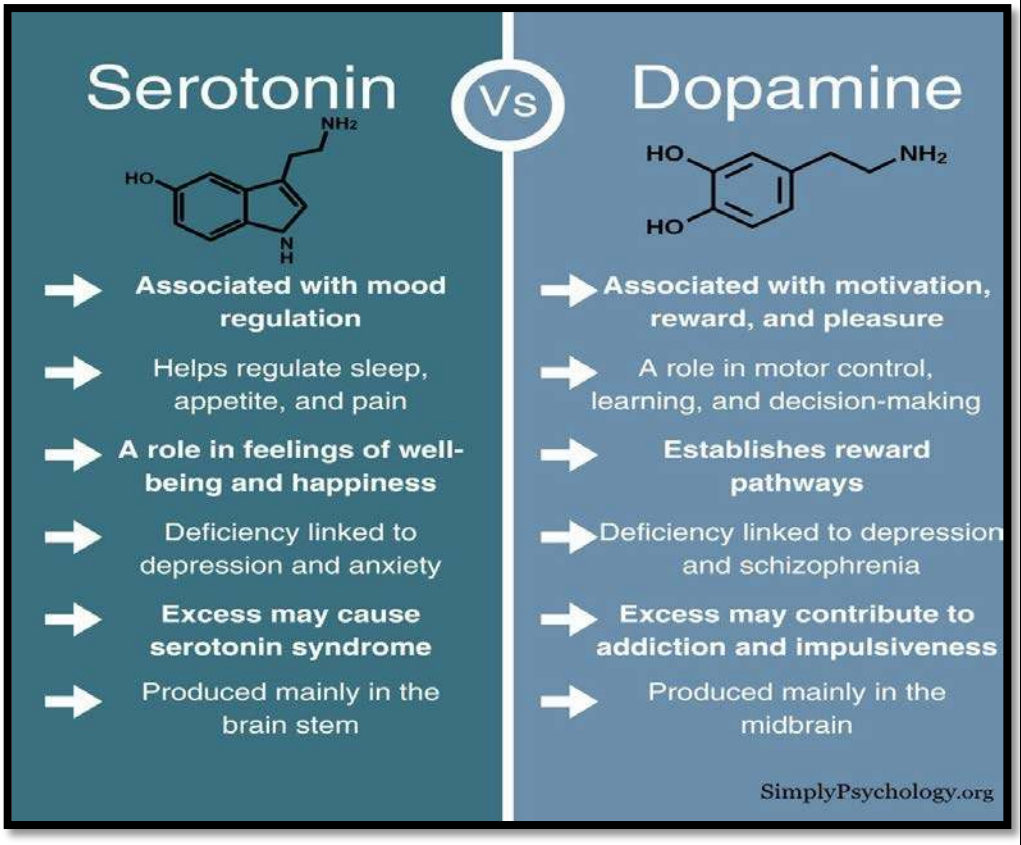
Functions and Significance

- It plays an important role in learning, attention, mood, movement, sleep and pain processing.

- It also influences heart rate, kidney function, blood vessel function and lactation.
- Abnormal dopamine levels are associated with conditions such as **Parkinson's disease, restless legs syndrome and ADHD**.
- Outside the brain, dopamine acts as a hormone and helps regulate blood vessel activity, salt balance, urine production, insulin secretion and digestion.

Medical Applications

- Dopamine is used as a medication in emergency settings.
- It can help improve blood pressure and support heart function in critically ill patients, particularly during shock.



Uttar Pradesh in News

Talanagri Industrial Area, Aligarh

Indian Masterminds

Uttar Pradesh Govt Approves Rs 80 Crore for Aligarh Talanagri Industrial Area, 1,300 Plots to Benefit



Uttar Pradesh approves Rs 80 crore for Aligarh's Talanagri industrial area, improving drainage, roads and cleanliness for 1300 plots.

Why in News

- The Uttar Pradesh government approved **₹80 crore** for infrastructure development in **Aligarh's Talanagri Industrial Area** under the **Atal Industrial Infrastructure Mission**.

About Talanagri Industrial Area

- **Location:** Aligarh, Uttar Pradesh; established in **1992**.
- Aligarh is nationally known for its **lock manufacturing industry** and has a strong base of small and medium enterprises.
- Approximately **1,300 industrial plots** are expected to benefit from the proposed development.

Infrastructure Development

- **Total Allocation:** ₹80 crore.
- **Drainage:** Approximately **40 km** of drains and drainage channels will be developed to improve rainwater management, reduce waterlogging and facilitate mechanised cleaning.
- **Roads:** Around **15 km** of roads will be improved to strengthen internal connectivity and the movement of raw materials and finished goods.
- **Sanitation:** Improved cleanliness and maintenance will enhance the working environment.

Significance

- Better drainage will minimise monsoon-related disruption to industrial operations.
- Improved roads and sanitation can strengthen logistics, working conditions and investment potential.
- The project is expected to support industrial growth and employment generation in Aligarh.