Factly Weekly

Compilation

2025

For UPSC CSE Prelims Exam

INDEX

Created with love ❤ by ForumIAS- the knowledge network for civil services.

Visit academy.forumias.com for our mentor based courses.

ForumIAS

Vitamin B9

News: Nearly 41 per cent of urban adolescents in government schools across north India suffer from folate or vitamin B9 deficiency, which might be affecting their growth and development, according to a recent study by the All-India Institute of Medical Sciences (AIIMS). **Vitamin B9**
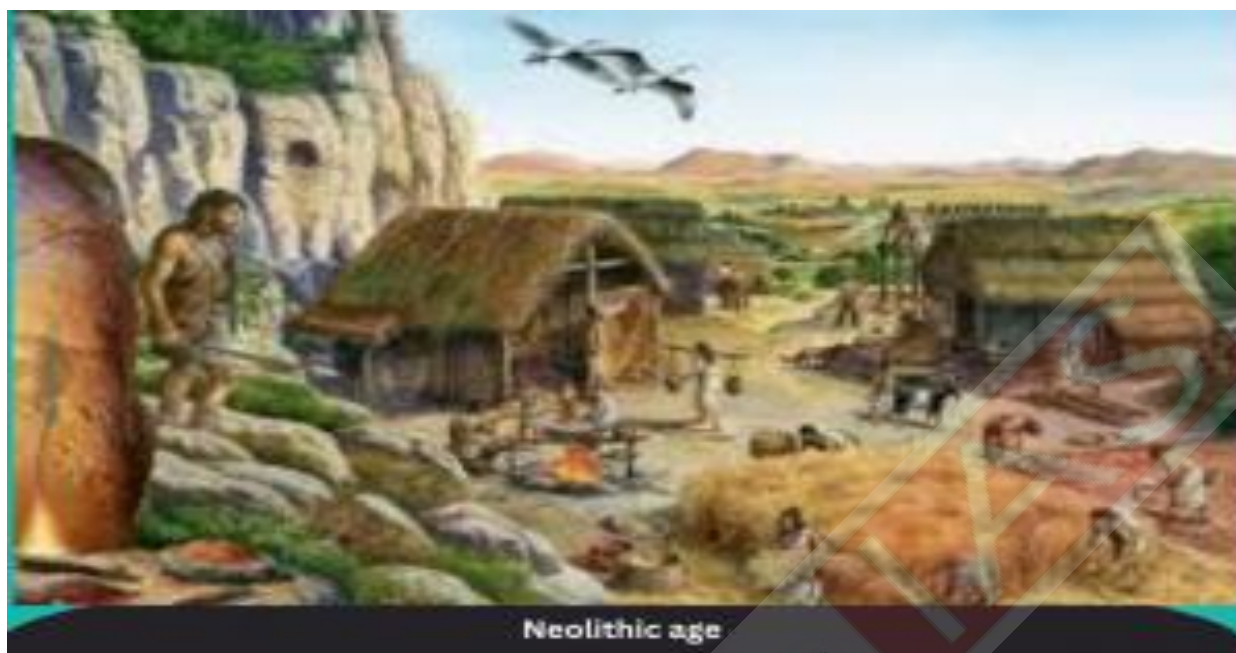
About Vitamin B9

Figure 1.Source – NDTV

- Vitamin B9 is also known as **Folate or folic acid**.
- It is a **water-soluble vitamin** essential for many bodily functions.
- **Sources of Vitamin B9:** Folate-rich **foods** which include green leafy vegetables (like spinach and fenugreek), legumes (lentils, chickpeas), citrus fruits, nuts, whole grains and fortified cereals.
  - In cases of poor dietary intake, **folic acid supplements** can be used.

- **Functions:**
  - It is needed for **red blood cell formation** and for healthy **cell growth**.
  - It is needed by cells to **carry oxygen** throughout the body.
  - Folate is involved in the **synthesis and repair of DNA and RNA**, which are the building blocks of genetic material.
  - It aids in the production of red blood cells and development of the central nervous system during early childhood.
- **Deficiency and consequences:** Its deficiency in foundational years can lead to impaired **cognitive development**, behavioural issues, fatigue, growth retardation, reduced academic performance and **anaemia**.
  - If there isn't enough folate, it can lead to **anaemia**, when the **body lacks enough red blood cells.**
- **Girls more deficient:** Adolescent girls have a **higher prevalence** of folate deficiency compared to boys, due to increased **physiological demands during menstruation and puberty**, as well as **differences in dietary** intake patterns.
  - Folate deficiency in girls can lead to **anaemia, decreased stamina and poor concentration**.

Neolithic age

News: The Archaeological Survey of India recently discovered one of **first rock grooves in Kanniyakumari district** which were created during the neolithic age. **Neolithic age**

Created with love ❤ by ForumIAS- the knowledge network for civil services.
Visit academy.forumias.com for our mentor based courses.
ForumIAS

Neolithic age

About Neolithic age

- The term Neolithic has been derived from **two Latin words**. '**Neo' meaning New** and '**lithic'** meaning **stone**, hence Neolithic period is also known as **New Stone Age**.
- The Neolithic Age in India is generally **dated between 7000 BCE and 1000 BCE**, though this varies regionally.
- **Characteristics of this period**
  - **Agriculture transition and domestication of animals:** People began domesticating animals, cultivating **crops** such as wheat, barley, rice, millets, lentils, ragi, and cotton.
  - **Permanent settlements:** This period saw a transition from **nomadic lifestyles to settled village**
  - **Tool advancement:** Use of **polished stone tools**, including axes and sickles, indicating technological progress; was seen in the period.
  - **Pottery:** Development of **handmade and wheel-turned pottery**, often decorated, reflecting artistic expression.
  - **Arts and crafts:** Beads made of semi-precious stones, terracotta figurines (including images of cattle and mother goddesses), and decorated pottery.
  - **Social behaviour:** Likely tribal, with nuclear families indicated by small house sizes.
    - **Burial practices** included burying the **dead within houses**, and sometimes animal burials, suggesting rituals and **ancestor worship**.
  - **Belief systems:** Possible worship of **natural forces and fertility cults**, as suggested by terracotta images and burial customs.

Important Neoithic sites of India

- **North-western India:** The Neolithic culture of the north-western part of the Indian subcontinent at **Mehrgarh** has produced the earliest evidence of **plant and animal domestication**.
- **North India: Kashmir** Neolithic sites have evidence of **pit dwellings (Burzahom, Gufkral)**. These sites show contacts with the Harappan sites and the cultures of East Asia and West Asia.
- **Vindhyan Hills, the Belan and the Ganga River Valleys**: The Belan valley Neolithic sites have **cord-marked pottery** and produced evidence for **transition from hunting gathering to agriculture.**
- **North-eastern India:** The sites of **eastern and north-Eastern India** show traits of **shouldered axes** often noticed in Southeast Asia. **Marakdola, Daojali Hading and Sarutaru** are the Neolithic sites of Assam region.

Created with love ❤ by ForumIAS- the knowledge network for civil services.
Visit academy.forumias.com for our mentor based courses.
🡕 Forum IAS

- **Central-eastern region:** The eastern Indian Neolithic sites have evidence of **shouldered axes, pointed-butt celts, and chisels. Birbhanpur, Kuchai, Golbaisasan and Sankarjang** are some of the important Neolithic sites of this region of West Bengal and Odisha.
- **South India:** The Neolithic sites of South India have **ash mounds** in the early stages and evidence of plant and **animal domestication** is found.
    - Neolithic grooves were found in parts of **Tamil Nadu** such as **Kanniyakumari, Krishnagiri, Tiruvannamalai and Villupuram**.

Battery Aadhaar Initiative

News: Tata Elxsi, with partners like Tata Motors and IIT Kharagpur, introduced Battery Aadhaar to government stakeholders, aiming to provide batteries with secure digital identities for better traceability. **Battery Aadhaar Initiative.**

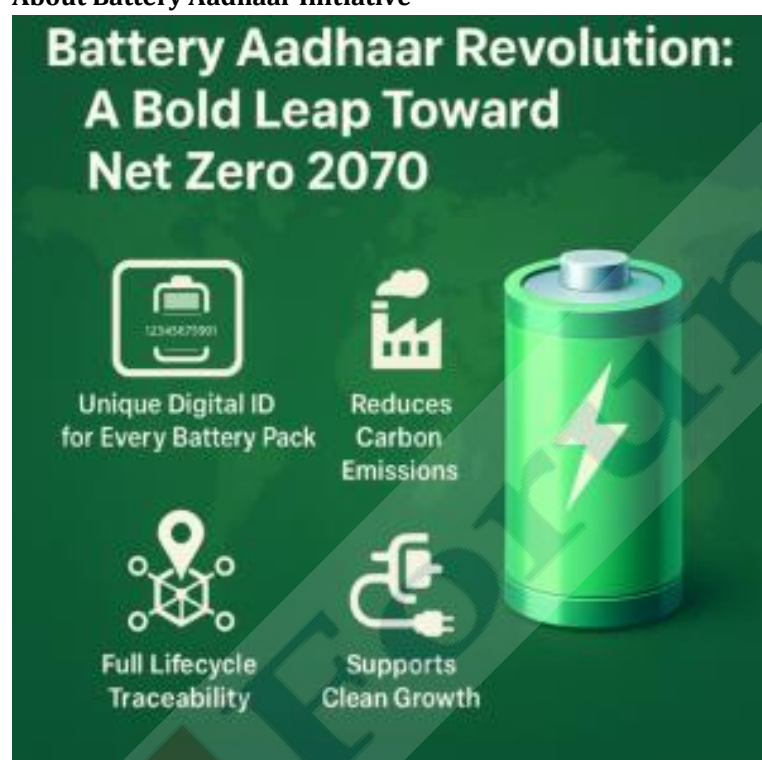**About Battery Aadhaar Initiative**

Figure 2.Source – NetZeroIndia

- It is a **digital identification system** for batteries, leveraging secure, **blockchain-backed technologies** to ensure full **traceability** throughout their lifecycle.
- **Aim:** It aims to **provide batteries with secure, digital identities**, facilitating traceability and improving lifecycle transparency.
- **Developed by:** It is developed by the **Tata Elxsi, with partners like Tata Motors, Tata AutoComp Systems and IIT Kharagpur.**
- The initiative was **introduced at the Battery Summit 2025,** organised by the World Resources Institute (**WRI**) India.
- **Functioning:** Tata Elxsi's **MOBIUS+ platform** integrates blockchain technology to support traceability and automate compliance reporting.
    - MOBIUS+ is designed to accelerate the transition to a cleaner mobility future by enabling digital transparency, traceability, and compliance through initiatives like Battery Aadhaar.
    - This platform is **designed to align with Indian regulatory initiatives** and international **frameworks**, such as the **EU Battery Regulation**.
- The initiative **prioritizes regulatory compliance and sustainability**, **not primarily cost reduction**, though **cost savings** (10–20% in recycling) are a **secondary benefit**.
- **International support:** The Battery Aadhaar project is supported by **a UNEP-led programme named 'Electrifying Mobility in Cities'**, coordinated by **NITI Aayog** and the **Department of Science & Technology,** Government of India.

Created with love ❤ by ForumIAS- the knowledge network for civil services.
Visit academy.forumias.com for our mentor based courses.
ForumIAS

Mango: Chemistry, Culture & History

News– This article, published in the Indian Express, explores the mango- cherished across South Asia for millennia—for its cultural, political, and culinary significance, from Buddha's parables to Mughal orchards.
Mango: Chemistry, Culture & History

Mango: Chemistry, Culture & History

About Mango's Chemistry and Aroma

- Volatile Organic Compounds (VOCs) are responsible for the characteristic aroma of mangoes.
- **Key VOCs include**:
    - **Esters** – impart the sweet, tropical fruity scents
    - **Lactones** – give it a creamy, earthy aroma
    - **Terpenes** – floral, pine-like notes
    - **Aldehydes** – grassy, mildly spicy fragrance
- Minor compounds contribute to variety-specific aromas.
- **Botanical Classification**:
    - Mango (Mangifera indica) belongs to the Anacardiaceae family *(Cashew family)*.
    - It is a distant relative of poison ivy.
- **Allergic Reactions**– Mango peels contain urushiol-like compounds, also found in poison ivy. These can cause contact dermatitis (skin allergy) in sensitive individuals.

Historical & Cultural Significance

Religious and Ancient Indian Roots

- It is believed to have originated 4,000 years ago in the Himalayan foothills.
- It is known as "Aamra" in Sanskrit, later "Aam".
- It is *mentioned in Vedas, Dharma Shastras, and Puranas.*
- In Buddhism:
    - *Buddha was born under a mango tree.*
    - The fruit used as a metaphor to convey his ideas to people, and his disciples are credited with spreading mangoes to the rest of South Asia

Created with love ❤ by ForumIAS- the knowledge network for civil services.
Visit academy.forumias.com for our mentor based courses.
↗ Forum IAS

Mango in Medieval and Mughal India

- Babur called it the "best fruit of Hindustan," though he preferred musk melons.
- Humayun loved mangoes; Himam Pasand, (originally Humayun Pasand), variety of mango was specially grafted for him.
- *Sher Shah named Chaunsa mango* after defeating Humayun at the Battle of Chausa (1539).
- *Akbar set up Lakhi Bagh in Darbhanga, Bihar*, with over 1 lakh mango trees.
  - *Portuguese Jesuits* trained royal horticulturists in grafting techniques.

FPV drones

News: In the ongoing conflict between Ukraine and Russia, Ukraine has utilized FPV drones effectively to launch precise strikes deep inside Russian territory.

About FPV drones

- FPV drones, or **first-person view drones**, are unmanned aerial vehicles controlled remotely by pilots who see through the drone's onboard camera in real-time.
- The **live video feed is transmitted to specialized goggles or screens**, allowing the operator to navigate the drone as if they were onboard.
- Unlike standard drones, which have a video transmission latency of over 200 milliseconds, **FPV drones have very low latency**, often just a few milliseconds.
- This low latency enables rapid reactions and allows pilots to see detailed, real-time views, improving flying accuracy significantly.
- FPV drones are commonly used for: Freestyling (performing aerial tricks), Drone racing and Capturing unique cinematic footage.
- **Advantage**: The key advantages include cost-effectiveness and deep-strike capabilities, all while remaining largely undetected.
- **Challenge**: A major challenge is that the drone operator cannot visually track the drone's movement through its surroundings.

Created with love ❤ by ForumIAS- the knowledge network for civil services.
Visit academy.forumias.com for our mentor based courses.
⬈ ForumIAS

Personality Rights

News: The Delhi High Court has passed an order protecting the personality rights, and publicity rights of Sadhguru Jaggi Vasudev, founder of Isha Foundation, and restrained various rogue websites from misusing his personality traits by deploying Artificial Intelligence (AI).

About Personality Rights

Figure 3.Source – Bar & Bench

- Personality rights refer to the **legal rights of an individual to protect** their unique personal attributes—such as name, image, likeness, voice, signature, and other distinctive traits—from unauthorized use, especially for commercial gain.
- These rights are particularly **significant for celebrities and public figures**, whose personas have substantial commercial value and are often targeted for endorsements or advertisements without their consent.
- **Key aspects of Personality Rights in India**
  ○ **Right to privacy:** It protects individuals from **unauthorized disclosure or intrusion into their personal life**.
  ○ In India, the right to privacy is recognized as a **fundamental right under Article 21** (Puttaswamy Case 2017).
  ○ **Right of publicity**: It grants individuals control over the **commercial use of their identity**, such as their name, image, likeness, or other recognizable characteristics.
  ○ This means that **no one can use these attributes** for commercial purposes (like advertisements or merchandise) without permission or appropriate compensation.
  ○ Publicity rights are governed by **statutes like the Trademarks Act 1999** and the **Copyright Act 1957.**

Exercise Operation Shield

News: Civil defence exercise Operation Shield conducted across Kashmir to test and strengthen the preparedness for emergency situations. **Exercise Operation Shield**

About Exercise Operation Shield

Created with love ❤ by ForumIAS- the knowledge network for civil services.
Visit academy.forumias.com for our mentor based courses.
ForumIAS
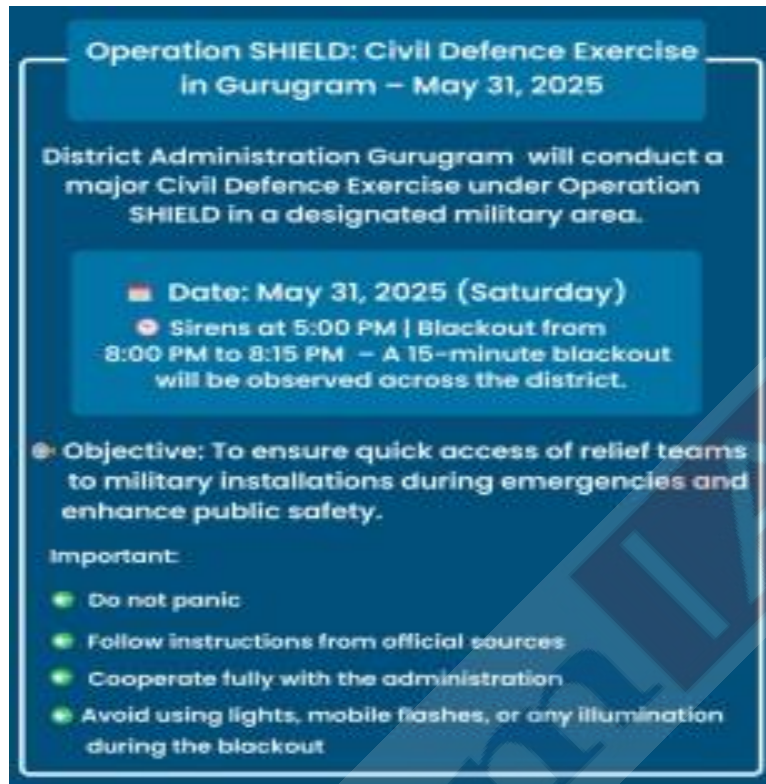
- It is a **government-led civil defence preparedness** initiative**.**
- **Aim:** The exercise was **aimed** at **familiarising citizens with emergency response protocols** during blackout or crisis situations and to evaluate the readiness of the public and the administration.
- The Exercise is being conducted across **several states** in India, including **Punjab, Haryana, Rajasthan, Gujarat, Chandigarh, and Jammu and Kashmir.**
- **It was** conducted by **District Administrations** in collaboration with **SDRF and Civil Defence**.
- The exercises involved demonstrations of rapid response tactics, **simulated rescue operations**, and real-time coordination between various emergency services.

Asian Development Bank (ADB)

News: Asian Development Bank (ADB) President Masato Kanda announced a 5-year initiative aimed at transforming urban infrastructure across India.

About Asian Development Bank (ADB)

Created with love ❤ by ForumIAS- the knowledge network for civil services.
Visit academy.forumias.com for our mentor based courses.
ForumIAS

- It is a **regional development bank** established on **19 December 1966.**
- ADB is headquartered in **Manila, Philippines**.
- **Aim:** It aims to **promote social and economic development** in Asia.
- It **assists** its members and partners by **providing loans, technical assistance, grants and equity investments** to promote social and economic development.
- It is an official **United Nations Observer**.
- **Members:** ADB has **69 members**—of which **50 are from within Asia** and the **Pacific** and **19 outside.**
- **Voting pattern:** It was **modeled closely on the World Bank** and has a **similar weighted voting system**, where votes are distributed in **proportion with members' capital subscriptions.**
  - As of 31 December 2020, **Japan and the United States** each hold the **largest** proportion of shares at **15.571%.**
  - **China** holds 6.429%, **India** holds 6.317%, and **Australia** holds 5.773%.
- **Governance**
  - **Board of Governors:** The **highest policy-making body** of the bank is the Board of Governors, composed of **one representative from each member state**.
  - **Directors and deputies:** The Board of Governors, in turn, **elect among themselves** the twelve members of the board of **directors and their deputies**.
  - **President:** The Board of Governors also elect the **bank's president**, who is the **chairperson** of the **board of directors** and manages ADB.
    - Traditionally, and because **Japan** is one of the largest shareholders of the bank, the **president has always been Japanese**.

Infrastructure Initiative Announced by ADB

- It is a **5-year initiative** aimed at **transforming urban infrastructure across India**.
- **Funding:** ADB will invest up to **$10 billion** into urban transformation including **metro extensions, new regional rapid transit system (RRTS) corridors, and urban infrastructure and services.**
- The plan includes **sovereign loans, private sector financing, and third-party capital**.
- **Anchored by**: The initiative is anchored by **India's flagship Urban Challenge Fund (UCF),** which ADB is supporting to attract private investment for urban infrastructure.

Urban Challenge Fund (UCF)

- It was announced in the Budget 2025-26.
- It will be a fund of **Rs. 1 lakh crores** aiming to encourage states to think innovatively towards **attaining sustainable urbanisation and redevelopment goals in existing cities.**
- **Financing mechanism:** Fund will **finance up to 25% of the cost of bankable projects** with a stipulation that at least 50% of the cost is funded from bonds, bank loans, and PPPs.

Mount Etna

News: Mount Etna in Sicily, Italy erupted recently creating a spectacular display while sending a massive cloud of smoke and ash several kilometers into the sky.

About Mount Etna

Created with love ❤ by ForumIAS- the knowledge network for civil services.

Visit academy.forumias.com for our mentor based courses.

⏶Forum IAS

- Mount Etna is a volcano l**ocated in Sicily, Italy.** It is one of the **most active volcanoes in the world.**
- Mount Etna is located on an **active fault line where the African plate and the Ionian microplate are both being subducted** beneath the Eurasian plate.
- Mount Etna stands about **3,300 metres tall.**
- **Etna is a stratovolcano** – a cone-shaped volcano made from thick, sticky lava. This lava does not flow easily, so it builds up around the vent and forms steep slopes.
- The most prominent feature of the mountain is the **Valle del Bove (Valley of the Ox),** a vast horseshoe-shaped caldera located on its eastern slope.
- It erupts in **two main styles**: **Effusive eruption** – where lava flows smoothly out onto the ground and **strombolian eruption** – which is more explosive with bursts of gas and lava.
- Etna has been erupting for at least 2,700 years, with the oldest known eruption dating back to around

Figure 4.Source: scienceteacherexplorer

1400 B.C.
- This gives it one of the longest recorded histories of volcanic activity in the world.
- It is a **UNESCO World Heritage Site** because of its long history and scientific value.
- It has also been designated a **Decade Volcano by the United Nations.**

Building-Integrated Photovoltaics (BIPV)

News: Boosting solar adoption in densely populated cities of India requires to look beyond traditional rooftop-mounted solar systems and towards Building-Integrated Photovoltaics (BIPV).

About Building-Integrated Photovoltaics (BIPV)

Source – U.S. Department of Energy

- They are **solar power generating products or systems** that are seamlessly **integrated** into the building envelope—such as **facades, roofs, skylights, or windows**.
- **Purpose:** It has **two purposes**: generating **electricity** and working as a **structural part** of a building.

Created with love ❤ by ForumIAS- the knowledge network for civil services.
Visit academy.forumias.com for our mentor based courses.
ForumIAS

- ○ It serves as the **outer layer of a building**, and it **generates electricity** for on-site use or exports it to the grid.
- This **differs from traditional rooftop solar (RTS),** where PV modules are placed on top of an existing roof.
- Unlike **rooftop solar (RTS),** systems, which are added to rooftops, BIPV systems are embedded into the building's architectural fabric replacing conventional construction materials such as glass, tiles, and cladding with solar alternatives.
- **Need for India**
  - ○ India can't rely solely on ground-mounted and rooftop systems to meet its goal to install 300 GW of solar capacity by 2030.
  - ○ Land-neutral solutions like BIPV need to be prioritised.
  - ○ **Potential:** The potential of BIPV for India's existing building stock is estimated to be 309 GW.
- **Challenges**
  - ○ High initial costs
  - ○ Policy gaps
  - ○ Inadequate technical capacity
  - ○ Reliance on imports.

Nanozyme

News: Researchers at the Indian Institute of Science (IISc.) have developed an artificial metal-based nanozyme that can potentially be used to clamp down on abnormal blood clotting caused by conditions like pulmonary thromboembolism (PTE). **Nanozyme**
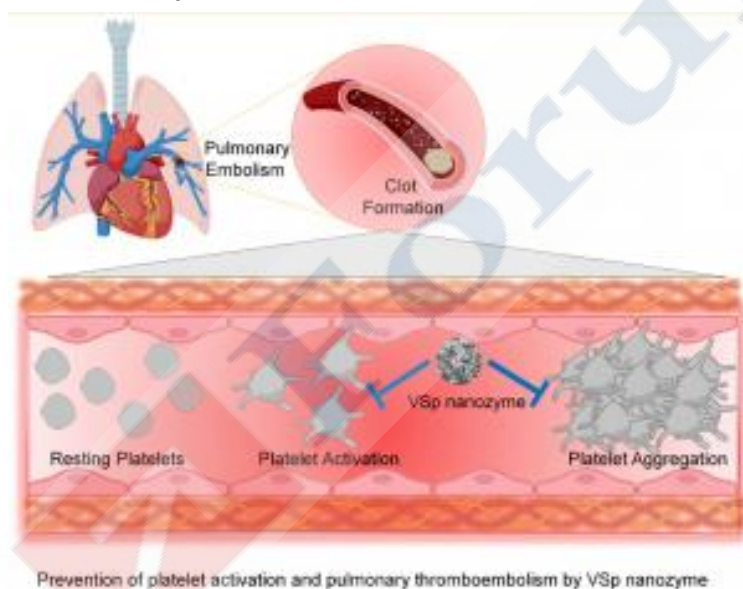
About Nanozyme

Prevention of platelet activation and pulmonary thromboembolism by VSp nanozyme

Figure 5 Source – IISc

- A nanozyme is a **nanomaterial** that exhibits **enzyme-like catalytic activity**, meaning it can mimic the functions of natural enzymes in facilitating biochemical reactions.
  - ○ They mimic the **activity of natural antioxidant enzymes**, which **scavenge reactive oxidative molecules.**
- Nanozymes can be **made** from a variety of **materials**, including **metals, metal oxides, carbon-based materials, and metal-organic frameworks.**
- **Significance:** These nanozymes developed by IISc. can be very efficiently used to **clamp down on abnormal blood clotting caused by conditions like pulmonary thromboembolism (PTE).**
- **Working:** These nanozymes work by controlling **Reactive Oxygen Species (ROS) levels**, thereby preventing the over-activation of platelets that leads to excess clot formation or thrombosis.
  - ○ **Reactive Oxygen Species (ROS)** levels refer to the amount of oxygen-containing molecules in a cell that are highly reactive and can damage biological molecules.
- **Material used:** The spherical-shaped **vanadium pentoxide (V2O5) nanozymes** were the most efficient.

Created with love ❤ by ForumIAS- the knowledge network for civil services.
Visit academy.forumias.com for our mentor based courses.
ForumIAS

- These materials mimic a **natural antioxidant enzyme** called **glutathione peroxidase** to reduce oxidative stress.
- **Applications**– Nanozymes have a large range of applications for diagnostic medicine, targeted therapy, and biosensing.

Bharat Gen

News: Union Minister Dr. Jitendra Singh launches 'Bharat Gen' – India's first of its kind Indigenously developed government funded AI based Multimodal LLM for Indian Languages at BharatGen Summit. **Bharat Gen.**

About Bharat Gen

Figure 6.Source – BharatGen

- Bharat Gen is **India's first** of its kind indigenously developed **government funded AI based Multimodal LLM for Indian Languages**.
- **Aim:** It aims to **revolutionize AI development** across India's linguistic and cultural spectrum.
- The platform **integrates text, speech, and image modalities**, offering seamless AI solutions in 22 Indian languages.
- **Support:** The initiative is supported by the **Department of Science and Technology (DST)** and brings together a robust consortium of leading academic institutions, experts, and innovators.
- It is launched at the **"BharatGen Summit"**—India's **largest Generative Artificial Intelligence (AI) and LLM summit and hackathon.**
- It is developed under the **National Mission on Interdisciplinary Cyber-Physical Systems (NM-ICPS).**
  - NM-ICPS is implemented through **Technology Innovation Hubs (TIHs)** Foundation for IoT and IoE at **IIT Bombay.**
  - It is a national mission to **create AI** that is **ethical, inclusive, multilingual**, and deeply rooted in Indian values and ethos.

Ungulates

News: A report flags tiger-human conflict risk as prey base (ungulates) shrinks in Jharkhand, Chhattisgarh and Odisha.

About Ungulates

Created with love ❤ by ForumIAS- the knowledge network for civil services.
Visit academy.forumias.com for our mentor based courses.
ForumIAS

STATUS OF
UNGULATES
IN TIGER HABITATS OF INDIA

Source – NTCA

- Ungulates are **hoofed mammals** that **walk on their toes**.
- The word ungulate comes from the Latin word "**unguis**" which means **nail, claw or hoof.**
- **Division:** They are divided into **two classes**:
    i. **Even-toed ungulates** such as deer, giraffe, antelopes
    ii. **Odd-toed ungulates** such as horses, zebras and rhinoceroses.
- **Importance:** Ungulates form the **bulk of a tiger's diet** and are also **critical to the forest ecosystem.**
- **Threats:** They are facing increasing pressure from **loss of habitat** due to deforestation, development, agricultural expansion, urbanisation, human-wildlife conflict, and subsistence hunting.

Report on Ungulates and key findings

- It is a **first-of-its-kind assessment of ungulates** conducted by the **Wildlife Institute of India (WII) and the National Tiger Conservation Authority (NTCA),** using **data** from India's **2022 tiger census.**
- **Key findings**
    - A **density of 30 ungulates per square km** can support four **tigers in 100 square**
    - Tiger numbers may rise with prey density, but plateau at about 75 ungulates per sq km due to ecological constraints such as territoriality, competition and lack of habitat connectivity.
    - Among the tiger reserves, **Pench in Madhya Pradesh** has one of the **highest chital densities** — nearly 54 per sq km.
    - There is a **direct link** between **low prey numbers and human-wildlife conflict**.

India to build first-ever indigenous Polar Research Vessel (PRV)

News: India to build first-ever indigenous Polar Research Vessel with Norwegian firm.

India to build first-ever indigenous Polar Research Vessel (PRV)

Created with love ❤ by ForumIAS- the knowledge network for civil services.
Visit academy.forumias.com for our mentor based courses.
ForumIAS

Source – DD News

- A PRV is a ship which serves a **platform for research in the polar regions** (areas surrounding the North and South Poles).
- It can also help scientists undertake **research in the ocean realm**.
- **MoU:** An MoU has been signed between the **Garden Reach Shipbuilders and Engineers Limited** (GRSE), Kolkata, and **Norway's Kongsberg Oslo** to build the PRV.
  - GRSE, which has built warships, survey and research vessels, will **build the PRV** in its yard in Kolkata.
- **Importance:** It will be equipped with the **latest scientific equipment**, enabling researchers to explore the oceans' depths and **study marine ecosystems**.
  - The vessel will support advanced oceanic and polar research for the **National Centre for Polar and Ocean Research (NCOPR)**, boosting India's scientific capabilities and '**Make In India' shipbuilding efforts.**
- **Polar basis of India:** India currently operates **three research base stations** in the polar regions — **Bharati and Maitri in Antarctica**, and **Himadri in the Arctic region**.
- '**MAHASAGAR' initiative:** This initiative is part of the government's larger maritime vision, 'MAHASAGAR' (Mutual and Holistic Advancement for Security Across the Regions), aimed at **promoting sustainable development and international cooperation** in the blue economy.

International Institute of Administrative Sciences (IIAS)

News: India has won the Presidency of the International Institute of Administrative Sciences (IIAS) for the 2025–2028 term. **International Institute of Administrative Sciences (IIAS)**

About International Institute of Administrative Sciences (IIAS)

Created with love ❤ by ForumIAS- the knowledge network for civil services.
Visit academy.forumias.com for our mentor based courses.
ForumIAS

Source – IIAS

- It is an international **non-profit organization** working as a federation of member states, national sections and academic research centres jointly **elaborating public governance solutions** to the policy challenges of the day.
- **Founded in:** It was founded in Madrid in 1930.
- **Headquarter:** Its headquarter is located in the Brussels, Belgium.
- **Objective:** IIAS has **five objectives**–
  - Organize high impact events targeting and involving both public service and academia.
  - Produce and dissemination relevant knowledge on public governance.
  - Enable collaborative and strategic projects with members and partners.
  - Accredit both academic and professional training programs in line with standards of best practices in public management.
  - To produce and promote comprehensive content on public governance research and practice to different audiences.
- **Governance**
  - **Council of Administration:** It is the **main governance body** responsible for **appointing** the **Director General**, adopting the **budget and accounts**, and the **program** of the association for the financial year.
  - It is composed of **different kinds of members**.
  - The Council of Administration is **legally responsible** among others for the acts of the association.
- **Not part of U.N.**: It is **not** a **formally affiliated** body of the United Nations but actively engages with the UN's work in the field of public administration.
- **Members:** It is a global federation comprising **31 member countries**, 20 National Sections, and 15 Academic Research Centres, collaborating on scientific research in public administration.
  - India has been a member state since **1998**.
  - India is represented by the **Department of Administrative Reforms and Public Grievances**.

World's first fusion-fission hybrid nuclear power plant

News: China has announced the construction of **Xinghuo**, the world's first **fusion-fission hybrid nuclear power plant**, marking a historic leap in nuclear energy technology. **World's first fusion-fission hybrid nuclear power plant.**

Created with love ❤ by ForumIAS- the knowledge network for civil services.
Visit academy.forumias.com for our mentor based courses.
📈 Forum IAS

World's first fusion-fission hybrid nuclear power plant

About World's first fusion-fission hybrid nuclear power plant

- The project is located on Yaohu Island in Jiangxi Province of China.
- It is strategically chosen for its proximity to essential copper resources used in superconducting technologies.
- **Aim:** To produce a **continuous power output of 100 megawatts**, which, although modest in scale, will demonstrate the viability of hybrid nuclear technology.
- **Objective:** To achieve a **Q factor greater than 30**, meaning it will generate over 30 times the energy it consumes to sustain plasma—far exceeding the **ITER project's goal of Q=10** and the U.S.'s recent record of Q=1.5.
- The plant uniquely combines **fusion and fission processes.**

Key Features of the Hybrid Reactor

- **Combines Benefits of Fusion and Fission**: Fusion reactors produce many neutrons but less power, while fission reactors produce more power but fewer neutrons. The hybrid reactor uses the strengths of both.
- **Lower Power Needed**: It needs less fusion power than a full fusion reactor, as its main goal is to produce neutrons, not energy.
- **Less Radioactive Waste**: The neutrons can help convert harmful long-lived nuclear waste into safer, short-lived waste that's easier to manage.
- **Self-Sustaining Fuel Supply**: It can create its own fissile fuel by converting fertile materials *(like uranium-238 or thorium-232)* into usable fuel (like plutonium-239 or uranium-233).

Centre's New Regulations For Ladakh

News– The Central Government has notified five regulations for the Union Territory of Ladakh, aimed at addressing demands related to land rights, local employment, and cultural protection. **Centre's New Regulations For Ladakh.**

Created with love ❤ by ForumIAS- the knowledge network for civil services.
Visit academy.forumias.com for our mentor based courses.
ForumIAS

Centre's New Regulations For Ladakh

About New Regulations

1. Ladakh Civil Services Decentralization and Recruitment (Amendment) Regulation, 2025

- Introduces *domicile-based recruitment* for government posts in Ladakh.
- Domicile criteria include:
    - 15 years of residence in Ladakh, or
    - 7 years of education including appearance in Class 10 or 12 in Ladakh, or
    - Children of Central Government employees serving 10+ years in Ladakh, or
    - Spouses/children of domiciles.

2. Ladakh Civil Services Domicile Certificate Rules, 2025

- Defines the procedure for obtaining domicile certificates.
- **Issuing Authority**: Tehsildar
- **Appellate Authority**: Deputy Commissioner
- *Applications allowed both online and offline.*

3. Union Territory of Ladakh Reservation (Amendment) Regulation, 2025

- Sets *reservation ceiling at 85% for SC, ST, OBC*, and other backward groups (excluding 10% EWS quota).
- *Extends reservations to professional institutions* (engineering/medical colleges).
- Earlier reservation in these institutes was capped at 50%.

4. Ladakh Official Languages Regulation, 2025

- Recognises English, Hindi, Urdu, Bhoti, and Purgi as official languages.
- Promotes *Shina, Brokskat, Balti, and Ladakhi* through institutional support.

5. Ladakh Autonomous Hill Development Councils (Amendment) Regulation, 2025

- Reserves *one-third of seats for women* in LAHDCs of Leh and Kargil, on a rotational basis.

Significance of the Regulations:

Created with love ❤ by ForumIAS- the knowledge network for civil services.
Visit academy.forumias.com for our mentor based courses.
ForumIAS

- *First region-specific legal framework* post bifurcation from Jammu & Kashmir.
- Attempts to safeguard local identity, address the lack of domicile/job protection, and recognize linguistic diversity.
- A response to growing local demands for constitutional safeguards, such as inclusion under the Sixth Schedule (currently not granted).

UMEED Portal

News: The Union Government is preparing to launch the *Unified Waqf Management, Empowerment, Efficiency, and Development (UMEED)* portal. **UMEED Portal**

About UMEED Portal
- The Unified Waqf Management, Empowerment, Efficiency, and Development (UMEED) Portal is a *centralized digital platform for streamlined registration and transparent management of Waqf properties across India.*
- It aims at streamlining the management of waqf properties by consolidating related documents and records.
- It aligns with the provisions of the recently enacted Waqf (Amendment) Bill, 2025.

Key Highlights:
- All Waqf properties must be registered on the portal *within six months* of its launch.
- Registration requires complete property details, including measurements and geo-tagged location.
- State Waqf Boards will facilitate the registration process.
- *Properties registered in the name of women will not qualify as Waqf assets*.
- Women, children, and economically weaker sections will continue as priority beneficiaries.
- Properties unregistered after the deadline (including any 1–2 month extension) will be treated as disputed and referred to the Waqf Tribunal.

Kichan and Menar Wetlands

News: Khichan in Phalodi and Menar in Udaipur have been designated as Ramsar sites. **Kichan and Menar Wetlands**

Created with love ❤ by ForumIAS- the knowledge network for civil services.
Visit academy.forumias.com for our mentor based courses.
Forum IAS

About Kichan and Menar Wetlands

Source – MoEFCC

Menar Wetland

- **Location:** It is located in the Menar and Kheroda villages in **Vallabhnagar taluka, Udaipur District of Rajasthan.**
- The Menar Wetland Complex is a **freshwater monsoon wetland complex** formed by **three ponds – Braham talab, Dhand talab and Kheroda talab**, and **agricultural land** that connects the latter two.
- **Importance**
  - **Migratory birds:** During the monsoon season the farmland floods provide **habitat for 110 species of waterbirds** of which 67 are migratory.
    - Among the **notable bird species** at the site are the **critically endangered white-rumped vulture and long-billed vulture.**
  - **Plant species:** Over **70 plant species** are found, including **mango trees around Braham talab** that host a large colony of **Indian flying foxes**.
- **Community participation:** It is recognized as one of the **best examples of community-led conservation** in Rajasthan, with residents playing a key role in conserving wildlife by preventing poaching or fishing.

Khichan Wetland

- **Location:** Khichan Wetland is located in the Phalodi tehsil of Phalodi district, Rajasthan, India, in the northern Thar Desert.
- It comprises **two water bodies – Ratri nadi (river)** and **Vijaysagar talab (pond),** riparian habitat and scrub land.
- **Fauna and flora**
  - This desert ecosystem supports **drought-resistant plant species** that provide habitat for over 150 species of birds.
  - The site is especially recognised for hosting **large wintering flocks of migratory demoiselle cranes (locally known as Kurjan),** making up over 22,000 individuals each year.

Note: Previously, only **Keoladeo Ghana National Park in Bharatpur** and **Sambhar Lake in Jaipur** had Ramsar site status in the state.

Created with love ❤ by ForumIAS- the knowledge network for civil services.
Visit academy.forumias.com for our mentor based courses.
ForumIAS

- **India** now has a total of **91 Ramsar sites.**

United Nations Economic and Social Council (ECOSOC)

News: India got elected to the United Nations Economic and Social Council (ECOSOC) for the term 2026-28. **United Nations Economic and Social Council (ECOSOC)**

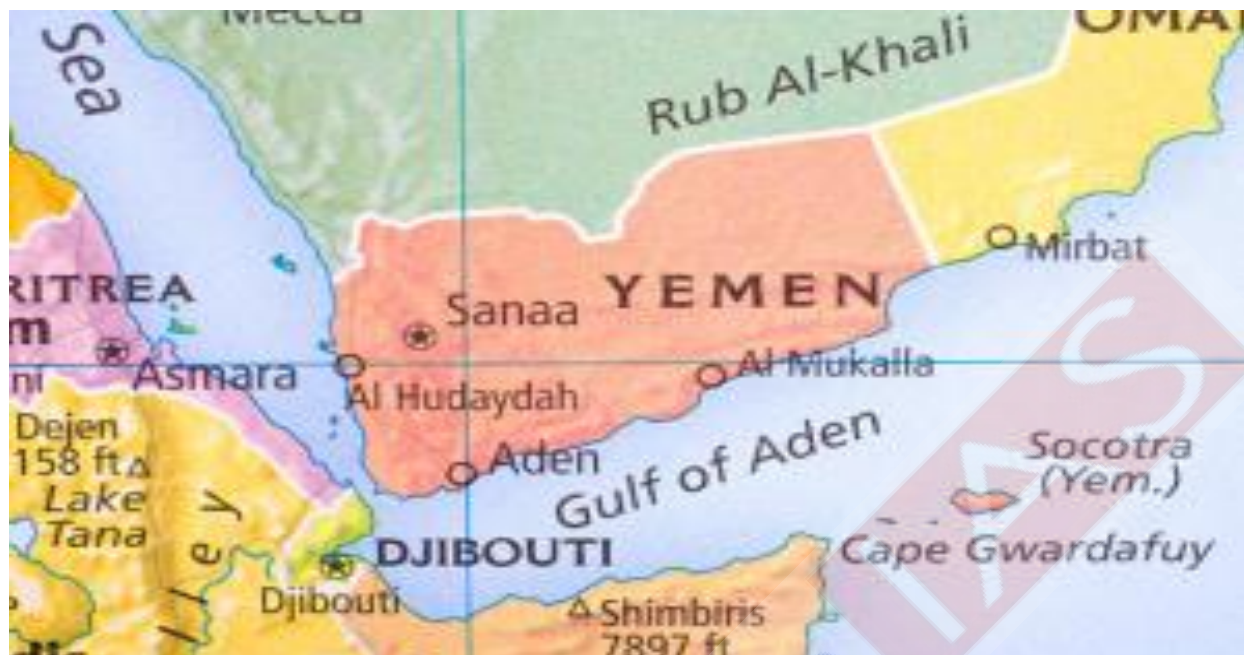**About United Nations Economic and Social Council (ECOSOC)**

Figure 7.Source – ECOSOC

- It is one of the **six principal organs** of the United Nations, established by the **UN Charter in 1945.**
  - Other organs are **UNSC, UNGA, Trusteeship Council, ICJ, and UN secretariat.**
- **Objective:** It plays a central role in advancing the international **development agenda** and fostering international **cooperation** across **economic, social, and environmental spheres**.
- **Headquarters:** Its headquarters is located in **New York, U.S.A.**
- **Members**
  - It has **54 member Governments** which are elected for **three-year terms** by the **General Assembly.**
  - The **General Assembly of U.N. comprising all 193 UN Member States** elects ECOSOC members annually by **secret ballot**.
- **President:** The president of the Council is elected for a **one-year term** and **chosen from the small or medium sized states represented on the Council** at the beginning of each new session.
- **Seat allocations:** Seats on the Council are allotted **based on geographical representation**.
- **Responsibilities:** The members of ECOSOC are responsible for electing the **executive board of UNICEF**, the **council of the United Nations Development Programme**, the committee of **UNHCR etc.**

Socotra Island

News: UAE partners with WHO to launch two-year initiative targeting child malnutrition crisis on Yemen's Socotra Island. **Socotra Island**

About Socotra Island

Created with love ❤ by ForumIAS- the knowledge network for civil services.
Visit academy.forumias.com for our mentor based courses.
ForumIAS

Source-iStock

- **Location:** It is a **Yemeni island** situated between the **Guardafui Channel and the Arabian Sea** in the Indian Ocean.
- It lies **380 km south of the Arabian Peninsula** and **232 km east of the Horn of Africa** near the **Gulf of Aden**.
- It is the **largest island** of the much larger **Socotra archipelago**.
- **Ecological diversity:** The Socotra archipelago has been dubbed the **Galapagos of the Indian Ocean** due to its **ecological diversity** and high rates of **endemism**.
    - **Endemic**: 37% of Socotra's 825 plant species, 90% of its reptile species and 95% of its land snail species do not occur anywhere else in the world.
    - Important plant species are the **Dragon's Blood trees**, frankincense, myrrh, and endemic aloes.
- **Climate:** It has a semi-desert climate with low annual rainfall.
- **Recognition:** In **2008**, Socotra was recognised as a **UNESCO World Heritage Site**.

ECI's Upgraded Index Card System

News– On June 5, 2025, the Election Commission of India (ECI) announced a major technological upgrade in its Index Card system. It aims to improve the efficiency, accuracy, and accessibility of post-election data dissemination. **ECI's Upgraded Index Card System.**

Created with love ❤ by ForumIAS- the knowledge network for civil services.
Visit academy.forumias.com for our mentor based courses.
ForumIAS

ECI's Upgraded Index Card System

About Index Card

- The Index Card is a *non-statutory*, post-election statistical reporting format developed as a *suo moto initiative* by the ECI.
- It serves as a constituency-level data tool to record and publish electoral details for public, academic, and research use.
- It provides constituency-level data across multiple dimensions, including *candidate information, vote counts, party performance, gender-based voting patterns*, and *regional voting variations.*

Why was the System Upgraded?

- Earlier, information was manually filled at the constituency level using various statutory formats on physical Index Cards.
- These *physical Index Cards were later used for data entry into the online system to generate statistical reports.*
- The process was manual and multi-layered, making it time-consuming and resource-intensive.
- It frequently led to delays in data availability and slowed dissemination of post-election statistical information.

Key features of the new technology-driven system

- Automation of data integration and report generation
- Faster access and dissemination of verified election statistics
- Reduced human errors and time delays
- Better support for researchers, academia, journalists, and policymakers

Eurasian Economic Union (EAEU)

News: India is set to commence trade negotiations with the Eurasian Economic Union (EAEU) this year.

About Eurasian Economic Union (EAEU)

Created with love ❤ by ForumIAS- the knowledge network for civil services.
Visit academy.forumias.com for our mentor based courses.
Forum IAS

EURASIAN ECONOMIC UNION (EAEU)

Source – MEA

- It is an international organization for **regional economic integration** in the **former Soviet region**.
- **Founded in:** It is established by the **Treaty on the Eurasian Economic Union** signed on 29 May **2014** and came into force on **1 January 2015.**
- **Aim:** It provides for **free movement** of goods, services, capital and labor, pursues coordinated, harmonized and **single policy in the sectors** determined by the Treaty and international agreements within the Union.
- **Members:** The Eurasian Economic Union consists of five member states: Russia, Belarus, Kazakhstan, Kyrgyzstan, and Armenia.
- **Structure**
    - **Eurasian Economic Commission (EEC):** It is the **permanent regulatory body** of the EAEU.
        - The **main purpose** is ensuring the functioning and development of the EAEU, and developing proposals for the further development of integration.
        - Its headquarters is in **Moscow**.
        - **Presidency:** Each year, a member state is elected chairman to head the Union.
    - **Court of the Eurasian Economic Union:** It was **formed** by replacing the Court of the Eurasian Economic Community (EurAsEC Court) in **2015**.
        - It is in charge of **dispute resolution and the interpretation of the legal order** within the EAEU.
        - Its headquarters is in **Minsk**.
    - **Customs Union of the Eurasian Economic Union:** It is a customs union of the member states of the EAEU which initially became effective on January 1, **2010**.
- **Drawbacks**
    - The Commission's **power is limited**.
    - Member states **disagreeing** with its judgements can **appeal to other bodies**, and the Commission has **no power to bring a member state before the Court** in a case of non-compliance.
    - Disputes are **often resolved bilaterally** rather than via EEU institutions.
    - Unlike the European Union (EU), the EAEU **does not share a common**

Created with love ❤ by ForumIAS- the knowledge network for civil services.
Visit academy.forumias.com for our mentor based courses.
ForumIAS

Clean Plant Programme (CPP)

News: The Union Agriculture Minister launched the "Clean Plant Programme" to establish nine horticultural facilities across the country duing India's first Agri Hackathon in Pune.

About Clean Plant Programme (CPP)

CABINET DECISION
9TH AUGUST, 2024

Cabinet approves the
Clean Plant Programme (CPP) under
Mission for Integrated Development
of Horticulture

- Investment of **Rs.1,765.67 Cr**

- CPP will provide access to virus-free, high-quality planting material to farmers regardless of their landholding size or socioeconomic status

- Streamlined certification processes & infrastructure support to nurseries

- Nine world class state-of-the-art Clean Plant Centers will be established across India

- It will address diverse agro-climatic conditions across India by developing region-specific clean plant varieties & technologies

Figure 8. Source – PIB

- It is designed to **address critical issues in horticulture** by providing access to **high-quality, virus-free planting material.**
- **Aim:** It aims to **enhance the quality and productivity of fruit crops** across the nation.
- **Nodal Ministry:** Ministry of Agriculture and Farmers Welfare
- **Implementing Agency:** National Horticulture Board in collaboration with the Indian Council of Agricultural Research (ICAR).
- **Core Components of the CPP**
  o **Clean Plant Centers (CPCs):** **Nine** world-class CPCs will be set up across India.
  o These centers will have advanced labs for diagnostics, therapy, and tissue culture.
  o **Locations**: The CPCs will be located in regions suited for specific fruit crops, such as Grapes (Pune), Temperate Fruits like Apple, Almond, and Walnut (Srinagar & Mukteshwar), Citrus Fruits (Nagpur & Bikaner), Mango, Guava, Avocado (Bangalore), Mango, Guava, Litchi (Lucknow), Pomegranate (Sholapur) and Tropical/Sub-Tropical Fruits in Eastern India.
  o **Certification and Legal Framework:** A strong certification system will be put in place to ensure that planting materials are produced and sold with full accountability. This system will be supported by regulations under the **Seeds Act of 1966**.
  o **Enhanced Infrastructure:** Large nurseries will receive support to develop the necessary infrastructure for multiplying clean planting materials efficiently.
- **Importance of the CPP**
  o **Sustainability:** The programme aligns with initiatives like **Mission LiFE and One Health,** promoting eco-friendly farming practices.
  o **Self-reliance:** It **reduces the need for importing** planting materials, making India more self-sufficient.
  o **Global leadership:** CPP will help position India as a **leading exporter of high-quality** fruits, driving transformative changes in the horticulture sector.

EnviStats India 2025

News: The Ministry of Statistics and Programme Implementation (MoSPI), Government of India has released the 8th issue of the publication titled "EnviStats India 2025: Environment Statistics".

Created with love ❤ by ForumIAS- the knowledge network for civil services.
Visit academy.forumias.com for our mentor based courses.
ForumIAS

About EnviStats India 2025

Figure 9. Source – MoSPI

● **Released by:** Ministry of Statistics and Programme Implementation (MoSPI)

● It is the **8th issue of the publication** titled **"EnviStats India 2025: Environment Statistics"** during the **National Workshop** on Using Alternate Data Sources and Frontier Technologies for Policy Making.

● **Published by:** The **National Statistics Office (NSO)** since **2018** in alignment with the Framework for the Development of Environment Statistics (FDES) 2013.

● The data presented in the publication are **organized into six components**, each corresponding to the components of FDES 2013.

Key highlights of the publication

● **Thermal power generation** has **increased** from 7,92,053 GWh to 13,26,549 GWh and **Electricity generation** from **renewable energy** sources has increased from 65520 GWh to 2,25,835 GWh during 2013-14 to 2023-24.

● The **annual mean temperature increased** from 25.05°C in 2001 to 25.74°C in 2024. Similarly, the **annual minimum and maximum temperature rose** from 19.32°C to 20.24°C and 30.78°C to 31.25°C respectively, during the same period.

● The **annual rainfall data** from 2001 to 2024 highlights significant year-to-year variability influenced by monsoon patterns.

○ Despite this variability, the data does not indicate any clear long-term upward or downward trend in total annual rainfall.

● **Inland fish production** has **increased** from 61.36 lakh tonnes in 2013-14 to 139.07 lakh tonnes in 2023–24, possibly indicating inland aquaculture and freshwater fisheries.

● The **Environment Sustainability Sector** shows the **highest expenditure** share as Rs. 2433.24 crore in 2021-22.

Significance

● It is a **key resource for policymakers, researchers, and stakeholders,** offering a comprehensive overview of the country's environmental landscape.

● Through the analysis of **key environmental indicators**, the publication highlights emerging environmental trends, identifies pressing challenges.

● It supports the development of **evidence-based policies** aimed at achieving environmental sustainability and resilience.

Greater Flamingo

News: Tamil Nadu has officially declared the establishment of the Greater Flamingo Sanctuary at Dhanushkodi, aiming to preserve a critical stopover point along the Central Asian Flyway for thousands of migratory wetland birds. **Greater Flamingo**

Created with love ❤ by ForumIAS- the knowledge network for civil services.
Visit academy.forumias.com for our mentor based courses.
ForumIAS

About Greater Flamingo

Figure 10.Source: Animilia

- It is the **largest among flamingo species.**
- They are commonly found in warm, aquatic habitats across multiple continents, including the **coastal areas of India and Pakistan in Asia, as well as regions in Central and South America, the Caribbean, and Southern Europe.**
- **Features**:
  - While this species exhibits significant dispersal ability during the non-breeding season, it **shows strong philopatry**—tending to return to or stay near the same site.
  - It is known for its pinkish-white feathers, long pink legs, and a curved pink bill with a black tip. Its color comes from carotenoid-rich food like shrimps and algae.

- **The Kachchh Desert Wildlife Sanctuary**, located in the Great Rann of Kachchh (GRK) in Gujarat, stands out as a unique Protected Area. It hosts **South Asia's only known breeding site for the Greater Flamingo**, which has earned it international recognition as the "**Flamingo City**."
- **Conservation Status**: Classified as **'Least Concern'** by IUCN.

Created with love ❤ by ForumIAS- the knowledge network for civil services.
Visit academy.forumias.com for our mentor based courses.
Forum IAS