SANSKRITI IAS DAILY CURRENT AFFAIRS

22-11-2026

Biotechnology Research and Innovation Council (BRIC)

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BRIC aims at USD 300 billion Indian bioeconomy by 2030 and USD 1 trillion by 2047: Dr. Jitendra Singh

BRIC aims at USD 300 billion Indian bioeconomy by 2030 and USD 1 trillion by 2047: Dr. Jitendra Singh. BRIC's Integrated Science Model...



Why in News?

- BRIC aims to expand India's bioeconomy to **USD 300 billion by 2030 and USD 1 trillion by 2047**.

Institutional Framework

- **BRIC** is an apex autonomous body established as a registered society under the **Department of Biotechnology (DBT), Ministry of Science and Technology**.
- It was formed by subsuming **14 autonomous DBT institutes**.
- It provides unified governance and administrative support through **intra-mural core grants**.

Objectives and Significance

- Promotes **multidisciplinary and cutting-edge biotechnology research**, from basic discoveries to practical applications.
- Encourages innovation, technology transfer and collaboration across institutions.
- Develops indigenous biotechnology capabilities under **Atmanirbhar Bharat**.
- Supports scientific leadership and globally competitive research ecosystems.

Gulf of Finland

BBC

Russia-bound ship towed away after it was attacked in Gulf of Finland

A Russian cargo vessel that was hit by a drone attack in the eastern Gulf of Finland is being towed away, authorities have said.



Why in News?

- A Russian cargo vessel bound for **Kaliningrad**, Russia's Baltic exclave, was reportedly hit by a drone attack in the eastern Gulf of Finland.

Geographical Location



- It is the **easternmost extension of the Baltic Sea** in Northern Europe.
- It is bordered by **Finland (north), Russia (east) and Estonia (south)**.
- It covers approximately **30,000 sq. km**, extending 400 km east–west.
- **Helsinki (Finland), Tallinn (Estonia) and St. Petersburg (Russia)** are located along its shores.

Physical and Hydrological Features

- It is a relatively shallow and brackish water body, with an average depth of approximately **38 metres**.
- Its low salinity results from freshwater inflow and limited exchange with the more saline waters of the North Sea.
- The **Neva River** flows into it near St. Petersburg.
- It can freeze completely during severe winters due to its low salinity.
- It is connected to **Lake Saimaa, Finland's largest lake**, through the Saimaa Canal.

Important Islands

- Major islands include **Kotlin Island (location of Kronstadt), Beryozovye Islands, Lisiy Island and Maly Vysotsky Island**.
- The region experiences a **humid continental climate**, with warm summers and harsh winters.

Pichwai Painting

India Today

Pichwai painting for Trump, Banarasi stole for Takaichi: PM's gifts to world leaders

Prime Minister Narendra Modi presented traditional Indian handicrafts to world leaders at the ASEAN Summit. The gifts highlighted regional...



Why in News?

- The Prime Minister presented a **Golden Pichwai painting from Nathdwara, Rajasthan**, to the US President.

Origin and Features

- Pichwai is a traditional Indian painting style originating in **Nathdwara, Rajasthan**, dating back to the **17th century**.
- Its primary theme is the life and activities of **Lord Krishna**, particularly Shrinathji.
- These paintings are traditionally used as decorative backdrops in Hindu temples.
- Characteristic features include **large elongated eyes, broad noses and heavier body forms** depicting Shrinathji.

Techniques and Schools

- Artists use **stone pigments**, while vegetable dyes provide bright orange, red, chrome yellow and kesari colours.
- Paintings feature intricate floral, animal and geometric patterns in symmetrical compositions.

- Major schools include **Nathdwara, Kishangarh, Bundi and Deccan**.

Famous Paintings

- **Shrinathji in Black & Gold** depicts the deity in traditional colours.
- **Ras Leela** portrays Krishna with Radha.
- **Giriraja Pichwai** depicts Krishna lifting Govardhana Mountain.

Membranous Nephropathy (MN)

NDTV

Kerala Girl Develops Kidney Ailment After 'Using' Fairness Cream: Side Effects Of Using Skincare High In Mercury

The girl had reportedly been using the cream for about a year after initially finding it effective for pimples, dark spots and pigmentation.



Why in News?

- An 18-year-old girl in Keralam reportedly developed **Membranous Nephropathy** (MN) following prolonged use of a fairness cream containing dangerously high levels of mercury.

Biological Characteristics

- MN is a kidney disorder in which the immune system damages the **glomeruli**, the tiny filtering units of the kidneys.
- It impairs kidney filtration and can cause excessive protein loss through urine.
- Two types are recognised:
  - **Primary MN:** Usually associated with an autoimmune condition; accounts for up to 75% of cases.
  - **Secondary MN:** Associated with other diseases, infections, toxins or medicines; accounts for approximately 25% of cases.

Causes and Risk Factors

- Risk factors include **mercury and gold exposure, cancers, hepatitis B, malaria, syphilis and autoimmune disorders**.
- Certain medicines, including **penicillamine and trimethadione**, and mercury-containing skin-lightening creams may also contribute.

Symptoms and Complications

- Major symptoms include **proteinuria, oedema, high cholesterol, fatigue, hypertension and changes in urination**.
- Complications may include **kidney failure, deep vein thrombosis (DVT) and pulmonary embolism (PE)**.

Treatment

- There is no definitive cure; treatment focuses on controlling symptoms and slowing disease progression.
- **Blood pressure control** is important to delay kidney damage, while high cholesterol and triglycerides must also be managed.

Other Important News of the day

Places in News	Canada

www.pib.gov.in

Sixth Round of India–Canada CEPA Negotiations Concludes in New Delhi

Union Minister of Commerce and Industry Shri Piyush Goyal and Canadian Minister Maninder Sidhu Reaffirm Commitment to a Balanced and...



Why in News?

- The **sixth round of India–Canada Comprehensive Economic Partnership Agreement (CEPA)** negotiations was held in New Delhi.



Geographical Location

- Located in **North America**, Canada is the **world's second-largest country by area** after Russia.
- It shares its southern border with the USA and northwestern border with **Alaska**.
- The **Canada–USA border** is the world's longest international land border.
- It is bounded by the **Arctic Ocean (north), Atlantic Ocean (east) and Pacific Ocean (west)**.

Physical Features

- Major mountain ranges include the **Rocky, St. Elias and Laurentian Mountains**.
- Important rivers include the **Mackenzie, Yukon and Saint Lawrence**.

- The **Great Lakes** are Superior, Michigan, Huron, Erie and Ontario; only **Lake Michigan** lies entirely within the USA.
- Canada has seven climatic regions, including Arctic, Subarctic, Prairie, Great Lakes and Cordilleran regions.
- Important mineral resources include **iron ore, nickel, zinc, copper, uranium, potash, diamonds and rare earth elements**.

Important Facts

- **Capital:** Ottawa.
- Canada is the world's second-largest country by geographical area.

Environment

New Micro-Moth Species: *Glyphipterix brevimucronata*

Deccan Chronicle

Micro Moth Species Discovered in Assam

This is the first discovery of a species of the sedge moth family in the country in nearly a century, said the CM Sarma.



Why in News?

- Scientists discovered a new micro-moth species, ***Glyphipterix brevimucronata***, near **Hollongapar Gibbon Sanctuary, Assam**.

Biological Characteristics



- It is a **6.5 mm** moth with brown forewings, a yellowish metallic sheen and distinctive white markings. Its name *brevimucronata* refers to a short, pointed structure in its reproductive anatomy.
- It belongs to the family **Glyphipterigidae (sedge moths)**, which has over **530 described species worldwide**, but only 25 documented in India.
- It marks India's **first addition to the sedge moth family in nearly 100 years**.

Hollongapar Gibbon Sanctuary

- Located in **Jorhat district, Assam**, it is named after the **Hoolock Gibbon**, India's only ape. The **Bhogdoi River** creates waterlogged habitats along its boundary.
- Its evergreen vegetation has a multi-layered canopy comprising **Hollong trees (upper), Nahar trees (middle) and shrubs (lower)**.
- Important fauna include **Hoolock gibbons, Bengal slow loris (Northeast India's only nocturnal primate), macaques, capped langur, elephants, tigers and leopards**.
- It supports over **200 bird species**, including the **white-winged wood duck, Bengal florican and great hornbill**.

Defence

Bagheera AT1: Anti-Tank Guided Missile System

TH The Hindu

Adani Defence fires four anti-tank missiles in Pokhran Test Range



Adani Defence debuts Bagheera AT1 ATGM system at Pokhran, showcasing night-day engagements, twin-shot capability, and extended-range aerial...

Why in News?

- **Adani Defence & Aerospace** successfully demonstrated its vehicle-mounted **Bagheera AT1 anti-tank guided missile (ATGM)** system at the **Pokhran Field Firing Ranges, Rajasthan**.

Technical Features

- It is an indigenously developed and integrated ATGM system designed to destroy **enemy tanks and armoured vehicles**.
- It combines a guided missile, automated launcher, day-and-night sights and a high-mobility armoured vehicle.
- It has an engagement range of up to **8 km**.
- It uses **laser beam-riding guidance**, making it resistant to electronic jamming.

Advanced Capabilities

- It can counter **Active Protection Systems (APS)** through a two-missile firing sequence.
- The first missile engages the APS, while the second targets the tank's armour.
- Each vehicle carries **12 missiles**: four ready-to-fire and eight reloads.

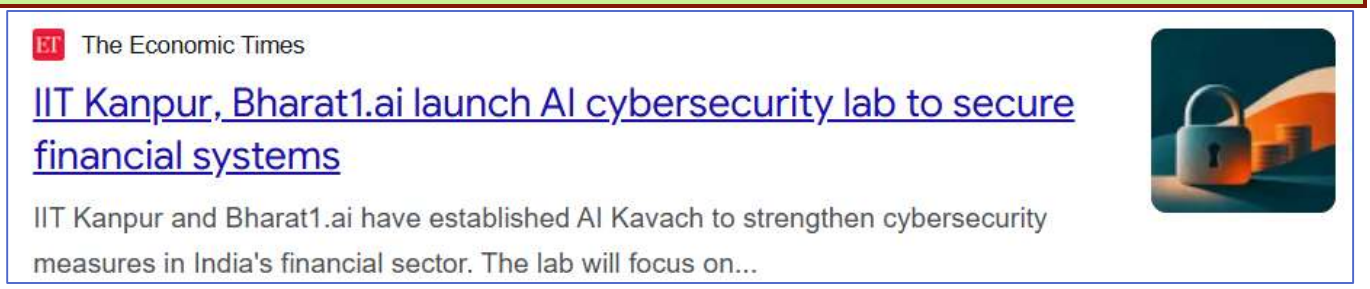
	➢ It has **television cameras for daytime targeting** and **thermal imaging for night operations**. ➢ Its **shoot-and-move capability** allows rapid relocation after firing to avoid enemy retaliation.
Science and Technology	**Candida albicans** **Why in News?** - Scientists at **CSIR-Centre for Cellular and Molecular Biology (CCMB)** identified two compounds that prevent *Candida albicans* from transforming into its infection-associated filamentous form without stopping its growth. **Biological Characteristics** ➢ *Candida albicans* is a **fungus (yeast)** naturally present in small amounts on human skin, mouth and intestines. ➢ The human **microbiome** normally controls its growth. ➢ Its excessive multiplication causes **candidiasis**, a fungal infection. **Types of Infections** ➢ **Cutaneous candidiasis:** Causes skin rashes and irritation. ➢ **Oral thrush:** Produces white patches in the mouth and throat. ➢ **Candidal paronychia:** Causes inflammation around nails.



	➢ **Vaginal candidiasis:** Causes itching, burning and abnormal discharge. **Transmission and Treatment** ➢ Infections are generally not contagious, but spread may occur in people with weakened immunity. ➢ Treatment involves **antifungal medications**. ➢ Preventing the transition into the filamentous form may offer a potential approach to controlling infection.

Uttar Pradesh in News

AI Kavach: AI Cybersecurity and Assurance Lab



Why in News?

- **IIT Kanpur and Bharat1.ai (Intellineuro Private Limited)** launched **AI Kavach** to strengthen the cybersecurity of AI systems in India's financial sector.

Institutional Framework and Functions

- Established through IIT Kanpur's **Wadhwani School of AI and Intelligent Systems (WSAIS)** in partnership with Bharat1.ai.
- It will conduct **adversarial red-teaming, security testing and vulnerability assessment** of financial AI systems.

- Other functions include sandboxing autonomous AI agents and research on **AI assurance, traceability and responsible vulnerability disclosure**.

Capacity Building and Significance

- Aims to train **over 300 students and professionals annually** through fellowships and industry programmes.
- **IIT Kanpur** will provide academic expertise and laboratory infrastructure, while **Bharat1.ai** will provide AI infrastructure and secure testing environments.
- It addresses risks involving sensitive financial data, autonomous transactions, credit decisions and AI-based fraud detection.

IndiaAI Mission

- Approved in **March 2024**, it aims to promote indigenous AI under the vision **"Making AI in India and Making AI Work for India."**
- Implemented by **IndiaAI under Digital India Corporation (DIC), MeitY**.
- Key components include:
  - **Computing Infrastructure:** Over **45,000 GPUs onboarded (June 2026)**.
  - **Foundation Models:** Indigenous models, including **BharatGen**.
  - **AIKosh:** National platform for AI datasets and models.
  - **AI Startups and Applications:** Support for innovation and India-specific solutions.
  - **Responsible AI:** Promotion of safe, ethical and trustworthy AI.