

SANSKRITI IAS DAILY CURRENT AFFAIRS

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Ribociclib

TH The Hindu

Kerala HC allows breast cancer patient to be impleaded in case on 'exorbitant' prices of medicines

Kerala High Court permits breast cancer patient to join petition seeking affordable pricing for life-saving medication Ribociclib.



Why in News: The **Kerala High Court** recently allowed a breast cancer patient to be impleaded in a case concerning the **exorbitant price of Ribociclib**, a life-saving breast cancer medicine.

Key Concern

- Because the medicine can also affect the growth of normal cells, it may produce **unwanted and potentially serious side effects**.

Pharmacological Profile

- Ribociclib is an **anticancer medicine** used with other medicines to treat certain types of breast cancer.
- It belongs to the **CDK 4/6 inhibitor** class of drugs.

Mechanism of Action

- Ribociclib blocks **cyclin-dependent kinases 4 and 6**, proteins involved in cell growth and division.
- This inhibition helps prevent the **growth and spread of cancer cells**.

Clinical Applications

- It is used for **advanced or metastatic breast cancer** that has spread to other parts of the body.
- It is also used for **locally advanced breast cancer** involving nearby lymph nodes, muscles or skin.
- Ribociclib is administered alongside a **hormone therapy drug**.

Regenerative Agriculture

DD News

Explainer: What is regenerative agriculture and why does India need it?

India's agriculture sector has maintained strong growth over the years, but sustaining that momentum is increasingly linked to the health of...



Why in News: **Regenerative agriculture** is increasingly being promoted as an approach to restore soil health, enhance biodiversity and make Indian farming more resilient to climate-related stresses.

Core Principles

- The approach focuses on **restoring soil health and biodiversity** rather than merely maintaining existing agricultural conditions.
- It emphasises **minimum soil disturbance, soil cover and protection of living roots**.
- It also promotes **livestock integration and reduced chemical-input use**.

Ecological and Economic Benefits

- **Agroforestry** can provide additional farm income while improving soil moisture, regulating local temperature and storing carbon.
- Crop-livestock diversification can **reduce crop-failure risks** and create additional livelihood opportunities.

Indian Agricultural Practices

- **Micro-irrigation** through drip and sprinkler systems improves water-use efficiency by delivering water closer to plant roots.
- **Natural farming** uses inputs such as **Beejamrut, Jeevamrut, GhanJeevamrut, Neemastra and Dashparni** along with mulching and multi-cropping.
- **Green manuring, cover cropping and mulching** improve organic matter, moisture conservation and nutrient cycling.



- **Integrated farming systems** combine crops with livestock, fisheries, horticulture, agroforestry or apiculture.

Policy Linkage

- The **National Mission on Natural Farming** was launched in **2023–24**, supporting the broader transition towards sustainable and regenerative agricultural practices.

Periyar Cow

TNIE The New Indian Express

Big win! 'Periyar Kullan' gets national recognition as Kerala's second indigenous cattle breed

The researchers said another feature they spotted was some Periyar cows have horns that don't grow upwards and instead hang around the ears.



Why in News: The **ICAR–National Bureau of Animal Genetic Resources (NBAGR)** has registered the **Periyar Cow** as an indigenous cattle breed, giving it national recognition.

Geographical Identity

- The breed is traditionally found in the **Periyar River basin** and adjoining plantation and forest landscapes of **Ernakulam and Thrissur districts of Kerala**.
- It is also known as **Periyar Kullan, Kuttampuzha cattle and Andukanni**.

Distinctive Adaptations

- The breed can survive under **semi-feral, low-input management** and agroforestry conditions.
- It has strong **ecological fitness and resilience**, with extensive grazing on naturally available vegetation.
- It is a compact, medium-sized animal weighing around **150–200 kg** and standing approximately **105–110 cm** tall.

Breed Characteristics

- It may have **brown, black or grey colouring**, horizontally placed ears and slightly curved horns.

Recognition Significance

- Periyar Cow is only the **second native cattle breed from Kerala** to receive national recognition.
- The **Vechur Cow**, recognised in **1996**, was the first native cattle breed from Kerala to receive such recognition.

- Bulls possess a **prominent hump**, while the breed's small size makes it relatively inexpensive to maintain.
- Its lactation period ranges between **160 and 200 days**.

Guruvayur Temple

 The New Indian Express

416 weddings in 7 hours: Guruvayur sees rush on Chingam's first Sunday

The wedding marathon took place on the auspicious occasion of the first Sunday of the Malayalam month of Chingam. 416 Weddings in Just Over...



Why in News: A record **416 marriages** were solemnised at the **Guruvayur Temple** in Kerala on a single day.

Location and Religious Significance

- Guruvayur Temple is located in **Guruvayur town, Thrissur district, Kerala**.
- It is dedicated to **Guruvayurappan**, a form of **Lord Vishnu worshipped as Baby Krishna**.
- The temple is popularly known as the **“Dwarka of the South.”**

Historical Context

- The main presiding deity is traditionally believed to be **5,000 years old**.
- The earliest recorded history of the temple dates to the **17th century CE**, while the present structure was rebuilt in **1638 CE**.
- The temple was attacked by the **Dutch in 1716** and by **Tipu Sultan in 1789**, while the idol was reinstalled in **1792**.

Architectural Features

- The temple represents the traditional **Kerala style of temple architecture**, featuring gabled roofs, wooden carvings and intricate sculptures.



- Important structures include the **Nalambalam, Balikkal and Deepastambam**, while the sanctum contains ancient murals.
- The approximately **70-foot gold-covered Dwajasthamba** is a prominent feature.

Cultural and Ritual Significance

- **Thulabharam** is a major offering in which devotees are weighed against commodities such as jaggery, coconuts, sugar or bananas.
- The temple is also associated with a large population of captive male **Asian elephants**, with **Punnathur Kotta elephant sanctuary** located nearby.

Smew

TOI The Times of India

Smew's debut signals healthy Laokhowa wetlands

First-ever smew sighting at Assam's Laokhowa Wildlife Sanctuary during Kaziranga Waterbird Count 2026 highlights healthy wetlands;...



Why in News: **Laokhowa Wildlife Sanctuary in Assam** recorded the **Smew (Mergellus albellus)** for the first time, making it a notable record of this rare migratory waterbird.

Species Profile

- Smew is a medium-sized duck belonging to the family **Anatidae**, scientifically known as **Mergellus albellus**.
- It was formally described in **1758 by Carl Linnaeus**.



Migration and Habitat

- The species breeds in the **northern taiga of Europe and Asia**.
- During winter, it occurs around the **Baltic Sea, Black Sea, Great Britain, Caspian Sea, East China, Korea and Japan**.
- It is an **occasional visitor to the Indian subcontinent** and inhabits freshwater lakes, reservoirs, flooded forests, rivers, estuaries and lagoons.

Distinctive Features

- It has a **narrow bill with tooth-like edges and a hooked tip**, adapted for catching fish.

- The male is predominantly white with a **black mask and black back**, while the female is grey with a reddish-brown head and white cheek.
- It is capable of **diving and swimming underwater** while pursuing prey.

Laokhowa Wildlife Sanctuary

- Laokhowa Wildlife Sanctuary lies on the **southern bank of the Brahmaputra in Nagaon district, Assam**.
- It forms part of the **Laokhowa–Burachapori ecosystem** and is a notified buffer of the **Kaziranga Tiger Reserve**.
- Its habitats include **alluvial grasslands, alluvial forests, moist deciduous forests and tropical semi-evergreen forests**.
- The sanctuary supports **one-horned rhinoceros, elephants, Royal Bengal tigers, Asiatic water buffaloes and more than 225 bird species**.

Conservation Status

- The Smew is classified as **Least Concern (LC)** under the **IUCN Red List**.

Other Important News of the day

Places in News

Nilgiri Biosphere Reserve

Why in News: Researchers have warned that **climate change is destabilising forest ecosystems** in the **Nilgiri Biosphere Reserve**, highlighting the vulnerability of Western Ghats ecosystems.

Geographical and Institutional Profile

- The reserve is located in the **Nilgiri Mountains of the Western Ghats** and spans **Tamil Nadu, Kerala and Karnataka**.
- Established in **1986**, it was **India's first biosphere reserve**.



	- It became part of UNESCO's Man and the Biosphere (MAB) Programme network in 2000. Protected Areas and Communities - Important protected areas include Mudumalai, Wayanad, Bandipur, Nagarhole, Mukurthi and Silent Valley. - Indigenous communities include the Todas, Kotas, Irullas, Kurumbas, Paniyas and Cholanaickens, among others. Ecological Diversity - Vegetation includes tropical evergreen forests, montane sholas and grasslands, semi-evergreen forests, moist and dry deciduous forests and thorn forests. - Important fauna include the Nilgiri Tahr, lion-tailed macaque, elephant, tiger, gaur, sambar and chital. Conservation Significance - The reserve represents a major biodiversity landscape of the Western Ghats and contains important habitats for several endemic and threatened species. - Its location at the Tamil Nadu–Kerala–Karnataka trijunction gives it major inter-State ecological significance.
Environment	Indian Star Tortoise Why in News: 216 rescued Indian Star Tortoises were rehabilitated in Tadoba-Andhari Tiger Reserve (TATR), Maharashtra, after being rescued from Mumbai and Thane. Species Profile The Indian Star Tortoise is a medium-sized terrestrial tortoise scientifically known as Geochelone elegans.

	Conservation Status • The Indian Star Tortoise has a lifespan of approximately 35–80 years in the wild. • It is classified as Vulnerable (VU) on the IUCN Red List. • Its shell has distinctive star-like patterns that provide camouflage by breaking up the outline of the shell. Habitat and Distribution • It primarily inhabits dry areas and scrub forests. • Its distribution includes western and southeastern India, including Kerala, Karnataka and Tamil Nadu, as well as Sri Lanka. Behavioural Traits • Females are considerably larger than males, and individuals can grow to around 10 inches in length. • The species is generally crepuscular, being active during early morning and late afternoon in hot, dry conditions. • It does not hibernate but may remain inactive during extreme heat, dryness or cold.
Water bodies in News	Vishwamitri River Why in News: A crocodile attack in Talsat village near Vadodara brought the Vishwamitri River and its significant mugger crocodile population into focus. Geographical Profile • Vishwamitri is a small, non-perennial river in Gujarat originating from the western and southern slopes of the Pavagadh Hills. • It flows westward through Vadodara, Gujarat's third-largest city.

	- The river ultimately drains into the Arabian Sea through the Gulf of Khambhat. River System - The river is approximately 200 km long and flows between the Mahi and Narmada river systems. - It meets the Dhadar and Jambuva tributaries before reaching the Gulf of Khambhat. - The river system includes Sayaji Sarovar near Ajwa and Dev Dam on the Dhadhar branch. Biodiversity Significance - Its highly meandering course contains ravines supporting species such as porcupines, Indian civets, jungle cats, cobras, pythons, checkered keelbacks and Bengal monitors. - The river supports the mugger crocodile (Crocodylus palustris). Conservation and Human Linkages - The 2025 census recorded 442 mugger crocodiles along a 21-km stretch passing through Vadodara. - Human settlements along the river banks have historically existed since around 1000 BC, highlighting its importance in Vadodara's development.
Science and Technology	Crimean-Congo Haemorrhagic Fever (CCHF)  Food and Agriculture Organization <u>Crimean-Congo hemorrhagic fever</u> Crimean-Congo hemorrhagic fever (CCHF) is an important zoonotic disease caused by a tick-borne virus (Nairovirus) belonging to the family...  Why in News: Scientists have identified multiple antibody targets that could potentially aid the development of treatments for Crimean-Congo Haemorrhagic Fever (CCHF). Disease Profile - CCHF is a serious zoonotic viral disease caused by a tick-borne Nairovirus and produces severe viral haemorrhagic fever. - It has a case fatality rate of 10–40%.

- The disease was first characterised in **Crimea in 1944**, while the same pathogen was identified in the **Democratic Republic of the Congo in 1969**.

Geographical Distribution

- CCHF is endemic across **Africa, Asia, the Middle East and parts of Europe**.
- Its distribution closely corresponds with that of **Hyalomma ticks**, the principal vectors.

Transmission and Risk

- Infection occurs through **infected tick bites** or direct contact with blood and tissues of infected ticks, humans and livestock.
- Livestock workers, slaughterhouse workers and veterinary personnel** are among the high-risk groups.
- Migratory birds** can also carry the ticks that transmit the virus.

Clinical and Treatment Dimensions

- Symptoms generally appear **1–13 days after infection** and include high fever, severe headache, muscle pain, vomiting, diarrhoea, jaundice and bleeding.
- Severe bleeding and bruising may develop **3–5 days after initial symptoms**.
- There is **no specific cure**, and treatment mainly involves **supportive care**, while **Ribavirin** has shown some therapeutic benefit.

Uttar Pradesh in News

Chromium

THE Hindu

Contaminated groundwater in Uttar Pradesh poses health risks

Groundwater in Uttar Pradesh is dangerously contaminated with chromium (VI), posing severe health risks to local villagers.



Why in News: Improper industrial waste management has contaminated groundwater with toxic **hexavalent chromium** across parts of three districts of Uttar Pradesh.

Chemical Profile

- **Chromium** is a naturally occurring element found in rocks, soil, plants, animals and volcanic dust and gases.
- It occurs mainly in **trivalent chromium (Cr III)** and **hexavalent chromium (Cr VI)** forms.
- **Trivalent chromium** is considered safe for humans in appropriate amounts, whereas **hexavalent chromium is toxic**.

Industrial Applications

- Chromium is used in **iron, steel and non-ferrous alloys** to improve hardness and resistance to corrosion and oxidation.
- It is particularly important in the manufacture of **stainless steel** and for **metal plating**.
- Other uses include **pigments, leather processing, catalysts, surface treatments and refractories**.

Geological and Mineral Link

- **Chromite** is the principal ore of chromium.
- **Odisha** has the highest chromite reserves among Indian states, according to the source.