

DAILY CURRENT AFFAIRS (DCA)

Time: 45 Min

Date: 21-07-2025

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BIRTH ANNIVERSARY OF MANGAL PANDEY

In News

- The Prime Minister paid tributes to **freedom fighter Mangal Pandey** on his birth anniversary.

Mangal Pandey

- He was born on 19 July 1827 in Nagwa village, Ballia district, Uttar Pradesh, India.
- Mangal Pandey is renowned for his role as a sepoy in the **34th Bengal Native Infantry** of the **British East India Company** and for sparking the Indian Rebellion of 1857, widely regarded as **India's First War of Independence**.

Major Events

- He refused to use the **newly introduced Enfield rifle because** it was believed that the new Enfield Pattern 1853 rifle-musket issued to the sepoys of the East India Company came with a **cartridge dipped in beef and pork fat**, which made it anathema to **both Hindu and Muslim sepoys**, who had to bite open the cartridge to load the weapon.
- On March 29, 1857, he mutinied and fired at his Senior Sergeant Major.
- He was overpowered and hanged on April 8, 1857, by the order of a Court Martial at Lal Bagan in Barrackpore.
- On 9 May 1857, 85 sepoys in Meerut refused to use new rifle cartridges believed to be coated with cow and pig fat.
 - They were dismissed and sentenced to 10 years in jail for disobedience.

Contributions

- He played a crucial role in sparking the **Revolt of 1857** which eventually led to the end of East India Company rule and the beginning of **direct governance by the British Crown under the Government of India Act, 1858**.
 - It appointed a Viceroy as the Crown representative in India in place of the Governor General of India.
 - Lord Canning became the First viceroy under this new system.

Legacy

- He was executed by the **British in 1857** and is synonymous with courage and determination.
- He was a pioneering warrior of the country who challenged British rule.

- His story of courage and valour will continue to be a source of inspiration for the people of the nation.

Source: AIR

CHINA'S MEGA-DAM ON THE BRAHMAPUTRA RIVER

Context

- China** officially commenced **construction** of a **massive hydropower project** on the **Brahmaputra River in Tibet**, near the Indian state of Arunachal Pradesh.

About

- The project is being hailed as the **largest infrastructure development** of its kind globally.
- Project Details:**
 - It comprises **five cascade hydropower stations**.
 - Total estimated investment:** 1.2 trillion yuan (approx. USD 167.8 billion).
 - Expected power generation:** 300 billion kilowatt-hours annually — enough to power 300 million people.
 - Location:** Situated in the **Yarlung Tsangpo Grand Canyon** (Brahmaputra in Tibet), where the river takes a U-turn near the India-China border before entering Arunachal Pradesh and eventually Bangladesh.
 - The region is seismically active and ecologically sensitive.



Yarlung Tsangpo (Zangbo) river

- It **originates from Chemayungdung Glacier** in **Tibet**, and enters **Arunachal Pradesh**, where it is known as the **Siang**.
- In **Assam**, it is joined by tributaries such as **Dibang and Lohit**, and is called the **Brahmaputra**.
- The river then enters **Bangladesh**, and makes its way to the Bay of Bengal.
- **The basin** spreads approximately 5,80,000 square kilometers across China (50.5%), India (33.3%), Bangladesh (8.1%) and Bhutan (7.8%).

Impact of the Project

- **Geopolitical Concerns:** India and Bangladesh are **lower riparian states**.
 - ♦ Both rely **heavily on the uninterrupted flow** of the Brahmaputra for agriculture, drinking water, and ecosystem stability.
 - ♦ **Concerns centre around** disruptions to water flow, blocking of nutrient-rich silt, and potential ecological damage.
 - ♦ It could also enable China to release large amounts of water **flooding border areas in times of hostilities**.
- **Ecological Risks:** Threat to biodiversity and river ecosystems, including aquatic species and wetlands.
- **Seismic and Structural Risks:** The Brahmaputra basin is seismically active, as evidenced by the **1950 Assam-Tibet earthquake**.
 - ♦ A mega-dam in this zone could trigger disasters like dam collapse and floods due to structural failure.
- **Geopolitical Tensions:** Control over water resources may heighten tensions between China and lower riparian countries (India, Bhutan, Bangladesh).
- **Disaster Vulnerability:** Increased risk of **Glacial Lake Outburst Floods (GLOFs)**, as seen in the **2023 Sikkim floods**.

Coordination Mechanism for Cooperation Between India and China:

- There is an **umbrella Memorandum of Understanding** on cooperation on transboundary rivers, and two separate MoUs on the **Brahmaputra and Sutlej**.

- ♦ The Brahmaputra MoU, renewable every five years, lapsed in **2023**.
- ♦ The umbrella MoU was signed in **2013**, and has no expiry date.
- **China and India** have the **Expert Level Mechanism (ELM)** since **2006** for hydrological data sharing, but lack a comprehensive treaty.
- None of the riparian nations (China, India, Bhutan, Bangladesh) are signatories to the **UN Convention on the Law of the Non-navigational Uses of International Watercourses (1997)**.

Way Ahead

- **Strengthen diplomatic dialogue:** Between China, India, Bhutan, and Bangladesh for transparent water-sharing agreements.
- **Institutional Mechanism:** Establish a permanent transboundary river management authority for data-sharing on water flow, dam operations, and disaster forecasting.
- **Disaster Preparedness:** Enhance regional cooperation for disaster management, including shared resources for relief efforts.
- **India's Counter-Strategy:** India is accelerating its own hydropower projects on the Brahmaputra in Arunachal Pradesh as part of regional infrastructure and border development.

Source: IT**INDIA'S RISING ABSTENTIONS AT THE UNITED NATIONS****Context**

- Recent analysis, based on more than 5,500 UN resolutions voted on by India from 1946 to June 2025, has found that India is altering its voting strategy at the United Nations (UN).

About the Voting in United Nations (UN)

- Voting in the UN is a cornerstone of global diplomacy, allowing member states to express their positions on international issues.



• Types:

- ♦ **General Assembly (UNGA):** One country, one vote; Non-binding resolutions; simple or two-thirds majority required.
 - Most UNGA resolutions are adopted by consensus, but contentious issues often require formal votes.
- ♦ **Security Council (UNSC):** Weighted Voting; 5 permanent members have veto power; 9/15 votes needed for adoption;
- ♦ **Economic & Social Council (ECOSOC):** Majority Voting; Focuses on development and human rights;
- ♦ **Human Rights Council:** Majority voting; Elects members and adopts resolutions on rights issues.

Key Examples: Recent Notable Abstentions

- **Resolutions on Russia-Ukraine conflict (2022):** India abstained in both the UN General Assembly and Security Council, signaling concern for sovereignty while avoiding direct condemnation.
- **Israel-Palestine Issue:** India has repeatedly abstained on votes condemning Israel or supporting Gaza, justifying abstention as reflecting a balanced approach or concern for missing context (e.g. terrorism).
- **Myanmar:** Abstentions on resolutions dealing with the Rohingya crisis and the military junta since 2017.
- **China's Human Rights Record:** India avoided antagonizing an immediate neighbor, opting for abstention on several critical votes.
- **Other Issues:** India abstained on votes relating to the Taliban in Afghanistan, Islamophobia, and arms embargo proposals.

Reasons for the Strategic Shift

- **Polarised Global Order:** Growing tension between major powers (e.g., USA, China, Russia) has reduced the space for consensus and increased pressure on states to "pick sides."
 - ♦ India, as a rising global player, prefers greater autonomy and aims to avoid rigid alignments.
- **Complexity of UN Resolutions:** Modern UN resolutions often embody multiple, sometimes conflicting, provisions—making simple "yes" or "no" votes diplomatically risky.
 - ♦ Abstention becomes a pragmatic tool to navigate these complexities.
- **Assertion of Strategic Autonomy:** For India, abstention serves as a deployment of sophisticated diplomatic signaling, allowing space for nuanced judgement on contentious or value-laden issues.
 - ♦ This approach signals independence from Cold War-style alignments but may create ambiguity among allies.
- **Middle Power Diplomacy:** Abstention is seen as allowing India to express its priorities as an emerging middle power, maintain relationships with opposing blocs, and advance its own interests.

Implications for India's Global Role

- India's rising abstentions signal a shift toward issue-based diplomacy rather than bloc alignment which:
 - ♦ Reinforces India's identity as a middle power with independent judgment.
 - ♦ Positions India as a bridge-builder in contentious debates.
 - ♦ Reflects a desire to shape outcomes without being boxed into binary choices.

Source: TH

KASHI DECLARATION FOR DRUG-FREE INDIA

Context

- The **Kashi Declaration**, outlining a **five-year roadmap** for a drug-free India was signed during the **Youth Spiritual Summit** in Varanasi.

Kashi Declaration

- The Kashi Declaration **affirms a national consensus** to treat substance abuse as a **multi-faceted public health and societal challenge**, and calls for a whole-of-government and whole-of-society approach.

- It emphasises the **integration of spiritual, cultural, educational, and technological efforts** to prevent addiction, support recovery, and foster a national culture of sobriety.
- It proposes institutional mechanisms for **multi-ministerial coordination**, including the formation of a **Joint National Committee, annual progress reporting, and a national platform** for linking affected individuals to support services.

Menace of Drug Abuse in India

- According to a **2019** report by **AIIMS** and the **Ministry of Social Justice and Empowerment**;
 - ♦ Over **16 crore** Indians consume alcohol, with **5.7 crore** requiring medical help.
 - ♦ More than **2.3 crore people** use **cannabis and opioids**.
 - ♦ About **1.08%** of 10-75 year old Indians (approximately 1.18 crore people) use sedatives (non-medical, non-prescription use).
 - ♦ Inhalants are a concern, particularly among children and adolescents, with a higher prevalence of use (**1.17%**) compared to adults (**0.58%**).

Reasons for drug menace in India

- **Geographical location:** India lies close to the **Golden Crescent and Golden Triangle**, major global drug-producing regions.
 - ♦ Easy cross-border smuggling in states like Punjab, Manipur, and Assam enables drug inflow.
- **Youth vulnerability:** Peer pressure, stress, unemployment, and curiosity make youth susceptible to drug use.
- **Weak enforcement:** Inadequate surveillance, corruption, and overburdened agencies hinder effective control.
- **Easy availability:** Online platforms, local peddlers, and pharmacies make drugs more accessible.
- **Social disintegration:** Broken families, isolation, and lack of community support increase addiction risks.

Impact of Drug Abuse

- **Economic Impact:** Drug abuse lowers productivity, increases healthcare costs, and weakens human capital.

- **Health Impact:** It causes mental disorders, spreads HIV/AIDS and hepatitis, and leads to physical deterioration.
- **Social Impact:** It disrupts families, fuels domestic violence, and results in social isolation and stigma.
- **National Security Impact:** Drug trade fosters narco-terrorism, organised crime, and youth involvement weakens national integrity.

Steps Taken

- **Indian Initiatives:**
 - ♦ **Narcotic Drugs and Psychotropic Substances Act, 1985 (NDPS Act):** It prohibits the production, possession, sale, and consumption of illicit drugs and prescribes penalties for violations.
 - ♦ **Nasha Mukh Bharat Abhiyaan:** Launched in 2020, this campaign aims to create awareness about the ill effects of drug abuse and promote a drug-free India.
 - ♦ **Anti-Narcotics Task Force (ANTF):** Many states have established ANTFs to strengthen drug law enforcement at the state level.
 - ♦ **DarkNet Monitoring Cell** under **Narcotics Control Bureau (NCB)** tracks online drug sales.
- **Global Initiatives:**
 - ♦ **United Nations Office on Drugs and Crime (UNODC):** The UNODC is at the forefront of the global fight against illicit drugs. The UNODC-led campaign aims to raise awareness about the dangers of drug abuse.
 - ♦ **International Narcotics Control Board (INCB):** The INCB monitors the global drug situation and assesses countries' compliance with international drug control treaties.

Concluding remarks

- The growing drug menace in India poses a grave threat to public health, societal well-being, and national security.
- However, sustained success will require coordinated efforts across government, civil society, and communities, with a strong emphasis on prevention, rehabilitation, and youth empowerment to build a truly Nasha Mukh Bharat.

Source: [PIB](#)

INDIA TO ADDRESS CONCERNS OF PRIVATE SECTOR IN CIVIL NUCLEAR SEGMENT

Context

- The Union Minister of Science and Technology has said that India will address the **apprehensions** of the **private sector globally** about **investments in the civil nuclear sector**.

About

- The Nuclear Sector was opened up to achieve the **ambitious target** of producing **100 GW of atomic power by 2047**.
 - Currently, India produces 8780 MWe of nuclear power and plans to scale it up to 22,480 MW by 2031-32.
- India's nuclear sector is governed by the Atomic Energy Act, 1962, under which **only government-owned entities** such as NPCIL can generate and supply nuclear energy.
 - There has been **no private sector involvement** in India's nuclear power sector so far.
- In the budget 2025, the Finance Minister announced the government's intention **to amend key legislation**, including the **Atomic Energy Act and the Civil Liability for Nuclear Damage Act**, to facilitate **private sector involvement**.

Need for Private Players in Nuclear Sector

- Nuclear Capacity:** India's plans to increase its nuclear power capacity to **100 GW by 2047**.
- Energy Demand Growth:** India's electricity demand is expected to increase 4-5 times by 2047, and nuclear power will help meet base-load demand alongside renewables.
- India's Targets:** To reduce the emission intensity of its GDP by 44% by 2030 from the 2005 level.
 - To achieve 50% cumulative electric power installed capacity from non-fossil fuel-based energy resources by 2030.

Concerns of Private Sector

- India's supplier liability in the Civil Liability for Nuclear Damage Act (CLNDA) imposes **strict and no-fault liability** on the operator.
- Reason:**
 - Inspired by **past tragedies like the Bhopal Gas Disaster (1984)**, where **defective equipment** played a role.

- Legislators aimed to **ensure accountability beyond** just the operator.
- Operator Liability:**
 - As per the Act, operator means the **Central Government or any authority or corporation** who has been granted a **licence** pursuant to the Atomic Energy Act, 1962 for the operation of that installation.
 - Operator must pay 1,500 crore in damages, insured or secured via financial means.
 - If claims exceed this, the government will cover up to 300 million Special Drawing Rights (SDRs) (2,100–2,300 crore).
- Supplier Liability (Section 17):** It is unique to India and introduces liability for suppliers under:
 - 17(a):** If contractually agreed.
 - 17(b):** If an incident results from **defective equipment** or services (even if not intentional).
 - 17(c):** If caused intentionally by the supplier.
 - This goes beyond Convention on Supplementary Compensation for Nuclear Damage (CSC)**, which allows recourse only if contractually agreed or intentional wrongdoing is proven.
- Legal Ambiguity (Section 46):** It states that other legal proceedings (civil/criminal) are not barred by the Act, which opens the door to **civil suits outside CLNDA**.
 - Raises fear among suppliers of being sued under tort law, potentially leading to unlimited liability, despite the capped liability for operators.
 - Tort law** is considered to be a form of **restorative justice** since it seeks to remedy losses or injury by providing monetary compensation.

Legal Reforms Underway

- Easing Nuclear Liability Law (Civil Liability for Nuclear Damage Act, 2010):** Its objective is to limit the liability of equipment vendors in case of a nuclear accident. **Key Proposed Changes:**
 - Monetary Cap:** Liability may be capped to the original contract value.
 - Time Limit:** Introduce a statute of limitations for how long liability applies.
- Amendment to the Atomic Energy Act, 1962:** Its objective is to allow private and foreign players to enter nuclear power generation.
 - Current Restriction:** Only state-owned entities like NPCIL and NTPC Ltd can operate nuclear plants.

- ♦ **Proposed Change:** Permit minority equity participation by foreign/private entities in upcoming projects.

Conclusion

- These developments reflect a **historic shift in India's nuclear policy**. By addressing legal and regulatory obstacles, India is poised to:
 - ♦ Unlock foreign investment and advanced technology.
 - ♦ Expand its clean energy portfolio through nuclear power.
 - ♦ Reinforce strategic alignment with the U.S. under the civil nuclear framework.

Source: [TH](#)

NEWS IN SHORT

Context

- A woman in Himachal Pradesh has married two brothers of the **Hatti tribe**.

About

- **Polyandry** refers to the practice of having **more than one husband** at a time.
- The custom, known as "**Jodidara**" in Himachal Pradesh, is followed by the Hattis and some other communities in the lower Himalayas.
 - ♦ The Hatti community, present in the **Himachal Pradesh-Uttarakhand border**, has been practising polyandry for centuries and it was declared a **Scheduled Tribe three years ago**.
- Indian law **does not permit** polyandry. However, it allows for the **protection of the customs and traditions of its many tribes**.

Source: [IE](#)

ICMR INVITES PARTNERS TO COMMERCIALISE MALARIA VACCINE

Context

- The Indian Council of Medical Research (ICMR) has invited vaccine manufacturers to partner in the commercialisation of a new indigenous malaria vaccine, AdFalcivax.

About the vaccine

- The vaccine is developed by the ICMR Regional Medical Research Centre, Bhubaneswar.

- AdFalcivax is a **recombinant malaria vaccine**, made using genetic engineering techniques.

- ♦ It uses DNA from the malaria parasite to produce specific proteins in lab cells, which are then used in the vaccine to trigger an immune response without causing disease.

Key Features of the Vaccine

- **Whole CSP Protein Target:** It uses DNA for the complete **Circumsporozoite Protein (CSP)** found on the malaria parasite surface.
 - ♦ It is expected to generate a stronger immune response compared to existing vaccines that use only fragments of the CSP.
- **Transmission Blocking Component:** It targets proteins involved in the **P. falciparum** lifecycle inside the mosquito's midgut. This provides a **dual effect**:
 - ♦ **Individual Protection:** It prevents the disease in vaccinated individuals.
 - ♦ **Community Protection:** It halts the parasite's development inside mosquitoes that have picked up the pathogen, thereby blocking further transmission of malaria.

What is Malaria?

- **Malaria** is a life-threatening disease spread to humans by some types of mosquitoes. It is mostly found in tropical countries.
- **Transmission:** It is caused by **plasmodium protozoa**. The plasmodium parasites spread through the bites of infected female Anopheles mosquitoes. Blood transfusion and contaminated needles may also transmit malaria.
- **Types of parasites:** There are 5 Plasmodium parasite species that cause malaria in humans and 2 of these species – **P. falciparum** and **P. vivax** – pose the greatest threat. The other malaria species which can infect humans are **P. malariae**, **P. ovale** and **P. knowlesi**.
 - ♦ **P. falciparum** is the **deadliest malaria parasite** and the most prevalent on the African continent. **P. vivax** is the dominant malaria parasite in most countries outside of sub-Saharan Africa.
- **Symptoms:** Fever and flu-like illness, including chills, headache, muscle ache and fatigue.

Source: [IE](#)

RAJASTHAN'S PRIDE 'SANGRI OF KHEJRI' AWAITS GI TAG

In News

- Efforts are being made to secure a Geographical Indication (GI) tag for sangri to protect the legacy of the khejri tree and support the farmers who rely on it.

The khejri tree

- It is known by many names, including *Prosopis cineraria*, shami, jand and ghaf.
- It is believed to have **originated in Rajasthan's Thar Desert**.
- It thrives in **extreme heat with minimal water**.
- It is a symbol of resilience, sustenance, and cultural heritage.
- It supports **desert communities** through its edible pods, sangri, which are vital during droughts.

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Do you know?

- The **khejri tree** is deeply embedded in **Indian religious and cultural traditions**.
- In the **Vedas**, it is recommended for use in fire rituals, with its wood historically used alongside peepal to ignite sacred flames.

- In the **Mahabharata**, Arjuna is said to have hidden his bow within a khejri tree during exile.
- In the **Ramayana**, Lakshman built his forest hut using its branches.
- In the 1730 Khejarli massacre, 363 Bishnois sacrificed their lives to protect khejri trees from being cut down.
 - ♦ Following Guru Jambhoji's teachings, the Bishnoi community believes that protecting trees is essential for the survival of all life.

Source: DTE

INTERNATIONAL MOON DAY

In News

- **International Moon Day** was observed on 20 July to commemorate humankind's first landing on the moon, by the Apollo 11 mission in 1969.

International Moon Day

- **On this day, Neil Armstrong and Edwin 'Buzz' Aldrin** set foot on the Moon's surface as the first humans while Michael Collins awaited their return in the Columbia Command Module in Moon orbit.
- The UN General Assembly formally recognised it in 2021, following a proposal recommended by the Committee on the Peaceful Uses of Outer Space (COPUOS).
- The **theme for 2025**, 'One Moon, One Vision, One Future,' highlights the spirit of global unity and shared ambition in the continued exploration of the Moon.
- It celebrates global achievements in lunar exploration and promotes international cooperation, sustainable space practices, and the peaceful use of lunar resources.

Status In India

- India also has made remarkable strides in lunar exploration.
 - ♦ From Chandrayaan-1's discovery of water molecules on the Moon in 2009 to Chandrayaan-3's successful landing near the lunar south pole in 2023, India has demonstrated its prowess in cost-effective and innovative space missions.

Source: PIB

ALIEN PLANT SPECIES TAKING OVER NATIVE ECOSYSTEMS: STUDY

In News

- Alien plant species are now spreading at an unprecedented pace, reshaping tropical ecosystems globally.

Alien plant species

- They were introduced by humans directly or indirectly in different geographical regions of the world, and are now spreading at an unprecedented pace.
- They are rapidly replacing rich, diverse and stable ecosystems.
- They are causing irreversible transformation, changing the fundamental characteristics of the native ecosystems.

Spread

- It has accelerated since the 1950s, with over 13,000 species now outside their native ranges.
 - ♦ By 2050, introduction of alien species would increase by approximately 21 per cent (669 species) across South America, 12 per cent (503 species) across Africa and 10 per cent (227 species) in the tropical regions of Asia.
- Climate change, land use change, and human activities further fuel this invasion, particularly in regions like South America, Africa, and Asia.
 - ♦ Islands are especially vulnerable, with some now hosting more alien than native plant species.
- **In India, agricultural expansion** and forest fires have enabled invasions in 66% of natural areas.

Impacts

- Alien species alter fire regimes, reduce native biodiversity, and threaten fauna, such as blackbuck, which inadvertently spread invasive seeds.
- The Amazon faces similar threats, where plant invasions and forest degradation could convert it from a carbon sink to a carbon source.

Suggestions

- There are calls for long-term, interdisciplinary research, improved public awareness, and ecosystem restoration, especially in the Global South.

Source: DTE

BIOSTIMULANTS

Context

- The Union Agriculture Minister wrote to **Chief Ministers of all states** to immediately **stop the “forced tagging”** of nano-fertilisers or **biostimulants** along with conventional fertilisers.

What are biostimulants?

- **The Fertiliser (Inorganic, Organic or Mixed) (Control) Order, 1985** regulates the **manufacturing and sale of biostimulants**.
 - ♦ It defines it as a substance or microorganism or a combination of both whose primary function when applied to plants, seeds or rhizosphere is to **stimulate physiological processes**.
 - ♦ It enhances its nutrient uptake, growth, yield, nutrition efficiency, crop quality and tolerance to stress.
 - ♦ It **does not include** pesticides or plant growth regulators which are regulated under the Insecticide Act, 1968.

Concerns

- Many biostimulants are complex mixtures of compounds or microbes, and their **exact modes of action are not always well understood**.
- **Inconsistent performance** under field conditions due to variations in climate, soil, crop variety, etc.
- Companies may market fertilizers or pesticides as biostimulants to bypass **regulations or appear sustainable** (“greenwashing”).
 - ♦ This erodes credibility and can mislead both farmers and policymakers.

Source: IE

88TH CODEX EXECUTIVE COMMITTEE MEET

Context

- India's role in global food standard development was appreciated in the 88th session of the Executive Committee of the Codex Alimentarius Commission (CCEXEC 88), held in Rome.

Highlights of CCEXEC88 and India's Role

- **India chaired the development of group standards** for whole millet grains, with **Mali, Nigeria, and Senegal** as co-chairs.
 - ♦ The Committee appreciated India's leadership, and the millet standard is scheduled for final approval at **Codex Alimentarius Commission (CAC48)**.

- **Strategic Planning and KPIs (2026–2031):** India actively contributed to discussions on the Codex Strategic Plan 2026–2031. It advocated for **SMART (Specific, Measurable, Achievable, Relevant, Time-bound)** outcome-based indicators.
 - ♦ These KPIs were finalized for endorsement at CAC48.
- India informed about its **capacity-building programs** for neighbouring countries like Bhutan, Nepal, Bangladesh, Sri Lanka, and Timor Leste, recognized by FAO.
- India encouraged less active member countries to use the **Codex Trust Fund (CTF)** for mentorship and twinning programmes.

Codex Alimentarius Commission (CAC)

- It is an intergovernmental food standards body, set up in **1963**.
- It was established jointly by the **UN's Food and Agriculture Organisation (FAO)** and the **World Health Organisation (WHO)**, within the framework of the Joint Food Standards Programme.
- **Objective:** To protect consumer's health and ensure fair practices in the food trade.
- **Members:** Currently, **189** members (188 UN member countries and the European Union).
- **India** became a member in **1964**.
- **Headquarter:** Rome

Source: [PIB](#)

NEW LICHEN SPECIES REVEALS ANCIENT SYMBIOSIS IN THE WESTERN GHATS

Context

- A new species of lichen, **Allographa effusosoredica**, has been discovered in the Western Ghats by Indian scientists, offering insights into ancient symbiosis and evolutionary patterns.

Western Ghat

- The Western Ghats are a **1,600-km** long mountain chain along the west coast of India running from the river Tapi in the north to Kanyakumari in the south.
- It covers **six states** — Gujarat, Maharashtra, Goa, Tamil Nadu, Karnataka and Kerala. About 60 percent of the mountain range is in Karnataka.
- **Significance:** These Ghats are home to high mountain forests, which moderate the tropical climate of the region.
 - ♦ They are home to 325 globally threatened flora, fauna, bird, amphibian, reptile and fish species.
- Western Ghats were accorded the **World Heritage Status by UNESCO** in **2012**.

About Lichens

- **Definition:** Lichens are composite organisms formed by a symbiotic association between a **fungus (mycobiont)** and a **photosynthetic partner** (photobiont, usually a **green alga or cyanobacterium**).
- **Ecological Role:** Soil formation, Nutrient cycling, Serve as food for insects, Bioindicators of environmental quality (especially air pollution).

About *Allographa effusosoredica*

- **Type:** Crustose lichen (forms a crust-like growth tightly bound to the substrate).
- **Unique Features:**
 - ♦ It has **effuse soredia** (powdery vegetative reproductive structures).
 - ♦ Contains **norstictic acid**, a rare chemical compound among related species.
 - ♦ Morphologically resembles **Graphis glaucescens**, though genetically distinct.

Source: [PIB](#)

