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Building Bureaucrats Since 2006

UPSC Daily Current Affairs –01.07.2026

Index

1. Digital Transformation of India's Criminal Justice System -01
2. Centralised IT-Enabled System (CITES) Project – EPFO Modernisation -02
3. The fiscal tightrope for State government -04
4. Pins Instrument Approach: A Milestone in India's Helicopter Navigation -05
5. Multi-Lane Free Flow (MLFF) Tolling System -07

1. Digital Transformation of India's Criminal Justice System

Prelims:

Polity & Governance, Internal Security, Science & Technology

Mains:

GS Paper II-Governance, GS Paper III-Internal Security

Current relevance:

The **Union Ministry of Home Affairs** announced that from **1 January 2027**, all investigation and trial procedures under the **new criminal laws** will be recorded digitally through the **Interoperable Criminal Justice System (ICJS)**.



Interoperable Criminal Justice System (ICJS):

1. It is expected to achieve **nationwide implementation by 2027**, enabling a fully digital investigation and trial process.
2. ICJS integrates **police, courts, prisons, forensic laboratories, and prosecution** on a single digital platform to facilitate seamless information sharing.
3. **Digital Storage:** Criminal justice data will be securely stored on **MeghRaj**, the Government of India's cloud platform.
4. **Legal Framework:** The digital framework supports the implementation of:
 - i. **Bharatiya Nyaya Sanhita (BNS), 2023**
 - ii. **Bharatiya Nagarik Suraksha Sanhita (BNSS), 2023**
 - iii. **Bharatiya Sakshya Sanhita (BSS), 2023**
5. **Implementation Status:** According to the **National Crime Records Bureau (NCRB)**, **only 46% of FIRs** have been digitally transmitted to courts, while **Haryana, Goa, Assam, Punjab, and Chandigarh** have fully implemented all prescribed digital parameters under the criminal justice system.
6. The BNSS strengthens the concept of **Zero FIR**, with the **CCTNS** enabling FIR registration in **23 languages** and the **Bhashini application** facilitating **multilingual translation** for seamless transfer of cases across jurisdictions.
7. The **national implementation score** increased from **46.47%** in **January 2025** to **70.06%** in **June 2026**, alongside significant improvement in compliance with statutory timelines for filing charge sheets.
8. The digital criminal justice system facilitates the generation of **digital evidence (Sakshya) IDs** and the **electronic service of summons**, enhancing efficiency and transparency in criminal proceedings.

Source: THE HINDU - <https://www.thehindu.com/news/national/criminal-justice-systems-digital-push-aims-for-a-full-roll-out-by-next-year/article71166359.ece>

2. Centralised IT-Enabled System (CITES) Project – EPFO Modernisation

Prelims:

Polity & Governance, Economy

Mains:

GS Paper II-Governance, GS Paper III – Economy

Current relevance:

The **Employees' Provident Fund Organisation (EPFO)** is implementing a planned **database consolidation** and software upgrade under the **Centralised IT-Enabled System (CITES) project**.

Highlights:

1. **Centralised IT-Enabled System (CITES)** is a digital modernisation initiative of the **EPFO** aimed at improving operational efficiency through **automation, rule-based processing, and a single national database**.
2. **Objective:** To modernise EPFO services by providing **transparent, seamless, and citizen-centric digital service delivery** across the country.
3. **Key Features:**
 - i. It is designed and developed by **the Centre for Development of Advanced Computing (C-DAC)**.
 - ii. It replaces the earlier decentralised system with a **single centralised national database**, enabling any EPFO office to process member service requests.
 - iii. Provides a **unified digital interface** for EPFO members.
 - iv. Enables **online KYC updates, claim submission, and grievance redressal**.
 - v. Allows members to access their PF balance, service records, pension details, and claim status using the existing **Universal Account Number (UAN)**.
 - vi. Facilitates **electronic claim processing**, online query management, and digital communication for faster service delivery.



Source: THE HINDU- <https://www.thehindu.com/news/national/what-is-epfos-new-system-explained/article71164453.ece>

3. The fiscal tightrope for State government

Prelims:

Indian Economy, Polity & Governance

Mains:

GS Paper II-Polity & Governance, GS Paper III-Indian Economy

Current relevance:

The **White Papers on State Finances** released by the **Kerala and Tamil Nadu Governments** have highlighted the growing debt burden and fiscal stress faced by State governments, reviving the debate on fiscal federalism, State borrowing, and development financing.



At a glance:

Fiscal Constraints:

1. States face **persistent fiscal deficits** as government expenditure continues to exceed revenue receipts.
2. **Limited fiscal autonomy** and a relatively **lower share** in **Central tax devolution** make States increasingly dependent on financial transfers from the Union Government.
3. A significant portion of State budgets is spent on salaries, pensions, and other revenue expenditure, leaving **limited resources for capital investment**.
4. **Lower capital expenditure** restricts investment in infrastructure and **long-term economic growth**.

5. **Higher borrowing costs** through **State Development Loans (SDLs)** increase the overall debt burden on State governments.

Measures to Strengthen State Finances:

1. Strengthen **fiscal federalism** by enhancing the fiscal autonomy of States.
2. Ensure **equitable tax devolution** and timely fiscal transfers from the Union Government to strengthen the **financial capacity of States**.
3. **Reduce borrowing costs** for State governments to improve **fiscal sustainability**.
4. **Increase investment in infrastructure**, higher education, research and innovation, public transport, and knowledge-based industries for long term growth.
5. Improve **public financial management** and strengthen revenue mobilisation to support sustainable and inclusive development.

Revenue Expenditure: Short-term expenses incurred during day-to-day operations to maintain the business or governmental body.

Capital Expenditure (CapEx): Funds a company or government uses to acquire, upgrade, or maintain long-term physical assets, such as property, buildings, or equipment.

State Development Loans (SDLs): Marketable debt securities (bonds) issued by individual state governments in India to fund fiscal deficits and finance infrastructure or public welfare programs.

Source: THE HINDU <https://www.thehindu.com/business/Economy/the-fiscal-tightrope-for-state-governments/article71167296.ece>

4. Pins Instrument Approach: A Milestone in India's Helicopter Navigation

Prelims:

Science & Technology, Infrastructure

Mains:

GS Paper III-Science & Technology, GS Paper II-Governance

Current relevance:

The **Ministry of Civil Aviation** has approved **India's first Private Point-in-Space (PinS) Instrument Approach Procedure** for helicopter operations **at Undavalli Heliport, Andhra Pradesh**.



Highlights:

1. India has approved its **first Private Point-in-Space (PinS) Instrument Approach Procedure** for helicopter operations at **Undavalli Heliport**.
2. **Point-in-Space (PinS)**: It is a **satellite-based instrument** approach procedure that **enables helicopters to safely approach heliports** without conventional instrument landing infrastructure.
3. The procedure was developed by the **Airports Authority of India (AAI)** and approved by the **Directorate General of Civil Aviation (DGCA)** in accordance with ICAO Standards and Recommended Practices (SARPs).
4. **Technology Integration:**
Supports the wider adoption of **indigenous satellite-based navigation technologies**, including **GAGAN**, for precision aviation operations.
5. **Other features:**
 - i. Enables **safe and precise** instrument approaches to heliports.
 - ii. Facilitates reliable **all-weather helicopter operations**.
 - iii. **Enhances connectivity to remote** and strategically important locations.
6. **Applications**
 - i. Emergency Medical Services (EMS).
 - ii. Disaster relief operations.
 - iii. Tourism and pilgrimage services.
 - iv. Offshore operations.

- v. Corporate aviation.
- vi. Regional connectivity.
- vii. Instrument Flight Rules (IFR) operations in remote areas.

Source: PIB- <https://www.pib.gov.in/PressReleaseDetail.aspx?PRID=2280128®=48&lang=1>

5. Multi-Lane Free Flow (MLFF) Tolling System

Prelims:

Science & Technology, Infrastructure

Mains:

GS Paper III-Infrastructure, GS Paper II-Governance

Current relevance:

The **National Highways Authority of India (NHAI)** has successfully launched the **Multi-Lane Free Flow (MLFF) Tolling System** at Manoharpura Toll Plaza on the **Delhi-Jaipur** section of **NH-48**.



Highlights:

1. The **Multi-Lane Free Flow (MLFF)** system is a **barrier-less electronic toll collection mechanism** that enables vehicles to pass through toll plazas without stopping.

2. **Objective:** To create a **seamless, barrier-free, and technology-driven toll collection system** that improves traffic flow and enhances commuter convenience.
3. **Technology:** The system integrates **Automatic Number Plate Recognition (ANPR)** technology with **FASTag-based Electronic Toll Collection (ETC)** for automated toll collection.
4. **E-Notice Mechanism:**
 - i. Vehicles with **insufficient FASTag balance**, invalid or non-functional FASTags receive an **Electronic Notice (E-Notice)**.
 - ii. Users must pay the applicable toll within **72 hours**, failing which **double the normal user fee** is charged.

Key features:

1. Provides barrier-free toll collection with **zero waiting time** at toll plazas.
2. Ensures **uninterrupted movement of vehicles** without stopping.
3. Automates toll collection through **minimal human intervention**.
4. Integrates **FASTag** and **Automatic Number Plate Recognition (ANPR)** technology for seamless digital toll payments.

Source: PIB- <https://www.pib.gov.in/PressReleaseDetail.aspx?PRID=2279896®=48&lang=1>



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UPSC Daily Current Affairs –02.07.2026

Index

1. 'VIJAY' Road Map: Vision for a Future-Ready Indian Army	-01
2. Himalayan Ray-Finned Fish	-03
3. Strategic Roadmap for Making Ayurveda Global	-05
4. Wild Rice (<i>Oryza rufipogon</i>)	-06
5. Digital India BHASHINI Division (DIBD)	-08

1. 'VIJAY' Road Map: Vision for a Future-Ready Indian Army

Prelims:

Defence & Security, Science & Technology

Mains:

GS Paper II-Governance, GS Paper III-Governance

Current relevance:

General Dhiraj Seth, the **31st Chief of the Army Staff**, unveiled the '**VIJAY**' Road Map, outlining his vision to transform the **Indian Army into a technology-enabled, future-ready, and multi-domain force**, aligned with the **Decade of Transformation**.



Highlights:

The 'VIJAY' Road Map presents the **Indian Army's strategic vision to build a technology-enabled, future-ready**, and combat-capable force capable of addressing evolving **security challenges**.

Objective:

To transform the Indian Army into a **modern, agile, technology-driven, and integrated combat force** aligned with India's long-term national security goals.

Pillars of the 'VIJAY' Road Map:

- i. **V – Vigilance**
Focuses on maintaining **high operational readiness** and **continuous vigilance** along India's borders.
- ii. **I – Innovation and Transformation**
Promotes **modern military doctrines**, advanced technologies, and capability development to adapt to the changing nature of warfare.
- iii. **J – Jointness and Integration**
Strengthens **coordination among the Army, Navy, and Air Force**, while promoting military-civil fusion through a **Whole-of-Nation approach**.
- iv. **A – Atmanirbharta**

Reinforces the Army's commitment to **indigenous defence technologies and self-reliance** in defence manufacturing.

v. **Y – Yodha First**

Places the **soldier at the centre of military transformation** by prioritising **training, technological skills**, welfare, and support for veterans and Veer Naris.

Significance:

1. It **accelerates the modernisation of the Indian Army** by enhancing its preparedness for technology-driven and multi-domain warfare.
2. It **promotes Atmanirbhar Bharat** in the **defence sector** through greater adoption of indigenous technologies and stronger military capabilities.
3. The initiative strengthens jointness among the armed forces while contributing to the **vision of Viksit Bharat 2047** through enhanced national security.

Source: THE HINDU- https://www.pressreader.com/india/the-hindu-kochi-9ww8/20260702/281874420138931?srsId=AfmBOoqi2dEVXLOURWXvcu-aNojZ8QShF_19bkdz1RzsPQdW9_qr5gjV

2. Himalayan Ray-Finned Fish

Prelims:

Environment & Ecology, Biodiversity & Conservation

Mains:

GS Paper I-Indian Society, GS Paper II-Governance, GS Paper III-Environment & Biodiversity

Current relevance:

The **Sangno clan** of East Kameng district, **Arunachal Pradesh**, has launched a community-led initiative to conserve the **endangered Himalayan ray-finned fish (Schizothorax pelzami)**.

Highlights:

Himalayan ray-finned fish (*Schizothorax pelzami*):

1. Native to the **Himalayan and Trans- Himalayan River systems**.
2. Distributed across parts of **Arunachal Pradesh** and other Himalayan regions.
3. It inhabits **oxygen-rich freshwater streams and rivers** and serves as an important **indicator of healthy freshwater ecosystems**.
4. IUCN Red List Status: **Least Concern (LC)**

Community-Led Conservation Initiative:

1. **Translocation:** The fingerlings were released into a **Richaso stream** to safeguard them from **predatory mahseer**.
2. **Aim:** To revive and **sustain the traditional practice of community fishing** while ensuring long-term conservation of the species.
3. To facilitate natural population growth, the village has proposed a **five-year ban on fishing in the Richaso stream**.
4. The community plans to promote **eco-angling, stream-trail trekking**, and other **eco-tourism activities** alongside biodiversity conservation.



Source: THE HINDU <https://www.thehindu.com/news/national/arunachal-pradesh/arunachal-clan-launches-drive-to- conserve-endangered-ray-finned-fish-sustain-tradition/article71170268.ece>

3. Strategic Roadmap for Making Ayurveda Global

Prelims:

Governance, Health, International Relations

Mains:

GS Paper II-Governance, GS Paper III-Economy

Current relevance:

NITI Aayog has released the report "**Strategic Roadmap for Making Ayurveda Global**", outlining a phased strategy to establish Ayurveda as a globally recognised system of healthcare by 2047.

Highlights:

1. **Objective:** To position Ayurveda as a **globally recognised, evidence-based healthcare system** while promoting research, education, exports, and international collaboration.
2. The report was prepared by the **Health Division of NITI Aayog** in collaboration with **PricewaterhouseCoopers (PwC)**.
3. **Three-Pillar Framework:**
 - i. **Availability**
Focuses on global practice and workforce, exports and manufacturing, **international research & development**, and standardised education.
 - ii. **Acceptability**
Promotes **regulatory compliance, international collaborations**, insurance coverage, and cultural adaptability.

iii. Propagation

Emphasises **global branding, international visibility**, medical value travel, and participation in global organisations.

Significance:

1. Supports the **vision of One Earth, One Health**.
2. Encourages **evidence-based research** and innovation for ayurveda.
3. Strengthens India's role as a **global hub for traditional healthcare** and wellness.
4. Enhance India's **cultural and knowledge-based soft power**.



Source: PIB –

<https://www.pib.gov.in/PressReleaseDetail.aspx?PRID=2280540®=48&lang=1>

4. Wild Rice (*Oryza rufipogon*)

Prelims:

Environment & Ecology, Agriculture

Mains:

GS Paper II-Governance, GS Paper III- Agriculture, Environment

Current relevance:

The **Borjuli site** in Sonitpur district, **Assam**, has been notified as a **Biodiversity Heritage Site (BHS)** under the **NRAA-funded Wild Rice Conservation Project**.

Highlights:

Background:

1. The **National Rainfed Area Authority (NRAA)** has funded the project "**In-situ Conservation and Management of Wild Rice in Sonitpur District of Assam**." The project has been implemented since **2022** by **ICAR–National Bureau of Plant Genetic Resources (ICAR–NBPGR)** in collaboration with the Assam State Biodiversity Board.
2. The **Borjuli site** has been notified as a **Biodiversity Heritage Site (BHS)** by the National Biodiversity Authority (NBA).

About Wild Rice (*Oryza rufipogon*):

1. *Oryza rufipogon* is the **wild ancestor of cultivated Asian rice**.
2. Native to **South and Southeast Asia**, including **India**.
3. Grows **naturally in wetlands, marshes, swamps**, floodplains, ponds, and seasonally flooded areas.

BORJULI SITE
Sonitpur District, Assam
NOTIFIED AS
BIODIVERSITY HERITAGE SITE (BHS)
under the
NRAA-FUNDED WILD RICE CONSERVATION PROJECT

NRAA
National Rainfed Area
Authority

Ministry of Agriculture
& Farmers Welfare
Government of India

WILD RICE
(*Oryza rufipogon*)

Conserving wild rice diversity for a resilient and food-secure future

Location
Borjuli, Sonitpur District,
Assam

Significance
Home to wild rice (*Oryza rufipogon*)
– a valuable genetic resource
for climate-resilient agriculture

Project
In-situ Conservation and Management
of Wild Rice in Sonitpur District

Implemented by
ICAR–NBPGR, New Delhi
in collaboration with
Assam State Biodiversity Board

Funded by
National Rainfed Area Authority
(NRAA)

Significance:

1. Provides valuable genes for **climate resilience**, disease and pest resistance, and stress tolerance.
2. Contributes to the development of **high-yielding** and **nutritionally superior** rice varieties.
3. Promotes sustainable food production and **nutritional security**.

Source: PIB-

<https://www.pib.gov.in/PressReleaseDetail.aspx?PRID=2280202®=48&lang=1>

5. Digital India BHASHINI Division (DIBD)**Prelims:**

Science & Technology, Governance

Mains:

GS Paper II-Governance, GS Paper III-Science & Technology

Current relevance:

The **Digital India BHASHINI Division (DIBD)** showcased its multilingual AI innovations at the **National Conference on e-Governance (NCeG) 2026**.



Highlights:

BHASHINI is India's national initiative for AI-driven multilingual digital inclusion, implemented by the **Digital India BHASHINI Division (DIBD)** under the Digital India Corporation (DIC), **Ministry of Electronics and Information Technology (MeitY)**.

Objective:

To enable **citizens to access digital services in their preferred language** through AI-powered speech and text technologies.

AI-Driven Applications:

1. ShrutLekh

An **AI-powered real-time speech-to-text and translation solution** used for live transcription during conference sessions.

2. BhashaDaan

A **national crowdsourcing initiative** that enables citizens to contribute and validate language datasets for AI development.

3. Suno Sutra

India's **first handheld multilingual edge AI device**, enabling multilingual communication and AI-assisted interactions.

BHASHINI supports **multilingual public service** delivery through platforms such as:

CPGRAMS, Nyaya Setu, Arogya Vani, SabhaSaar, Yuva Saarthi

Significance:

1. Promotes inclusive and **citizen-centric digital governance**.
2. **Reduces language barriers** in accessing government services.
3. Strengthens India's **Digital Public Infrastructure (DPI)**.
4. Advances the vision of **Digital India** by making governance accessible in multiple languages.

Source: PIB-

<https://www.pib.gov.in/PressReleaseDetail.aspx?PRID=2280234®=48&lang=1>



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Building Bureaucrats Since 2006

UPSC Daily Current Affairs –03.07.2026

Index

1. New provident fund (PF) rules	-01
2. VISA'S OTP-less Payment Authentication	-03
3. Submarine Cable System	-04
4. Pashujanya Yudh Abhyas (PYA)	-06
5. DAKSH Leadership Programme	-08

1. New provident fund (PF) rules

Prelims:

Economy, Social Security

Mains:

GS Paper II-Governance, GS Paper III-Economy

Current relevance:

The **Ministry of Labour and Employment** has notified the **Employees' Provident Fund (EPF) Scheme, 2026**, **Employees' Pension Scheme (EPS), 2026**, and **Employees' Deposit Linked Insurance (EDLI) Scheme, 2026** under the **Code on Social Security, 2020**.

Highlights:

Background:

1. The **Employees' Provident Funds and Miscellaneous Provisions (EPF & MP) Act, 1952** established the legal framework for social security benefits for organised sector employees.
2. The **Code on Social Security, 2020** consolidated and rationalised India's labour laws relating to social security.

New changes:

1. The Government has notified the **EPF Scheme, 2026, EPS, 2026, and EDLI Scheme, 2026** to align social security provisions with the **Code on Social Security, 2020**.
2. **Objective:** To provide a **legally sound, uniform, and modern framework** for administering provident fund, pension, and insurance benefits while ensuring continuity of social security.

Ministry of Labour & Employment
Government of India

NEW SOCIAL SECURITY FRAMEWORK FOR A SECURE TOMORROW
Under the Code on Social Security, 2020

The Ministry of Labour and Employment notifies
NEW SCHEMES, 2026

Replacing the existing Rules of 1952 and ensuring a modern, inclusive and legally sound social security system.

EMPLOYEES' PROVIDENT FUND (EPF) SCHEME, 2026
Ensuring savings, financial security and long-term benefits for employees and their families.

EMPLOYEES' PENSION SCHEME (EPS) SCHEME, 2026
Providing financial support and dignified life to employees after superannuation.

EMPLOYEES' DEPOSIT LINKED INSURANCE (EDLI) SCHEME, 2026
Insurance protection for employees and their nominees in the event of unforeseen circumstances.

SECURE TODAY, EMPOWER TOMORROW | SOCIAL SECURITY FOR ALL

Noticeable changes:

1. Mandatory EPF contributions will be capped at **Rs 1,800 a month** for employees earning above the **statutory wage ceiling**. Above which contributions are **voluntary increasing take-home income**.
2. The new framework is expected to give employers greater **flexibility in designing salary structures**.
3. Among other reforms, EPFO has **simplified withdrawal provisions** by reducing multiple withdrawal categories into three broad classifications, while continuing its push towards greater **digitalisation of services**.

Source: THE HINDU - <https://www.thehindu.com/news/national/labour-ministry-makes-epf-contributions-beyond-1800-voluntary/article71175645.ece>

2. VISA'S OTP-less Payment Authentication

Prelims:

Economy, Science & Technology

Mains:

GS Paper II-Governance, GS Paper III-Economy

Current relevance:

Visa has launched **Visa Payment Passkey (VPP)**, an **OTP-less payment authentication solution** that enables users to verify online card transactions.



Highlights:

- Visa Payment Passkey (VPP)** is an **OTP-less payment authentication system** that enables secure online card transactions using biometric and device-based verification.

2. Objective:

To provide **faster, more secure, and seamless digital payment authentication** while reducing dependence on One-Time Passwords (OTPs).

3. Regulatory Backing:

The initiative aligns with the **Reserve Bank of India's Alternative Factor Authentication (AFA)** framework.

4. Authentication Methods:

Users can **authenticate transactions** using fingerprint recognition, facial recognition, device PIN, password, or pattern lock instead of an OTP.

5. Significance:

- i. Encourages wider adoption of **secure digital payments**.
- ii. Strengthens India's rapidly growing **FinTech ecosystem**.
- iii. Supports innovation in **authentication technologies**.
- iv. Contributes to a safer and more efficient digital economy.

Source: THE HINDU – <https://www.thehindu.com/business/visa-rolls-out-otp-less-payment-method-for-partner-customer/article71175003.ece>

3. Submarine Cable System

Prelims:

Science & Technology, Infrastructure

Mains:

GS Paper II-International Relations, GS Paper III-Science & Technology, Infrastructure

Current relevance:

A consortium comprising **Microsoft, Singtel, Tata Communications, and Lightstorm** has unveiled the **India-International Subsea Express Alliance (I-2SEA)**.

India-International Subsea Express Alliance (I-2SEA)

Submarine Cable System Connecting India, Malaysia, and Singapore



Highlights:

1. **I-2SEA (India–International Subsea Express Alliance)** is a submarine optical fibre cable system connecting **India, Malaysia, and Singapore** to enhance regional digital connectivity.
2. **Objective:**
To provide **high-speed, low-latency digital connectivity** for AI workloads, cloud services, hyperscalers, enterprises, and data centres across the India–Southeast Asia corridor.
3. **Implementation Partners:**
 - i. **NEC Corporation** has been appointed as the system supplier.
 - ii. **ASEAN Cablesip (ACPL)** will serve as the marine installation partner.
4. Provides **direct and low-latency subsea connectivity to Hyderabad**, a major AI and hyperscaler data centre hub.

Source: THE HINDU-

<https://www.thehindu.com/news/national/telangana/submarine-cable-system-project-linking-india-malaysia-singapore-unveiled/article71173557.ece>

4. Pashujanya Yudh Abhyas (PYA):

Prelims:

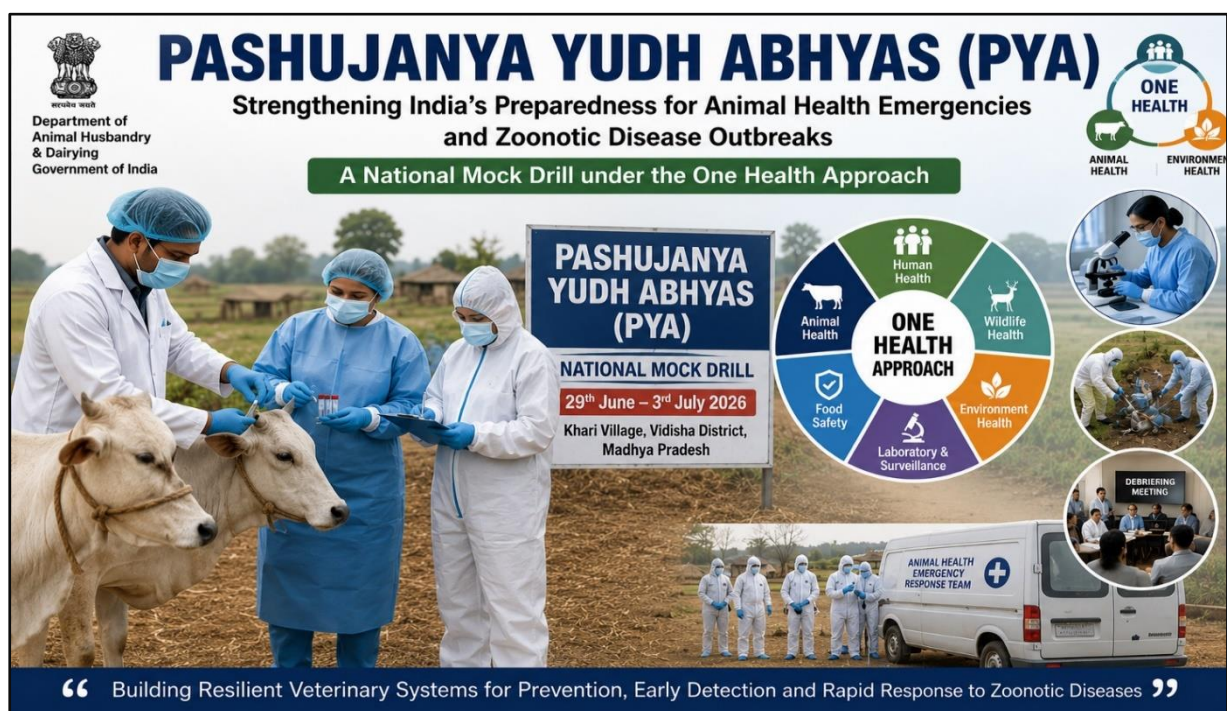
Environment & Ecology, Science & Technology, Health

Mains:

GS Paper II-Governance, GS Paper III-Science & Technology

Current relevance:

The **Department of Animal Husbandry & Dairying (DAHD)** conducted the **third national-level Pashujanya Yudh Abhyas (PYA)** in Khari village, Vidisha district, Madhya Pradesh.



Highlights:

1. **Pashujanya Yudh Abhyas (PYA)** is a **national-level mock drill** conducted under the **National One Health Mission** to assess India's preparedness for **animal health emergencies and zoonotic disease outbreaks**.

2. Objective:

To validate **emergency response mechanisms**, strengthen inter-sectoral coordination, and improve preparedness for the early detection, containment, and **management of zoonotic diseases**.

3. The **exercise simulated an Influenza A (H1N1) outbreak in animals** with the potential to spill over to humans and wildlife, testing the complete outbreak response chain.
4. The **One Health approach** was demonstrated by integrating the animal health, human health, wildlife, food safety, laboratory, and district administration sectors into a **unified response mechanism**.

5. Significance:

- i. Enhances India's preparedness to prevent and respond effectively to **zoonotic disease** outbreaks.
- ii. Promotes **coordinated action** among **multiple sectors** through the One Health framework.
- iii. Improves surveillance, laboratory infrastructure, and emergency response capabilities.
- iv. Facilitates the **early detection and rapid containment** of emerging and re-emerging infectious diseases.
- v. Strengthens **resilient veterinary** and public health systems for improved health security.

Source: PIB-

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2280871®=3&lang=1>

5. DAKSH Leadership Programme

Prelims:

Polity & Governance, public administration

Mains:

GS Paper II-Governance, GS Paper III-Science & Technology, Economy

Current relevance:

Union Minister Dr. Jitendra Singh launched the **third batch of the DAKSH Leadership Programme** for senior executives of **Central Public Sector Enterprises (CPSEs)**.

DAKSH LEADERSHIP PROGRAMME
Building Future-Ready Leaders for India's Public Sector Enterprises
DEVELOPMENT OF ASPIRATION, KNOWLEDGE, SUCCESSION AND HARMONY

Government of India
Capacity Building Commission

CAPACITY BUILDING COMMISSION
ENABLING LEADERSHIP. ADVANCING INDIA.

SCOPE
PROMOTING EXCELLENCE

ISB
Indian School of Business

DAKSH LEADERSHIP PROGRAMME
3rd BATCH INAUGURATION

LEADERSHIP
EXCELLENCE
INTEGRITY
INNOVATION
NATION FIRST

DAKSH LEADERSHIP PROGRAMME
BUILDING LEADERS
BUILDING INDIA

Preparing Today's Leaders
for Tomorrow's India

The DAKSH Leadership Programme is jointly organised by the **Capacity Building Commission (CBC)** and the **Standing Conference of Public Enterprises (SCOPE)**, in collaboration with the Indian School of Business (ISB).

Highlights:

1. **DAKSH (Development of Aspiration, Knowledge, Succession and Harmony)** is a one-year leadership development programme designed for senior executives of **Central Public Sector Enterprises (CPSEs)**.

2. Objective:

To develop a **future-ready leadership pool** by strengthening leadership, strategic thinking, governance, and decision-making capabilities among senior CPSE executives.

3. It is jointly organised by the Capacity Building Commission (CBC) and the **Standing Conference of Public Enterprises (SCOPE)**, in collaboration with the Indian School of Business (ISB).
4. **Governance Framework:**
 - i. **Whole-of-Government Approach**
 - Promotes **convergence of individual expertise and institutional capabilities** to achieve common national development goals.
 - Encourages collaboration across ministries, departments, institutions, and stakeholders for integrated governance.
 - ii. **Capacity Building**
 - Focuses on strengthening **both individual competencies and institutional capacities**.
 - Encourages continuous learning, innovation, adaptability, and collaborative leadership.

Source: PIB –

<https://www.pib.gov.in/PressReleaseDetail.aspx?PRID=2280759®=48&lang=1>



P.L.RAJ IAS & IPS ACADEMY

Building Bureaucrats Since 2006

UPSC Daily Current Affairs –04.07.2026

Index

1. Nameri tiger reserve	-01
2. Matcha Tea, Assam	-02
3. LokOS: Digital Governance Platform	-04
4. India Enters a New Era in Semiconductor Manufacturing	-06
5. e-Jagriti	-07

1. Nameri tiger reserve

Prelims:

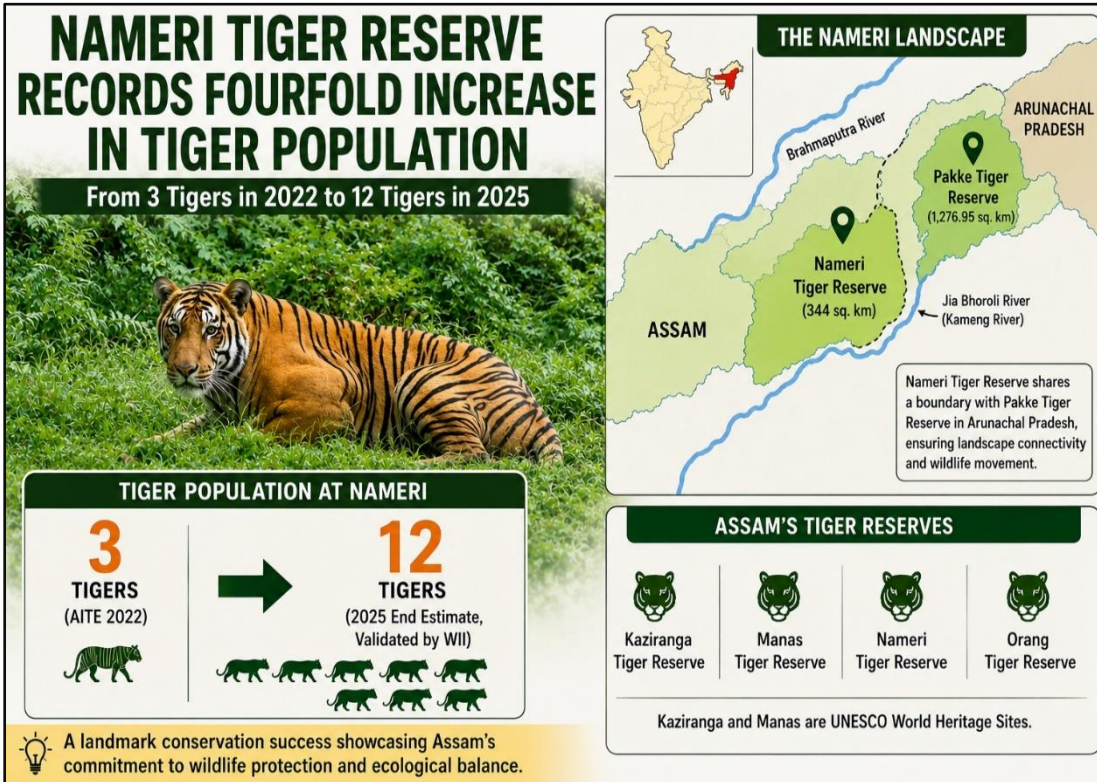
Environment & Ecology

Mains:

GS Paper III–Environment

Current relevance:

The **Wildlife Institute of India (WII)** validated the Assam Forest Department's estimate of **12 tigers in Nameri Tiger Reserve** by the end of 2025, marking a fourfold increase in tiger population.



Highlights:

About Nameri Tiger Reserve:

1. It is located in **Sonitpur district of Assam**, in the foothills of the **Eastern Himalayas**.
2. It shares an international ecological landscape with the **Pakke Tiger Reserve** in **Arunachal Pradesh**, facilitating wildlife movement.
3. The **Jia Bhoroli River** (known as the **Kameng River** in Arunachal Pradesh) flows through the reserve, supporting its rich aquatic and terrestrial biodiversity.
4. **Vegetation:** Comprises **tropical evergreen, semi-evergreen, moist deciduous forests**, along with extensive grasslands.
5. **Fauna:** Home to the **Royal Bengal Tiger, Asian Elephant, Clouded Leopard, Leopard, Gaur, Sambar, Wild Boar**, and several species of hornbills.

Reasons for Conservation Success:

1. **Continuous habitat protection and restoration** have created a favourable environment for tiger conservation.
2. **Scientific monitoring and regular wildlife surveys** have enabled effective population assessment and management.

3. Strengthened **anti-poaching measures** and improved conservation management have enhanced tiger protection.
4. **Landscape-level conservation** efforts have improved habitat connectivity and supported the recovery of tiger populations.

Source: THE HINDU–

<https://www.pressreader.com/foryou?popupArticleId=281668261713338>

2. Matcha Tea, Assam

Prelims:

Agriculture, Economy

Mains:

GS Paper III–Agriculture, Economy

Current relevance:

Chota Tingrai Tea Estate in Tinsukia district, **Assam**, has produced and auctioned India's first commercially manufactured **"matcha tea"** at the **Guwahati Tea Auction Centre (GTAC)**.



Highlights:

About Matcha Tea:

1. A premium **powdered green tea** prepared from specially cultivated tea leaves.
2. It is traditionally originated in **Japan**, while the tea plant (*Camellia sinensis*) is native to **East Asia**.
3. Tea plants are shade-grown for **3–4 weeks before harvest**, reducing sunlight exposure and enhancing chlorophyll and amino acid content.
4. **Growing Conditions:** Thrives in **cool, humid climates** with well-distributed rainfall, **well-drained acidic soils**, and high-altitude or hilly regions.
5. **Processing:** Tender leaves are steamed, dried, de-stemmed, and finely ground into a **vibrant green powder** using specialised stone or mechanical grinders.
6. **Key Nutrients:** Rich in **catechins (especially EGCG)**, chlorophyll, **L-theanine**, vitamins, minerals, **and natural caffeine**.
7. **Health Benefits:** Contains high antioxidant levels, supports sustained energy, improves concentration, and promotes overall well-being.
8. **Uses:** Widely used in **beverages, confectionery, bakery products, desserts, and health supplements**.

Source: THE HINDU - <https://www.thehindu.com/news/national/other-states/assam-estate-sells-indias-first-matcha-tea/article71178771.ece>

3. LokOS: Digital Governance Platform

Prelims:

Polity & Governance, Economy

Mains:

GS Paper II-Governance, GS Paper III-Economy

Current relevance:

LokOS, the digital platform under the **Deendayal Antyodaya Yojana–National Rural Livelihoods Mission (DAY-NRLM)**, is strengthening digital governance by enabling end-to-end digitisation of **Self-Help Groups (SHGs)** and **Community-Based Organizations (CBOs)**.

Highlights:

About LokOS:

1. LokOS (Lok = People, OS = Operating System) is a web and mobile platform under the **Deendayal Antyodaya Yojana–National Rural Livelihoods Mission (DAY-NRLM)** for end-to-end digitization of Self-Help Groups and their federations.
2. It offers a **comprehensive digital solution** for managing **Self-Help Groups (SHGs)** and **Community-Based Organizations (CBOs)** by digitizing member records, profiles, savings, lending, repayments, financial transactions, livelihoods, and convergence initiatives.
3. **LokOS comprises both web and mobile applications,**
 - i. **WEB Application** is designed for: supporting administrators, E-bookkeepers, and transaction approvers in creating and approving SHGs, Village Organizations (VOs), Cluster Level Federations (CLFs), and their members.
 - ii. **Mobile application** is for the member on field.

Deendayal Antyodaya Yojana– National Rural Livelihoods Mission (DAY-NRLM) is a flagship **poverty alleviation** programme promoting self-employment, skilled jobs, and sustainable livelihoods for poor rural households.

LokOS Network Coverage:

It supports **large scale digital transformation** in transforming community institutions. It improves Transparency, accountability and efficiency integrated with Program implementation and Program monitoring.

1. Community Institutions Covered

The linked community and community-based institutions are:

- i. Cluster Level Federations (CLFs)
- ii. Village Organizations (VOs)
- iii. Self-Help Groups (SHGs)
- iv. SHG Members

2. Financial Support Mobilized

LokOS enables efficient tracking of financial support, including

- i. Revolving Fund (RF)
- ii. Community Investment Fund (CIF)
- iii. Community Enterprise Fund (CEF)

3. LoKoS supporting Lakhpati Didis

LokOS supports the Lakhpati Didi initiative through large-scale outreach, beneficiary tracking, and digital monitoring.

4. platform also maintains 18.50 crore Digital Aajeevika Registers (DARs)

5. SHE-LEAPS:

A Digital Platform for **Rural Entrepreneurship** – launched on 29th June 2026 and is implemented under the LokOS platform. SHE-LEAPS is a digital platform for **empowering women associated with Self-Help Groups (SHGs) across rural India.**



Source: PIB-

<https://www.pib.gov.in/PressReleaseDetail.aspx?PRID=2280986®=48&lang=1>

4. India Enters a New Era in Semiconductor Manufacturing

Prelims:

Science & Technology, Economy

Mains:

GS Paper III-Science & Technology, Economy, Internal Security

Current relevance:

India marked a major milestone in its semiconductor journey as the **CG SEMI OSAT (Outsourced Semiconductor Assembly and Test)** facility at **Sanand, Gujarat**, commenced **commercial production**.



Highlights

1. Major Milestone

- i. **CG SEMI'S OSAT** facility has become India's third semiconductor plant to enter commercial production in 2026.

- ii. The project was completed in 27 months, from groundbreaking to commercial operations.

2. **Global Collaboration**

The Sanand facility has been established in **partnership with Renesas Electronics (Japan)** enabling India to gain access to:

- i. Advanced semiconductor technologies
- ii. Global manufacturing standards
- iii. International quality systems

The chips produced will cater to Automobile industry, two-wheelers, Industrial equipment.

3. **Social Impact**

The project is also emerging as a **model of inclusive development**. Young women from Jharkhand, Chhattisgarh, Madhya Pradesh, Bihar, Jammu & Kashmir, Kerala, Gujarat have been employed as **plant operators** after receiving specialized semiconductor training in Malaysia.

Source: PIB-

<https://www.pib.gov.in/PressReleaseDetail.aspx?PRID=2281174®=48&lang=1>

5. e-Jagriti:

Prelims:

Polity & Governance, Economy

Mains:

GS Paper II-Governance, GS Paper III-Economy

Current relevance:

The Prime Minister shared an article highlighting **e-Jagriti**, a digital platform that **digitises the entire lifecycle of consumer complaints**.



e-Jagriti

DIGITISING CONSUMER JUSTICE

- ONLINE FILING
- DIGITAL CASE MANAGEMENT
- REAL-TIME UPDATES
- PAPERLESS PROCESS
- TRANSPARENT & ACCOUNTABLE

उपभोक्ता मामले विभाग
DEPARTMENT OF
CONSUMER AFFAIRS
भारत सरकार | GOVERNMENT OF INDIA

सत्यमेव जयते

CONSUMER DISPUTES
REDRESSAL COMMISSION

Highlights:

About e-Jagriti

- e-Jagriti** is an **end-to-end digital platform** developed to **digitise the entire lifecycle of consumer complaints**, from filing to final disposal.
- It **modernises** the functioning of consumer dispute redressal commissions through a **unified digital system**.

Objective:

- To provide **faster, transparent, efficient, and accessible consumer justice** through digital technology.
- To strengthen **consumer grievance redressal** by reducing procedural delays and improving case management.

Consumer Protection Framework:

- It Operates under the **Consumer Protection Act, 2019**.
- Strengthens the functioning of the **District, State, and National Consumer Disputes Redressal Commissions**.

Key features:

- Provides a seamless digital platform for **filing consumer complaints**.

- ii. Ensures **end-to-end digital management** of consumer dispute cases.
- iii. Enables **electronic communication**, document management, and virtual hearings.
- iv. Offers **real-time monitoring** and tracking of complaint status.
- v. Enhances **transparency, efficiency, and accountability** through a **paperless** grievance redressal mechanism.

Source: PIB-

<https://www.pib.gov.in/PressReleaseDetail.aspx?PRID=2281010®=48&lang=1>



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Index

1.	Ethanol Blended Petrol (EBP) Programme	-01
2.	Lokayan 2026: INS Sudarshini	-02
3.	Syama Prasad mookerjee	-03
4.	Assam Releases Booklet Showcasing Butterfly Diversity of the Bodoland Forest Landscape	-05
5.	Modified UDAN Scheme	-06

1. Ethanol Blended Petrol (EBP) Programme

Prelims:

Environment & Ecology, Economy, Science & Technology

Mains:

GS Paper III-Economy, Environment, Science & Technology

Current relevance:

The Government of India released a comprehensive note on the **Ethanol Blended Petrol (EBP) Programme**, highlighting its policy evolution, achievements, and scientific evidence supporting **E20 fuel**.



At a glance:

1. The **EBP Programme** promotes blending **ethanol with petrol** to reduce dependence on imported fossil fuels and encourage the use of **domestically produced renewable biofuels**.
2. It forms a key pillar of **India's energy transition** and biofuel strategy.
3. **Objective:** To strengthen **energy security** by reducing crude oil imports, lower greenhouse gas emissions, **enhance farmers' income** through additional markets for agricultural produce, and promote a cleaner, self-reliant transport fuel ecosystem.
4. **Sources of Ethanol Production:**
 - i. Sugarcane juice
 - ii. Sugarcane molasses
 - iii. Maize
 - iv. Surplus rice approved by the Government
 - v. Other approved agricultural feedstocks under the National Policy on Biofuels
5. **Features of E20 Fuel:**
 - i. E20 contains **20% ethanol** and 80% petrol.
 - ii. Ethanol is a **high-octane fuel**, improving combustion efficiency.
 - iii. Extensive testing by **SIAM, ARAI, IOCL, and automobile manufacturers** has confirmed that E20 is safe for compatible vehicles.
 - iv. E20 complies with BIS specifications and **BS-VI emission norms**.
6. **Global Adoption of Ethanol Blending:**
 - i. **Brazil** mandates around **E27** and is moving towards E35.
 - ii. **United States** widely uses **E10**, with increasing adoption of E15 and E85 for flex-fuel vehicles.
 - iii. **Japan, Canada, Thailand**, and several European countries have also adopted ethanol blending as part of their clean fuel strategies.

Source: PIB- <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2281287®=3&lang=1>

2. Lokayan 2026: INS Sudarshini

Prelims:

International Relations, Defense & Security

Mains:

GS Paper II-International Relations, GS Paper III-Security

Current relevance:

Indian Naval Sail Training Ship (INS) Sudarshini arrived in New York under the **Lokayan 2026 expedition** to participate in the **Sail4th 250 celebrations** and the United States International Naval Review 250.

Highlights:

About Lokayan 2026

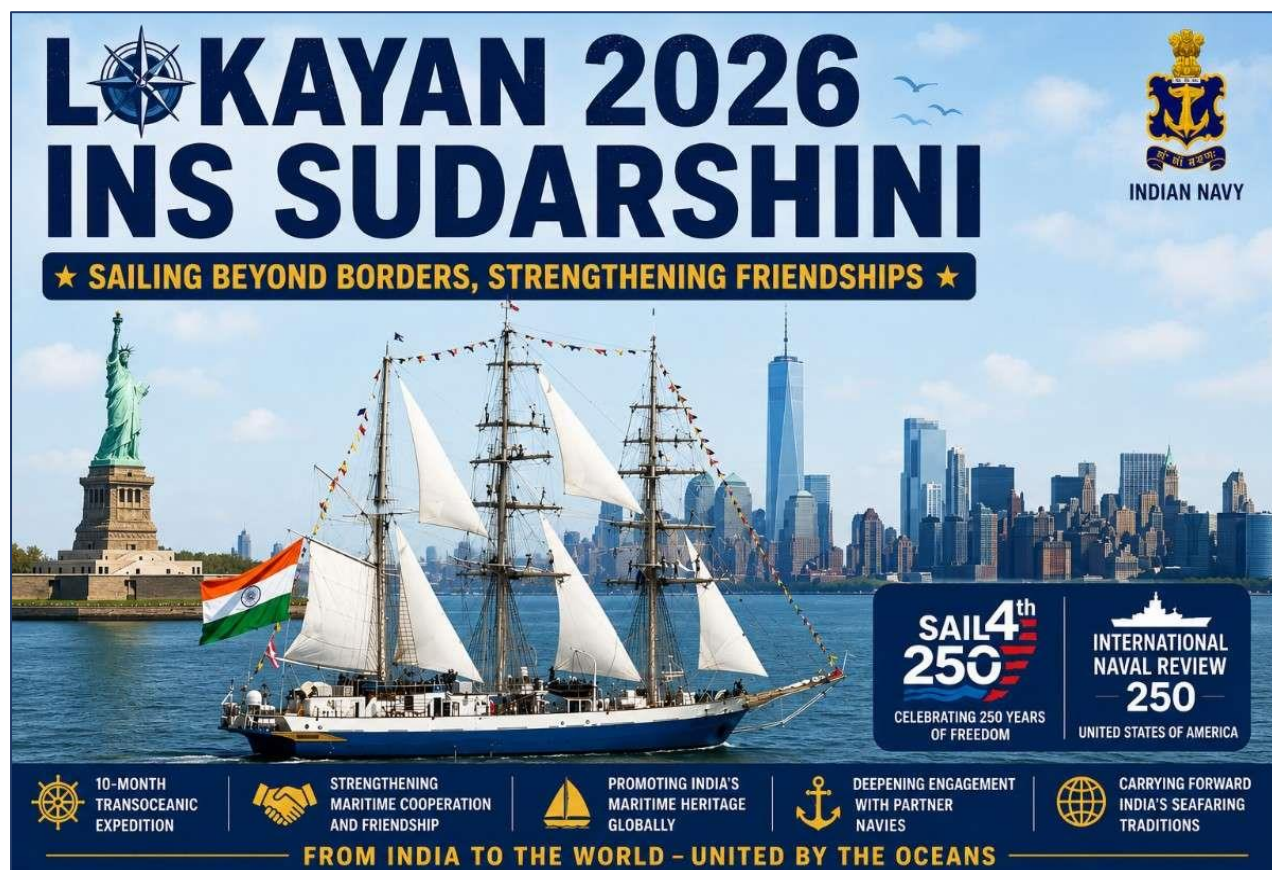
- i. Lokayan 2026 is a **10-month transoceanic expedition** undertaken by **INS Sudarshini**.
- ii. The expedition aims to **strengthen maritime cooperation**, promote international goodwill, and deepen engagement with partner navies.

INS Sudarshini

- It is the **Indian Navy's sail training ship**, designed as a three-masted barque.
- It serves as a symbol of **India's rich maritime heritage** and centuries-old seafaring traditions.
- The vessel is primarily used for sail training, maritime diplomacy, and international outreach.

Participation in Sail4th 250

- INS Sudarshini participated in the **Parade of Sail** along the **Hudson River in New York**.
- It proudly **flew the Indian Tricolour**, showcasing India's maritime legacy during the international celebrations.



Source: PIB- <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2281357®=48&lang=2>

3. Syama Prasad mookerjee

Prelims:

Modern Indian History, Polity, Culture

Mains:

GS Paper I-Modern Indian History, GS Paper II-Governance, GS Paper IV-Ethics

Current relevance:

The **Ministry of Culture**, in association with the Government of West Bengal, is organising a **special commemorative programme in Kolkata** on **6 July 2026** to mark the **125th Birth Anniversary of Bharat Kesari Dr. Syama Prasad Mookerjee** as part of a two-year nationwide commemoration.

Ministry of Culture
Government of India

125th BIRTH ANNIVERSARY

OF
DR. SYAMA PRASAD MOOKERJEE

Honouring the Visionary Statesman, Educationist,
Parliamentarian and Nation Builder

TWO-YEAR NATIONWIDE COMMEMORATION (2025-2026)

**BHARAT KESARI
DR. SYAMA PRASAD MOOKERJEE**
(6 July 1901 – 23 June 1953)

“One individual may die for an idea,
but that idea will, after his death,
incarnate itself in a thousand lives.”
– Dr. Syama Prasad Mookerjee

- FLORAL TRIBUTES AT BHAWANIPORE, KOLKATA
- BHOOMI POOJAN & FOUNDATION STONE FOR 125-FOOT STATUE AT ECO PARK, KOLKATA
- SPECIAL EXHIBITION ON LIFE AND LEGACY AT MILAN MELA PRANGAN
- MUSICAL TRIBUTE “SUR, SANSKRITI” EVAM RASHTRA BY CCRT
- SCREENING OF DOCUMENTARY & RELEASE OF SPECIAL COMMEMORATIVE VIDEO

REMEMBERING HIS ENDURING CONTRIBUTIONS TO
NATION BUILDING, EDUCATION, INDUSTRY AND NATIONAL INTEGRATION

INSPIRING GENERATIONS. STRENGTHENING THE NATION.

Highlights:

About Dr. Syama Prasad Mookerjee:

1. He was born on **6 July 1901** in Kolkata (then Calcutta), **Bengal Presidency**.
2. He was popularly known as "**Bharat Kesari**", for his contributions to nation-building and public service.
3. Eminent **educationist, lawyer, parliamentarian, statesman, and nationalist leader**.
4. **Key contributions:**
 - i. Served as the **youngest Vice-Chancellor of the University of Calcutta**.
 - ii. He became **India's first Minister for Industry and Supply** in the first Union Cabinet after Independence.
 - iii. Strong advocate of **national unity and territorial integrity**.
 - iv. Championed the principle of "**One Nation, One Constitution, One Flag**."
 - v. He founded the **Bharatiya Jana Sangh in 1951**, laying the ideological foundation for a nationalist political movement in independent India.

Commemoration:

- i. The Government of India launched a **two-year nationwide commemoration in 2025** to celebrate the **125th birth anniversary of Dr. Syama Prasad Mookerjee**.
- ii. **Aim:** To preserve and promote his contributions to India's political, educational, cultural, and industrial development.
- iii. Floral tributes at **Dr. Mookerjee's residence in Bhawanipore, Kolkata**.
- iv. **Foundation stone** laying (Bhoomi Poojan) for a **125-foot statue at Eco Park, Kolkata**.
- v. Mass rendition of **Vande Mataram**.
- vi. Musical tribute titled "**Sur, Sanskriti evam Rashtra**".

Source: PIB- <https://www.pib.gov.in/PressReleaseDetail.aspx?PRID=2281355®=48&lang=1>

4. Assam Releases Booklet Showcasing Butterfly Diversity of the Bodoland Forest Landscape

Prelims:

Environment & Ecology, Geography

Mains:

GS Paper I-Indian Culture, GS Paper III-Environment, Geography

Current relevance:

The **Assam Forest Department** released a special booklet documenting the **rich butterfly diversity** of the **Bodoland Territorial Region (BTR)**.



Highlights:

1. Booklet released by the **Assam Forest Department** to document the butterfly diversity of the **Bodoland Territorial Region (BTR)**.
2. Reinforces the ecological importance of one of **Northeast India's richest butterfly habitats**.
3. **Bodoland forest landscape:**
 - i. Comprises tropical evergreen, semi-evergreen, moist mixed deciduous forests, and alluvial grasslands.
 - ii. Lies at the confluence of the **Indo-Malayan** and **Indo-Gangetic** biogeographic zones.
4. **Butterfly Diversity:**
Numerous rare, endemic, and threatened butterfly species, making it one of the **richest butterfly habitats** in Northeast India.
5. **Unique Ecological Significance**

The **only ecological corridor in Northeast India** where butterfly species from the **Eastern Himalayas, Indo-Malayan region, and Indo-Gangetic plains** occur together.

6. Cultural Significance:

- i. Butterflies inspire the **Bagurumba**, the traditional **Butterfly Dance** of the **Bodo community**.
- ii. The dance is believed to be inspired by colourful butterfly congregations observed during the monsoon.

Source: THE HINDU - <https://www.pressreader.com/foryou?popupArticleId=281767045962882>

5. Modified UDAN Scheme

Prelims:

Indian Economy, Infrastructure

Mains:

GS Paper II-Governance, GS Paper III-Infrastructure

Current relevance:

Prime Minister Narendra Modi inaugurated the **new terminal building at Jodhpur Airport** and launched the **Modified UDAN Scheme**.



Highlights:

Background:

1. **UDAN (Ude Desh ka Aam Nagrik) Scheme** launched in 2016 under the **National Civil Aviation Policy (NCAP), 2016**.
2. **Nodal Ministry:** Ministry of Civil Aviation.
3. **Objective:** To make air travel affordable and connect underserved and unserved airports across India through the **Regional Connectivity Scheme (RCS)**.

4. Operates through **Viability Gap Funding (VGF)** to airlines for selected regional routes.

Modified UDAN Scheme:

- i. It is the next phase of the **Ude Desh ka Aam Nagrik (UDAN)** initiative launched by the **Government of India** to strengthen regional air connectivity.
- ii. The scheme has an **outlay of ₹28,840 crore** for implementation over the **next 10 years**.
- iii. It focuses on developing **airports, heliports, and water aerodromes**, while enhancing last-mile connectivity and supporting inclusive economic growth.
- iv. The scheme seeks to accelerate **aviation-led development** by boosting tourism, trade, investment, and employment across the country.

New Jodhpur Airport Terminal:

- i. It is a **modern passenger facility** designed to provide a seamless and comfortable travel experience.
- ii. Its architecture reflects **Rajasthan's royal heritage** by blending traditional design elements with contemporary airport infrastructure.

Source: THE HINDU - <https://www.thehindu.com/news/national/rajasthan/pm-modi-inaugurates-new-jodhpur-airport-terminal-launches-modified-udan-scheme/article71181992.ece>



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Index

1.	Pandavani	-01
2.	SOLVE Platform for Gaganyaan Mission	-02
3.	National Pension System (NPS) Withdrawal Rules	-03
4.	National Action Plan for Prevention and Control of Zoonoses (Zoonotic Diseases)	-05
5.	Sahkar Se Samriddhi	-06

1. Pandavani

Prelims:

Art & Culture

Mains:

GS Paper I-Indian Heritage and Culture, GS Paper IV-Ethics

Current relevance:

Padma Vibhushan awardee Teejan Bai, the legendary exponent of **Pandavani**, the traditional musical storytelling of the **Mahabharata** from Chhattisgarh, passed away at the age of 70 after a prolonged illness.

PANDAVANI
THE MUSICAL NARRATION OF MAHABHARATA

Pandavani is a traditional folk art of Chhattisgarh that presents the epic Mahabharata through singing, narration, acting and expressions.

- RICH TRADITION**
A centuries-old folk art from Chhattisgarh.
- MUSICAL STORYTELLING**
A unique blend of music, narration, acting, dialogue and abhinaya.
- TWO STYLES**
Vedamati (seated) and Kapalika (standing).
- GLOBAL HERITAGE**
A proud cultural treasure that has captivated audiences worldwide.

VOICE. TRADITION. HERITAGE.
THE SOUL OF CHHATTISGARH.

Highlights:

About Teejan Bai:

1. Teejan Bai was a renowned **Pandavani artist** from **Chhattisgarh** and one of India's most celebrated folk performers.
2. She popularised Pandavani across India and internationally, and was honoured with the **Padma Shri, Padma Bhushan, and Padma Vibhushan**.

About Pandavani:

1. A traditional **folk storytelling and musical performance** based on the **Mahabharata**.
2. It is originated in **Chhattisgarh**.
3. It Combines **singing, narration, acting, dialogue, and music**.
4. Usually accompanied by the **Tanpura** and other traditional instruments.
5. It popularised the **Kapalika** style by performing **standing with expressive acting, dialogues, and dramatic narration**.

Significance:

1. Preserved and revitalised the traditional **Pandavani** art form.
2. Enhanced global recognition of India's **intangible cultural heritage**.
3. Demonstrated the **transformative role of women** in preserving cultural traditions.
4. Inspired younger generations to protect and **promote India's folk arts**.

Source: THE HINDU - <https://www.thehindu.com/news/national/pandavani-legend-teejan-bai-dies-at-70/article71185044.ece>

2. SOLVE Platform for Gaganyaan Mission

Prelims:

Science & Technology, Space Technology

Mains:

GS Paper III-Science & Technology

Current relevance:

ISRO successfully conducted the first ground test of the **Sub-Orbital Launch Vehicle for Experiments (SOLVE)**.



Highlights:

SOLVE: An Overview

1. **Sub-Orbital Launch Vehicle for Experiments (SOLVE)** is a **solid motor based test platform** developed by **ISRO**.
2. It is designed to conduct **Integrated Parachute Tests** for validating the crew **module's deceleration system** under different mission conditions.
3. The platform provides flexibility for testing critical systems before the actual **Gaganyaan mission**.
4. **Technology:**
 - i. The **SOLVE solid motor** is derived from the **PSLV Strap-on Motor** with modifications.
 - ii. Features **slow burn-rate propellant** and a **straight nozzle with Secondary Injection Thrust Vector Control (SITVC)** to meet Gaganyaan mission requirements.

Gaganyaan Mission:

1. It is **India's first indigenous human spaceflight mission**, developed by the **Indian Space Research Organisation (ISRO)**.
2. **Aim:** To send **Indian astronauts (Gaganyatris)** into **Low Earth Orbit (LEO)** for a short-duration mission and safely return them to Earth.
3. Demonstrates India's capability to **independently develop** and execute **human spaceflight technology**, including crew launch, orbital operations, and the safe recovery of astronauts.
4. **Gaganyaan Mission Readiness Tests:**
 - i. **First Ground Test of SOLVE.**
 - ii. **Integrated Air Drop Test (IADT-02)-** Tests the parachute system of the Gaganyaan crew module for a safe landing.
 - iii. **Mission MITRA (Mapping of Interoperable Traits and Response Assessment)** conducted in Leh to assess astronaut performance under challenging conditions.

Source: THE HINDU - <https://www.thehindu.com/sci-tech/science/how-will-tests-solve-gaganyaan-astronauts-safe-landing-explained/article71187964.ece>

3. National Pension System (NPS) Withdrawal Rules

Prelims:

Economy, Government Schemes

Mains:

GS Paper II-Governance, GS Paper III-Economy

Current relevance:

The **Pension Fund Regulatory and Development Authority (PFRDA)** has introduced **new National Pension System (NPS) withdrawal norms**.

NATIONAL PENSION SYSTEM (NPS)
A MARKET-LINKED RETIREMENT SAVINGS SCHEME

SECURE RETIREMENT Ensures financial security after retirement	MARKET LINKED RETURNS Investments in equity, corporate bonds & government securities	FLEXIBLE OPTIONS Choose your investment and withdrawal options	TAX BENEFITS Deduction under Sec 80CCD(1B) & other provisions
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NPS

SECURE YOUR TOMORROW

NPS – Small savings today for a secure tomorrow

SAVE TODAY

Highlights:

1. The **National Pension System (NPS)** is a **voluntary, market-linked retirement savings scheme** regulated by the **Pension Fund Regulatory and Development Authority (PFRDA)**.
2. **Aim:** To provide financial security and a regular income after retirement.
3. **Key Changes:**
 - i. The **mandatory annuity purchase** has been reduced from **40% to 20%** of the retirement corpus.
 - ii. Subscribers can now withdraw **up to 80%** of the corpus as a **lump sum**, compared to **60% earlier**.
 - iii. Revised withdrawal norms provide **greater flexibility** based on the size of the accumulated corpus.
4. **Retirement Income Scheme (RIS):**

It allows subscribers to receive **periodic withdrawals** while keeping the remaining corpus invested, enabling **market-linked returns** and a regular post-retirement income.

Types of RIS:

- i. **Systematic Lump Sum Withdrawal (SLW):** Provides **fixed periodic withdrawals** at monthly, quarterly, half-yearly, or annual intervals.
- ii. **Systematic Unit Redemption (SUR):** Allows redemption of a **fixed number of units**, with payouts varying according to the Net Asset Value (NAV).

5. Tax Implications:

- i. Under Section 10(12A) of the **Income Tax Act**, only **60% of the withdrawn corpus** remains tax-exempt.
- ii. The **additional 20% lump sum withdrawal** permitted under the new rules is **taxable**.

Source: THE HINDU - <https://www.thehindu.com/business/what-new-nps-withdrawal-rules-mean-for-retirement/article71185706.ece>

4. National Action Plan for Prevention and Control of Zoonoses (Zoonotic Diseases)

Prelims:

Environment & Ecology, Science & Technology, Public Health, Government Policies

Mains:

GS Paper II-Health, GS Paper III-Science & Technology, Environment

Current relevance:

On the occasion of **World Zoonoses Day (6 July 2026)**, the **Ministry of Health & Family Welfare** organized a National Multistakeholder Consultation on the **National Action Plan for Prevention and Control of Zoonoses: A Strategic Framework with One Health Approach**.

NATIONAL ACTION PLAN FOR PREVENTION AND CONTROL OF ZONOSSES (ZONOTIC DISEASES)

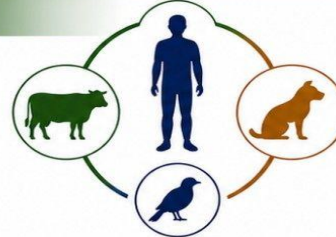
A One Health Approach for Human, Animal,
and Environmental Health



WHAT ARE ZONOSSES?

Zoonoses are diseases that are naturally transmitted between animals and humans.

Examples: Rabies, Brucellosis, Leptospirosis, Avian Influenza, Tuberculosis, Nipah, etc.



ONE HEALTH APPROACH

HUMAN HEALTH



Protecting people from zoonotic diseases through surveillance, vaccination, treatment and awareness.



ANIMAL HEALTH



Ensuring animal health through vaccination, disease control and responsible practices.

ENVIRONMENTAL HEALTH



Maintaining a healthy environment and ecosystems to reduce disease emergence.



A proactive and coordinated effort to build a healthier, safer and disease-resilient India through the One Health Approach.



Highlights:

1. The consultation brought together stakeholders from the **human health, animal health, wildlife, environment, academic and development sectors**
2. **Aim:** To strengthen India's **preparedness and response to zoonotic diseases** (diseases transmitted naturally between animals and humans).
3. The consultation emphasized the **need for sustained multisectoral coordination** to operationalize the **One Health Approach**, integrating efforts across the human health, animal health, wildlife and environmental sectors.
4. During the event, the Government launched **two technical resources** under the National One Health Programme for Prevention and Control of Zoonoses:
 - i. Learning Resource Package on 10 Priority Zoonotic Diseases.
 - ii. Comprehensive **E-Learning Modules** for healthcare professionals, veterinarians, public health officials and other frontline workers.
5. The consultation **reviewed the draft National Action Plan** through thematic sessions covering: Governance and institutional mechanism, Surveillance and early warning systems, Laboratory strengthening, Prevention and preparedness, Outbreak response, Research and innovation, Risk communication, Workforce development, Financing, Monitoring, evaluation and implementation strategies.
6. The discussions highlighted the need to:
 - i. Expand sentinel surveillance sites.

- ii. Strengthen laboratory networks.
 - iii. Promote timely data sharing through IHIP 2.0.
 - iv. Build capacity of frontline professionals.
 - v. Leverage digital technologies and Artificial Intelligence (AI) for disease intelligence, early warning, outbreak prediction and rapid response.
7. The above recommendations from the consultation will be incorporated into the **National Action Plan for Prevention and Control of Zoonoses**, which will serve as India's national strategic framework for **coordinated multisectoral action** and guide States/UTs in developing State Action Plans based on the One Health Approach.

Source: PIB -

<https://www.pib.gov.in/PressReleaseIframePage.aspx?PRID=2281860&RegID=6&LID=1®=48&lang=2>

5. Sahkar Se Samriddhi

Prelims:

Indian Economy, Polity & Governance

Mains:

GS Paper II-Governance, GS Paper III-Indian Economy

Current relevance:

The Ministry of Cooperation aims to strengthen India's cooperative sector through the vision of "Sahkar Se Samriddhi" (Prosperity through Cooperation).

The infographic features the 'SAHKAR SE SAMRIDDHI' logo on the top left, which is a circular emblem with a wheel in the center and the text 'सहकार से समृद्धि' at the top and 'SAHKAR SE SAMRIDDHI' at the bottom. The main title 'SAHKAR SE SAMRIDDHI' is in large blue letters, followed by the subtitle 'Five Years of Strengthening India's Cooperative Movement' in green. On the top right, there is a photo of the Ministry of Cooperation building and a group of people. Below the title, a green box contains the text 'INDIA'S COOPERATIVE JOURNEY: ROOTED IN COLLECTIVE GROWTH' and a paragraph about the philosophy of Vasudhaiva Kutumbakam. At the bottom, a blue banner reads 'COOPERATIVES – EMPOWERING MILLIONS, ENRICHING LIVES'. Below this banner are five categories: 'RURAL CREDIT' (with a photo of a man), 'DAIRY' (with a photo of milk being poured), 'FISHERIES' (with a photo of people fishing), 'HOUSING' (with a photo of a house), and 'MARKETING' (with a photo of people at a market). A final paragraph states that cooperatives have enabled millions to access markets, finance, and livelihoods. The bottom of the infographic features the slogan 'SAHKAR SE SAMRIDDHI – TOGETHER FOR A PROSPEROUS INDIA' with a group of people icon.

Highlights:

1. The cooperative movement is based on the philosophy of "**Vasudhaiva Kutumbakam**" ("**The World is One Family**") and promotes shared ownership, democratic management, mutual assistance and inclusive socio-economic development.
2. Cooperatives play a vital role in sectors such as: Agricultural credit, Dairy, Fisheries, Housing, Marketing, Rural livelihoods.
3. **Major Initiatives:**
 - i. **Transformation of 50,000 PACS into e-PACS:**
 - **PACS (Primary Agricultural Credit Societies)** are the lowest tier of the Short-Term Cooperative Credit Structure (STCCS). They provide: Short-term agricultural credit, Farm inputs, Fertilizers and seeds, other rural financial services.
 - **e-PACS** aims to **digitize operations, improve transparency, efficiency and service delivery.**
 - ii. **Grain Storage Infrastructure**
 - Foundation stones laid for 47 cooperative grain storage godowns.
 - **Objective:**
 - Strengthen **decentralized storage capacity.**
 - Reduce post-harvest losses.
 - Improve food security and **farmer incomes.**
 - iii. **Milk Supply Review Dashboard Portal**
 - Launched for the **National Dairy Development Board (NDDB).**
 - **Purpose:** Monitor milk procurement and distribution, Improve supply chain management, Support data-driven decision-making.
 - iv. **National Urban Cooperative Finance and Development Corporation (NUCFDC) Initiatives:**
 - **Sahakar CBS**
Core Banking Solution(CBS), **centralized digital banking platform** for **Urban Cooperative Banks (UCBs).** Enables standardized, secure and efficient banking operations.
 - **Sahakar Sahyogi**
A **Conversational Artificial Intelligence (AI) platform** which Improves customer service, grievance redressal and banking operations.

Source: PIB -

<https://www.pib.gov.in/PressReleaseIframePage.aspx?PRID=2281581&RegID=6&LID=1®=48&lang=2>



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UPSC Daily Current Affairs –07.07.2026

Index

- | | | |
|----|---|------------|
| 1. | Vepdegestrant - Cancer therapy drug | -01 |
| 2. | SEBI Proposes to Ease Short Selling | -02 |
| 3. | Natural History Museum (NHM) at Mizoram University | -04 |
| 4. | Super El Nino damages wind potential | -05 |
| 5. | Nanophotonic devices | -07 |

1. Vepdegestrant - Cancer therapy drug

Prelims:

Science & Technology, Biotechnology, Health

Mains:

GS Paper II-Health, GS Paper III-Science & Technology

Current relevance:

Recently, **U.S. Food and Drug Administration (FDA)** approved the drug vepdegestrant for patients with **ESR1-mutated, ER-positive, and HER2-negative advanced breast cancer**. It is the world's first therapy that the FDA has approved that is based on **PROTAC** technology.

FDA APPROVAL FOR VEPDEGESTRANT
A NEW TARGETED THERAPY FOR BREAST CANCER

- Vepdegestrant is a first-in-class oral selective estrogen receptor degrader (SERD).
- Approved for the treatment of adults with advanced or metastatic **ER-positive, HER2-negative** breast cancer with **ESR1 mutations**, who have progressed on endocrine therapy.
- Offers a new treatment option for patients with limited alternatives and represents a major step forward in precision oncology.

VEPDEGESTRANT
50 mg tablets
Selective Estrogen Receptor Degradator (SERD)

How Vepdegestrant Works

Estrogen binds to the Estrogen Receptor (ER). Vepdegestrant binds to ER, leading to ER degradation, which blocks cancer cell growth.

FDA U.S. FOOD & DRUG ADMINISTRATION APPROVED

Highlights:

- Vepdegestrant** is the world's first therapy that the U.S. Food and Drug Administration (FDA) has approved that is based on **PROTAC technology**.
- PROTAC (proteolysis-targeting chimaera):**

- i. It is a molecule-like substance which are designed to **remove specific protien** from a cell.
- ii. This is achieved with the help of bodily enzyme named “**E3 Ligase**”, which is naturally involved in **protein degradation** process.
- iii. PROTAC has two Ends, one side attaches to the target protein and other binds to E3 Ligase, by artificially bringing these together the **PROTAC** causes the **target protein to be degraded** by the cell. This is called **targeted protein degradation**.

3. Advantages over conventional Drugs:

- i. Conventional drugs work by binding to a protein and blocking its function, often requiring repeated doses. In contrast, **PROTACs** degrade the **target protein** and are then released to destroy other proteins, allowing them to act repeatedly like a **catalyst**.
- ii. **PROTACs** degrade the **entire target protein**, thereby blocking all of its functions, unlike **conventional drugs** that inhibit only a **specific activity of the protein**.

4. Key Features:

- i. **Convenient Oral Dosing:** Intaken as **oral tablet**, replacing the need for monthly intramuscular injections required with therapies like fulvestrant.
- ii. **Manageable Safety Profile:** Most side effects were mild, including fatigue, nausea, muscle pain, and temporary changes in liver enzymes or ECG findings.

Source: THE HINDU - <https://www.thehindu.com/sci-tech/science/why-fda-approval-for-vepdegestrant-is-a-major-shift-in-cancer-therapy/article71188088.ece>

2. SEBI Proposes to Ease Short Selling

Prelims:

Indian Economy

Mains:

GS Paper II-Governance, GS Paper III-Indian Economy

Current relevance:

The **Securities and Exchange Board of India (SEBI)** has proposed easing short selling by nearly doubling the number of stocks eligible for borrowing under the **Securities Lending and Borrowing (SLB) mechanism**.



Highlights:

1. SEBI's Proposed Changes:

SEBI is considering several important reforms to improve the existing framework.

- i. The regulator plans to nearly **double the number of stocks eligible for lending and borrowing**. This would allow most liquid and actively traded shares to become part of the SLB system.
 - ii. SEBI intends to **reduce collateral requirements**. Lower collateral would decrease the amount of money or securities investors need to provide before borrowing shares, making participation more affordable and increasing market activity.
2. These reforms are intended
- i. To strengthen India's cash equity market and
 - ii. Encourage investors to participate in stock trading instead of relying heavily on the derivatives market, which has grown rapidly but carries greater risks, especially for retail investors.

3. Short Selling:

It is an investment strategy in which an investor borrows shares, sells them at the current market price, and later buys them back at a lower price to earn a profit.

4. Stock Lending and Borrowing (SLB) Mechanism:

- i. Short selling requires a **Stock Lending and Borrowing (SLB) mechanism**, which allows investors to borrow shares legally and securely before selling them.
- ii. This system improves **market liquidity**, supports price discovery, and increases overall **market efficiency**.

Source: PIB - <https://www.thehindu.com/business/sebi-said-to-ease-short-stocks-by-nearly-doubling-those-eligible-for-borrowing/article71190860.ece>

3. Natural History Museum (NHM) at Mizoram University

Prelims:

Environment & Ecology, Biodiversity

Mains:

GS Paper II-Governance, GS Paper III-Environment

Current relevance:

The Ministry of Environment, Forest and Climate Change (MoEFCC) has officially designated the Natural History Museum (NHM) at Mizoram University, Aizawl, as a **Designated Repository** under Section 39 of the **Biological Diversity Act, 2002**.



Highlights:

1. The designation was made based on the recommendation of the **National Biodiversity Authority (NBA)**. The museum is located in the **Indo-Burma Biodiversity Hotspot**, one of the world's richest regions for biodiversity.
2. **Designated Repository:**
 - i. It is an institution officially recognized by the Central Government under Section 39 of the **Biological Diversity Act, 2002** to **preserve authenticated biological specimens collected** under the provisions of the Act.

- ii. These repositories function as **permanent scientific reference centres** where biological specimens are securely preserved for research, identification, verification, conservation, and future scientific studies.

3. Natural History Museum:

- i. It will preserve **authenticated specimens** from both plant and animal groups.
- ii. Preserve flora such as pteridophytes and macrofungi, and fauna including reptiles, amphibians, fishes, moths, beetles, and butterflies.
- iii. It will also maintain type specimens of newly discovered species from the region for scientific documentation and long-term conservation.

4. Indo-Burma Biodiversity Hotspot:

- i. The **Natural History Museum** is strategically located in the Indo-Burma Biodiversity Hotspot.
- ii. Indo-Burma Biodiversity Hotspot is one of the **world's recognized biodiversity hotspots**.
- iii. It extends across northeastern India, Myanmar, Thailand, Laos, Cambodia, Vietnam, and parts of southern China.

Source: PIB- <https://www.pib.gov.in/newsite/pmreleases.aspx?mincode=30®=48&lang=2>

4. Super El Nino damages wind potential

Prelims:

Geography, Environment & Ecology

Mains:

GS Paper I-Geography, GS Paper III-Environment, Infrastructure, Disaster Management

Current relevance:

The **Centre for Research on Energy and Clean Air (CREA)** has projected that the ongoing El Niño could strain India's power sector by **reducing electricity generation from wind and hydropower**.



Highlights:

1. According to **CREA**, India could face an **electricity generation gap** of about **18 TWh** (terawatt-hours) during the one-year period ending June 2027.

2. Impact of Super El Niño on Power Generation:

- i. **Super El Niño** is exceptionally high warming of sea surface temperatures in the **central and eastern equatorial Pacific Ocean**. It weakens the Indian southwest monsoon, leading to below-normal rainfall.
- ii. Reduced rainfall **lowers water availability** in reservoirs, decreasing hydropower generation. Changes in atmospheric circulation can also **weaken wind speeds**, reducing wind power generation. At the same time, hotter weather increases electricity demand, particularly for air conditioning.

1. India's Power Sector:

- i. As of March 2026, India's **installed non-fossil fuel power** capacity stood at **283.46 GW**, including solar, wind, hydropower, and nuclear energy. **Solar energy** currently supplies nearly **one-fourth** of daytime electricity demand, but **inadequate battery storage** and grid infrastructure limit its full utilization.
- ii. **CREA** recommends **expanding battery energy storage** systems and **upgrading the electricity grid** to better integrate renewable energy and reduce dependence on coal during periods of high demand.

Source: THE HINDU - <https://www.thehindu.com/sci-tech/energy-and-environment/el-nino-to-dent-indias-wind-hydropower-output-study/article71189323.ece>

5. Nanophotonic devices

Prelims:

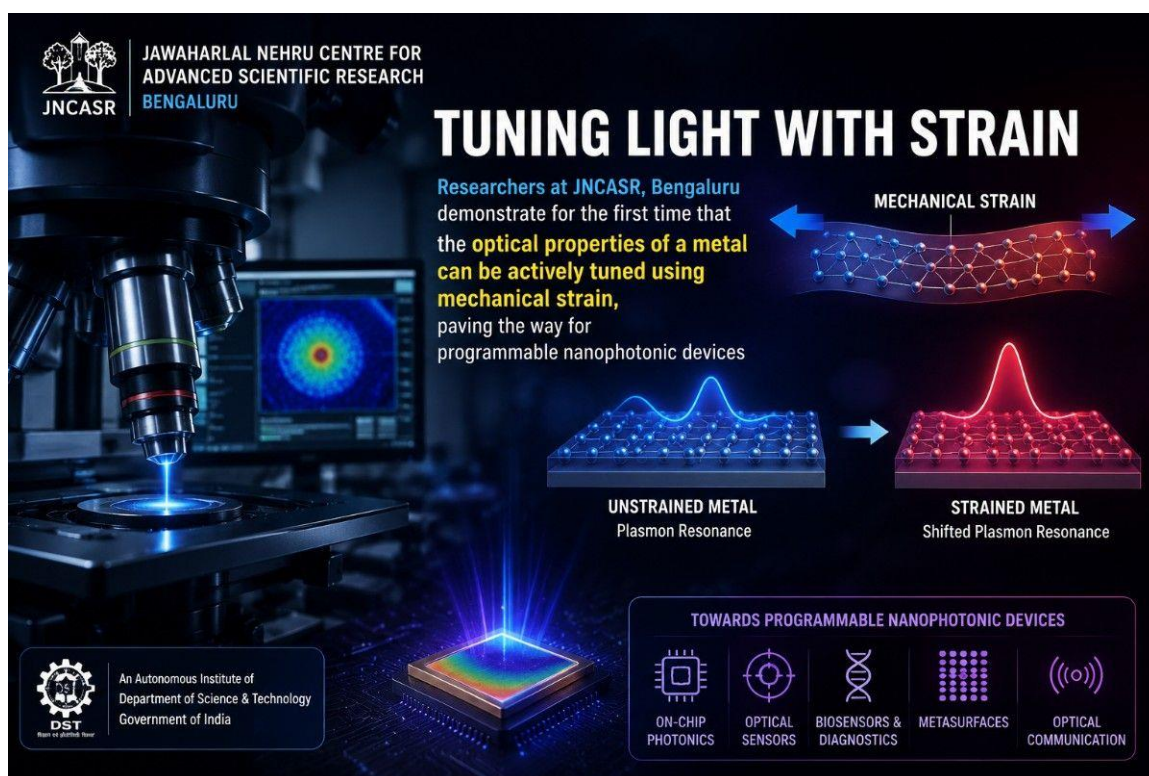
Science & Technology, Nanotechnology

Mains:

GS Paper III-Science & Technology

Current relevance:

Researchers at the **Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR), Bengaluru**, have demonstrated for the first time that the optical properties of a metal can be actively tuned using mechanical strain, paving the way for **programmable nanophotonic devices**.



Highlights:

- The discovery could enable **programmable optical devices**, advanced sensors, and faster photonic chips that are compatible with existing semiconductor manufacturing technologies.
- Plasmon Resonance:**
 - Plasmon resonance is the ability of certain **metals to trap and concentrate light into tiny spaces** by making their free electrons vibrate together. This allows the development of much smaller and more **efficient light-based devices**.
 - Applications include:**
 - Ultra-sensitive chemical and biological sensors
 - Cancer diagnostics
 - High-speed optical communication
 - Photonic circuits that use light instead of electricity
 - Meta surfaces for controlling light in advanced optical devices.

3. Material Used:

The study used ultrathin films of **Titanium Nitride (TiN)**, a material that behaves similarly to gold in its interaction with light but is much more heat-resistant, chemically stable, and **compatible with modern computer chip manufacturing (CMOS technology)**.

Source: PIB <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2282020®=3&lang=1>



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UPSC Daily Current Affairs –08.07.2026

Index

1.	Himalayan yak	-01
2.	Leucine	-02
3.	Bintang Adipurna	-04
4.	Guwahati declaration	-05
5.	IICA Certified Arbitration Program (ICAP)	-06

1. Himalayan yak

Prelims:

Science & Technology, Environment & Ecology, Agriculture, Geography

Mains:

GS Paper III-Science & Technology, Agriculture, Environment, Internal Security

Current relevance:

Scientists from the **Indian Council of Agricultural Research's (ICAR) National Research Centre on Yak (NRC-Y), Dirang (Arunachal Pradesh)**, in collaboration with **Assam Don Bosco University**, have developed an **Internet of Things (IoT)-based smart collar**.



Highlights:

Technological Innovation:

1. Internet of Things (IoT)-Based Smart Collar:

The system consists of a **wearable smart collar** fitted on the yak that uses **embedded sensors and wireless communication** to continuously collect and transmit physiological and location data in real time.

2. Geo-Fencing Capability:

The device employs **geo-fencing technology**, creating virtual boundaries using **GPS, Wi-Fi, and cellular networks**. It sends alerts whenever an animal crosses the predefined geographical limits.

3. Real-Time Health Monitoring

The smart system continuously monitors the yak's **health status, stress levels, and movement patterns**, enabling the early detection of illness and facilitating timely veterinary intervention.

About Himalayan yak:

1. It is also known as "**Ship of the Himalayas**"
2. The yak is native to the **Himalayan and Tibetan Plateau region of Asia**.
3. Major populations are found in Ladakh, Arunachal Pradesh, Sikkim, Himachal Pradesh, Uttarakhand.
4. Adapted to **extreme cold and low-oxygen environments**, the Himalayan yak primarily inhabits **alpine meadows**, high-altitude grasslands, mountain pastures, and **cold desert landscapes**.
5. **Both male and female** Himalayan yaks **possess curved horns**, although they vary in size and shape.
6. It serves **multiple economic purposes** by providing milk, meat, wool, hair, leather, and manure, while also acting as a reliable draught and transport animal in the Himalayas.

Source: THE HINDU -<https://www.thehindu.com/news/national/scientists-develop-health-tracker-for-high-altitude-yaks/article71190428.ece>

2. Leucine

Prelims:

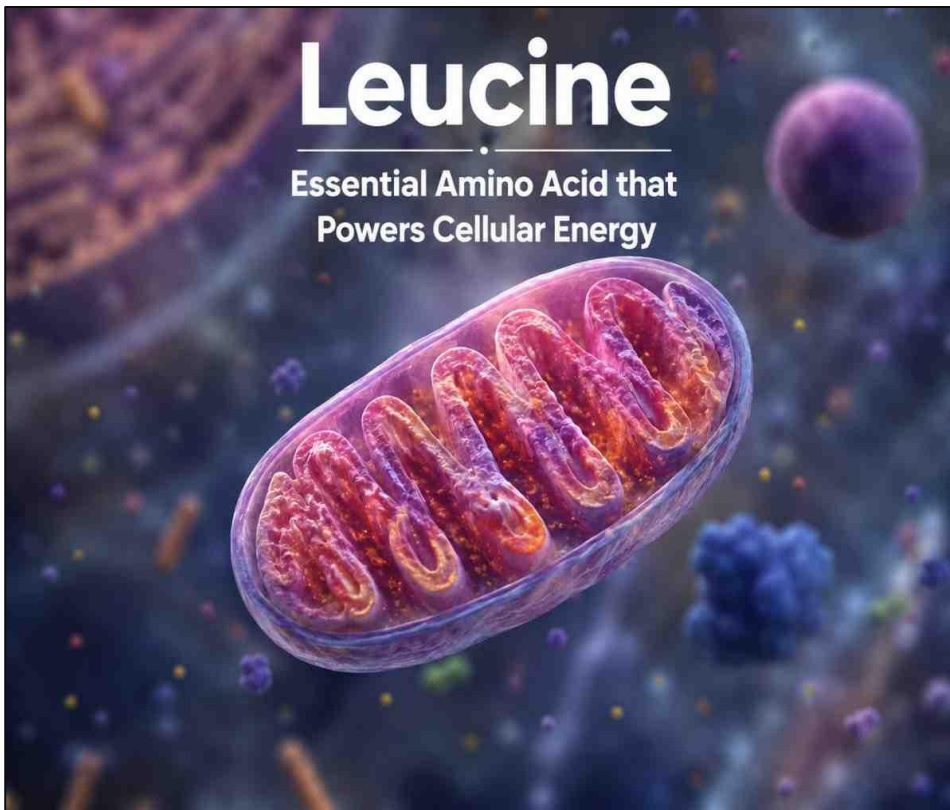
Science & Technology, Biotechnology

Mains:

GS Paper II-Health, GS Paper III-Science & Technology

Current relevance:

Recent research has shown that the **essential amino acid leucine** not only supports muscle growth but also **protects mitochondria**, helping cells produce energy efficiently and potentially reducing the risk of metabolic and age-related diseases.



Highlights:

1. Leucine:

- i. It is an **essential amino acid** that the human body cannot produce and must obtain through the diet.
- ii. It belongs to the **Branched-Chain Amino Acid (BCAA)** family, along with **isoleucine** and **valine**.

2. Role of Leucine:

It supports **muscle growth, tissue repair, protein synthesis, and cellular energy production.**

3. Mitochondria:

The energy-producing organelles of cells that generate **Adenosine Triphosphate (ATP)**, the cell's primary energy source.

4. Leucine's Contribution to Cellular Function:

It helps maintain the **outer membrane of mitochondria**, ensuring efficient ATP production and normal cellular function.

5. Significance:

Healthy mitochondria improve energy production and may help reduce the risk of **metabolic disorders, muscle degeneration, and age-related diseases.**

Source: THE HINDU - <https://www.thehindu.com/sci-tech/science/how-the-amino-acid-leucine-helps-our-cells-produce-energy/article71188124.ece>

3. Bintang Adipurna:

Prelims:

International Relations

Mains:

GS Paper II-International Relations

Current relevance:

Prime Minister Narendra Modi was conferred '**Bintang Adipurna of the Republic of Indonesia**', the highest civilian honour of Indonesia.



Highlights:

1. Bintang Adipurna, instituted in 1959, is the **highest civilian honour awarded by the Republic of Indonesia**.
2. The award is conferred on individuals who have rendered exceptional service to the unity, continuity, and prosperity of Indonesia.
3. **Award to Prime Minister Modi:**
The award recognises his efforts in strengthening **India–Indonesia bilateral relations** and advancing the **Comprehensive Strategic Partnership**.
4. **India–Indonesia Relations**
 - i. India and Indonesia share a **Comprehensive Strategic Partnership**.

- ii. Both countries cooperate in **maritime security, defence, trade, energy, digital economy, and cultural exchanges.**
- iii. Both are important partners in promoting a **free, open, inclusive, and rules-based Indo-Pacific.**

Source: THE HINDU - <https://www.thehindu.com/news/national/pm-modi-conferred-with-indonesias-highest-honour-bintang-adipurna-in-jakarta/article71192597.ece>

4. Guwahati declaration:

Prelims:

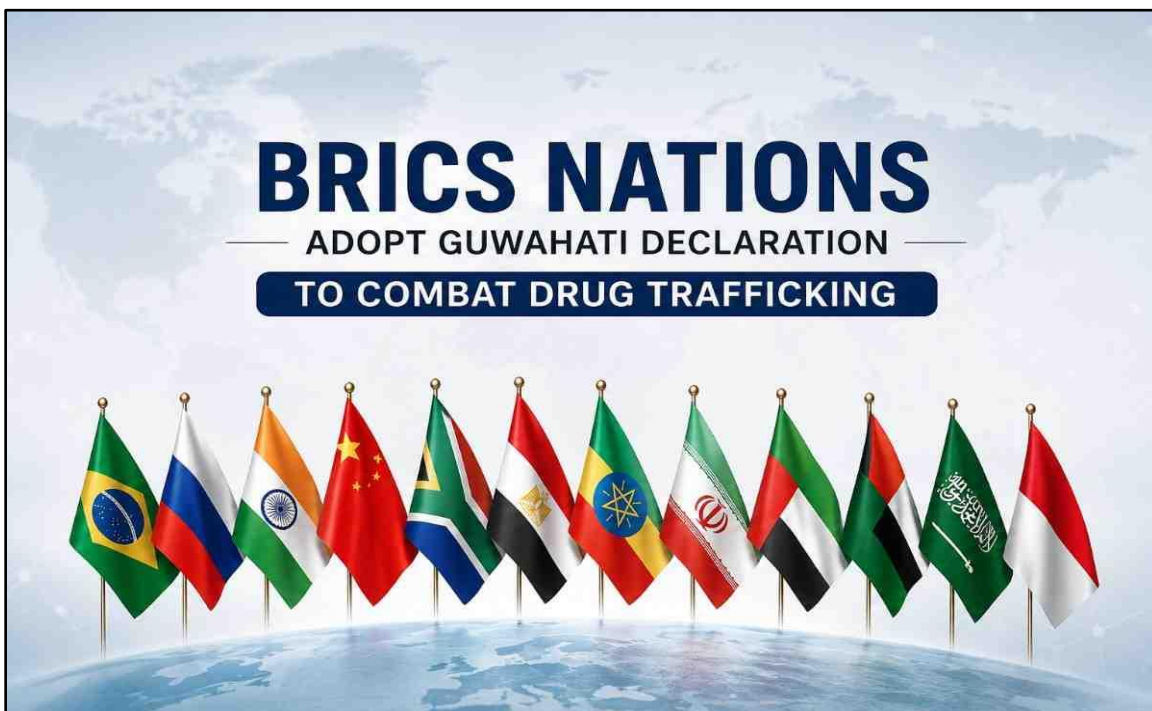
International Relations, Internal Security

Mains:

GS Paper II-International Relations, GS Paper III-Internal Security

Current relevance:

The **BRICS nations** adopted the **Guwahati Declaration** during the **BRICS Anti-Drug Working Group Meeting** in Guwahati.



Highlights:

1. The **Guwahati Declaration** is a joint commitment by BRICS nations to strengthen cooperation in preventing and combating **illicit drug trafficking** and **transnational organised crime**.
2. **Objectives:**
 - i. Enhance **intelligence sharing** among member countries.
 - ii. Strengthen coordinated **law enforcement** actions.

- iii. Improve **capacity building** and exchange of best practices.
- iv. Promote **international cooperation** to curb drug trafficking networks.

3. Significance for India:

- i. Reinforces India's efforts to **tackle cross-border drug trafficking**.
- ii. Enhances **cooperation with BRICS countries** in intelligence sharing and enforcement.
- iii. Supports **regional security** and the fight against organised **crime and narco-terrorism**.

4. About BRICS:

- i. **BRICS** is an intergovernmental grouping of major emerging economies comprising **Brazil, Russia, India, China, South Africa, Egypt, Ethiopia, Iran, Saudi Arabia, the United Arab Emirates (UAE), and Indonesia**.
- ii. It promotes cooperation in **economic development, trade, security, science and technology, public health, and global governance**.

Source: THE HINDU - <https://www.thehindu.com/news/national/brics-nations-adopt-guwahati-declaration-to-combat-drug-trafficking/article71193362.ece>

5. IICA Certified Arbitration Program (ICAP)

Prelims:

Polity & Governance, Economy

Mains:

GS Paper II-Governance, GS Paper III-Indian Economy

Current relevance:

The **Indian Institute of Corporate Affairs (IICA)**, under the **Ministry of Corporate Affairs**, inaugurated the **second batch of the IICA Certified Arbitration Program (ICAP)** to strengthen India's arbitration ecosystem and develop globally trained arbitration professionals.



Highlights:

1. **ICAP** is the flagship arbitration training programme of the **Indian Institute of Corporate Affairs (IICA)**.
2. It aims to develop a pool of **globally benchmarked arbitration professionals** to strengthen India's dispute resolution ecosystem.
3. **Objectives of ICAP:**
 - i. Promotes **institutional arbitration** in India by developing a strong, efficient, and internationally recognised arbitration ecosystem.
 - ii. **Builds professional capacity** in arbitration and **Alternative Dispute Resolution (ADR)** through specialised training and skill development.
 - iii. Supports the vision of **Viksit Bharat@2047** by strengthening India's legal, commercial, and dispute resolution institutions to improve investor confidence and ease of doing business.
4. **Reforms to Strengthen Arbitration:**
 - The Government is working to make India a **global arbitration hub** through reforms in the **Arbitration and Conciliation Act, 1996**.
 - It has also indicated plans to establish the **Arbitration Council of India (ACI)** to strengthen institutional arbitration.
5. **Significance:**

The programme supports the development of a **robust arbitration ecosystem**, promotes judicial efficiency, and strengthens India's position as a preferred destination for international commercial dispute resolution.

Source: PIB - <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2282584®=48&lang=1>



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UPSC Daily Current Affairs –09.07.2026

Index

1.	Prambanan Temple	-01
2.	Hummus trail	-02
3.	Samriddh Gram	-03
4.	TribeX	-05
5.	Right to be forgotten	-06

1. Prambanan Temple

Prelims:

Art & Culture, International Relations

Mains:

GS Paper I-Indian Heritage and Culture, GS Paper II-International Relations

Current relevance:

India and Indonesia jointly inaugurated a **conservation and restoration project** for the **Prambanan Temple Complex**, a **UNESCO World Heritage Site** in Yogyakarta, Indonesia.



At a glance:

1. The initiative reflects the **deep historical, cultural, and civilisational ties** between India and Indonesia, rooted in centuries of shared heritage and cultural exchanges.
2. The **Archaeological Survey of India (ASI)** will serve as the lead Indian agency for implementing the restoration project in collaboration with Indonesian authorities.

3. About Prambanan Temple:

- i. It is the **largest Hindu temple complex** in **Indonesia**, located in **Yogyakarta**.
- ii. It was designated a **UNESCO World Heritage Site** in **1991**.
- iii. It is dedicated to the **Trimurti—Lord Shiva, Lord Vishnu, and Lord Brahma**.

Source: THE HINDU - <https://www.pressreader.com/india/the-hindu-international-9bn2/20260709/281741276167539>

2. Hummus trail

Prelims:

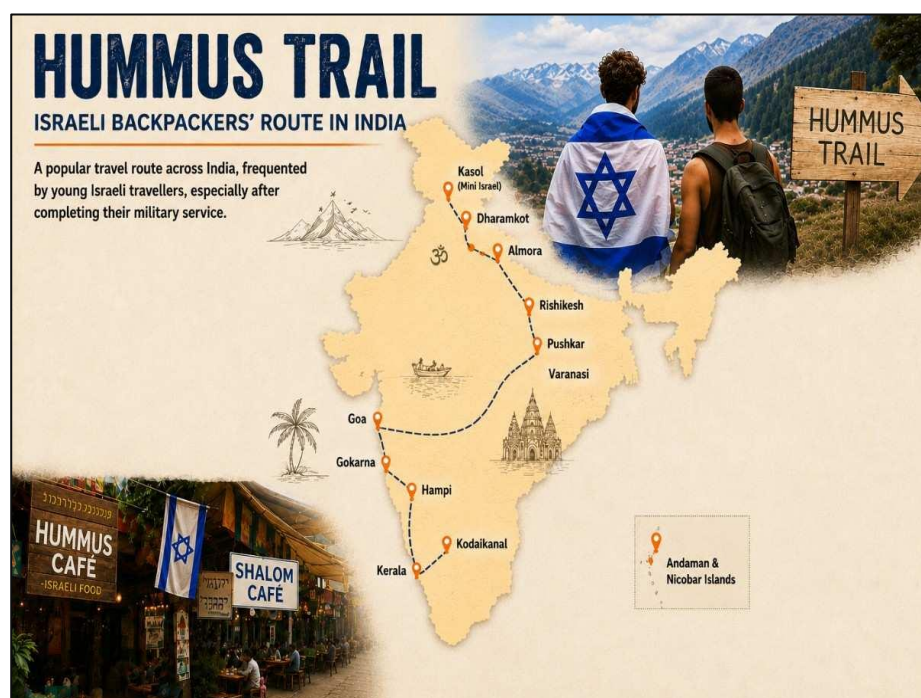
International Relations, Polity

Mains:

GS Paper II-International Relations, GS Paper III-Internal Security

Current relevance:

The **Hind Rajab Foundation (HRF)** sought action against an Israeli soldier vacationing in India, alleging involvement in **war crimes in Gaza**, bringing attention to the '**Hummus Trail**' and India's legal obligations under the **Geneva Conventions Act, 1960**.



Highlights:

1. Hummus Trail:

It is an **informal tourism route** across India popular among **young Israeli travellers**, particularly after completing their mandatory military service.

2. India's Legal Position:

- i. India is a **signatory** to the **Geneva Conventions** and has enacted the **Geneva Conventions Act, 1960**.
- ii. The Act allows India to take legal action against individuals accused of **grave breaches of the Geneva Conventions, irrespective of their nationality** or where the offence occurred.
- iii. Grave breaches include serious violations of international humanitarian law, such as **deliberate attacks on civilians, destruction of civilian infrastructure, torture, and inhuman treatment** during armed conflict.

3. Concerns Associated with the Hummus Trail:

- i. Reports have highlighted concerns over **drug abuse, illegal drug trafficking, rave parties, and mental health issues** among some visitors in locations along the Hummus Trail.
- ii. The issue has also sparked debate on **accountability for alleged international crimes** and the implementation of international humanitarian law.

4. Significance:

The case highlights the importance of **international humanitarian law, India's treaty obligations**, and the growing relevance of **universal jurisdiction** in addressing alleged war crimes across national boundaries.

Source: THE HINDU

3. Samriddh Gram

Prelims:

Science & Technology, Governance, Economy

Mains:

GS Paper II-Governance, GS Paper III-Science & Technology

Current relevance:

The **Department of Telecommunications (DoT)** won the **WSIS Prize 2026** under Action Line C6 – Enabling Environment for its flagship **Samriddh Gram: Integrated Phygital Service Delivery Model Enabled by BharatNet**, receiving global recognition for promoting inclusive rural digital development.



Highlights:

About Samriddh Gram:

1. It is a flagship rural digital transformation initiative of the **Department of Telecommunications (DoT), Ministry of Communications.**
2. It is built on the **BharatNet** broadband network to deliver integrated **phygital (physical + digital)** services in rural areas.
3. The initiative establishes **Samriddhi Kendras** as one-stop village service centres.
4. It provides services in **healthcare, education, agriculture**, financial inclusion, skilling, **e-governance, and e-commerce.**
5. It integrates **telecom connectivity, digital platforms, and assisted physical service delivery** for seamless access to public services.
6. Supports technologies such as **Health ATMs**, AR/VR-based skill development, **IoT-enabled agriculture**, drone-assisted farming, **PM-WANI**, FTTH connectivity, and digital governance services.
7. It aims to **bridge the digital divide** and promote **inclusive rural development** through Digital Public Infrastructure (DPI).

WSIS Prizes:

1. The WSIS Prizes are organised under the **World Summit on the Information Society (WSIS)** process led by the **International Telecommunication Union (ITU).**
2. They recognise projects that effectively use **Information and Communication Technologies (ICTs)** to promote sustainable development.
3. Samriddh Gram won the **World Summit on the Information Society (WSIS) Prize 2026** under **Action Line C6 – Enabling Environment** during the **WSIS Forum 2026** held in **Geneva.**

Source: PIB - <https://www.pib.gov.in/PressReleaseDetail.aspx?PRID=2282831®=48&lang=1>

4. TribeX

Prelims:

Polity & Governance, Social Justice

Mains:

GS Paper II-Social Justice, GS Paper III-Science & Technology

Current relevance:

The **Ministry of Tribal Affairs** inaugurated a **two-day National Workshop on Strengthening Tribal Research Institutes (TRIs)** in Bhubaneswar, Odisha, and launched **TribeX**.



Highlights:

1. The **Ministry of Tribal Affairs**, in collaboration with the **Government of Odisha**, organised a National Workshop on Strengthening **Tribal Research Institutes (TRIs)** in Bhubaneswar.
2. **Aim:** To transform **TRIs into centres of research, innovation, policy support, and cultural preservation.**
3. **About TribeX:**
 - i. A first-of-its-kind **digital learning platform** for preserving and promoting **tribal arts, languages, culture, and traditional knowledge.**
 - ii. The platform includes a **Digital Academy** offering **free certificate and UGC-aligned diploma courses**, along with a **Heritage Archive** for documenting tribal literature and oral traditions.
4. The Ministry signed an **MoU** with **Sampurnanand Sanskrit Vishwavidyalaya, Varanasi**, to jointly develop **UGC-recognised diploma programmes** on **tribal languages, traditional knowledge, arts, textiles, and museology** under TribeX.
5. **Technology Integration:**

Highlighted the use of **Artificial Intelligence (AI)**, **Geographic Information Systems (GIS)**, digital documentation, and data analytics to strengthen research and policymaking related to tribal communities.

Source: PIB - <https://www.pib.gov.in/PressReleaseDetail.aspx?PRID=2282205®=48&lang=1>

5. Right to be forgotten

Prelims:

Polity & Governance

Mains:

GS Paper II-Polity & Governance

Current relevance:

Recently **Delhi High Court** has laid down **principles governing Right to Be Forgotten**. The court has evolved a new jurisprudence to protect the privacy of those who continue to be victimised on account of their digital footprints on social media and elsewhere, despite having those matters settled in their favour.



At a glance:

1. Definition:

The **Right to be Forgotten** means that an individual may request the removal, de-indexing, or restriction of access to personal information available online when its continued availability causes unjustified harm and no larger public interest requires it to remain accessible.

2. Constitutional provision:

The RTBF is implicitly provided under **Right to Privacy** mentioned **article 21, (Puttasamy case 2017)**.

3. Delhi High Court decision:

- i. **Recognized the Right to be Forgotten (RTBF):** The Court held that, in appropriate cases, individuals can seek the removal or restriction of personal information available online.
- ii. **Privacy is a Fundamental Right:** The Court reaffirmed that RTBF flows from the Right to Privacy under **Article 21** of the Constitution.
- iii. **RTBF is not an absolute right:** A person's privacy must be balanced against freedom of speech, public interest, and the principle of open justice.
- iv. **Case-by-case approach:** The Court clarified that every RTBF request should be decided based on the specific facts of the case. There cannot be a **one-size-fits-all rule**.
- v. **Judicial records should generally remain public:** Instead of deleting court judgments, the Court suggested that in suitable cases names and personal details may be **redacted (masked) to protect privacy**.
- vi. **Need for institutional mechanism:** The Court observed that an effective framework, including the **Data Protection Board under the DPDP Act**, would help deal with RTBF requests more efficiently.

4. Digital Personal Data Protection (DPDP) Act, 2023

- i. The **DPDP Act, 2023** provides the **Right to Erasure** of personal data under specified conditions.
- ii. Under the DPDP Act, 2023, a **Data Principal** may request the erasure of personal data once the purpose for its collection has been fulfilled, consent has been withdrawn, or retention of the data is no longer required under the Act.
- iii. However, **the Act does not expressly recognise or define the "Right to be Forgotten"** as a distinct legal right.

Source: THE HINDU - <https://www.thehindu.com/news/national/what-is-the-right-to-be-forgotten-explained/article71198013.ece>



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UPSC Daily Current Affairs –10.07.2026

Index

1. Age-Based Social Media Restrictions for Minors	-01
2. Australia to Repatriate Three Stolen Antiquities to India	-02
3. Parrot Bornavirus-4 (PaBV-4)	-04
4. Australia–India Partnership on Cyber, Critical Technologies and Supply Chains (PACTS)	-05
5. Pinaka Long Range Guided Rocket (LRGR)	-07

1. Age-Based Social Media Restrictions for Minors:

Prelims:

Polity & Governance, Science & Technology

Mains:

GS Paper II-Governance, GS Paper III-Science & Technology

Current relevance:

Prime Minister Narendra Modi praised Australia's ban on social media access for children below 16 years and indicated that India is considering similar age-based restrictions to enhance online safety for minors.

DIGITAL CONTROL

Several countries are following Australia's footsteps to curb social media use by children

- 
Malaysia: under-16s barred from owning social accounts
- 
Indonesia: minors blocked from 'high-risk' platforms
- 
France: Bill passed to ban social media use by under-15s
- 
Australia: social media access banned for children below 16 years





PROTECT CHILDREN. BUILD A SAFER DIGITAL FUTURE.
Responsible use today, safer generation tomorrow.

At a glance:

1. Australia's Social Media Law:

Australia's **Online Safety Amendment (Social Media Minimum Age) Act, 2024** requires social media platforms to prevent children **below 16 years** of age from accessing their services.

2. India's Approach:

India is exploring **age-based restrictions** on social media platforms to improve online safety for children and adolescents.

3. Legal Options:

This restriction may be introduced through:

- **New legislation passed by Parliament, or**
- **Amendments to the Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021.**

4. Significance:

To strengthening **child online safety**, promoting **responsible digital governance**, and creating a **secure digital ecosystem** while ensuring balanced access to technology and **freedom of expression**.

Source: THE HINDU - <https://www.thehindu.com/news/national/pm-narendra-modi-praises-australias-social-media-ban-for-minors/article71202133.ece>

2. Australia to Repatriate Three Stolen Antiquities to India

Prelims:

Art & Culture, International Relations

Mains:

GS Paper I-Indian Heritage and Culture, GS Paper II-International Relations

Current relevance:

Australia announced the repatriation of **three culturally significant antiquities** stolen from temples in **Tamil Nadu**, during Prime Minister Narendra Modi's visit, marking another milestone in India's efforts to recover its stolen cultural heritage.



Highlights:

1. Repatriation of Antiquities:

Australia will return **three ancient artefacts** that were illegally removed from temples in **Tamil Nadu** and later traced to the **National Gallery of Australia**.

2. Legal Framework:

- The repatriation is being carried out under the **Mutual Legal Assistance Treaty (MLAT)** between India and Australia.
- Investigations by the **Tamil Nadu Idol Wing CID** established that the artefacts had been illegally removed from temples and trafficked overseas.

3. Historical background:

The artefacts date back to the **11th–12th centuries** and belong to the **Chola period**, renowned for its exceptional temple art and bronze sculptures.

- **Granite Nandi Sculpture:**

- i. **Nandi**, the sacred bull, is the **vahana** and foremost **devotee of Lord Shiva**.
- ii. It originally stood in a **Shiva temple in Tamil Nadu**, facing the sanctum (garbhagriha), symbolising **devotion, strength, and righteousness**.

- **Basalt Karthikeya (Shanmukha) Sculpture:**

- i. It is originally from the **Naganathaswamy Temple**, Manambadi (Thanjavur district, Tamil Nadu).
- ii. The **six-headed (Shanmukha) deity** represents **wisdom, courage, victory, and divine knowledge**, and is an important symbol in South Indian temple traditions.

- **Bhadrakali Bronze Trident (Trishul):**

- i. The **Bronze Trident** is a ceremonial weapon associated with **Goddess Bhadrakali**, a fierce manifestation of Goddess Parvati symbolising **power, protection, and the destruction of evil**.

- ii. Originally belonged to the **Sri Kasi Viswanatha Swamy Temple**, Kollumangudi (Tiruvarur district, Tamil Nadu) and was used in temple rituals and processions.

Source: THE HINDU- <https://www.thehindu.com/news/national/tamil-nadu/australia-to-return-three-antiquities-stolen-from-tamil-nadu-temples/article71202173.ece>

3. Parrot Bornavirus-4 (PaBV-4)

Prelims:

Environment & Ecology, Science & Technology

Mains:

GS Paper III-Environment, Science & Technology

Current relevance:

Scientists from the **Assam Veterinary and Fishery University (AVFU)** have identified and genetically characterised **Parrot Bornavirus-4 (PaBV-4)** for the **first time in India**.



Highlights:

1. Researchers have **identified and genetically characterised Parrot Bornavirus-4 (PaBV-4)** in captive psittacine birds, marking its **first confirmed detection in India**.
2. **Parrot Bornavirus-4 (PaBV-4):**
 - It is a highly **pathogenic virus** belonging to the species *Orthobornavirus alphapsittaciforme*.
 - It primarily infects **psittacine birds (parrots and related species)** and is one of the major causes of **Proventricular Dilatation Disease (PDD)**.
3. **Proventricular Dilatation Disease (PDD):**
 - It is a largely **fatal viral disease** affecting the **digestive and nervous systems** of birds.

- Common symptoms include **weight loss, regurgitation, neurological disorders, digestive dysfunction, and sudden death.**

4. Significance:

The discovery highlights the importance of **early disease surveillance, biosecurity measures, screening of imported birds, and monitoring wildlife diseases** to protect both captive and endangered bird populations.

Source: THE HINDU- <https://www.thehindu.com/sci-tech/energy-and-environment/deadly-bird-virus-pabv-4-identified-for-first-time-in-india/article71201191.ece>

4. Australia–India Partnership on Cyber, Critical Technologies and Supply Chains (PACTS)

Prelims:

International Relations, Science & Technology

Mains:

GS Paper II-International Relations, GS Paper III-Science & Technology, Internal Security

Current relevance:

India and Australia have launched the **Australia–India Partnership on Cyber, Critical Technologies and Supply Chains (PACTS)**, replacing the 2020 Framework Arrangement on Cyber and Cyber Enabled Critical Technology Cooperation.



At a glance:

1. **PACTS (Australia–India Partnership on Cyber, Critical Technologies and Supply Chains)** is a new bilateral strategic framework that strengthens cooperation in **cyber security, critical technologies, resilient supply chains, digital resilience, and defence research**.
2. It replaces the 2020 Framework Arrangement on **Cyber and Cyber Enabled Critical Technology Cooperation**.
3. **Objective:**
To strengthen **national and regional security** by building resilient supply chains, promoting trusted **critical technologies**, enhancing cyber security, and supporting **inclusive digital transformation**.
4. **Five Pillars of Cooperation:**
 - i. **Supply Chain Resilience and Diversification**
Australia and India will strengthen secure and **resilient supply chains** by enhancing cooperation in **trusted technologies, critical minerals, semiconductors, undersea cable connectivity**, bilateral trade, research, and investment.
 - ii. **Critical Technologies**
Collaborate in **Artificial Intelligence (AI), biotechnology, telecommunications, space technology**, and advanced materials while promoting research, innovation, international standards, and secure digital infrastructure.
 - iii. **Cyber Security**
strengthen cooperation in cyber security by tackling **cybercrime, protecting critical infrastructure, promoting capacity building**, and developing cyber skills.
 - iv. **Digital Resilience**
Promote **Digital Public Infrastructure (DPI)** and collaborate on **trusted digital solutions** to strengthen digital resilience across the Indo-Pacific.
 - v. **Defence Research Collaboration**
Strengthen **defence research cooperation** by promoting collaboration in defence technology, maritime capabilities, innovation, and start-up ecosystems.

Source: PIB- <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2282692®=3&lang=1>

5. Pinaka Long Range Guided Rocket (LRGR)

Prelims:

Science & Technology, Defence

Mains:

GS Paper III-Science & Technology, Defence & Security

Current relevance:

The Defence Research and Development Organisation (DRDO) successfully conducted the flight-test of the Pinaka Long Range Guided Rocket (LRGR) at the Integrated Test Range (ITR), Chandipur, Odisha.

**Highlights:**

1. DRDO successfully tested the **Pinaka Long Range Guided Rocket (LRGR)** from the Integrated Test Range (ITR), Chandipur.
2. **Developing Agencies:**
 - Designed by the **Armament Research and Development Establishment (ARDE)**.
 - Developed in collaboration with:
 - i. **High Energy Materials Research Laboratory (HEMRL)**
 - ii. **Defence Research and Development Laboratory (DRDL)**
 - iii. **Research Centre Imarat (RCI)**
3. **About Pinaka LRGR**
 - An **indigenously developed** precision-guided rocket system developed by the **Defence Research and Development Organisation (DRDO)**.
 - It is designed to provide **long-range, high-precision strike capability for the Indian Army**.
 - The LRGR was successfully flight-tested from the Integrated Test Range (ITR), demonstrating a **minimum range of 60 km**.

Source: PIB - <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2282572®=48&lang=1>



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UPSC Daily Current Affairs –11.07.2026

Index

1. Filariasis

Prelims:

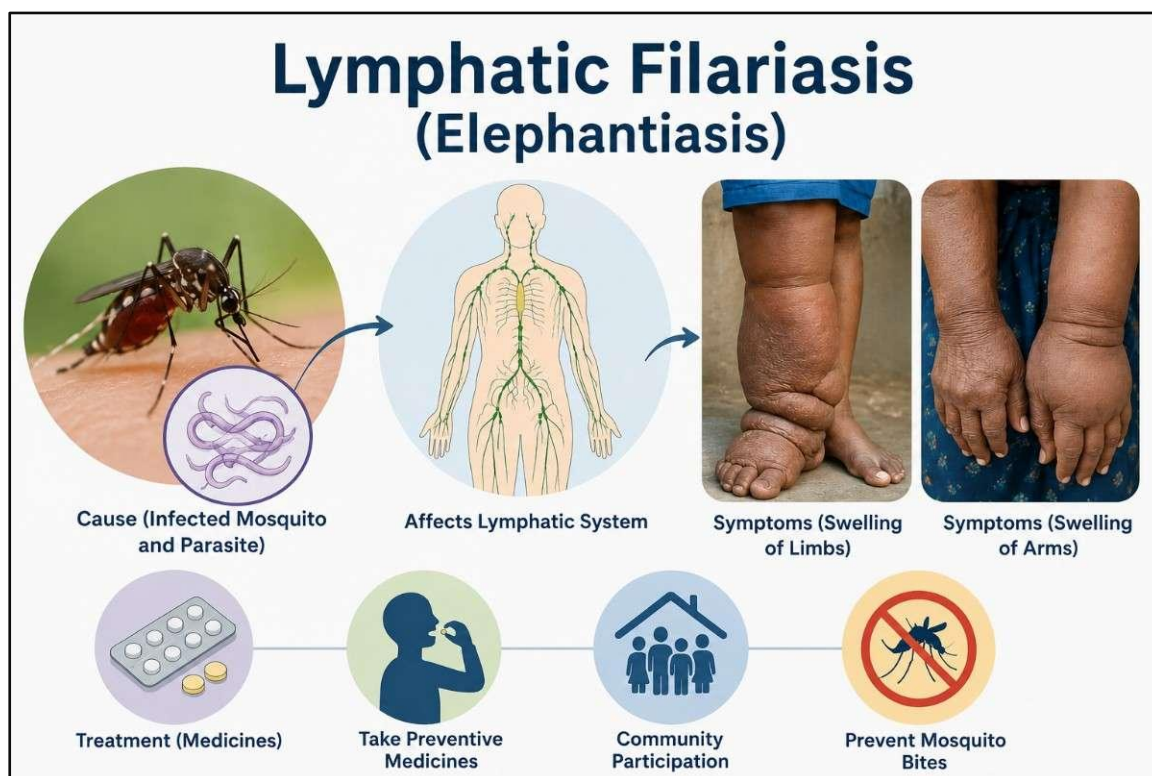
Science & Technology, Health

Mains:

GS Paper II-Health, GS Paper III-Science & Technology

Current relevance:

The **West Bengal Health Department** has launched a **Mass Drug Administration (MDA)** campaign against **Lymphatic Filariasis (Elephantiasis)** in **10 districts**, aiming to eliminate the disease in the State by **2030**.



At a glance:

Lymphatic Filariasis

1. It commonly known as **Elephantiasis**, is a **mosquito-borne Neglected Tropical Disease (NTD)**.
2. It is caused by **parasitic filarial worms** that infect the **human lymphatic system**, leading to abnormal swelling (lymphoedema) of body parts.
3. **Symptoms:**

- **Early Stage** - asymptomatic, Fever, Swollen lymph nodes.
- **Chronic Stage** - Severe swelling (Lymphoedema) of: Legs, Arms, Breasts, Genital organs.

4. **Diagnostic Methods:**

It is diagnosed through **blood smear examination** (preferably collected at night), **antigen detection tests**, ultrasound to detect adult worms, and **PCR-based molecular tests**.

5. **Prevention:**

Mass Drug Administration (MDA) in endemic areas, effective **mosquito control** measures, **increased community awareness** with early treatment.

6. **Mass Drug Administration (MDA):**

- A public health strategy where **anti-filarial medicines are given to all eligible people in endemic areas**, irrespective of infection status.
- **Objective:** Interrupt transmission and eliminate Lymphatic Filariasis.

7. **National Programme:**

National Programme for Elimination of Lymphatic Filariasis (NPELF) implemented by the Ministry of Health & Family Welfare.

8. **WHO Initiative:**

- **Global Programme to Eliminate Lymphatic Filariasis (GPELF)** launched by **WHO** in 2000.
- Lymphatic Filariasis is one of the **Neglected Tropical Diseases (NTDs)** targeted for global elimination.

Source: THE HINDU - <https://www.thehindu.com/news/national/west-bengal/west-bengal-conducts-filariasis-drug-drive-in-10-districts-targets-elimination-by-2030/article71210351.ece>

2. **Manas Tiger Reserve**

Prelims:

Environment & Ecology

Mains:

GS Paper III-Environment

Current relevance:

A recent assessment has revealed that **14 invasive plant species** have contributed significantly to the **loss of over 43% of grassland cover** in **Manas Tiger Reserve, Assam**.



Highlights:

1. The grassland cover in **Manas Tiger Reserve** declined from **53.61% in 1990** to **30.24% in 2019**, representing a 43.59% relative loss over three decades.
2. The shrinking grasslands **threaten several grassland-dependent species**, including: **Indian Rhinoceros, Pygmy Hog, Hispid Hare, Tiger** and other associated wildlife.
3. **Invasive Alien Species:**
Non-native organisms introduced outside their natural range that spread rapidly and negatively affect **native biodiversity, ecosystems, and ecological balance**.
4. **About Manas Tiger Reserve:**
 - Located in **Assam**, Manas Tiger Reserve is one of **India's first Tiger Reserves**, established under **Project Tiger in 1973**.
 - **UNESCO World Heritage Site:** Inscribed in **1985** for its outstanding biodiversity.
 - It was declared as **National Park** in **1990**, strengthening its protection as one of India's most important biodiversity conservation areas.
 - Recognised as a **Biosphere Reserve** under India's Biosphere Reserve Programme.
 - Designated as an **Elephant Reserve**, providing protected habitat for the conservation of the Asian Elephant.

Source: THE HINDU - <https://www.thehindu.com/news/national/assam/14-invasive-plants-behind-grassland-loss-in-one-of-indias-first-tiger-reserves/article71209522.ece>

3. PMFME Scheme (Prime Minister Formalisation of Micro Food Processing Enterprises Scheme)

Prelims:

Economy, Agriculture, Government Schemes

Mains:

GS Paper II-Government Policies & Interventions, GS Paper III Agriculture, Economy, Inclusive Growth

Current relevance:

The **Ministry of Food Processing Industries (MoFPI)** has announced that the **Pradhan Mantri Formalisation of Micro Food Processing Enterprises (PMFME) Scheme** has achieved a major milestone by **sanctioning loans to more than two lakh micro food processing enterprises** across the country.



Highlights:

1. PMFMPE is a **Centrally Sponsored Scheme** by the **Ministry of Food Processing Industries**. Designed to address the challenges faced by the **micro-enterprises** and to tap the potential of groups and cooperatives in supporting the upgradation and formalization of these enterprises.
2. **Beneficiaries:** Individuals, Farmer Producer Organizations (FPOs), Self Help Groups (SHGs), and Producers Cooperatives along their entire value chain.
3. To build the capability of microenterprises to enable:
 - i. **Increased access to credit**

Achieved:

- Sanction of loans to **more than two lakh+ beneficiaries**
 - **90 percent** of beneficiaries are **first-generation entrepreneurs** and **44 percent** are **women entrepreneurs**
- ii. **Integration with an organized supply chain by strengthening branding & marketing.**
Achieved:
- Scheme calls for **One District One Product (ODOP)** approach .
 - Under this scheme, support for **40 common brands** covering **nearly 200 products**, through which PMFME is building local value chains around products **such as Makhana, millets, spices and GI-tagged products** across the country.
- iii. **Support for the transition of existing 2,00,000 enterprises into a formal framework.**
Achieved:
- Over 75,000 PMFME-supported enterprises have entered the formal economy through registrations such as **Udyam Aadhaar, Udyam Assist, FSSAI and GST**.
 - Under this scheme, there is Support for **Self-Help Groups (SHGs)** known as **Seed capital**:
 - **Provision:** Seed capital **Rs40,000/- per member of SHG** for working capital and purchase of small tools would be provided under the scheme.
4. Increased access to common services like common processing facilities, **laboratories, storage, packaging, marketing**, and incubation services.
5. Strengthening of **institutions, research, and training** in the food processing sector; and
6. Increased access for the enterprises, to **professional and technical support**.

source: PIB - <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2283606®=48&lang=1>

4. India–New Zealand Strategic Partnership

Prelims:

International Relations

Mains:

GS Paper II-International Relations, GS Paper III- Economy, Science & Technology, Internal Security

Current relevance:

India and New Zealand elevated their bilateral relations to a **Strategic Partnership** during the meeting of the Prime Ministers in **Auckland, New Zealand**. Both countries adopted **the Roadmap to 2030**.



Key Highlights

1. Aims to **strengthen institutional engagement** through regular high-level political, ministerial, parliamentary, and senior officials' dialogues.
2. Targets **doubling bilateral trade by 2030**, alongside early implementation of the **India–New Zealand Free Trade Agreement (FTA)**.
3. Enhances cooperation in the **Indo-Pacific**, maritime security, counter-terrorism, cybersecurity, disaster resilience, climate action, education, research, and emerging technologies.
4. Promotes greater **people-to-people connectivity**, cultural exchanges, tourism, sports, diaspora engagement, and direct air connectivity.
5. Expands collaboration in **agriculture, horticulture, forestry, dairy, animal husbandry**, and sustainable energy through platforms such as the **International Solar Alliance (ISA)** and **Global Biofuels Alliance (GBA)**.
6. Reaffirms commitment to a **rules-based Indo-Pacific**, peaceful dispute resolution under **UNCLOS**, and cooperation at the **United Nations**, including support for **UN Security Council reforms**.

Six Pillars of the Roadmap to 2030:

A comprehensive six-pillar framework to deepen cooperation over the next four years across political, security, economic, people-to-people, scientific, and multilateral domains. The roadmap is **non-legally binding**, creates **no financial commitments**, and serves as a guiding framework for future collaboration.

1. Political & Diplomatic Engagement

- **Regular dialogues** to oversee implementation. (PM/Minister level)

2. Defence & Security Cooperation

- Strengthen defence cooperation through military exercises, defence dialogues, implementation of the **2025 Defence MoU**, maritime cooperation arrangements, the **Maritime Security Dialogue**, and a **Mutual Logistics Support Arrangement**.
- Enhance collaboration through the **Cyber Dialogue**, Joint Working Group on **Counter-Terrorism**, **anti-narcotics cooperation**, and the **Coalition for Disaster Resilient Infrastructure (CDRI)**.

3. Trade & Economic Cooperation

- **Trade target of NZ\$7 billion by 2030**, implementation of the **FTA**, operationalisation of the **Authorised Economic Operators Mutual Recognition Arrangement (AEO-MRA)**, cooperation in agriculture, horticulture, forestry, dairying, tourism, and promotion of **direct non-stop flights**.

4. People, Culture & Sport

- Diaspora engagement, implementation of the **Sports MoU**, traditional medicine exchanges, maritime heritage cooperation, recognition of seafarer competency certificates, cultural exchanges, and local government partnerships.

5. Education, Research, Science & Technology, and Disaster Management

- Education partnerships, research collaboration in **agriculture, climate, digital transformation, and emerging technologies**, cooperation under **ISA** and **GBA**, and disaster management partnership between **NDMA (India)** and **NEMA (New Zealand)**.

6. Regional & Multilateral Cooperation

- Coordination in **ASEAN-led forums**, cooperation under the **Indo-Pacific Oceans Initiative (IPOI)**, support for **UNCLOS**, enhanced collaboration at the **United Nations**, and support for India's permanent membership in a reformed **UN Security Council**.

Source: PIB- <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2283529®=48&lang=1>

5. Cyanobacteria

Prelims:

Science & Technology, Environment & Ecology

Mains:

GS Paper III-Science & Technology, Environment

Current relevance:

A team of scientists from **the Indian Institute of Technology Guwahati (IIT Guwahati)** has developed a **biological material using cyanobacteria (blue-green algae)** that can effectively remove **lead (Pb)** from contaminated water.



Highlights:

About Cyanobacteria (Blue-Green Algae):

1. Cyanobacteria are **photosynthetic microorganisms** that can produce their own food through photosynthesis.
2. They are commonly found in **freshwater, marine, and moist terrestrial environments**.
3. Many cyanobacteria can **fix atmospheric nitrogen**, helping **improve soil fertility**.
4. They play an important role in maintaining ecosystems and **cleaning polluted environments** through **bioremediation**.

Bioremediation:

The process of using living organisms such as microorganisms, algae, fungi, or plants to remove, degrade, or neutralize pollutants from contaminated soil, water, or air, thereby restoring the environment naturally.

Significance:

1. Provides an **eco-friendly and low-cost method** for removing heavy metal contamination.
2. Can improve access to **safe drinking water**.
3. Offers a **sustainable alternative** to conventional chemical water treatment methods.

Source: THE HINDU - <https://www.thehindu.com/sci-tech/science/iit-guwahati-team-finds-blue-green-algae-can-remove-lead-from-water/article71198226.ece>



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UPSC Daily Current Affairs –12.07.2026

Index

1.	Eärendil-1	-01
2.	New Species of Rare Jumping Spiders	-02
3.	Protocol for Singing Vande Mataram and National Anthem	-04
4.	Nasha Mukta Yuva for Viksit Bharat	-05
5.	Guinness World Record for Miyawaki Plantation Drive	-06

1. Eärendil-1

Prelims:

Science & Technology, Space Technology

Mains:

GS Paper III-Science & Technology, Environment, Internal Security / Disaster Management

Current relevance:

The **U.S. Federal Communications Commission (FCC)** has authorised **Reflect Orbital** to launch **Eärendil-1**, a test satellite equipped with a **large deployable mirror** designed to reflect sunlight onto selected areas of the Earth during nighttime.



Highlights:

1. Federal Communications Commission (FCC):

- It is an **independent agency** of the United States Government.
- It regulates communications by **radio, television, satellite, cable, and other communication technologies**.

2. Reflect Orbital:

A U.S.-based space technology company developing **space-based reflective systems** to redirect sunlight for practical applications.

3. About Eärendil-1:

- It is a **test satellite** equipped with a **deployable, highly reflective thin-film mirror**.
- The mirror is **motorised** and can be oriented to reflect sunlight toward selected locations on Earth during nighttime.
- The satellite will operate in a **Non-Geostationary Orbit (NGSO)**.

4. Non-Geostationary Orbit (NGSO):

an orbit in which satellites **do not remain fixed over one point** on the Earth's surface and includes Low Earth Orbit (LEO), Medium Earth Orbit (MEO), as well as other inclined and polar orbits.

5. Applications:

- The technology can provide light during **disaster relief** and **emergency management operations**.
- It can support **humanitarian missions** by providing temporary illumination in affected areas.
- It can help **extend the operating hours of solar panels** by reflecting sunlight after sunset.
- Provide **temporary lighting** for **remote or inaccessible locations** where conventional lighting is unavailable.

Source: THE HINDU -<https://www.thehindu.com/sci-tech/science/us-regulator-green-lights-mission-to-launch-giant-mirror-to-orbit/article71213314.ece>

2. New Species of Rare Jumping Spiders

Prelims:

Environment & Ecology

Mains:

GS Paper III-Environment, Science & Technology

Current relevance:

A team of researchers from **India and Sri Lanka** has discovered **three new species of the rare jumping spider genus *Onomastus***, with two species found in **Kerala** and one in **Sri Lanka**.



At a glance:

1. The three new *Onomastus* species were discovered in the **Brahmagiri Hills (Wayanad)** and **Silent Valley National Park (Palakkad)** in **Kerala**, as well as in the **mountain forests** of **Sri Lanka**.
2. **Onomastus (genus of jumping spiders)**
 - These spiders are **small, agile predators** known for their **excellent vision** and **jumping ability**.
 - It is **diurnal (active during the day)** and rely on their eyesight rather than webs to hunt prey.
 - They are mainly found on **leaves, shrubs, and forest vegetation** in tropical forests.
 - These spiders are native to **South and Southeast Asia, in India** it is distributed across **western ghats** (Kerala and Tamil Nadu)
 - These spiders are **beneficial predators**, feeding mainly on small insects and helping maintain ecological balance.
3. **Silent Valley National Park:**
 - It is located in Palakkad district of **Kerala**, forms part of the **Nilgiri Biosphere Reserve** lies within the Western Ghats.
 - It is a **UNESCO World Heritage Site**, and is renowned for its **tropical evergreen forests** and high level of endemism.
4. **Brahmagiri Hills:**

Located along the **Kerala–Karnataka border** in the **Western Ghats** and are known for their rich endemic flora and fauna, forming an important wildlife habitat connected to protected forest landscapes.

Source: THE HINDU - <https://www.thehindu.com/news/national/kerala/researchers-discover-three-new-species-of-rare-jumping-spiders/article71210387.ece>

3. Protocol for Singing Vande Mataram and National Anthem

Prelims:

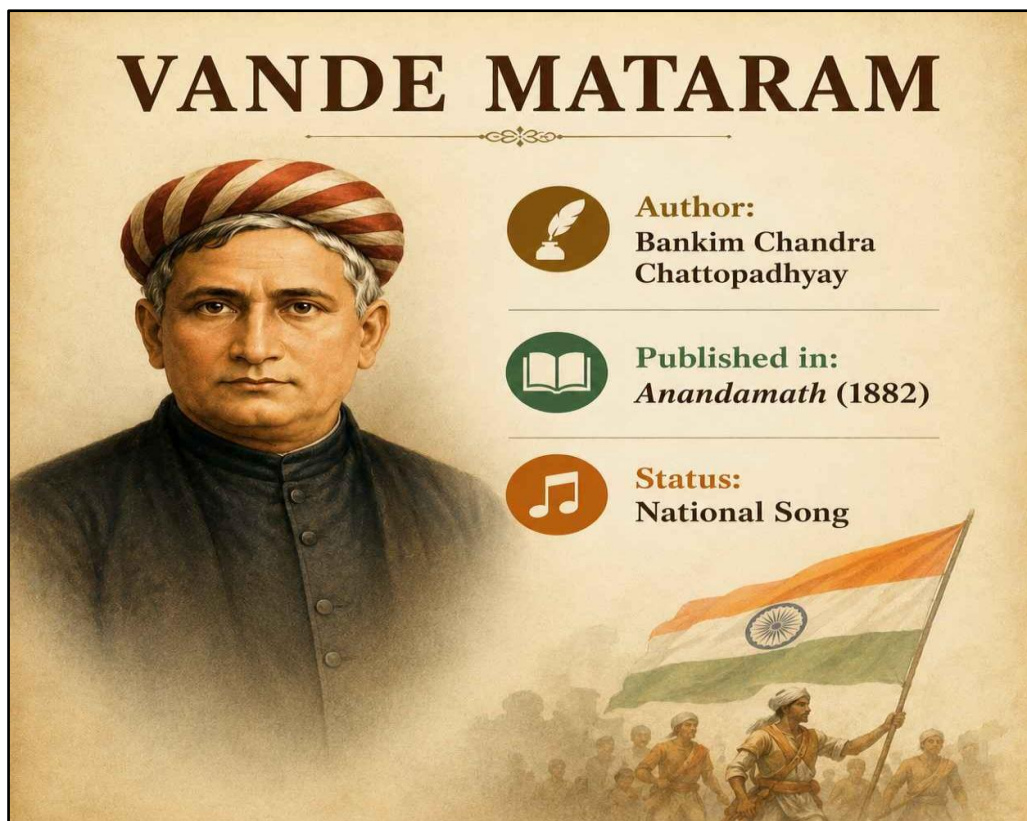
Indian Polity, History

Mains:

GS Paper II-Polity & Governance, GS Paper I-Modern Indian History

Current relevance:

The **Ministry of Home Affairs (MHA)** has directed all **States and Union Ministries** to **strictly comply** with the protocol that **Vande Mataram (National Song)** must be sung or played **before Jana Gana Mana (National Anthem)** whenever both are performed at official events.



Highlights:

1. The **directive reiterates** that:
 - If both **Vande Mataram** and **Jana Gana Mana** are performed at an official event, Vande Mataram **must precede the** National Anthem.
 - The officially prescribed **text, script, pronunciation, and tune** must be followed.

- The Ministry has requested **Chief Secretaries of States** and **Secretaries of Union Ministries** to issue suitable instructions to all institutions and organizations under their jurisdiction for **uniform compliance**.

2. Historical Background:

- **Vande Mataram** was written by **Bankim Chandra Chattopadhyay** and first appeared in his novel **Anandamath**, published in **1882**.
- The song became one of the **most powerful symbols of India's freedom struggle**, inspiring nationalist movements, particularly during the **Swadeshi Movement (1905–08)** following the Partition of Bengal.
- In **1937**, the **Indian National Congress** resolved that only the **first two stanzas of Vande Mataram** would be used at its official gatherings, considering them universally acceptable.
- **After Independence**, the Constituent Assembly, on **January 24, 1950**, adopted **Jana Gana Mana** as the **National Anthem** while according **Vande Mataram** the status and honour of the **National Song**.

3. Significance:

- Reinforces **uniform observance** of national symbols across the country.
- **Preserves the historical and cultural** significance of Vande Mataram in India's freedom movement.
- Promotes respect for officially recognized national symbols while ensuring **standardized rendition** at government functions.

Source: THE HINDU - <https://www.pressreader.com/foryou?popupArticleId=281702621468126>

4. Nasha Mukh Yuva for Viksit Bharat

Prelims:

Polity & Governance

Mains:

GS Paper II-Governance, Social Justice, GS Paper IV - Ethics

Current relevance:

The **Ministry of Youth Affairs & Sports (MYAS)**, through the **Mera Yuva Bharat (MY Bharat)** platform, has launched the **district-level competitions** under the nationwide '**Nasha Mukh Yuva for Viksit Bharat**' campaign.



Highlights:

1. The campaign follows a **three-tier competition** format comprising District, State and National levels.
2. Competitions will be held across **five creative categories—Dance, Music, Reel & Short Film, Nukkad Natak, and Slam Poetry**—to promote the message of a drug-free India through culture, storytelling, music and digital creativity.
3. The initiative is open to **youth aged 15–29 years**, allowing both individual and group participation, with entries accepted in Hindi, English and regional languages through the **MY Bharat Portal**.
4. The campaign aims to encourage **Yuva Shakti** to use creativity as a means of social transformation, contributing to the vision of a **Nasha Mukta Bharat** and Viksit Bharat during Amrit Kaal.
5. The campaign reinforces the Prime Minister's call to make the fight against substance abuse a nationwide **Jan Andolan (People's Movement)**.
6. **Jan Andolan** is the initiative that seeks to **mobilise youth** through **creativity, culture and community leadership** to promote a Nasha Mukta Bharat.

Source: PIB - <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2283943®=20&lang=1>

5. Guinness World Record for Miyawaki Plantation Drive

Prelims:

Environment & Ecology

Mains:

GS Paper III-Environment

Current relevance:

The **Gandhinagar Lok Sabha constituency in Gujarat** created a **Guinness World Record** by planting **over 3.61 lakh saplings in one hour** using the **Miyawaki method** under the nationwide '**Ek Ped Maa Ke Naam**' (**Plant4Mother**) campaign.



At a glance:

1. The Gandhinagar, Gujarat created a **Guinness World Record** by planting over **3.61 lakh saplings** in **one hour** using the **Miyawaki method**.
2. The achievement was accomplished through the collective efforts of the **Ahmedabad Municipal Corporation**, over 25,000 volunteers, government departments, **voluntary organisations and citizens**.
3. The initiative forms part of the nationwide '**Ek Ped Maa Ke Naam**' ("**Plant4Mother**") campaign, which seeks to transform environmental conservation into a people's movement through **mass public participation**.
4. The campaign highlighted the importance of **public participation, meticulous planning and community commitment towards environmental conservation**.
5. The initiative supports the vision of "**Progress with Nature**" through activities such as **large-scale tree plantation, development of oxygen parks, restoration of ponds**, and other environmental conservation initiatives.
6. The campaign also emphasises that plantation must be followed by **protection and nurturing of saplings** to ensure long-term ecological benefits.
7. **Significance:**

The initiative demonstrates a **community-driven model** of environmental conservation and reinforces the role of the '**Ek Ped Maa Ke Naam**' campaign in promoting **green development, sustainable practices and ecological balance** as part of the vision for Viksit Bharat.

Source: PIB- <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2283926®=48&lang=1>



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UPSC Daily Current Affairs –13.07.2026

Index

1. National Innovation Challenge for Drone Application and Research (NIDAR 2.0)	-01
2. UMANG Portal	-03
3. Gaganyaan	-06
4. Global Helium Supply Concerns	-08
5. National Scheduled Castes Finance and Development Corporation (NSFDC)	-09

1. National Innovation Challenge for Drone Application and Research (NIDAR 2.0)

Prelims:

Science & Technology

Mains:

GS Paper III-Science & Technology, Economy, Internal Security

Current relevance:

The Ministry of Electronics and Information Technology (MeitY), in collaboration with the Drone Federation India (DFI), has launched the National Innovation Challenge for Drone Application and Research (NIDAR 2.0, 2026–27) under the SwaYaan initiative.



Highlights:

About NIDAR (National Innovation Challenge for Drone Application and Research):

1. Background:

- i. The first phase of **NIDAR (2025–26)** was launched in **2025**.
- ii. **NIDAR 2.0**, was launched in **2026**, the **flagship innovation** platform under the **SwaYaah** initiative.
- iii. It is jointly organised by the **Ministry of Electronics and Information Technology (MeitY)** and the **Drone Federation India (DFI)**.

2. Objective:

To encourage students to develop **autonomous drones**, **indigenous drone components**, and **AI-enabled drone technologies** using Indian-made processors.

3. Key Focus:

The initiative promotes the development of smarter drones using the **indigenous VEGA processor** and strengthens **self-reliance** in **drone electronics** and **semiconductor technologies**.

About SwaYaah:

1. It is a **Capacity Building** initiative for Human Resource Development in **Unmanned Aircraft Systems (UAS)**, including **drones** and **allied technologies**.
2. It was approved by the **Ministry of Electronics and Information Technology (MeitY)** in **2022**.
3. **Aim:** To develop a **skilled workforce** for India's rapidly growing **drone ecosystem**.
4. It is implemented through a **Hub-and-Spoke model** involving **30 premier institutions**, including **IISc, IITs, IIITs, NITs, C-DAC, and NIELIT**.
5. It focuses on **five key themes**:
 - i. Aeromechanics

- ii. Drone Electronics
- iii. Guidance, Navigation & Control (GNC) Algorithms and Simulation
- iv. Drone Applications
- v. Allied Unmanned Aircraft System (UAS) Technologies

Source: PIB - <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2284236®=48&lang=1>

2. UMANG Portal

Prelims:

Science & Technology, Governance

Mains:

GS Paper II-Governance, GS Paper III-Science & Technology, Internal Security

Current relevance:

Security researchers reported **multiple vulnerabilities** in the **UMANG (Unified Mobile Application for New-age Governance) portal**, exposing sensitive user information such as **EPFO UANs, LPG booking details, and Aadhaar numbers**.



At a glance:

Security Flaws:

1. Researchers identified **multiple security flaws** in the **UMANG portal**, potentially exposing the personal data of millions of users.
2. The reported vulnerabilities exposed information such as: **EPFO Universal Account Numbers (UANs)**, **LPG cylinder booking details**, **Aadhaar numbers** stored across several services.
3. **Government Response:**
MeitY acknowledged the security vulnerabilities and stated that **corrective and preventive measures**, including the **encryption of sensitive information** in the affected APIs, are being implemented.
4. **Role of CERT-In:**
The vulnerabilities were reported to the **Indian Computer Emergency Response Team (CERT-In)**, the national nodal agency that assists organisations in **identifying and mitigating cybersecurity threats**.

About UMANG Portal:

1. Unified Mobile Application for New-age Governance (UMANG), developed by the **Ministry of Electronics and Information Technology (MeitY)** and the **National e-Governance Division (NeGD)**.
2. It provides a **single platform** to access **Central, State, and local government services** through a mobile application and web portal.
3. The platform offers services such as **EPFO, PAN, Aadhaar-linked services, DigiLocker, Passport, gas booking, utility bill payments, healthcare, education, and taxation**.
4. It is available in **multiple Indian languages**, making government services more accessible.
5. Supports the vision of **Digital India** by promoting **paperless, faceless, and cashless governance**.
6. It enables **single sign-on (SSO)**, allowing users to access multiple government services with one login.
7. The platform is accessible through **Android, iOS, KaiOS, and the UMANG web portal**.

Source: THE HINDU - <https://www.thehindu.com/sci-tech/technology/umang-portal-flaws-exposed-user-data-across-hundreds-of-services-researchers-find/article71217208.ece>

3. Gaganyaan

Prelims:

Science & Technology, Space Technology

Mains:

GS Paper III-Science & Technology, Technology and Innovation

Current relevance:

TEST OF GAGANYAAN SYSTEM



MeitY
Ministry of Electronics and
Information Technology

NeGD
National e-Governance Division

ISRO successfully carries out
tests of Gaganyaan systems



Crew Module Uprighting System

Ensures the crew module returns
to an upright position after
splashdown in the sea.



Umbilical Mechanism Separation Test

Ensures clean separation between
crew module and service module
before re-entry.



Apex Cover Separation Test

Validates the structural integrity
of the crew module during apex
cover separation before parachute
deployment.



These tests strengthen the safety, reliability, and readiness of
India's Gaganyaan Human Spaceflight Programme.



The Indian Space Research Organisation (ISRO) successfully completed **three major qualification tests** of critical Gaganyaan crew module systems.

At a glance:

Three Major System Tests:

1. Crew Module Uprighting System (CMUS) Test:

It uses **stored cold-gas inflation technology** to restore the crew module to an upright position after splashdown, ensuring astronaut safety after landing.

2. Umbilical Mechanism Separation Test:

The umbilical mechanism connects the **crew module** and **service module**, demonstrated its clean separation and structural stability before atmospheric re-entry.

3. Apex Cover Separation Test:

The **apex cover** protects the **parachute system** during the mission and separates just before **parachute deployment** to enable the crew module to decelerate safely during descent.

About Gaganyaan:

1. It is **India's first indigenous human spaceflight mission**, developed by the **Indian Space Research Organisation (ISRO)**.
2. **Aim:** To demonstrate India's capability to send humans into space and safely return them to Earth.
3. It is designed to place **three Gaganyatris(astronauts)** in **Low Earth Orbit (LEO)**, around **400 km** above Earth, for a duration of up to **three days**.
4. The astronauts will return safely through **atmospheric re-entry** followed by splashdown in the sea.
5. The mission uses **Launch Vehicle Mark-3 (LVM3)**, India's heavy-lift launch vehicle.
6. **Vyommitra:** A **female humanoid robot**, will fly on uncrewed test missions before the crewed mission to validate spacecraft systems.
7. Programme comprises both **uncrewed test missions** and a **crewed mission**.
8. India will become the **fourth country**, after the **United States, Russia, and China**, to independently develop and launch a human spaceflight mission.

Source: THE HINDU - <https://www.thehindu.com/sci-tech/science/isro-successfully-carries-out-tests-of-gaganyaan-crew-module-systems/article71214549.ece>

4. Global Helium Supply Concerns

Prelims:

Science & Technology, Economic Geography

Mains:

GS Paper III-Science & Technology, Economy, International Relations

Current relevance:

China has temporarily imposed an immediate **ban on helium exports**, raising concerns over global helium supply.

Highlights:

1. **China** has imposed a **temporary ban on helium exports**, adding to existing global supply uncertainties.
2. Although China produces only about **1.6%** of the world's helium, it imports over **80%** of its domestic requirement.
3. The major helium producers are **United States, Qatar, Russia, Canada, Algeria.**

About Helium:



1. Helium is a **non-renewable natural resource** formed by the radioactive decay of **uranium and thorium** within the Earth's crust.
2. It is the **second lightest element** after hydrogen and

is **colourless, odourless, non-toxic**, and chemically inert.

3. It has an extremely **low boiling point** of about -269°C , making it ideal for **cryogenic applications**.

4. **Strategic Resource:**

- i. It is essential for **semiconductor manufacturing and MRI scanners**.
- ii. It supports advanced technologies such as **quantum computing, aerospace, and rocket systems**.
- iii. It is also critical for **fibre-optic manufacturing and leak detection applications**.

Source: THE HINDU -

<https://www.pressreader.com/foryou?popupArticleId=281801405717526>

5. National Scheduled Castes Finance and Development Corporation (NSFDC)

Prelims:

Polity & Governance, Social Justice, Government Schemes

Mains:

GS Paper II-Social Justice, Governance

Current relevance:

An **Impact Evaluation Study** of the **National Scheduled Castes Finance and Development Corporation (NSFDC)** revealed that its **Credit-Based Schemes** have significantly improved **entrepreneurship, self-employment, income, asset creation, and socio-economic conditions** of Scheduled Caste beneficiaries across the country.



Highlights:

About NSFDC:

1. National Scheduled Castes Finance and Development Corporation (NSFDC) is a **central public sector enterprise (CPSE)** functioning under the **Ministry of Social Justice and Empowerment**.
2. Established to promote the **economic and social development** of **Scheduled Castes** through concessional financial assistance.
3. **Objectives:**
 - i. Promotes **entrepreneurship and self-employment** among Scheduled Caste beneficiaries.
 - ii. It provides concessional credit for **income-generating activities**.
 - iii. It supports **skill development and sustainable livelihood** opportunities.
4. **Outcomes:**
 - i. The proportion of **self-employed beneficiaries** increased from **46.62% to 73.95%** after receiving assistance.
 - ii. More than **81% of beneficiaries** reported a positive improvement in their **social and economic status**.

Source: PIB - <https://www.pib.gov.in/PressReleaseDetail.aspx?PRID=2284193®=48&lang=1>



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UPSC Daily Current Affairs –14.07.2026

Index

1. Compressed Biogas (CBG)	-01
2. New bee species	-03
3. Codex Alimentarius Commission	-05
4. Index of Services Production (ISP)	-07
5. Red Sea: A Strategic Hinge Between West Asia and the Horn of Africa	-09

1. Compressed Biogas (CBG)

Prelims:

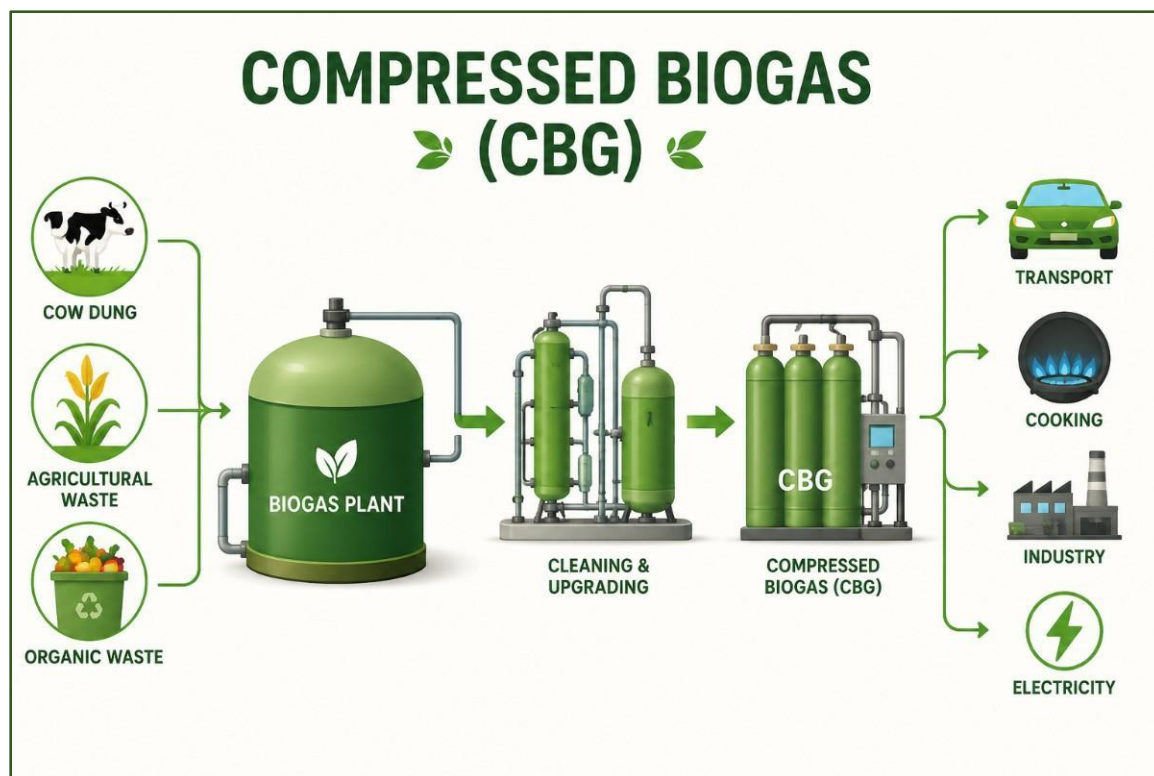
Environment & Ecology, Science & Technology

Mains:

GS Paper III-Energy, Environment, Economy

Current relevance:

Amid **global energy supply concerns** due to tensions in **West Asia**, attention has shifted to **Compressed Biogas (CBG)** as a renewable alternative to reduce India's dependence on imported fossil fuels and strengthen energy security.



Highlights:

Current status:

1. **India imports** nearly 85% of its **crude oil requirement**, making its energy security highly vulnerable to global geopolitical developments.
2. India is trying to diversify crude oil suppliers, yet around **90% of its LPG imports transit through the Strait of Hormuz**, exposing the country to supply disruptions during **conflicts in West Asia**.

Compressed Biogas (CBG):

1. It is produced by compressing purified biogas generated through the **anaerobic digestion of organic waste**.
2. It is chemically similar to **Compressed Natural Gas (CNG)** and serves as a renewable, carbon-neutral fuel.
3. Can be used for **transport, cooking, electricity generation, and industrial applications**.

Government Initiatives:

1. SATAT Initiative:

- i. **The Sustainable Alternative Towards Affordable Transportation (SATAT)** initiative promotes the production and use of **Compressed Biogas (CBG)** to provide clean, affordable fuel while reducing crude oil imports.
- ii. It also aims to increase farmers' income, support crop residue management, and establish **5,000 CBG plants** across the country.

2. GOBARDhan Scheme:

- i. Promotes **waste-to-wealth** by supporting community biogas plants and strengthening biomass collection and pipeline infrastructure.

3. Mandatory CBG Blending:

- i. The **National Biofuels Coordination Committee (2023)** approved mandatory blending of **CBG with natural gas**.
- ii. Blending will begin at **1% in FY26** and gradually increase to **5% by FY29**.

Source: THE HINDU - <https://www.thehindu.com/business/Economy/can-biogas-aid-indias-energy-security/article71218703.ece>

2. New bee species

Prelims:

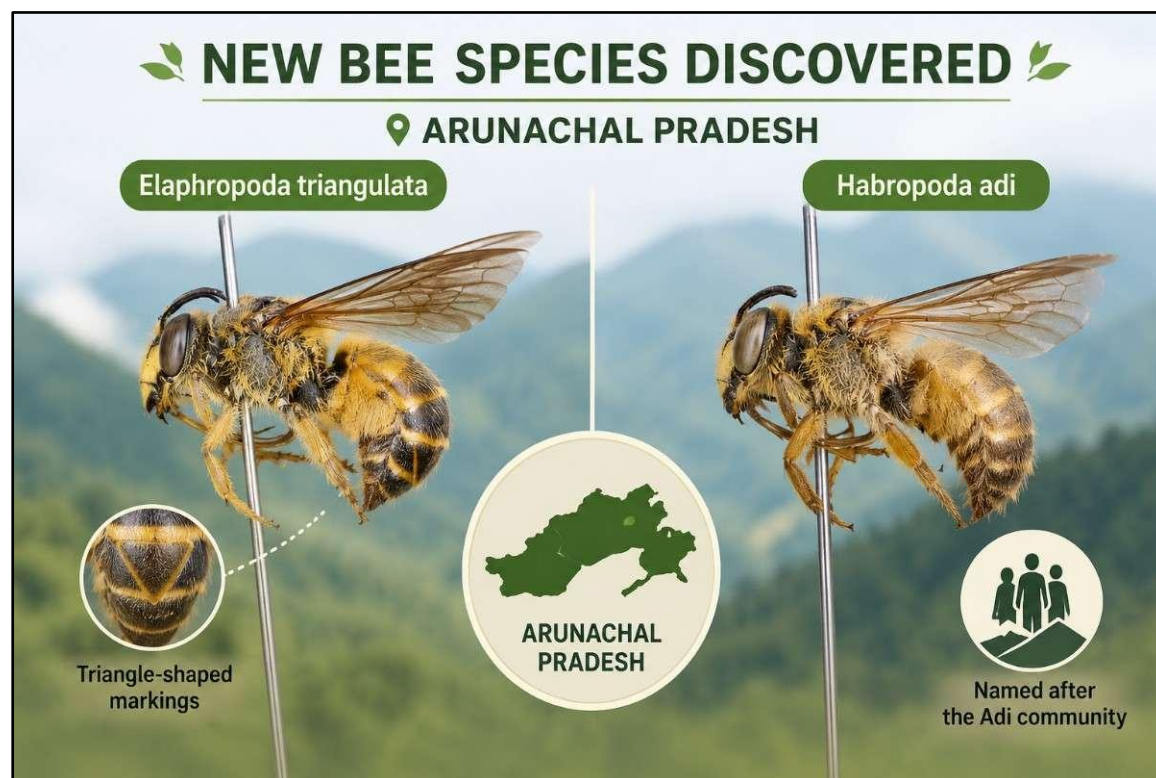
Environment & Ecology, Biodiversity

Mains:

GS Paper III- Environment, Science & Technology

Current relevance:

Researchers from the **Ashoka Trust for Research in Ecology and the Environment (ATREE)** discovered **two new species** of solitary bees in **Arunachal Pradesh**.



Highlights:

1. Researchers from **Ashoka Trust for Research in Ecology and the Environment (ATREE)** discovered **two new solitary bee species** in **Arunachal Pradesh**:
 - i. **Elaphropoda triangulata** – named after the triangle-shaped abdominal markings.

- ii. **Habropoda adi** – named in honour of the Adi indigenous community.

About Solitary bee:

1. Both species are **solitary bees** that mainly build their **nests in the ground**.
2. They are important **pollinators**, playing a crucial role in maintaining **biodiversity** and supporting **agricultural productivity**.
3. These bees **do not live-in colonies** like honeybees.
4. Each female solitary bee builds, provisions, and maintains its **own nest independently**.
5. They are **non-aggressive** and rarely sting.

About ATREE:

1. An **environmental research organisation** based in Bengaluru, Karnataka.
2. Focuses on **biodiversity conservation, climate change, sustainable development, and ecological research**.

Source: THE HINDU - <https://www.thehindu.com/news/national/karnataka/atree-researchers-discover-two-new-bee-species-in-arunachal-pradesh/article71221452.ece>

3. Codex Alimentarius Commission

Prelims:

International Organizations, Agriculture

Mains:

GS Paper II-Governance, GS Paper III-Agriculture, Science & Technology

Current relevance:

At the 49th Session of the **Codex Alimentarius Commission** (CAC49) held in **Geneva, Switzerland**, India secured major achievements, including the adoption of **seven India-led Codex standards and guidelines** and approval to develop a **Codex Standard for Cashew Kernels**.



At a glance:

About Codex Alimentarius Commission (CAC):

1. It is a joint body of the **Food and Agriculture Organization (FAO)** and the **World Health Organization (WHO)**, established in **1963** to develop international food standards.
2. Develops **science-based international food standards** to protect consumer health and facilitate fair food trade.

Key outcomes for India:

Seven India-led Codex Texts Adopted

1. Under India's Chairmanship:

- i. **Codex Standard for Dried Coriander Seeds** – promotes harmonized quality standards and facilitates global spice trade.
- ii. **Codex Standard for Fresh Curry Leaves** – establishes the first international quality benchmark for curry leaves.

2. Under India's Co-chairmanship:

- i. Adopted Codex Standards for **Vanilla and Large Cardamom** to establish internationally harmonised quality requirements.
- ii. Guidelines for the **safe use and reuse of water** in food **production and processing** to promote food safety and sustainable water management.
- iii. Guidelines for controlling **Campylobacter and Salmonella** in chicken meat to reduce foodborne illnesses.
- iv. **Food labelling** provisions for **joint presentation and multipack formats** to improve clarity and consistency in food labels.

3. Cashew Kernel Standard Approved:

- i. CAC approved India's proposal to develop a **Codex Standard for Cashew Kernels** under the **Codex Committee on Processed Fruits and Vegetables (CCPFV)**.
- ii. Expected to improve export competitiveness, reduce technical barriers, and facilitate fair international trade.

Source: PIB - <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2284554®=3&lang=1>

4. Index of Services Production (ISP)

Prelims:

Indian Economy

Mains:

GS Paper III-Indian Economy, Science & Technology

Current relevance:

The **Government of India** has introduced the **Index of Services Production (ISP)**, India's **first high-frequency indicator** to measure the performance of the formal services sector.



Highlights:

1. The **Index of Services Production (ISP)** has been introduced as India's first **high-frequency indicator** to track short-term changes in the output of the formal services sector.

2. The **Ministry of Statistics and Programme Implementation (MoSPI)** constituted a **Technical Advisory Committee (TAC)** in **2025** to develop the conceptual and methodological framework for the ISP.
3. The first trial index covers **19 service sub-sectors**, representing nearly **60% of the services sector**.

About Index of Services Production (ISP):

1. It is important because **services sector contributes** over **50%** of India's Gross Value Added (GVA).
2. The **base year** for the ISP is **2024–25**.
3. The ISP is released monthly, with a **time lag of approximately 60 days**.
4. It is compiled using **Administrative Data, GST data, and the Annual Survey of Incorporated Services Sector Enterprises (ASISSE)**.
5. The index uses **price deflators (CPI and WPI)** to convert **nominal (value-based)** data into **real (volume-based) output**.
6. The ISP fills the gap left by the **Index of Industrial Production (IIP)** by providing a dedicated measure of **services sector performance**.

Source: PIB -

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2284646®=48&lang=2>

5. Red Sea: A Strategic Hinge Between West Asia and the Horn of Africa

Prelims:

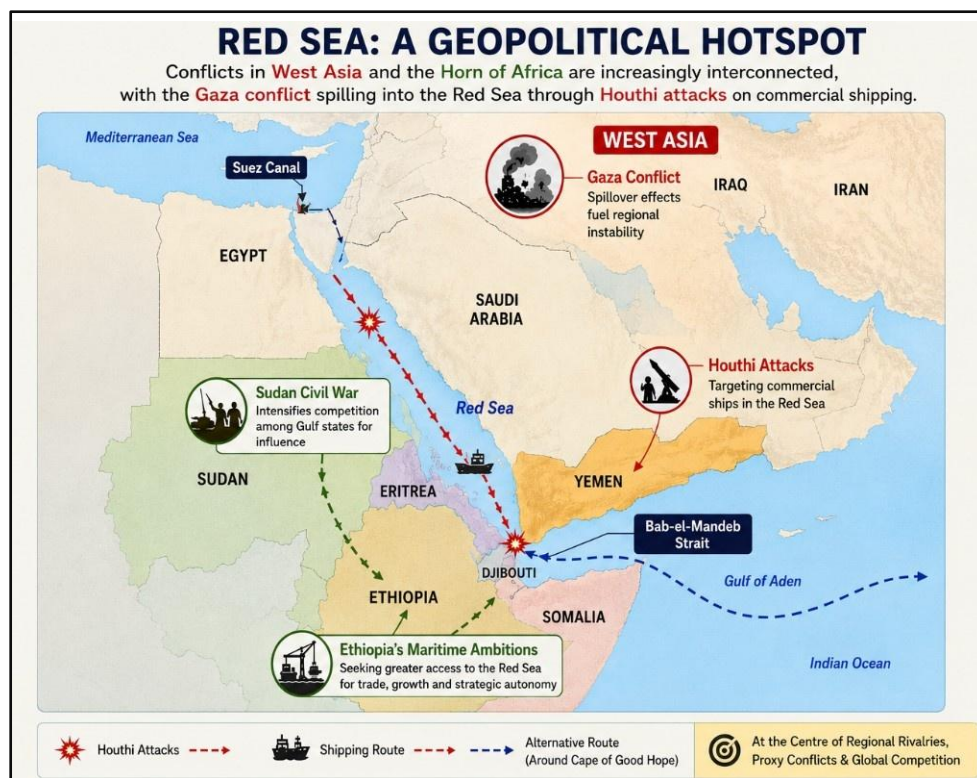
International Relations

Mains:

GS Paper II-International Relations, GS Paper III- Internal Security

Current relevance:

The **Red Sea** has emerged as a major **geopolitical hotspot** as conflicts in **West Asia and the Horn of Africa** become increasingly interconnected, with the Gaza conflict spilling into the Red Sea through Houthi attacks on commercial shipping.



Highlights:

1. **Red Sea Connects the Mediterranean Sea to the Indian Ocean through the Suez Canal and Bab-el-Mandeb Strait.**
2. It is a **vital global maritime trade corridor** through which a significant share of international commerce and energy supplies passes.
3. **Gaza Conflict Spillover:**
 - i. The **Houthis** linked their attacks on commercial shipping in the Red Sea to the ongoing **Gaza conflict**, **targeting vessels** associated with **Israel and Western countries**.
 - ii. These attacks expanded the conflict from the land domain to the maritime domain, disrupting global shipping routes, threatening international trade, and further intensifying **regional instability in West Asia and the Red Sea**.
4. **Sudan Civil War and Gulf Rivalries:**
 - i. **Sudan's ongoing civil war** has intensified regional power competition, with **Gulf countries** seeking to expand their influence through political support, economic investments, and security partnerships.
 - ii. As a result, Sudan has emerged as a key arena for **geopolitical rivalry**, where competing regional interests shape the country's political and security landscape.
5. **Ethiopia's Maritime Ambitions:**
 - i. Since **Eritrea's independence in 1993**, Ethiopia has been a landlocked country and has actively sought greater access to the Red Sea to reduce its dependence on neighboring ports.

- ii. **Maritime access** is considered crucial for enhancing economic growth, diversifying trade routes, reducing transportation costs, and strengthening the country's **strategic autonomy and regional influence**.

Red sea:

- It is a **semi-enclosed saltwater sea** located between **Northeast Africa** and the **Arabian Peninsula**.
- It is one of the world's **most strategically important maritime waterways**, connecting **Europe, Asia, and Africa**.
- It is bordered by six countries—**Egypt, Sudan, Eritrea, Djibouti, Saudi Arabia, and Yemen**.

Horn of Africa:

- It is a strategically important region comprising Djibouti, Eritrea, Ethiopia, and Somalia, located at the junction of the Red Sea, the Gulf of Aden, and the Indian Ocean.



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UPSC Daily Current Affairs –15.07.2026

Index

1. Jumping Gene	-01
2. Indian Grey Hornbill	-02
3. e-VSP Portal	-04
4. National Investment Policy for Urea-2026 (NIPU-2026)	-05
5. India-UK CETA	-06

1. Jumping Gene

Prelims:

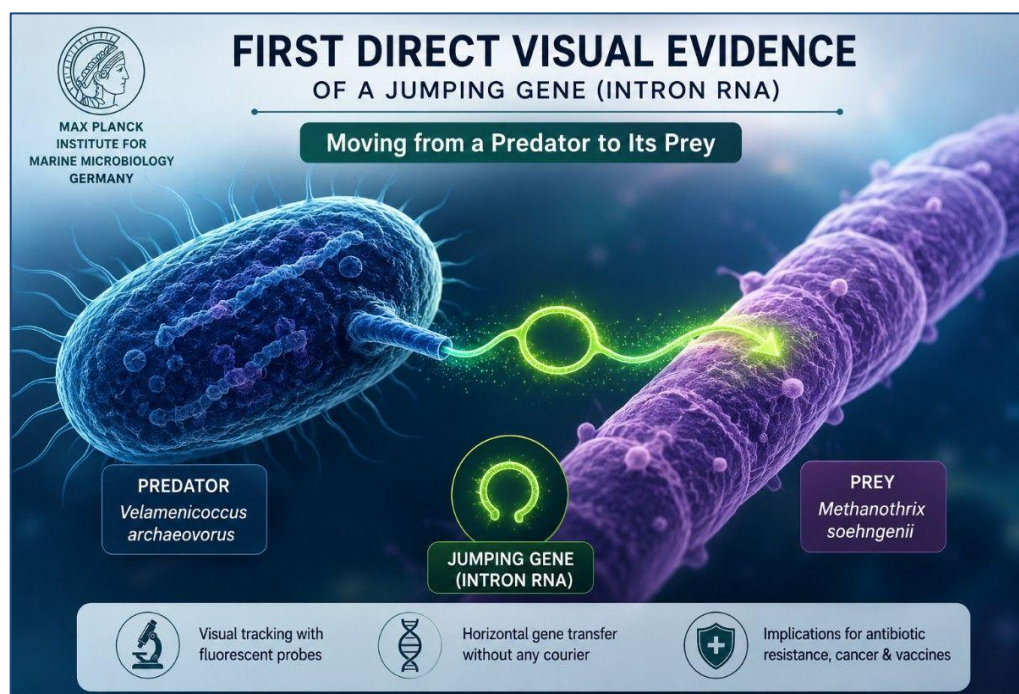
Science & Technology

Mains:

GS Paper III-Science & Technology

Current relevance:

Researchers at the **Max Planck Institute for Marine Microbiology, Germany**, have provided the **first direct visual evidence** of a **jumping gene (intron RNA)**.



Highlights:

1. Scientists visually tracked an **RNA intron** moving from a **predatory bacterium** to its **archaeal prey**, marking the **first direct observation** of horizontal gene transfer without a biological courier.
2. The study focused on the interaction between **Methanothrix soehngenii** (a methane-producing archaeon) and **Velamenicoccus archaeovorus**, an ultramicrobacterium that preys on the archaeon.
3. Scientists used **fluorescent RNA probes** and **confocal fluorescence microscopy** to visually track the movement of the intron RNA.
4. The study demonstrates **horizontal gene transfer (HGT)**, where genetic material is transferred between unrelated organisms rather than inherited from parents, with the transfer occurring **without the involvement of viruses**.
5. **Significance:**
 - i. **Medical Applications:**
Jumping genes are associated with the development of several **cancers** and play a role in the **spread of antibiotic resistance** among microorganisms.
 - ii. **Biotechnological Applications:**
Circular RNA molecules derived from mobile introns are being explored as promising **next-generation vaccine platforms** due to their stability and potential for efficient gene delivery.

About Jumping Genes:

1. Jumping genes, also known as **Transposable Elements (TEs)**, are DNA sequences that can move from one location to another within a genome.
2. In some cases, they can also move between **different organisms**, contributing to genetic diversity and evolution.

Source: THE HINDU - <https://www.thehindu.com/sci-tech/science/why-scientists-watched-a-gene-hop-from-a-predator-into-its-prey/article71220657.ece>

2. Indian Grey Hornbill

Prelims:

Environment & Ecology

Mains:

GS Paper III-Environment & Ecology

Current relevance:

Researchers have reported **four consecutive years** of successful breeding of **the Indian Grey Hornbill** in **Gir Forest, Gujarat**, following its reintroduction in **2021**.



Highlights:

Background:

1. The Indian Grey Hornbill disappeared from **Gir Forest** during the **1950s–1960s**.
2. To restore the species, the **Gujarat Forest Department** initiated a reintroduction programme in **2021**.

Key Findings:

1. The species has recorded **four consecutive years** of **successful breeding**.
2. The restored population has begun establishing **self-sustaining territories** in Gir.

About Indian Grey Hornbill:

1. **The Indian Grey Hornbill (*Ocyrceros birostris*)** is a **medium-sized** with a long curved bill, grey plumage, and a long tail with a white tip.
2. Primarily **frugivorous**(fruits) bird, also **feeds on insects, small reptiles**, and other invertebrates.
3. Native to the **Indian subcontinent** (India, Nepal, and parts of Pakistan).
4. It inhabits **dry deciduous forests**, open woodlands, **riverine forests**, agricultural landscapes, and urban green spaces.
5. The species is an important **long-distance seed disperser**, aiding natural forest regeneration.
6. The bird nests in **tree cavities**, where the female seals herself inside during incubation, leaving only a narrow slit for feeding.
7. IUCN Red List Status: **Least Concern (LC)**

Source: THE HINDU - <https://www.thehindu.com/sci-tech/energy-and-environment/60-years-after-disappearing-from-gir-indian-grey-hornbills-breed-for-fourth-consecutive-year/article71220419.ece>

3. e-VSP Portal

Prelims:

Polity & Governance

Mains:

GS Paper II – Governance

Current relevance:

The Union Minister of State for Law & Justice, Shri Arjun Ram Meghwal, launched the **e-VSP (Vidhi Sahitya Prakashan) Portal** on July 2026.



Highlights:

1. **e-VSP (Vidhi Sahitya Prakashan) Portal** is a digital platform developed by the Legislative Department, Ministry of Law & Justice.
2. It provides **online access** to Hindi legal publications, including judgments of the **Supreme Court and High Courts**, legal journals, and reference books.

Objective:

1. **Promoting Digital Access:**
 - i. To make **legal literature available online** for lawyers, judicial officers, students, teachers, researchers, and citizens worldwide.
 - ii. To support the **Digital India** initiative by improving access to legal knowledge.
2. **Promoting Hindi in the Legal Domain:**
 - i. Encourages the use of **simple, lucid, and citizen-friendly Hindi** in legal literature.
 - ii. Strengthens Hindi as a language for legal understanding and professional discourse.

Major benefit:

1. The e-VSP Portal makes legal information more accessible to citizens, **promoting transparency and enhancing legal awareness.**
2. Preserves India's **constitutional values and legal heritage** through **digital documentation.**

Source: PIB - <https://www.pib.gov.in/PressReleaseDetail.aspx?PRID=2285193®=48&lang=1>

4. National Investment Policy for Urea-2026 (NIPU-2026)**Prelims:**

Economy, Agriculture

Mains:

GS Paper III – Indian Economy, Agriculture

Current relevance:

The **Cabinet Committee on Economic Affairs (CCEA)**, chaired by the Prime Minister, has approved the **National Investment Policy for Urea-2026** for Atmanirbhar Bharat (NIPU-2026).

**Highlights:**

1. **National Investment Policy for Urea-2026 (NIPU-2026)** is a policy launched by the **Department of Fertilizers** to encourage investments in **gas-based urea manufacturing plants.**

2. Objective:

- i. Increase **domestic urea production** by encouraging investment in new gas-based urea manufacturing units.
- ii. Achieve **fertilizer self-reliance** by reducing import dependence and strengthening India's fertilizer security.

3. Significance:

- i. It **reduces India's dependence** on imported urea, strengthens the external sector, and promotes investment in the domestic fertilizer industry.
- ii. Ensures a **reliable supply of urea** for farmers, thereby improving agricultural productivity and supporting **national food security**.
- iii. It advances the **vision of Atmanirbhar Bharat** by enhancing self-reliance and strengthening India's **long-term fertilizer security**.

4. About Gas-based urea manufacturing units:

- i. The fertilizer plants that use **natural gas as the primary raw material (feedstock)** and energy source to produce urea fertilizer.
- ii. **Working Mechanism:**
Natural gas is first converted into **ammonia** through a chemical process. The ammonia is then combined with **carbon dioxide (CO₂) to produce urea**, which is widely used as a **nitrogen-based fertilizer**.

Source: PIB - <https://www.pib.gov.in/PressReleaseDetail.aspx?PRID=2284801®=48&lang=1>

5. India-UK CETA**Prelims:**

Economy, International Relations

Mains:

GS Paper II – Bilateral Relations, GS Paper III – Economy

Current relevance:

The India–UK Comprehensive Economic and Trade Agreement (CETA) and the Agreement on Social Security (Double Contribution Convention – DCC) entered into force on July 2026.

 INDIA-UNITED KINGDOM COMPREHENSIVE ECONOMIC AND TRADE AGREEMENT INDIA-UK CETA 									
KEY HIGHLIGHTS  Zero-duty market access for nearly 99% of India's exports to the UK  Covers almost 100% of bilateral trade value  Over 50 export consignments worth over USD 140 million flagged off on Day One  Consignments dispatched from 20+ ports, airports, ICDs, SEZs and factories across India  First Certificates of Origin issued via eCoO 2.0 platform on self-certification basis	SECTORS TO BENEFIT <table border="1"> <tr> <td> TEXTILES</td> <td> LEATHER</td> <td> GEMS & JEWELLERY</td> <td> ENGINEERING GOODS</td> </tr> <tr> <td> MARINE PRODUCTS</td> <td> CHEMICALS</td> <td colspan="2"> PROCESSED FOODS</td> </tr> </table>	 TEXTILES	 LEATHER	 GEMS & JEWELLERY	 ENGINEERING GOODS	 MARINE PRODUCTS	 CHEMICALS	 PROCESSED FOODS	
 TEXTILES	 LEATHER	 GEMS & JEWELLERY	 ENGINEERING GOODS						
 MARINE PRODUCTS	 CHEMICALS	 PROCESSED FOODS							

Highlights:

1. The Comprehensive Economic and Trade Agreement (CETA) is a **Free Trade Agreement (FTA)** between India and the United Kingdom.
2. **Aim:** To promote trade in goods and services, investment, market access, and economic cooperation between the two countries.
3. The Agreement grants **zero-duty access** to nearly **99%** of **India's exports**, accounting for almost **100% of bilateral trade value** with the UK.
4. The implementation of India–UK CETA commenced with the dispatch of over **50 export consignments** worth more than **USD 140 million** from over 20 ports, airports, ICDs, SEZs, and factories across India.
5. The first Certificates of Origin (CoO) were issued through the **eCoO 2.0 platform** on a **self-certification basis**, reducing compliance costs and facilitating easier trade.

About Double Contribution Convention (DCC):

- i. It is a **bilateral social security agreement** that **exempts** employees on **temporary overseas assignments** from making social security contributions in both their home and host countries, thereby preventing double contributions.
- ii. The exemption is available for up to **five years**.
- iii. Enhances the **global competitiveness of India's skilled workforce** by reducing employment costs for Indian professionals working temporarily in the United Kingdom.

Source: PIB - <https://www.pib.gov.in/PressReleaseDetail.aspx?PRID=2285085®=48&lang=1>



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UPSC Daily Current Affairs –16.07.2026

Index

1. Hydrogen-Powered Train	-01
2. Data Governance Guidance Framework for Banks	-02
3. Semicon 2.0	-04
4. Mobile Phone Manufacturing Scheme (MPMS)	-06
5. Abathsahayeswarar Temple, Thukkachi	-07

1. Hydrogen-Powered Train

Prelims:

Science & Technology, Environment & Ecology

Mains:

GS Paper III – Science & Technology, Environment, Infrastructure, Energy

Current relevance:

India's **first indigenously developed** hydrogen fuel cell-powered train was inaugurated on 17 July 2026 and is set to commence operations on the **Jind–Sonipat** section of Northern Railway.

Ministry of Railways
Government of India

INDIA'S FIRST HYDROGEN-POWERED TRAIN

ADVANCING GREEN RAIL MOBILITY

भारत 2023 INDIA

**WILL OPERATE ON THE
JIND–SONIPAT SECTION**
of Northern Railway

ZERO EMISSION
Only water vapour
and heat as by-product

10-COACH
Hydrogen fuel cell
trainset

1200 kW
Hydrogen fuel cell
propulsion system

75 kmph
Operational Speed
(Design Speed:
110 kmph)

~2,600
Passenger
Capacity

CONNECTS
Jind Junction,
Gohana Junction &
Sonipat

BY-PRODUCT
Only water vapour
and heat

Highlights:

About Hydrogen-Powered Train:

1. It is a railway train that **uses hydrogen fuel cells** to generate electricity onboard, which powers its electric traction motors instead of diesel.
2. The train is powered by a **1200 kW** hydrogen fuel cell propulsion system, enabling clean and efficient operation.
3. It has an approved maximum operating speed of **75 kmph** and a design speed of **110 kmph**.
4. **Working Principle:**
 - i. Hydrogen stored onboard reacts with oxygen from the atmosphere inside a **Proton Exchange Membrane Fuel Cell (PEMFC)** to generate electricity.
 - ii. The electricity produced by the **fuel cell powers** the train's electric traction motors, enabling smooth and efficient operation.
 - iii. The process emits **only water vapour and heat** as by-products, producing **zero carbon dioxide emissions** at the point of use.
5. **Operational Readiness:**
 - i. Indian Railways has established **comprehensive standard operating procedures (SOPs)**, regular safety audits, and operational protocols for safe hydrogen train operations.
 - ii. The **hydrogen refuelling system** will be monitored round the **clock (24×7)** to ensure safe, reliable, and uninterrupted operations.
 - iii. Critical operations will be managed by **trained and certified personnel**.
6. **Safety Features:**
 - i. **Hydrogen leak and flame detection systems** have been installed at hydrogen production, storage, and refuelling facilities for continuous monitoring.
 - ii. **Safety sensors** are inspected and maintained regularly to ensure reliable performance and **early detection** of any hazards.
 - iii. The train is equipped with an **automatic safety mechanism** that immediately shuts off the hydrogen supply if heat, flame, smoke, or any abnormal condition is detected.
7. **Paving the Way for Green Railways:**

It supports the **National Green Hydrogen Mission**, advances India's **net-zero goals**, and lays the foundation for a cleaner, more resilient, and **sustainable railway system**.

Source: PIB - <https://www.pib.gov.in/PressReleaseDetail.aspx?PRID=2285268®=48&lang=1>

2. Data Governance Guidance Framework for Banks

Prelims:

Indian Economy, Governance

Mains:

GS Paper III: Indian Economy, Banking Sector, Digital Economy, Cyber Security, Data Governance

Current relevance:

The Reserve Bank of India (RBI) has issued the **Guidance on Regulatory Expectations for Data Governance** for banks and other Regulated Entities (REs).



Highlights:

Data Governance Guidance Framework (DGF)

1. It is a **regulatory framework issued by the RBI** that prescribes standards for the effective governance, management, protection, and utilisation of data by banks and other Regulated Entities (REs).

Need for Data Governance:

1. The rapid digital transformation of the banking sector has made **data a critical asset** for banks.
2. The growing **scale, diversity, and complexity of data** require robust governance practices to ensure its **quality, integrity, and security**.
3. Inadequate data governance can increase **operational, financial, regulatory, and reputational risks** for banks and other regulated entities.
4. The framework enables compliance with the **Digital Personal Data Protection (DPDP) Act, 2023**, and other applicable legal and regulatory requirements.

Key Features of the Framework:**1. Comprehensive Data Governance Framework (DGF)**

Every Regulated Entity (RE) is required to establish a DGF that is integrated with its **overall risk management** framework.

2. Risk-Based and Proportionate Approach

The framework should be designed in proportion to the institution's **size, operational complexity, business model, and technological capabilities**.

3. End-to-End Data Lifecycle Management

The DGF should govern the entire data lifecycle, including data creation, collection, storage, processing, sharing, retention, and secure disposal.

4. Robust Institutional Governance

Define clear organisational structures, governance policies, **roles and responsibilities**, operational processes, technology systems, and **audit** mechanisms.

5. Periodic Review and Updation

Banks are required to review and update the Data Governance Framework **atleast annually or more frequently**.

Source: THE HINDU - <https://www.pressreader.com/india/the-hindudelhi9ww5/20260716/282123528271454?srsltid=AfmBOoqv7f8RMxKtWzLjwoSFZSsIDXGWOZpNys0XAKdTTvE8qvwUUnlj>

3. Semicon 2.0**Prelims:**

Government Schemes and Initiatives, Science & Technology, Economy

Mains:

GS Paper III-Science and Technology, Economy

Current relevance:

The Union Cabinet has approved ₹1.27 lakh crore for **Semicon India Programme 2.0 (India Semiconductor Mission – ISM 2.0)** to strengthen India's semiconductor ecosystem.



Highlights:

Background:

The **India Semiconductor Mission (ISM)** is a flagship initiative of the Government of India launched in 2021 under the **Ministry of Electronics and Information Technology (MeitY)** to develop a complete semiconductor and display manufacturing ecosystem in India.

Semicon India Programme 2.0:

1. Semicon 2.0 is the **next phase** of the India Semiconductor Mission that focuses on **scaling semiconductor manufacturing**, strengthening supply chains, encouraging research, and making India a **globally competitive semiconductor hub**.
2. **Nodal Ministry:** Ministry of Electronics and Information Technology (MeitY)
3. **Implementing Agency:** India Semiconductor Mission (ISM)

Key Objectives:

1. Promote indigenous **design, development, and manufacturing** of semiconductor chips.
2. Expand support to suppliers of **raw materials, minerals, specialty gases**, and other semiconductor ecosystem components.
3. **Reduce India's dependence** on imported semiconductors and strengthen supply chain resilience.

Six-Pillar Approach of Semicon 2.0:

1. **Indigenous Chip Design:** Promote the design of semiconductor chips in India.
2. **Research and Development (R&D):** Strengthen innovation, technology development, and intellectual property (IP) creation.
3. **Manufacturing Ecosystem:** Establish globally competitive **semiconductor fabrication (fabs)**, and packaging (ATMP/OSAT) facilities.

4. **Raw Material Support:** Encourage domestic production of critical minerals.
5. **Supply Chain Development:** Build a resilient end-to-end semiconductor supply chain.
6. **Technology Advancement:** Facilitate the adoption of next-generation semiconductor technologies for emerging sectors such as **Artificial Intelligence (AI)**, **electric vehicles (EVs)**, **5G/6G**, **Internet of Things (IoT)**, and **high-performance computing**.

Source: THE HINDU - <https://www.pressreader.com/foryou?popupArticleId=281977499383437>

4. Mobile Phone Manufacturing Scheme (MPMS)

Prelims:

Indian Economy, Government Schemes, Science & Technology

Mains:

GS Paper III: Indian Economy, Science & Technology

Current relevance:

The Union Cabinet, chaired by the Prime Minister, has approved the **Mobile Phone Manufacturing Scheme (MPMS)** with a **budgetary outlay of ₹62,500 crore** to boost domestic manufacturing.



Highlights:

1. **MPMS** is a **Central Sector Scheme** aimed at promoting large-scale mobile phone manufacturing in India by providing production-linked incentives, encouraging domestic value addition, strengthening supply chains, and supporting indigenous brands.

2. Key Features:

- i. The scheme also supports **Indian brands** by promoting indigenous design, **research & development (R&D)**, technological self-reliance, and patent creation.
- ii. Eligible mobile phone manufacturers will receive **production incentives** ranging from **2.25% to 5%** on eligible sales.
- iii. An **additional incentive** of up to **1.5%** is provided for using domestically sourced components and sub-assemblies.
- iv. **Indian brands** will receive an **additional 3% incentive** for product design and research & development (R&D).

3. Major Achievements:

- i. Growth under **Make in India**: Since **FY 2014–15**, electronics manufacturing has grown **seven-fold**, while **electronics exports** have increased **eleven-fold** under the **Make in India** initiative.
- ii. India is the **world's second-largest** mobile phone manufacturer by volume.
- iii. **High Domestic Production**: Around **99.2%** of mobile phones used in India are now **manufactured domestically**.
- iv. **Leading Export Product**: In **2025**, **smartphones** became **India's largest exported product** category, surpassing traditional exports such as diesel fuel and cut diamonds.
- v. The **Production Linked Incentive Scheme for Large Scale Electronics Manufacturing (PLI-LSEM)** played a pivotal role in establishing India as a **global hub** for mobile phone manufacturing before its conclusion on **31 March 2026**.

Source: PIB - <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2284789®=48&lang=1>

5. Abathsahayeswarar Temple, Thukkachi

Prelims:

Indian History, Art and Culture

Mains:

GS Paper I-Indian Culture, Temple Architecture

Current relevance:

The **Abathsahayeswarar Temple** at Thukkachi, Tamil Nadu, has received **UNESCO's Award of Distinction** under the **2025 UNESCO Asia-Pacific Awards for Cultural Heritage Conservation**.



Highlights:

About the Abathsayeswarar Temple:

1. The Abathsayeswarar Temple is a 12th-century Shiva temple located at Thukkachi, near Kumbakonam in Thanjavur district, Tamil Nadu.
2. It was built during the reign of the Later Chola dynasty and is dedicated to Lord Shiva, worshipped as Abathsayeswarar.
3. The temple is built in the Dravidian style of architecture, representing the Later Chola architectural tradition.
4. It reflects the architectural excellence and engineering skills of the Later Chola dynasty, blending artistic beauty with structural precision.
5. The temple recently received the UNESCO Asia-Pacific Award of Distinction (2025) for its exemplary restoration, which successfully combined traditional conservation techniques with modern technology.

UNESCO Asia-Pacific Award of Distinction:

1. It recognises outstanding efforts to conserve and restore cultural heritage sites in the Asia-Pacific region.
2. The Award of Distinction is one of the highest honours under this programme, presented to projects that demonstrate exceptional conservation standards.
3. Winning projects are evaluated for their technical excellence, use of traditional conservation methods, community participation, sustainability, and long-term heritage management.

Source: THE HINDU - <https://www.thehindu.com/news/national/tamil-nadu/unesco-award-winning-restoration-of-thukkachi-temple-in-tamil-nadu-a-blend-of-traditional-wisdom-and-modern-technology/article71221191.ece>



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UPSC Daily Current Affairs –17.07.2026

Index

1. Cyclosporiasis	-01
2. Kudankulam Nuclear Power Plant Data Leak	-03
3. Investment Friendliness Index (IFI)	-05
4. Dark patterns	-07
5. Magnetic Tree Hypothesis	-09

1. Cyclosporiasis

Prelims:

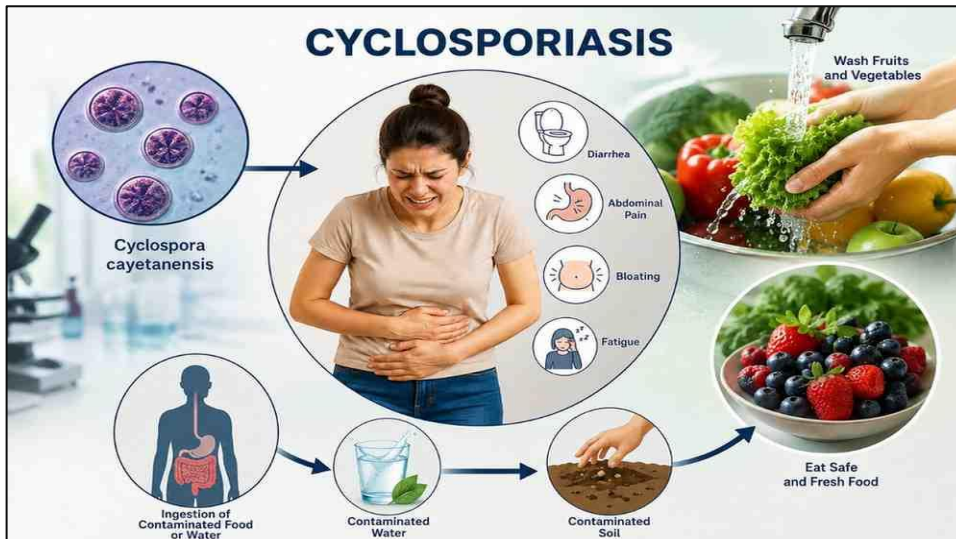
Science & Technology, Health

Mains:

GS Paper II-Health, GS Paper III-Science & Technology

Current relevance:

The **United States** has reported a major outbreak of **cyclosporiasis**, with over 1,600 confirmed cases across 34 States, prompting public health advisories by the **U.S. Centers for Disease Control and Prevention (CDC)**.



Highlights:

Cyclosporiasis:

1. It is a **foodborne gastrointestinal illness** caused by the microscopic parasite ***Cyclospora cayetanensis***.
2. It spreads through the **faeco-oral route** by consuming food or water contaminated with **human faeces** containing the parasite.
3. It is **not transmitted from person to person** and spreads only through the consumption of contaminated food or water.

Adverse Health Effects:

1. Severe dehydration.
2. **Malabsorption** of nutrients.
3. **Cholecystitis** (inflammation of the gallbladder).
4. **Reactive arthritis**
5. Symptoms may persist for several weeks or recur if left untreated.

Treatment:

1. The recommended treatment for cyclosporiasis is a **7–10-day course of Trimethoprim–Sulfamethoxazole (TMP–SMX)**, along with **adequate oral rehydration** to prevent dehydration.

2. Individuals with weakened immune systems may require a longer duration of treatment depending on the severity of the infection.

preventive measures:

1. **Strengthen food safety surveillance and disease monitoring systems** to enable the early detection and effective control of foodborne disease outbreaks.
2. **Promote good hygiene and safe food handling practices** throughout the food supply chain, from production and processing to distribution and consumption.
3. **Enhance public awareness** and demonstrates how foodborne parasitic diseases can spread rapidly through contaminated fresh produce.

Source: THE HINDU- https://www.pressreader.com/india/the-hinduinternational9bn2/20260717/281904484941648?srsId=AfmBOopx_klOzQybpcl2tdrKsTPLZ3aYSWdwAjnleqDHn7mvuO7o1Nf2

2. Kudankulam Nuclear Power Plant Data Leak

Prelims:

Science & Technology, Infrastructure

Mains:

GS Paper III- Science & Technology, Cyber Security, Internal Security

Current relevance:

A **cybersecurity breach** involving **Kudankulam Nuclear Power Plant (KKNPP)** data came to light after cybercriminals leaked files on the **Dark Web** following an attempted **ransomware attack** on Reliance Infrastructure's third-party cloud server.



Highlights:

Background:

1. The Kudankulam Nuclear Power Plant (KKNPP) is located in Tirunelveli district, Tamil Nadu, and is operated by the **Nuclear Power Corporation of India Limited (NPCIL)**.
2. A **ransomware attack** on a third-party cloud server used by Reliance Infrastructure led to the leakage of operational documents related to the Kudankulam Nuclear Power Plant (KKNPP).
3. Approximately 14.3 GB of KKNPP-related data, part of a larger 1.2 TB dataset, was published on the **Dark Web** after the ransom demand was reportedly not paid.
4. The leaked data included engineering blueprints, supplier details, equipment review documents, **meeting and inspection records**, and insurance policy documents related to the Kudankulam Nuclear Power Plant's **operational infrastructure**.

Ransomware Attack:

It is a type of **malicious software (malware)** that blocks access to systems or steals data and **demands payment (ransom)** to restore access or prevent public disclosure.

Dark web:

- I. It is a **hidden part of the internet** that is not indexed by standard search engines and can only be accessed using **specialized software** such as the Tor browser.
- II. It is **used for both legitimate purposes**, such as protecting privacy and anonymous communication, and **illegal activities**, including cybercrime, data trading, and ransomware operations.

Source: THE HINDU- https://www.pressreader.com/india/the-hindu-mumbai9wwd/20260717/281728391282532?srsId=AfmBOorAAp6Zn2IrepvRWncuEid5Cn_P9mtsohKYZHahHg_jyxRVATSH

3. Investment Friendliness Index (IFI)**Prelims:**

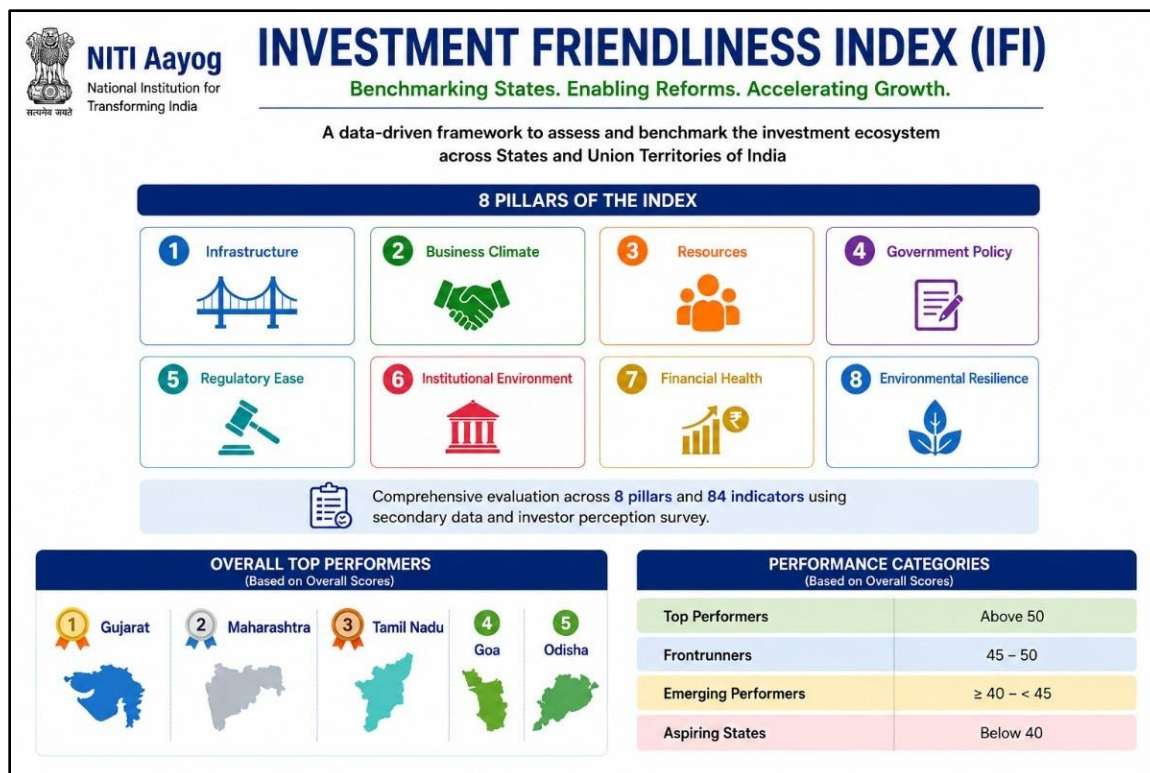
Indian Economy, Government Policies & Indices

Mains:

GS Paper II- polity and governance, GS Paper III-Indian Economy

Current relevance:

NITI Aayog has released **the Investment Friendliness Index (IFI)** to assess and benchmark the investment ecosystem across **States and Union Territories**.



Highlights:

1. Background:

Union Budget 2025–26 announced the development of an **Investment Friendliness Index** to strengthen the spirit of **competitive and cooperative federalism** by promoting reforms and fostering a conducive investment ecosystem across States.

2. Definition:

- I. IFI presents a **structured and data-driven framework** for assessing how effectively States and Union Territories create, enable, and sustain an environment conducive to investments.
- II. The Index **evaluates key policy, institutional, regulatory, and infrastructure-** related parameters that influence investment decisions and provides a comparative assessment of the investment ecosystem **across States and Union Territories**.

3. IFI Evaluates investment attractiveness across the following Eight pillars:

- I. Infrastructure

- II. Business climate
- III. Resources
- IV. Government policy
- V. Regulatory Ease
- VI. Institutional Environment
- VII. Financial Health; and
- VIII. Environment resilience

4. Performance Categories

- I. States and Union Territories have been classified into **four performance categories**:
 - Top Performers (scores above 50)
 - Frontrunners (45–50)
 - Emerging Performers (≥ 40 – < 45)
 - Aspiring States (below 40)
- II. Overall Top Performers are **Gujarat, Maharashtra, Tamil Nadu**, Goa, Odisha.
- III. Among the **Large States, Gujarat** secured the first rank, followed by Maharashtra and Tamil Nadu.
- IV. In the **Hilly and North-Eastern States category, Uttarakhand** emerged as the highest-ranked State, followed by Assam and Himachal Pradesh
- V. **City States and Union Territories, Goa** secured the top position, followed by Delhi and Chandigarh.

5. State Profiles:

- I. The report provides **detailed State Profiles** that offer a comprehensive assessment of the investment ecosystem of each State and Union Territory across the eight pillars of the Investment Friendliness Index.
- II. Highlights the **key indicators** and factors that contribute to a state's investment performance.

- Identifying areas requiring policy attention
- Insights of investor perspective
- Balanced and evidence-based assessment
- Acts as tool for policymakers, for targeted reforms
- Enable investor to understand investment climate of the particular state

The Investment Friendliness Index is therefore envisaged not merely as a periodic assessment exercise, but as **a strategic reform instrument** that will guide States in **strengthening their investment ecosystems** over time.

Source: PIB-

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2285847®=48&lang=1>

4. Dark patterns

Prelims:

Polity & Governance, Digital Governance

Mains:

GS Paper II-Governance, GS Paper III-Science & Technology

Current relevance:

The **Central Consumer Protection Authority (CCPA)** imposed a **₹1 lakh penalty on SpiceJet** for using **dark patterns** on its flight booking platform.



Highlights:

Dark patterns:

1. They are deceptive user interface (UI) designs that manipulate or **mislead users into making choices** they would not have made voluntarily.
2. They impair **consumer autonomy**, undermine **informed decision-making**, and violate the principles of **fair and transparent digital commerce**.

Dark Patterns in SpiceJet's Booking Platform:

1. **Forced Action** – automatic enrolment of consumers into the **SpiceClub Loyalty Programme** through a **pre-ticked checkbox**.
2. **Interface Interference** – presenting the company's preferred option as the **default choice**, thereby influencing consumer decision-making.
3. **Trick Question** – use of **confusing and negatively worded consent language** that had the potential to mislead consumers.

Legal Provisions:

1. **Consumer Protection Act, 2019**, relating to unfair trade practices, unfair contracts and misleading representations.
2. **Rule 4(9) of the Consumer Protection (E-Commerce) Rules, 2020**, which requires consumer consent to be obtained through explicit and affirmative action
3. **Guidelines for Prevention and Regulation of Dark Patterns, 2023.**

About the Central Consumer Protection Authority (CCPA):

1. It was established under the **Consumer Protection Act, 2019**, and functions under the **Ministry of Consumer Affairs, Food & Public Distribution** to protect and promote consumer rights.
2. It investigates unfair trade practices and misleading advertisements, and has the authority to impose penalties, order product recalls, and initiate legal action against violators.

Source: PIB –

<https://www.pib.gov.in/PressReleaseDetail.aspx?PRID=2285871®=6&lang=1>

5. Magnetic Tree Hypothesis

Prelims:

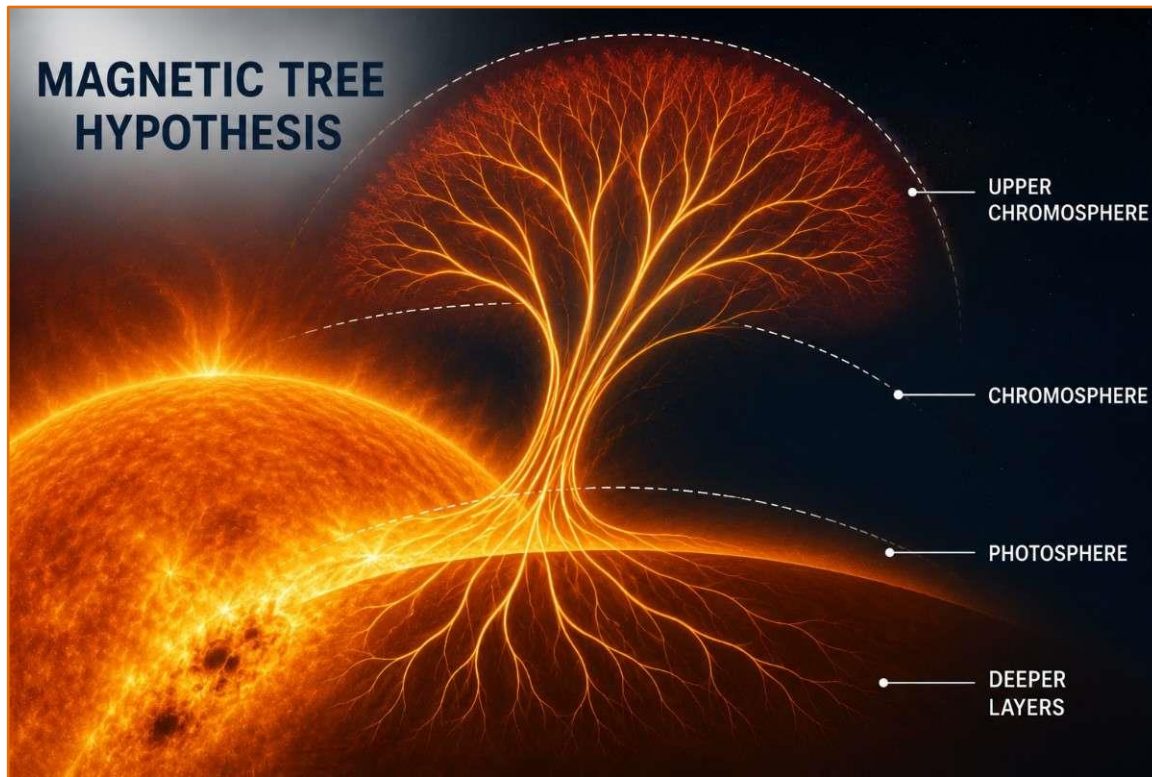
Science & Technology,

Mains:

GS Paper III–Science & Technology

Current relevance:

Scientists from **ARIES**, in collaboration with Indian research institutions and **NASA**, have provided **the first observational evidence supporting the Magnetic Tree Hypothesis**, revealing that the Sun's poleward plasma flow extends into the upper chromosphere.



Highlights:

Background:

1. Scientists have long known that the Sun exhibits a **slow poleward movement of hot plasma**, called the meridional flow, which transports magnetic fields across the solar surface.
2. Earlier, the Sun's meridional plasma flow had been detected only in its **lower atmospheric layers**. The latest study reveals that this flow extends nearly **3,000 km above the visible surface into the upper chromosphere**.

Key findings:

1. The study provides the **first direct evidence** that the Sun's poleward plasma flow extends into the **upper chromosphere**.
2. Bright radio features move poleward in close alignment with the **Sun's magnetic fields**, indicating a strong connection between the Sun's surface and upper atmosphere.

3. Plasma flows toward the poles at speeds of about 5–15 metres per second, with variations over the **11-year solar cycle**.
4. The **northern and southern hemispheres** exhibit **different plasma flow patterns** depending on their magnetic activity.

Magnetic Tree Hypothesis:

1. It proposes that **magnetic structures extending high above the Sun's surface** remain connected to deeper layers, similar to the way the branches of a tree remain connected to its trunk and roots.
2. It suggests that the Sun's upper atmosphere remains closely connected to the deeper layers, reflecting the movements occurring within the Sun.

Source: PIB –

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2285705®=48&lang=1>



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UPSC Daily Current Affairs –18.07.2026

Index

1. Sonam Wangchuk	-01
2. Manasbal Lake	-03
3. Vizhinjam Port	-05
4. Vikram-1	-06
5. Areko Cherries and Scentrose Plums	-08

1. Sonam Wangchuk

Prelims:

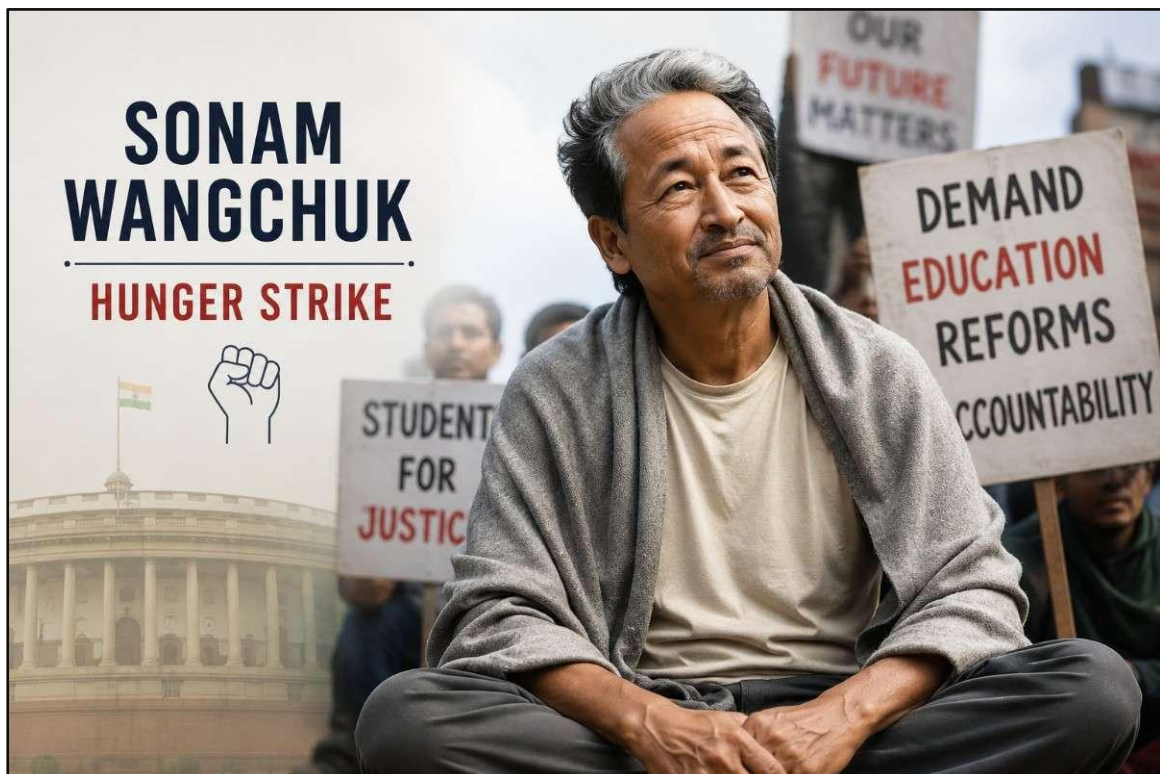
Polity

Mains:

GS Paper II-Polity and Governance, GS Paper IV-Ethics

Current relevance:

Activist Sonam Wangchuk continued his **indefinite hunger strike** for the 20th day, demanding the resignation of Union Education Minister Dharmendra Pradhan.



Highlights:

Sonam Wangchuk:

1. He is an engineer, **education reformer**, innovator, and environmental activist from Ladakh.
2. He is known for **promoting sustainable development**, educational reforms, and climate conservation through community-based initiatives.

Background of the Hunger Strike:

1. Hunger strike demanding the resignation of the Union Education Minister, holding the Ministry **accountable** for its handling of issues related to the **education sector**.
2. The protest seeks greater **transparency, accountability**, and **reforms** in educational governance.
3. The protest has attracted support from political parties, student organisations, and public figures across the country.

Constitutional Provisions:

1. **Article 19(1)(a):** Guarantees the **Freedom of Speech and Expression**, enabling citizens to voice their grievances peacefully.
2. **Article 19(1)(b):** Guarantees the **Right to Assemble Peacefully and Without Arms**, forming the constitutional basis for peaceful protests and demonstrations.
3. **Article 19(1)(c):** Guarantees the **Right to Form Associations or Unions**, allowing collective action through civil society and student organisations.
4. **Article 21:** Guarantees the **Right to Life and Personal Liberty**, imposing a duty on the State to safeguard the health and life of hunger strikers by ensuring timely medical care.
5. **Article 14:** Guarantees **Equality Before Law and Equal Protection of Laws**, requiring the State to respond fairly and without discrimination.
6. **Article 32 & Article 226:** Empower the **Supreme Court and High Courts** to protect Fundamental Rights through constitutional remedies, as reflected in judicial intervention to monitor the protester's health.

Ethical Dilemmas:

Positive Ethical Dimensions

1. **Moral Courage:** Demonstrates personal sacrifice to highlight issues of public interest.
2. **Democratic Dissent:** Upholds the democratic right to peaceful protest and freedom of expression.
3. **Accountability:** Seeks transparency and responsibility from public authorities regarding governance and policy decisions.
4. **Public Participation:** Reinforces active citizen engagement in democratic processes by encouraging public involvement in matters of governance and accountability.
5. **Non-Violence:** Embodies Gandhian principles of peaceful protest, emphasizing moral persuasion and constitutional methods over the use of force.

6. **Social Justice:** Highlights systemic issues affecting the public and advocates institutional reforms to ensure fairness, transparency, and equitable governance.

Negative Ethical Dimensions

1. **Risk to Life:** Prolonged hunger strike endangers the protester's health and life, raising ethical concerns.
2. **Moral Pressure on Government:** Hunger strikes may exert emotional or moral coercion rather than relying solely on democratic deliberation.
3. **Public Disruption:** Prolonged protests may divert administrative attention and affect normal governance.
4. **Influence on Vulnerable Groups:** Such protests may inspire students or supporters to undertake similar health-threatening actions.
5. **Ethical Dilemma for the State:** The government must balance respect for individual autonomy with its constitutional duty to protect life.
6. **Political Polarisation:** The movement may become politicised, shifting focus away from the core issues and reducing the scope for constructive dialogue.

Source: THE HINDU - https://www.pressreader.com/india/the-hindu-international-9bn2/20260718/281560887560601?srltid=AfmBOorBILksQ0LIHAtD1amIBfcx3BHY1F_rXOpq_gxF6QxT7u7z7zMI5k

2. Manasbal Lake

Prelims:

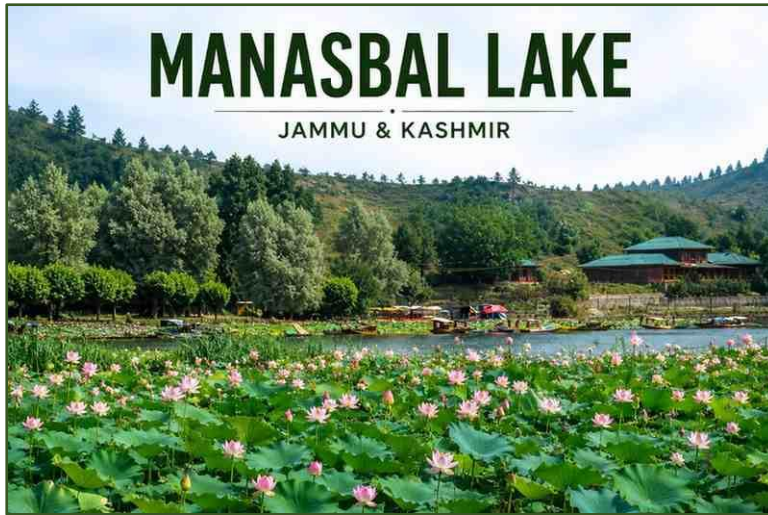
Environment & Ecology, Geography

Mains:

GS Paper I-Geography, GS Paper III-Environment

Current relevance:

Manasbal Lake in **Jammu & Kashmir** is witnessing an ecological revival, marked by the return of migratory birds following **sustained conservation measures**.



Highlights:

About Manasbal Lake:

1. It is the **deepest freshwater lake** in India, located in Ganderbal district of **Jammu & Kashmir**.
2. The lake is fed primarily by underground springs and seasonal runoff, and drains into the **Jhelum River** through the **Jhelum–Manasbal channel**.
3. It is known for its **abundant lotus blooms** and diverse aquatic flora and fauna.
4. It serves as an important **wintering habitat** for numerous resident and **migratory bird species** along the **Central Asian Flyway**.
5. It is managed by the **Wullar–Manasbal Development Authority (WMDA)**, which undertakes restoration and conservation measures.

Key Conservation Measures:

1. **De-weeding Operations:**
More than 7,200 cubic metres of excessive aquatic vegetation were cleared to **restore ecological balance** and improve water quality.
2. **Dredging:**
Around 70,000 square feet of the lake was **dredged to restore its depth**, clear water channels, and improve ecological health.
3. **Water Budgeting:**
The **J&K Water Resources Regulatory Authority** will conduct water budgeting to assess the lake's carrying capacity, water usage, and ecological water needs.
4. **Waste Management:**
A **Sewerage Treatment Plant (STP)** and an **Integrated Solid Waste Management Plant** are being developed to ensure that untreated waste does not enter the lake.

Future Course of Action:

1. Adopt an integrated conservation approach by **strengthening ecological restoration**, implementing **scientific water resource management**, controlling pollution, and promoting **community-led stewardship** to ensure the lake's long-term ecological sustainability.

Source: THE HINDU - <https://www.thehindu.com/news/national/jammu-and-kashmir/jksmansballake-starts-hosting-migratory-birds-again/article71233500.ece#:~:text=Manasbal%20Lake%2C%20the%20country's%20deepest,km%20and%201.5%20km%2C%20respectively.>

3. Vizhinjam Port

Prelims:

Indian Economy

Mains:

GS Paper III-Infrastructure

Current relevance:

Vizhinjam International Seaport in Kerala will commence **Export-Import (EXIM) cargo operations** from August 2026.



Highlights:

About Vizhinjam International Seaport:

1. Located on the Arabian Sea coast near **Thiruvananthapuram in Kerala**.
2. It is the country's **first dedicated deep-water trans-shipment container port**.
3. Developed under the **Public-Private Partnership (PPP) model** by **Adani Ports** and **SEZ Ltd.**
4. Strategically located near the **East–West International Shipping Route**, a major global maritime trade corridor.
5. It serves as an **international trans-shipment hub**, facilitating the transfer of containers between mother vessels and feeder ships.

EXIM Cargo:

1. It refers to goods **transported across international borders** for export from or import into a country through maritime, air, rail, or land trade.

Significance:

1. Enhances **direct international shipping** access for exporters and importers in southern India.
2. Expected to reduce logistics and **cargo transportation costs** by nearly **50%**, improving trade competitiveness.
3. Strengthens India's **self-reliance** by reducing dependence on foreign trans-shipment hubs such as Colombo, Singapore, and Dubai.

Steps Ahead:

Accelerate **multimodal connectivity**, strengthen logistics infrastructure, establish supporting customs facilities, and expand port capacity to transform Vizhinjam into a **globally competitive trans-shipment and EXIM hub**.

Source: THE HINDU - <https://www.thehindu.com/news/national/kerala/exim-operations-at-keralas-vizhinjam-seaport-set-to-begin-on-august-18/article71237203.ece#:~:text=EXIM%20operations%20at%20Kerala's%20Vizhinjam,on%20August%2018%20%2D%20The%20Hindu>

4. Vikram-1**Prelims:**

Science and Technology, Government Policies and Initiatives

Mains:

GS Paper III-Science and Technology

Current relevance:

Skyroot Aerospace is preparing to launch **Vikram-1** under **Mission Aagaman**, making it **India's first privately developed orbital launch vehicle**.



Highlights:

About Vikram-1:

1. Vikram-1 is **India's first privately developed orbital launch vehicle**, developed by **Skyroot Aerospace**.
2. It is capable of placing **payloads** of up to **350 kg** into **Low Earth Orbit (LEO)**.
3. The launch vehicle features an **all-carbon composite** structure, **solid-fuel** boosters, and a **3D-printed liquid engine**.
4. It is designed for **commercial satellite launches**, strengthening India's indigenous launch capabilities and **expanding private sector participation** in the space industry.
5. It will be launched under **Mission Aagaman**, carrying multiple customer payloads into Low Earth Orbit (LEO).
6. **Aim:** To validate India's **indigenous commercial orbital launch** capability and showcase the success of India's space sector reforms.

Space Sector Reforms Supporting Private Participation:

1. Indian Space Policy, 2023

Opened the entire space value chain to **private players**, promoting innovation, investment, and international collaboration.

2. IN-SPACe

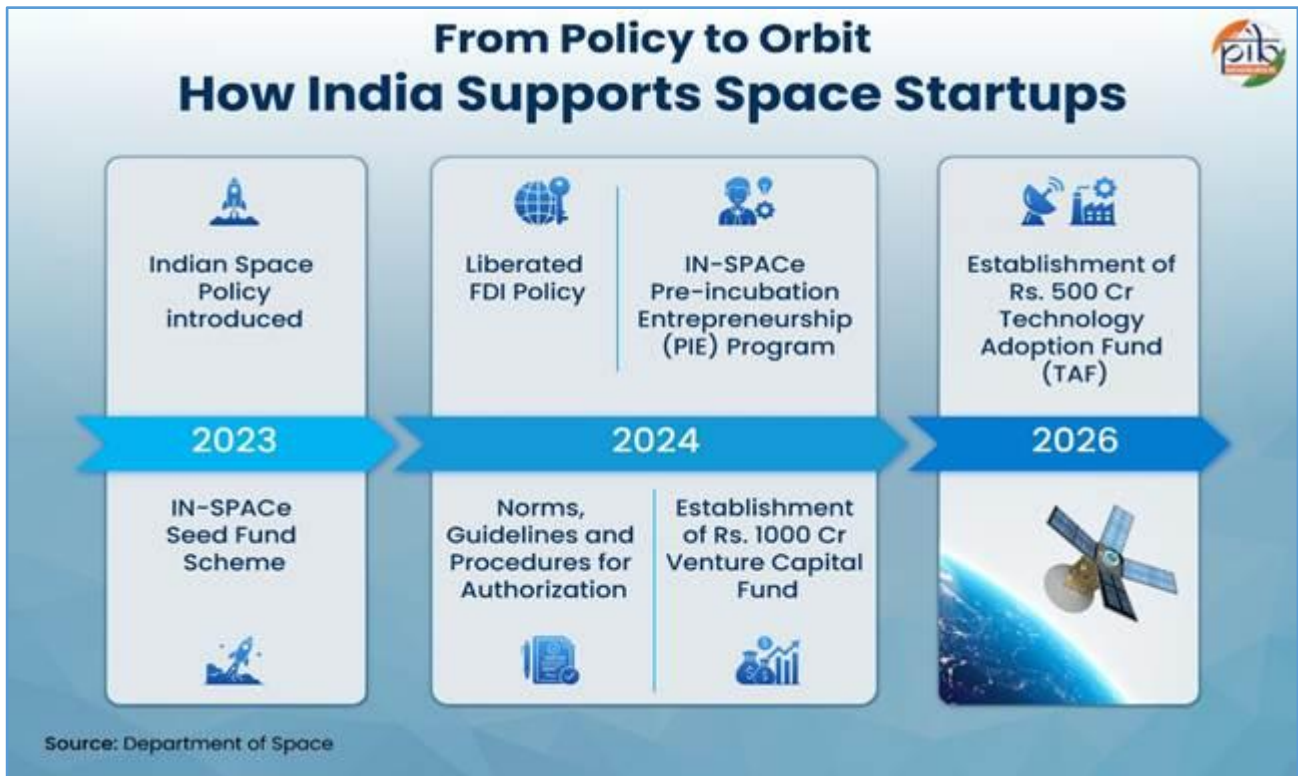
Acts as a **single-window regulator**, enabling private participation and facilitating access to ISRO's facilities and technologies.

3. NewSpace India Limited (NSIL)

ISRO's **commercial arm**, responsible for commercial launch services, satellite solutions, and technology transfer.

4. Liberalised FDI Policy

Permits **higher automatic FDI** in the space sector to attract investments, advanced technology, and boost private participation.



Source: PIB -

<https://www.pib.gov.in/PressNoteDetails.aspx?NoteId=159250&ModuleId=3®=48&lang=1>

5. Areko Cherries and Scentrose Plums

Prelims:

Agriculture, Government Institutions

Mains:

GS Paper III – Agriculture

Current relevance:

The **Agricultural and Processed Food Products Export Development Authority (APEDA)** facilitated the first export shipment of premium **Areko Cherries** and **Scentrose Plums** from Jammu & Kashmir to Singapore.



Highlights:

About Areko Cherries:

1. A premium sweet cherry variety, native to **Europe and Western Asia**.
2. It is cultivated under **high-density orchard systems** for improved productivity and fruit quality.
3. The variety is known for its **large size**, deep red colour, sweetness, firmness, and longer shelf life.
4. It is well suited to the **temperate climatic conditions** of Jammu & Kashmir.

About Scentrose Plums:

1. It is native to **China** and was later extensively cultivated and improved in **Japan**.
2. It is known for its attractive **reddish-purple skin**, sweet flavour, juicy pulp, and firm texture.
3. The variety has good shelf life and **transportability**, making it suitable for **long-distance exports**.
4. It is cultivated in the **temperate fruit-growing regions** of Jammu & Kashmir.
5. Its premium quality and export potential contribute to the **growth of India's horticultural exports**.

About APEDA:

1. **Agricultural and Processed Food Products Export Development Authority (APEDA), 1986** is a **statutory body** established under the APEDA Act, 1985.
2. It functions under the **Ministry of Commerce & Industry**, Government of India.
3. **Objective:** To promote the export of agricultural and processed food products from India.
4. It provides **export promotion**, market development, **quality certification**, infrastructure development, and capacity-building support to exporters.

5. Facilitates compliance with international food safety, quality, and **phytosanitary standards** to enhance the global acceptance of Indian agricultural products.
6. Supports branding, packaging, **cold-chain infrastructure**, and **international market** access to strengthen India's agricultural exports.

Source: PIB - <https://www.pib.gov.in/PressReleaseDetail.aspx?PRID=2286073®=48&lang=1>



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Index

1. e-Zero FIR	-01
2. Catch the Rain	-02
3. Rameshwar–Paradeep Coastal Highway	-05
4. E-Commerce Council of India (ECCI)	-06
5. Museum of Word	-07

1. e-Zero FIR

Prelims:

Internal Security, e-Governance

Mains:

GS Paper II-e-Governance, Government Policies and Interventions, GS Paper III-Internal Security

Current relevance:

The **Tamil Nadu Government** has implemented the **e-Zero FIR system** to enable the prompt registration and investigation of **cyber financial fraud cases**.



Highlights:

1. The initiative has been introduced through the **National Cyber Crime Reporting Portal (NCRP)** and will be integrated with the **Crime and Criminal Tracking Network and Systems (CCTNS)** for seamless registration of electronic Zero FIRs.
2. It has been introduced in line with the **Ministry of Home Affairs** nationwide efforts to strengthen the response to cyber crimes, improve **inter-state coordination**, and enhance the **recovery of defrauded money**.
3. **Central Government notification:**

The e-Zero FIR mechanism has been implemented under **Section 173** of the **Bharatiya Nagarik Suraksha Sanhita (BNSS), 2023**. The provision enables offences relating to cyber financial fraud to be registered as **cognizable offences** without delay, facilitating **quicker legal action and investigation**.

4. Need for the initiative:

- i. Cyber financial frauds often involve rapid transfer of money across multiple bank accounts. **Delays in registration of FIRs** can reduce the chances of freezing fraudulent transactions and recovering the stolen funds.
- ii. The **e-Zero FIR system** seeks to **eliminate procedural delays** by ensuring that complaints immediately enter the criminal justice system.

5. Key features:

- i. Registration of electronic Zero FIRs for cyber financial frauds involving **losses above ₹1 lakh**. (state government can adjust their threshold limit)
- ii. **Automatic integration** of complaints received through the **National Cyber Crime Reporting Portal** and the **1930 helpline** with CCTNS.
- iii. Electronic transmission of complaints to the **jurisdictional cyber police station**.
- iv. **Mandatory conversion** of the complaint into an FIR **within three days** after completion of formalities.
- v. Facilitates the **faster initiation** of investigations and legal proceedings against cyber financial fraudsters.

Source: THE HINDU - <https://www.thehindu.com/news/cities/chennai/tn-government-implements-e-zero-fir-system-for-faster-action-against-cyber-financial-scams/article71238136.ece>

2. Catch the Rain

Prelims:

Environment & Ecology, Geography, Agriculture

Mains:

GS Paper II-Government Policies and Interventions, GS Paper III- Environment, Agriculture, Disaster and Disaster Management

Current relevance:

Prime Minister's appeal during the **135th episode of Mann Ki Baat** (28 June 2026), the Government launched a nationwide "**Catch the Rain**" campaign from 4 July to 4 August 2026.



Highlights:

1. **Catch the Rain (CTR)** is the flagship water conservation campaign of the **Ministry of Jal Shakti** aimed at promoting rainwater harvesting, groundwater recharge, and sustainable water management. The campaign encourages every citizen and institution to **convert rainfall into a valuable water resource** through local, low-cost, and community-driven interventions.
2. **Major Activities under the Campaign:**
 - i. Promote **rainwater harvesting systems** in homes, institutions, and workplaces.
 - ii. Install **recharge pits and recharge shafts** to replenish groundwater.
 - iii. Restore **baolis, wells, ponds, and other traditional water bodies**.
 - iv. Remove silt from **ponds and reservoirs** to enhance water storage capacity.
 - v. Increase **tree plantation in water retention areas** to improve groundwater recharge and ecological sustainability.
3. **Background:**
 - i. **Jal Sanchay Jan Bhagidari (JSJB)** is a community-based water conservation initiative launched by the **Ministry of Jal Shakti** to transform water conservation into a **Jan Andolan (people's movement)**.

- ii. The programme focuses on creating groundwater recharge structures through **active participation of citizens, local bodies, CSR initiatives**, and convergence with government schemes.
- iii. The initiative follows a **Whole-of-Government** and **Whole-of-Society** approach, encouraging scientifically designed, locally appropriate, and low-cost solutions for water security.

4. **Jal Sanchay Jan Bhagidari (JSJB) 1.0(2024)**

- i. It was based on the 3Cs—**Community, CSR, and Cost-effective interventions** to promote groundwater recharge and revive defunct borewells through public participation.
- ii. The initiative **exceeded its target** by creating over **27 lakh artificial recharge structures** against the target of 10 lakh across the country.
- iii. Outstanding performers of **JSJB 1.0** were honoured during the **6th National Water Awards (2025)**.

5. **Jal Sanchay Jan Bhagidari (JSJB) 2.0(2025)**

- i. Focused on accelerating groundwater recharge in **Over-Exploited and Critical districts** through low-cost, hyper-local interventions.
- ii. The initiative reported over **1.5 crore groundwater recharge structures** against the target of one crore.

6. **Jal Sanchay Jan Bhagidari: Catch the Rain**

- i. In 2026, it launched by integrating **JSJB** with the **Jal Shakti Abhiyan: Catch the Rain (JSA: CTR) campaign**.
- ii. Implemented through convergence with major Central and State Government schemes to strengthen **climate resilience and water security**.
- iii. Driven by **Jan Bhagidari**, involving **Panchayati Raj Institutions, Urban Local Bodies, women's groups, youth, educational institutions, civil society organisations, and local communities** in water conservation efforts.

7. **Jal Shakti Abhiyan: Catch the Rain**

- i. It was launched by Hon'ble Prime Minister on **World Water Day (22 March 2021)** with the theme "**Catch the Rain, where it falls, when it falls.**"
- ii. It builds upon the success of the **Jal Shakti Abhiyan 2019**, which focused on water-stressed regions through a **Jan Andolan approach**.

8. **Jal Shakti Kendras (JSKs)** are **district-level knowledge** and facilitation centres established under the **Jal Shakti Abhiyan**. They serve as local resource centres for planning, technical guidance, awareness generation, and coordination of water conservation activities.

9. **"Catch the Rain -Through this mission, we have to collectively save every drop of rainwater. My special appeal to save every single drop of rainwater collectively."** ~ Hon'ble PM. Shri. Narendra Modi

Source: PIB -

[https://www.pib.gov.in/FeaturesDeatils.aspx?NoteId=159260&ModuleId=2®=48&lang=1#:~:text=\(JSA%3A%20CTR\)-](https://www.pib.gov.in/FeaturesDeatils.aspx?NoteId=159260&ModuleId=2®=48&lang=1#:~:text=(JSA%3A%20CTR)-)

[Jal%20Shakti%20Abhiyan%3A%20Catch%20the%20Rain%20\(JSA%3A%20CTR\),falls%2C%20when%20it%20falls.%E2%80%9D](#)

3. Rameshwar–Paradeep Coastal Highway

Prelims:

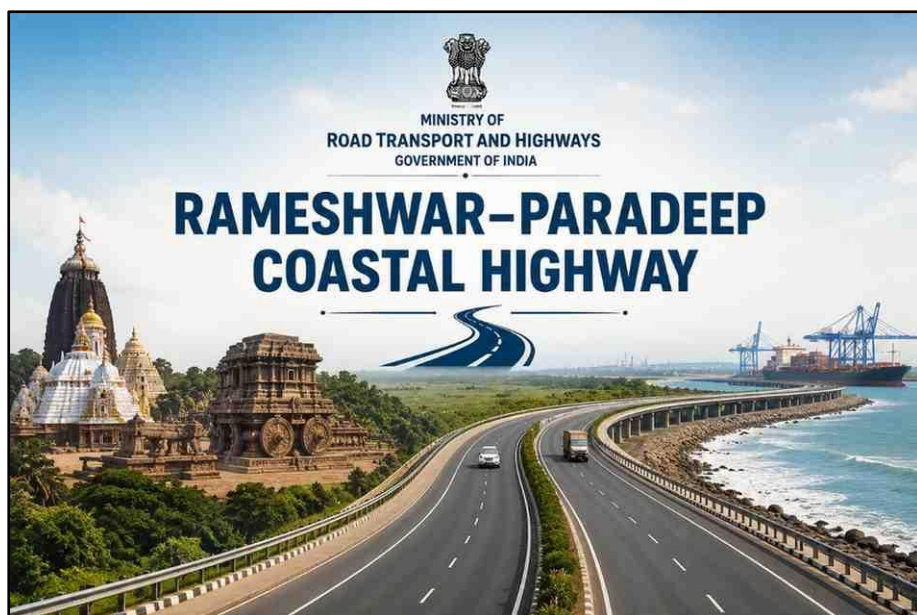
Geography, Environment & Ecology

Mains:

GS Paper II-Government Policies and Interventions, GS Paper III – Infrastructure

Current relevance:

The **Union Ministry of Road Transport & Highways (MoRTH)** has approved the construction of the **Rameshwar–Paradeep Coastal Highway** in Odisha.



Highlights:

1. A **160.18 km coastal highway** being developed by the **Ministry of Road Transport & Highways (MoRTH)**.
2. Enhances connectivity between **Jagannath Temple (Puri)**, **Konark Sun Temple** (UNESCO World Heritage Site), **Ramchandi Temple** and other major tourism destinations along Odisha's coast.
3. Will **reduce travel time** between Rameshwar and Paradeep by about 2.5 hours, improving passenger and freight movement.

4. Enhances connectivity to **Paradeep Port**, one of India's major ports, and links **9 economic nodes** and **5 logistics nodes**.
5. Expected to boost religious tourism, coastal tourism, local employment, logistics efficiency, and regional economic development, in line with the **PM GatiShakti National Master Plan**.

Source: PIB-

<https://www.pib.gov.in/PressReleaseDetail.aspx?PRID=2286292®=%203&lang=1#:~:text=Odisha's%20New%20Coastal%20Highway%3A%20A,Journeys%20and%20Coastal%20Tourism%20Revolution&text=Odisha's%20coastline%20is%20set%20to,across%20the%20state's%20coastal%20belt.>

4. E-Commerce Council of India (ECCI)

Prelims:

Indian Economy

Mains:

GS Paper II-Government Policies and Interventions, GS Paper III-Indian Economy, Infrastructure

Current relevance:

The **Internet and Mobile Association of India (IAMAI)** has launched the **E-Commerce Council of India (ECCI)**, the country's first national platform to unify India's \$120 billion digital commerce ecosystem.



Highlights:

1. **ECCI** is a national industry platform established to strengthen India's digital commerce ecosystem through stakeholder collaboration, policy engagement, research, and the promotion of best practices.
2. **Launched by:** Internet and Mobile Association of India (IAMAI).
3. **Objective:** Serve as a common platform for policy advocacy, industry research, best practices, and stakeholder consultation in the digital commerce sector.
4. **Stakeholders:** Policymakers, e-commerce marketplaces, retailers, brands, logistics providers, payment solution providers, technology companies, startups, MSMEs, exporters, industry experts, and academic institutions.
5. **Coverage:** Represents the broader digital commerce ecosystem, including online marketplaces, digital payments, logistics and supply chains, mobility services, travel-tech, Direct-to-Consumer (D2C) brands, cross-border e-commerce, and AI-enabled commerce.
6. **Industry Participation:** Expected to bring together major companies such as **Amazon, Flipkart, Meesho, Swiggy, IndiaMART, MakeMyTrip, Ixigo, Uber, Rapido, Shiprocket, eBay, Tata 1mg**, and others.
7. **Significance:**
 - i. Provides a **unified industry voice** on key policy and regulatory issues.
 - ii. Encourages **industry–government collaboration** for balanced and innovation-friendly regulations.
 - iii. Supports **ease of doing business**, consumer protection, and digital trust.
 - iv. Facilitates the growth of **MSMEs and exporters** by improving their integration into digital and global value chains.
 - v. Strengthens India's vision of becoming a **globally competitive digital economy** through a collaborative and **future-ready e-commerce ecosystem**.
8. India's **digital commerce** sector has expanded beyond **online retail to become a key driver of economic growth**, encompassing services, logistics, digital payments, mobility, and AI-driven platforms.

Source: THE HINDU - <https://www.thehindu.com/business/Industry/iamai-launches-e-commerce-council-of-india-to-unify-120-bn-digital-commerce-ecosystem/article71234602.ece>

5. Museum of Word**Prelims:**

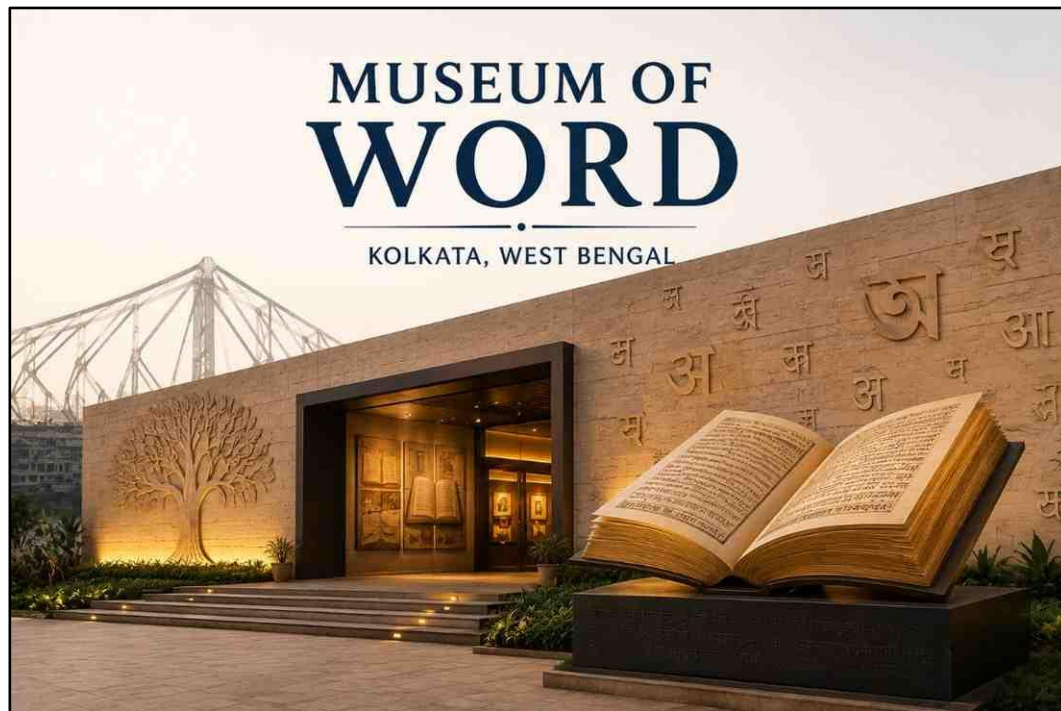
Art and Culture

Mains:

GS Paper I-Indian Culture, GS Paper II-Government Policies and Interventions, GS Paper III-Science and Technology

Current relevance:

Union Home Minister Shri Amit Shah inaugurated the **first phase of the 'Museum of Word'** in Kolkata, **West Bengal**.



Highlights:

1. The **Museum of Word** is an **innovative cultural initiative** that preserves India's **multilingual heritage, knowledge traditions**, and collective memory through visual, auditory, tactile, and immersive experiences.
2. **Key Features:**
 - i. Illustrates the evolution of Indian languages from **Omkar and Panini's grammar to the Shruti and Smriti traditions, palm-leaf manuscripts, stone inscriptions, the printing press, and the era of Artificial Intelligence.**
 - ii. Transforms the **science of language and words** into an engaging, interactive learning experience through modern museum technologies.
 - iii. Preserves **India's rich linguistic heritage** by showcasing its diverse languages, dialects, manuscripts, inscriptions, and literary traditions.
3. **Five Principles for Language Preservation:**
 - i. Every family should serve as a child's **first school of learning** from an early age.
 - ii. Education should begin in the **mother tongue** to strengthen conceptual understanding, cognitive development, and cultural identity.

- iii. Universities should foster **original thinking, innovation, and research** for knowledge creation and national development.
- iv. Every Indian language should **be integrated with digital technologies and Artificial Intelligence** to ensure its preservation and future relevance.
- v. Every citizen should learn **at least one additional Indian language** besides their mother tongue to promote linguistic diversity and national integration.

Source: PIB- <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2286356®=48&lang=2>



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Index

1.	Electronic Gold Receipts (EGRs)	-01
2.	QDenga (TAK-003)	-03
3.	The Employment Transition of India's Gen Z	-04
4.	WTO Agreement on Fisheries Subsidies	-06
5.	Cotton Sector in India	-08

1. Electronic Gold Receipts (EGRs)

Prelims:

Indian Economy

Mains:

GS Paper III-Indian Economy

Current relevance:

The National Stock Exchange (NSE) introduced **Electronic Gold Receipts (EGRs)** as a new exchange-traded segment in May 2026.



Highlights:

About Electronic Gold Receipts (EGRs):

1. Electronic Gold Receipts (EGRs) are **exchange-traded securities** representing ownership of **physical gold** of specified purity stored in **SEBI-regulated vaults**.
2. They are held electronically in a **demat account** and can be traded on stock exchanges.
3. Investors can convert EGRs into **physical gold** through a prescribed redemption process.

Evolution of Electronic Gold Receipts (EGRs):

1. SEBI approved the regulatory framework for the **Gold Exchange** and notified the **SEBI (Vault Managers) Regulations, 2021**.
2. The Central Government notified **Electronic Gold Receipts (EGRs)** as **securities** under the **Securities Contracts (Regulation) Act, 1956**.
3. SEBI introduced a **Comprehensive Risk Management Framework** for EGRs in **2022**.
4. The **Bombay Stock Exchange (BSE)** launched **India's first EGR segment** in **2022**, followed by the **National Stock Exchange (NSE)** in **2026**.
5. Initially, BSE introduced EGRs backed by **995 and 999 purity gold**, with trading in multiples of **1 gram** and physical redemption in **10-gram** and **100-gram** units.

Working mechanism:

1. Physical gold deposited in **SEBI-regulated vaults** is converted into **equivalent Electronic Gold Receipts (EGRs)**, which are credited to investors' demat accounts.
2. EGRs can be **traded** through registered stockbrokers on **stock exchanges** and redeemed for physical gold through the prescribed process whenever required.

Advantages of EGRs:

1. Ensures the **purity and authenticity of gold** while eliminating the need for personal storage.
2. Facilitates transparent and **uniform price discovery** through exchange-based trading.
3. Offers **high liquidity** with a secure and guaranteed settlement mechanism.
4. Provides investors the **flexibility to convert** electronic holdings into physical gold through a prescribed process.
5. Enables **portfolio diversification** by adding gold as a regulated investment asset.
6. Promotes a **transparent, standardised, and efficient gold trading** ecosystem in India.

Source: THE HINDU - <https://www.thehindu.com/business/electronic-gold-receipts-a-new-way-to-own-gold/article71242289.ece>

2. QDENG (TAK-003)

Prelims:

Science and Technology, Health

Mains:

GS Paper II – Health, Government Policies and Interventions, GS Paper III - Science and Technology

Current relevance:

The **Drug Controller General of India (DCGI)** has granted market authorisation to **Takeda Biopharmaceuticals India's QDENG (TAK-003)**, making it the **first dengue vaccine** approved in India.



Highlights:

1. **QDENG (TAK-003)** is India's **first approved dengue vaccine**, developed by **Takeda Biopharmaceuticals** for the prevention of dengue disease.
2. **Key Features:**
 - i. It is a **live-attenuated tetravalent dengue vaccine**.
 - ii. Designed to provide protection against **all four dengue virus serotypes (DENV-1, DENV-2, DENV-3, and DENV-4)**.
 - iii. It is approved for **individuals aged 4 to 60 years** and is administered as a **two-dose vaccine**, with the second dose given **three months** after the first.
 - iv. **Special Feature:** Can be administered **without prior dengue screening** and irrespective of **previous dengue infection**.
3. **About Dengue:**
 - i. Dengue is a **mosquito-borne viral disease** caused by the dengue virus (DENV).
 - ii. It is transmitted primarily through the bite of an infected **female Aedes aegypti mosquito**.

- iii. Common symptoms include **high fever, severe headache, pain behind the eyes, muscle and joint pain, skin rash, nausea, and vomiting.**
- iv. Severe dengue may lead to **plasma leakage, bleeding, shock** (Dengue Shock Syndrome), and organ impairment.
- v. The management of dengue is primarily supportive, with **adequate fluid replacement** being the cornerstone of treatment, as no specific antiviral therapy is available.

Source: THE HINDU - <https://www.thehindu.com/sci-tech/health/india-approves-first-dengue-vaccine-for-individuals-aged-4-to-60-years/article71244651.ece>

3. The Employment Transition of India's Gen Z

Prelims:

Indian Economy, Social Security

Mains:

GS Paper II- Issues Relating to Development and Management of Social Services relating to Education and Human Resources, GS Paper III- Indian Economy, Science and Technology

Current relevance:

Recent analysis based on the **Periodic Labour Force Survey (PLFS) 2023–24** highlights rising unemployment, informality, and poor labour market transition among **Generation Z (Gen Z)**, raising concerns over India's demographic dividend.



Highlights:

1. **Generation Z (Gen Z)** refers to individuals born between **1997 and 2012**. They represent the youngest generation entering India's workforce and are central to the **country's demographic dividend**.
2. According to **Periodic Labour Force Survey (PLFS) 2023–24**, India's working-age **Gen Z population (15–26 years)** is estimated at **29.94 crore**, making them a crucial component of India's demographic dividend.
3. **Employment Status of Gen Z:**
A significant proportion of Gen Z remains engaged in education, while many who enter the labour market are employed as **unpaid family workers, casual workers, or informal workers**. Only a **small proportion** secure regular **salaried employment**, reflecting limited access to formal job opportunities.
4. **Gender Disparities:**
Young women have **lower labour force participation** than men, with many engaged in **unpaid domestic work** due to social norms, **childcare responsibilities**, safety concerns, and mobility constraints.
5. **The Graduate Employment Trap:**
Graduate unemployment is **higher among Gen Z** than Millennials due to **skill mismatches and rapid technological changes**, including **automation and Artificial Intelligence**, which have widened the gap between education and labour market demand.
6. **Measures to Address the Challenge:**
 - i. Expand **labour-intensive industries** to create large-scale employment opportunities for the growing youth workforce.
 - ii. Strengthen **school-to-work transition pathways** by improving the linkage between education, vocational training, and employment.
 - iii. **Align skill development programmes** with evolving industry requirements to enhance youth employability.
 - iv. **Promote apprenticeships and formal employment** through incentives that encourage workforce participation and social security coverage.
 - v. **Enhance women's workforce participation** by providing childcare support, safe transportation, and flexible work arrangements.
 - vi. Expand **urban employment opportunities** to absorb the increasing number of educated young job seekers.

Source: THE HINDU - <https://www.thehindu.com/opinion/lead/the-stark-reality-of-the-missing-jobs-for-indias-gen-z/article71241905.ece>

4. WTO Agreement on Fisheries Subsidies

Prelims:

International Organisations

Mains:

GS Paper II- International relations, GS Paper III- Indian Economy, Agriculture

Current relevance:

India has **deposited its Instrument of Acceptance** of the **WTO Agreement on Fisheries Subsidies (AFS)** on July 2026, becoming the 123rd WTO Member to join the Agreement.



Highlights:

1. About WTO Agreement on Fisheries Subsidies (AFS):

- i. It is adopted at the 12th WTO Ministerial Conference (Geneva, June 2022), is the **first multilateral WTO agreement** with an **environmental sustainability** objective.
- ii. It seeks to promote the **conservation and sustainable use of marine fisheries resources** while providing appropriate flexibilities for developing and least-developed countries.
- iii. The Agreement covers subsidies related to marine wild capture fishing and fishing-related activities at sea, while **aquaculture and inland fisheries remain outside its scope**.

2. Significance for India:

- i. Promotes sustainable fisheries while safeguarding the livelihoods of **traditional and small-scale fishing** communities.

- ii. Creates a fairer global fisheries regime by **curbing harmful subsidies** to large industrial fishing fleets.
- iii. Strengthens **India's reputation as a responsible seafood exporter**, enhancing access to sustainability-conscious international markets.
- iv. Since India's seafood exports are largely **aquaculture-based shrimp**, which is outside the Agreement's scope, the competitiveness of exports remains protected.

3. India's Fisheries Management Framework

- i. Sustainable Harnessing of Fisheries in the Exclusive Economic Zone (EEZ) Rules, 2025.
- ii. Guidelines for Sustainable Harnessing of Fisheries in the High Seas by Indian-Flagged Fishing Vessels, 2025.
- iii. Capacity-building initiatives under the Pradhan Mantri Matsya Sampada Yojana (PMMSY).

Source: PIB - <https://www.pib.gov.in/PressReleaseDetail.aspx?PRID=2286763®=48&lang=1>

5. Cotton Sector in India

Prelims:

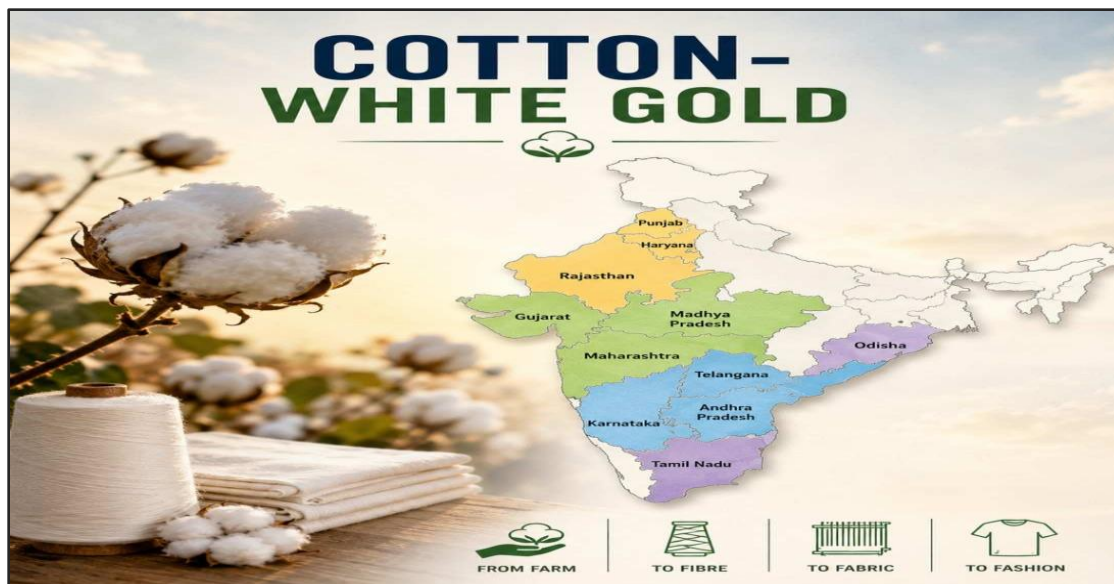
Agriculture, Indian Economy

Mains:

GS Paper II- Government Policies and Interventions, GS Paper III- Agriculture, Indian Economy and Inclusive Growth

Current relevance:

The Government of India has highlighted recent initiatives to strengthen the cotton sector through the **Mission for Cotton Productivity, MSP operations, digital procurement, and Kasturi Cotton Bharat**, while outlining India's position in the global cotton economy.



Highlights:

1. India is the **only country cultivating all four recognised cotton species** and ranks **first globally in cotton acreage** and **second in production and consumption**.
2. Cotton is one of India's most important commercial crops and is popularly known as "**White Gold**" due to its significant contribution to agriculture, textiles, exports, and rural livelihoods.
3. It supports around **6 million cotton farmers** and provides employment to **40–50 million people** in allied activities.
4. **Bt Cotton:**
 - i. It is a **genetically modified** cotton variety containing genes from **Bacillus thuringiensis** that provide resistance against bollworms.
 - ii. Commercially introduced in **2002**, it helped improve yields while **reducing insecticide use and pest-control costs**.
5. Cotton is used for **textiles, edible cottonseed oil, animal feed, biomass fuel, and absorbent surgical cotton**, making it valuable beyond the textile industry.
6. **Government Initiatives:**
 - i. **Minimum Support Price (MSP) Operations**
MSP ensures remunerative prices to cotton farmers during market downturns, with procurement undertaken by the **Cotton Corporation of India (CCI)**.
 - ii. **Mission for Cotton Productivity**
Launched in **2025–26**, the five-year mission focuses on developing **climate-resilient, pest-resistant, and high-yielding cotton varieties**, with a target of increasing production to **498 lakh bales** by **2031**.
 - iii. **Special Project on Cotton (NFSM)**
Implemented under the **National Food Security Mission (NFSM)** to improve productivity through **High-Density Planting System (HDPS), Closer Spacing Planting System, and Extra Long Staple (ELS) cotton technologies**.
 - iv. **Kapas Kisan App**
A digital platform enabling farmer **self-registration, procurement slot booking, Aadhaar-linked payments, and real-time updates**, making MSP procurement transparent and paperless.
 - v. **Kasturi Cotton Bharat**
A branding and traceability initiative that promotes **certification, QR-based traceability, blockchain technology, and quality assurance** to enhance the global positioning of Indian cotton.

Source: PIB - <https://www.pib.gov.in/PressReleaseDetail.aspx?PRID=2286497®=48&lang=1>



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Index

1. Ultrafast Organic Anodes for Next-Generation Rechargeable Batteries	-01
2. Mission Golden Spice	-02
3. FinTech Regulatory Framework	-03
4. Special Swap Facility	-05
5. Five New Allographa Species	-07

1. Ultrafast Organic Anodes for Next-Generation Rechargeable Batteries

Prelims:

Science and Technology

Mains:

GS Paper III-Science and Technology, Energy

Current relevance:

In Collaboration with **Indian Association for the Cultivation of Science (IACS)** and **S. N. Bose National Centre for Basic Sciences (SNBNCBS)**, scientists have developed a porous organic anode material based on a **Covalent Organic Framework (COF)** that enables ultrafast charging and high durability in rechargeable batteries in the near future.



Highlights:

1. Developed a porous organic anode using **Covalent Organic Framework (COF)** technology.
2. Allows rapid movement of **lithium ions**, reducing charging time significantly.

3. The battery **achieved 80% charge** in just over one minute.
4. Maintained excellent **cycling stability** over repeated charge-discharge cycles.
5. Also demonstrated the **ability to store sodium ions**, indicating potential for sodium-ion batteries.
6. Successfully tested in a practical battery device, showing **real-world applicability**.
7. **Covalent Organic Framework (COF):**
 - i. COFs are **highly porous**, crystalline organic materials made by linking light elements (C, H, O, N, B, etc.) through strong covalent bonds.
 - ii. Their ordered **nanoporous structure** provides:
 - a) Large surface area.
 - b) Fast ion transport pathways.
 - c) High structural stability.
 - d) Tunable chemical properties.
8. **Significance:**
 - i. Supports the growing demand for **Electric Vehicles (EVs)**.
 - ii. Enables **faster charging** for smartphones, laptops, and portable electronics.
 - iii. Improves storage solutions for **renewable energy** such as solar and wind.
 - iv. Reduces charging downtime while improving battery **safety and durability**.
 - v. Strengthens India's **research capabilities** in advanced battery technologies.
9. **Challenges:**
 - i. Scaling up laboratory synthesis for mass production.
 - ii. Cost-effective manufacturing of **Covalent Organic Framework (COF)** materials.
 - iii. **Long-term commercial validation** under varied operating conditions.
 - iv. **Integration** with existing battery manufacturing processes.

Source: PIB - <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2285704®=48&lang=1>

2. Mission Golden Spice

Prelims:

Agriculture

Mains:

GS Paper II- Government Policies and Interventions for Development, GS Paper III- Agriculture

Current relevance:

The Ministry of Development of North Eastern Region (MDoNER) launched Mission Golden Spice, an initiative to transform Meghalaya's GI-tagged Lakadong Turmeric into a globally competitive premium spice brand under the vision of "Brand North East".



Highlights:

1. Lakadong Turmeric:

- i. **Indigenous turmeric** variety grown mainly in Jaintia Hills, Meghalaya.
- ii. Has received **Geographical Indication (GI) Tag** (2024)
- iii. Known for:
 1. Very **high curcumin content** (7–10%), nearly four times the global average.
 2. **Rich aroma** and bright colour.
 3. High medicinal and **nutraceutical value**.
 4. Organic cultivation practices.
- iv. Considered Meghalaya's flagship "**Brand North East**" product with premium export potential.

2. Mission Golden Spice:

- i. The Mission is designed as a **five-year roadmap** (2025–2030) with two phases: **Value Chain Strengthening** (Phase 1) and **Expansion and Scale-up** (Phase 2).
- ii. Targets **tripling** the existing **cultivation area** and **doubling** the direct financial returns for **local farmers** through value addition and premium pricing.
- iii. It advances the '**Ashtalakshmi initiative**', which identifies a Unique Selling Proposition (USP) for each of the northeastern states.
- iv. Position Lakadong Turmeric as a **global luxury spice brand**.
- v. Develop a complete **farm-to-market value chain**.
- vi. Strengthen processing, branding, exports, and GI monetisation.

Source: PIB - <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2287186®=1&lang=1>

3. FinTech Regulatory Framework

Prelims:

Indian Economy

Mains:

GS Paper II-E-Governance, GS Paper III-Science and Technology,

Indian Economy

Current relevance:

The Government and the **Reserve Bank of India (RBI)** have strengthened India's **FinTech ecosystem** through enhanced regulatory frameworks, cybersecurity measures, consumer protection initiatives, and AI-based fraud detection mechanisms.



Highlights:

1. To curb the operations of fake or illegal loan apps, following steps were taken,
 - i. RBI has operationalized a directory on '**Digital Lending Apps (DLAs)**' on its website, to help customers verify whether a lending app is associated with an RBI-regulated entity.
 - ii. RBI issued the **Digital Lending Directions, 2025**, providing a comprehensive regulatory framework for digital lending.
 - iii. **MeitY** blocked 87 illegal loan apps under Section 69A of the **Information Technology Act, 2000**.

- iv. Sectoral regulators have been empowered under the **Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2025** to direct the blocking of unlawful online content.

2. Government Initiatives

- i. Continuous engagement with internet intermediaries and messaging platforms to **curb unauthorised lending apps**.
- ii. **Indian Cyber Crime Coordination Centre (I4C)** proactively analyses digital lending apps to detect fraudulent platforms.
- iii. Citizens can report cyber fraud through:
 - National Cyber Crime Reporting Portal.
 - National Cybercrime Helpline – 1930.
- iv. **SACHET Portal** and **State Level Coordination Committees (SLCCs)** facilitate complaints against illegal deposit-taking and unauthorised financial entities.
- v. Consumer Awareness by RBI and Bank
 - SMS-based awareness campaigns.
 - Radio campaigns on cyber fraud prevention.
 - **e-BAAT (Electronic Banking Awareness and Training)** programmes to educate customers about digital banking risks and fraud prevention.

Source: PIB - <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2286607®=48&lang=1>

4. Special Swap Facility

Prelims:

Indian Economy

Mains:

GS Paper III-Indian Economy

Current relevance:

The **Reserve Bank of India (RBI)** has mobilised over US\$20 billion through its **special foreign exchange swap facility**.



Highlights:

1. The RBI stated that the scheme has seen strong investor interest and has attracted **steady foreign exchange inflows** since it became operational on June 8, 2026.
2. The initiative was launched to:
 - i. Strengthen India's **balance of payments (BoP)**
 - ii. Increase foreign exchange reserves
 - iii. Encourage banks to mobilize foreign currency from overseas sources.
3. **Sources of Foreign Exchange Mobilisation**
 - i. Foreign Currency Non-Resident (Bank) [FCNR(B)] deposits
 - ii. External Commercial Borrowings (ECBs)
 - iii. Overseas Foreign Currency Borrowings (OFCBs)
4. **Special Swap Facility:**
 - i. Mechanism that allows eligible **foreign currency deposits and overseas borrowings** to be swapped with the RBI.
 - ii. Banks mobilize foreign currency which they deposit (the dollars) with the RBI through a currency swap.
 - iii. The RBI provides rupees to the banks at a concessional swap rate, reducing the banks' hedging cost.
 - iv. At maturity, the transaction is reversed at the pre-agreed exchange rate. Easing out exchange rate risks.
 - v. This makes it **cheaper and more attractive for banks** to raise foreign currency from abroad.

Source: THE HINDU - <https://www.thehindu.com/business/over-20-billion-mobilised-through-rbis-special-swap-facility/article71245998.ece>

5. Five New Allographa Species

Prelims:

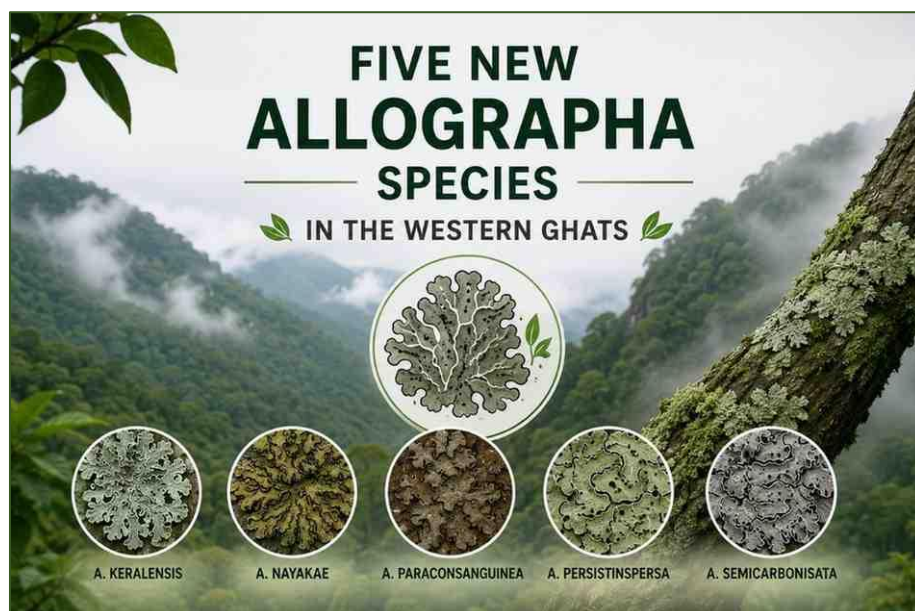
Environment and Ecology

Mains:

GS Paper III-Environment and Ecology

Current relevance:

Researchers from the **MACS Agharkar Research Institute, Pune**, have discovered five new species of **lichen-forming fungi** belonging to the genus *Allographa* from the Western Ghats.



Highlights:

1. About Allographa:

- i. Allographa is a **genus of script lichens** (lichen-forming fungi) belonging to the family Graphidaceae.
- ii. It consists of more than **200 species** and is characterised by **elongated fruiting bodies**.
- iii. It is formed through a **symbiotic association** between a **fungus and algae or cyanobacteria**.

2. Lichens:

- i. Lichens are important **indicators of forest health** and **environmental quality** due to their sensitivity to pollution and habitat changes.
- ii. They help identify **ecologically sensitive areas** and support **long-term environmental monitoring**.

- iii. They contribute to **evidence-based conservation policies** and the sustainable management of forest ecosystems.

3. **Key findings:**

- i. New Species of lichen-forming fungi discovered, they are A.keralensis, A.nayakae, A.paraconsanguinea, A.persistinspersa , A.semicarbonisata.
- ii. Revealed that **morphologically similar species** are **not** necessarily **closely related** evolutionarily.
- iii. Improved the understanding of **species boundaries**, evolutionary relationships, and **lichen symbiosis**.

Source: PIB - <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2287004®=48&lang=1>



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Index

1. Plastic Banknotes	-01
2. Atmanirbhar Philanthropy Ecosystem	-03
3. Index of Core Industries	-04
4. Borophene	-06
5. Tenzing Norgay National Adventure Award (TNNAA) 2025	-08

1. Plastic Banknotes

Prelims:

Indian Economy

Mains:

GS Paper III-Indian Economy

Current relevance:

The **Reserve Bank of India's (RBI)** currency printing arm has invited global **Expressions of Interest (EOI)** for supplying **polymer substrates with embedded security features**, marking a significant step towards the possible introduction of plastic banknotes in India.



Highlights:

Historical Background:

1. The **RBI** initially proposed the **introduction of polymer banknotes** in **2009** to enhance the durability and lifespan of currency notes.
2. In **2012**, a pilot programme for **₹10 polymer banknotes** was planned in **Kochi, Mysuru, Jaipur, Bhubaneswar, and Shimla** to evaluate their performance under diverse climatic conditions.
3. The pilot initiative was **subsequently discontinued** owing to **technological challenges** encountered during implementation.
4. The **proposal has now been revived**, with polymer banknotes once again under **active consideration** through fresh procurement initiatives.

Plastic Banknotes:

5. They are **polymer-based currency notes** made from **biaxially oriented polypropylene**, a material derived from **petroleum and natural gas**.
6. **Advantages:**
 - i. Have a lifespan that is **2.5–4 times longer** than conventional cotton-paper banknotes.
 - ii. Enhance **durability** reduces the need for frequent replacement, improving the **efficiency of currency management**.
 - iii. **Advanced security features** provide greater protection against counterfeiting and currency fraud.
 - iv. Their extended circulation life can **lower overall lifecycle** costs despite higher initial manufacturing expenses.
 - v. The reduced requirement for repeated printing and transportation may result in a **lower overall carbon footprint**.

Source: THE HINDU - <https://www.pressreader.com/india/the-hindu-international-9bn2/20260722/282132118219797>

2. Atmanirbhar Philanthropy Ecosystem

Prelims:

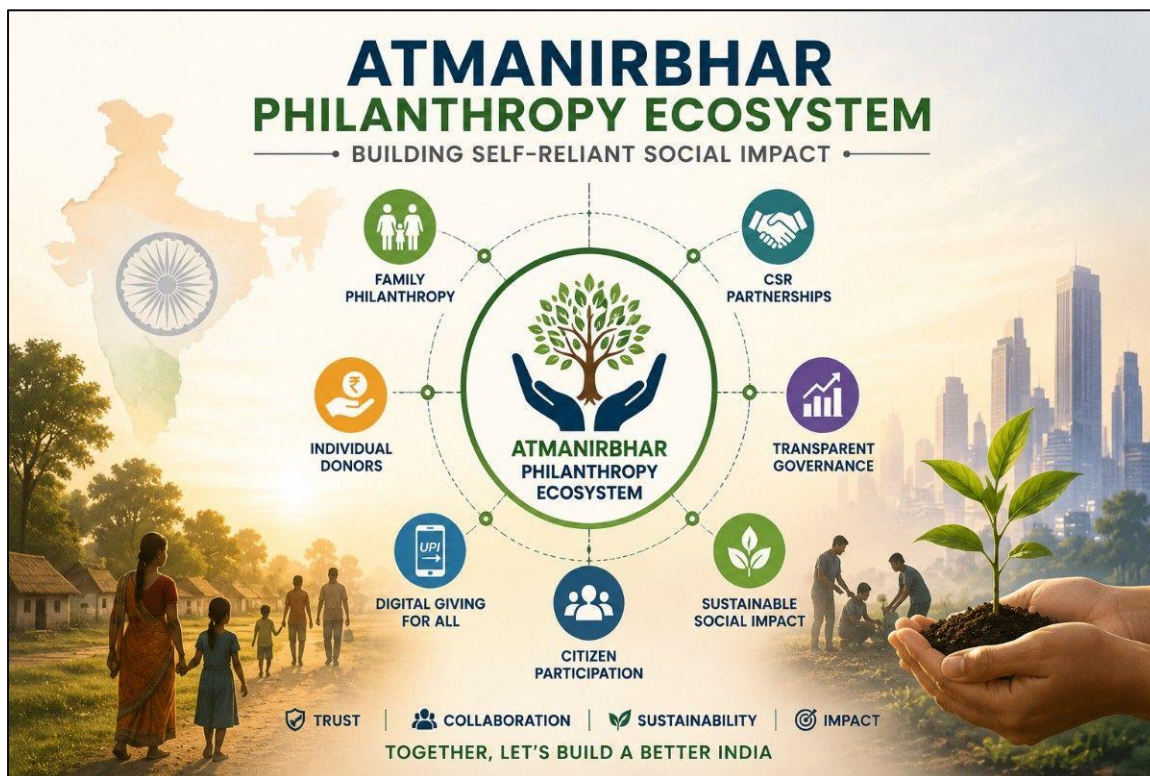
Government Policies and Interventions

Mains:

GS Paper II-Government Policies and Interventions,

Current relevance:

India's growing domestic philanthropy and the evolving debate around the **Foreign Contribution (Regulation) Act (FCRA)** have renewed focus on building an **Atmanirbhar (self-reliant) philanthropy ecosystem**.



Highlights:

1. An **Atmanirbhar philanthropy ecosystem** refers to a development model in which India's social sector is primarily financed, and **supported by domestic philanthropy**, while foreign funding plays a complementary role.
2. Domestic private philanthropy has **grown rapidly** and now **exceeds ₹1.18 lakh crore annually**, significantly surpassing foreign philanthropic inflows.

3. **Family philanthropy, Corporate Social Responsibility (CSR)**, and individual donations have emerged as the primary sources of funding for social development.
4. Strengthening India's Domestic Philanthropy Ecosystem
 - i. Encourage greater participation from **high-net-worth individuals** to unlock larger pools of domestic philanthropic capital.
 - ii. Promote **long-term domestic philanthropy** by creating a supportive policy and institutional environment.
 - iii. Strengthen **governance, transparency, and accountability** to enhance public trust in the social sector.
 - iv. Enhance **tax incentives** under **Section 80G** by increasing deduction benefits and expanding eligible limits to encourage charitable giving.
 - v. Develop a framework for **donating appreciated listed shares** to eligible charitable organisations, enabling greater philanthropic contributions.
 - vi. Broaden the **donor base** by leveraging digital platforms such as **UPI, SIPs, and demat accounts** to facilitate small, recurring donations.
 - vii. Strengthen the **Social Stock Exchange** to connect credible non-profit organisations with individual donors through transparent disclosure and measurable social impact.

Source: THE HINDU – <https://www.thehindu.com/opinion/lead/building-an-atmanirbhar-philanthropy-ecosystem/article71250572.ece>

3. Index of Core Industries

Prelims:

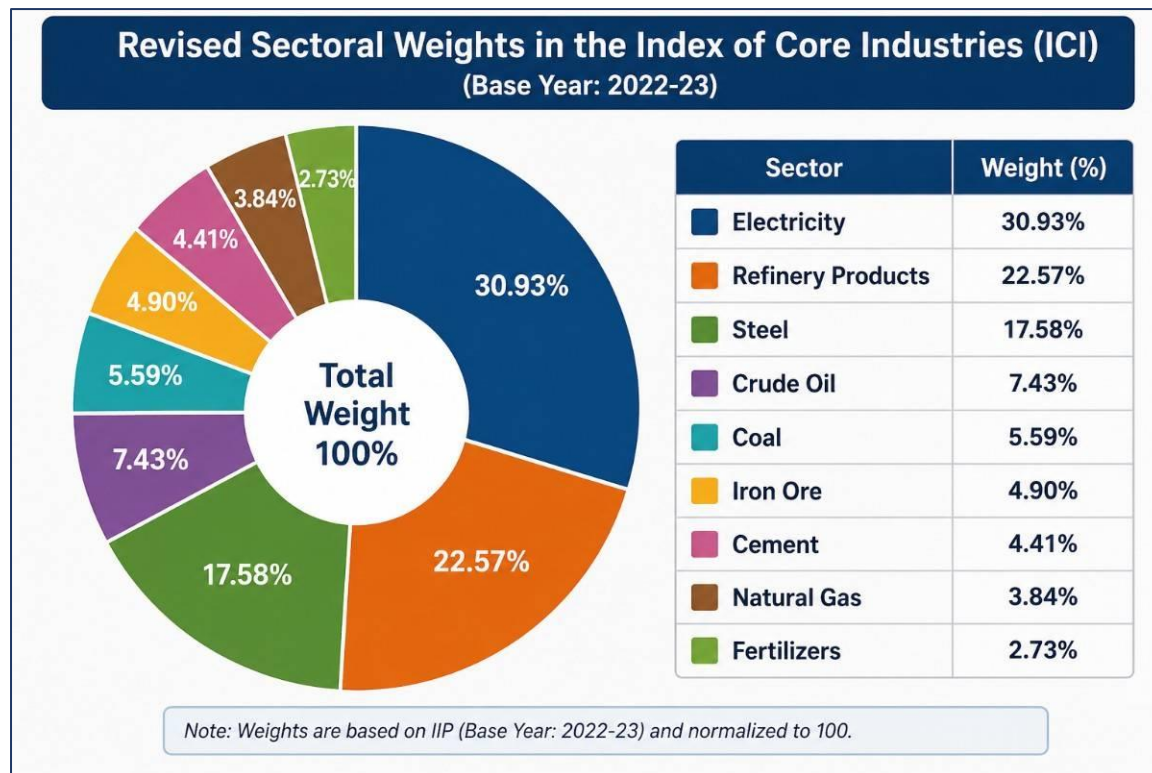
Indian Economy

Mains:

GS Paper III-Indian Economy

Current relevance:

The Union Government has released an **updated series of the Index of Core Industries (ICI)** by revising the base year to **2022–23**.



Highlights:

1. The **Index of Core Industries (ICI)** is a key indicator that measures the performance of India's core industrial sectors and serves as an important gauge of industrial activity.
2. It is Compiled by the **Office of the Economic Adviser (OEA), Ministry of Commerce & Industry**.
3. The Index of Core Industries (ICI) forms part of the **Index of Industrial Production (IIP)**, with its nine core industries accounting for **32.88%** of the total weight in the IIP.
4. Both the ICI and the IIP are released on a **monthly basis** to monitor trends in India's industrial growth.
5. **Major changes:**
 - i. The Office of Economic Adviser (OEA), Ministry of Commerce and Industry, has released the **first provisional Index of Core Industries (ICI)** under the revised series with the **base year 2022–23**.

- ii. The revised **Index of Core Industries (ICI)** has expanded from **eight to nine core industries** with the inclusion of **Iron Ore**, based on the recommendations of the **Praveen Mahto Committee (2025)**, recognising its critical role in steel production and industrial development.
- iii. The **Steel Index** is now compiled using **Gross Production Data** instead of **Net Production Data**, ensuring consistency with the revised IIP methodology.
- iv. To eliminate **double counting**, the coal index now includes **only Raw Coal**, while **Washed Coal** and **Coal Middlings** have been excluded.
- v. The sectoral weights have been **revised** and normalised to **100** in line with the **revised IIP (Base Year: 2022–23)**, reflecting the current structure of the economy.

Source: THE HINDU – <https://www.thehindu.com/business/Industry/indias-index-of-core-industries-gets-an-updated-series-what-has-changed-explained/article71248264.ece>

4. Borophene

Prelims:

Science & Technology, Environment & Ecology

Mains:

GS Paper III – Science & Technology, Environment

Current relevance:

Scientists from the **Institute of Advanced Study in Science and Technology (IASST)**, Guwahati, an autonomous institute under the Department of Science and Technology (DST), have demonstrated for the **first time that borophene**.



Highlights:

1. Researchers successfully demonstrated, for the first time, the **use of borophene as a high-performance lubricant additive** in **castor oil**, marking its first reported **application in lubrication technology**.
2. Borophene is a **two-dimensional (2D) nanomaterial** consisting of a **single layer of boron atoms**, known for its exceptional mechanical strength, electrical conductivity, chemical stability, and tribological (friction-reducing) properties.
3. **Working Mechanism:**
 - i. During operation, borophene **disperses uniformly** in castor oil without chemical modification and forms a durable **protective tribofilm** composed of **iron oxides, carbonaceous species, and boron-based compounds**.
 - ii. This **tribofilm** reduces shear stress, enhances load-bearing capacity, and minimizes friction, wear, and tear, thereby **improving lubrication performance** and machine efficiency.
4. **Potential Applications:**
 - i. Renewable Energy Systems
 - ii. Marine Applications

- iii. Green Lubrication Technologies
 - iv. Sustainable Manufacturing
 - v. Industrial Machinery
5. The **integration of borophene** with **renewable castor oil** marks a major advancement in sustainable lubrication technology by combining **nanotechnology, renewable resources, and enhanced energy efficiency.**

Source: PIB –

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2287664®=48&lang=2>

5. Tenzing Norgay National Adventure Award (TNNAA) 2025

Prelims:

National Awards and Honours

Mains:

GS Paper II–Government policies and initiatives, GS Paper III–Sports (human resource development)

Current relevance:

The **Ministry of Youth Affairs & Sports** has invited **online nominations** for the **Tenzing Norgay National Adventure Award (TNNAA) 2025**. Nominations are open from 21 July to 20 August 2026 through the National Awards Portal.



Highlights:

1. **Tenzing Norgay National Adventure Award (TNNAA)** is India's highest national award for excellence in adventure activities.
2. **Objective:** Recognises exceptional achievements in adventure while promoting **endurance, courage, teamwork, leadership, and adventure sports** among youth.
3. Award is presented in **four categories**:
 - i. Land Adventure
 - ii. Water (Sea) Adventure
 - iii. Air Adventure
 - iv. Lifetime Achievement
4. Awardees receive: Bronze statuette, Certificate, Blazer with silken tie (or saree), **Cash award of ₹15 lakh**.
5. This award enjoys a status **equivalent to the Arjuna Award** and is presented by the **Government of India** along with the **National Sports Awards**.
6. **Eligibility:**
 - i. **Indian citizens** with outstanding achievements in adventure activities are eligible to apply, achievements of the **last three calendar years** are considered during the selection process.
7. **Recommendation:**
 - i. Applicants may obtain recommendations from State Youth/Sports Departments or Recognised adventure institutions.
 - ii. Recommendations are **mandatory** for serving personnel of the **Army, Navy, and Air Force**.

Source: PIB –

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2287049®=48&lang=1>



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UPSC Daily Current Affairs –23.07.2026

Index

1. Review of Cross-Ownership Norms Between Airports and Airlines	-01
2. Truncated Common Wealth Games 2026	-02
3. FCRA (Amendment) Bill, 2026	-03
4. Bharat Taxi	-05
5. India's Resilient Economy Amid a Weakening Rupee	-06

1. Review of Cross-Ownership Norms Between Airports and Airlines

Prelims:

Indian Economy

Mains:

GS Paper III- Indian Economy, Infrastructure

Current relevance:

The **civil aviation ministry** is considering to lift restrictions on airport ownership, which when implemented allows **Airport owning companies to also own/buy stakes** in an airline company.



Highlights:

1. Current Rules restrict airline ownership in airports and vice versa (Airport operators from owning airlines).
2. In India, Cross-ownership restrictions between airport operators and airlines are primarily governed by **project-specific Concession Agreements, Operation, Management and Development Agreements (OMDAs)**, and **privatization frameworks** rather than a single standalone statutory act.
3. These rules cap cross-stakes at **10% to 26%** to prevent conflicts of interest in slot allocation and pricing.

Example:

- i. Concessional agreements for Noida and Navi Mumbai International Airport caps equity to 26%.
 - ii. Under Privatization framework for Delhi and Mumbai airports aggregate equity was capped to 10%, and no permissions for foreign airlines.
4. The Ministry of Civil Aviation is currently preparing a concept note for consultations with NITI Aayog and other government ministries on the proposed changes.

Source: THE HINDU - <https://www.thehindu.com/news/national/centre-weighs-easing-cross-ownership-rules-between-airlines-and-airports/article71254520.ece>

2. Truncated Common Wealth Games 2026

Prelims:

International Sports Events

Mains:

GS Paper II-International Relations, GS Paper III- Sports

Current relevance:

The **2026 Commonwealth Games (CWG)** are being held in **Glasgow**, Scotland.



Highlights:

1. Common wealth Games are **quadrennial** international **multi-sport event** that brings together athletes from across the Commonwealth of Nations.
2. The 2026 Commonwealth Games, officially known as the **XXIII Commonwealth Games** and commonly known as **Glasgow 2026**, events being held from 23 July to 2 August 2026 in Glasgow, Scotland.

3. Why is it truncated?

On April 2022, Victoria State (Australia) was announced as host after bidding. But in July 2023 concerned government **withdrew** from hosting citing Unsustainable costs. With no host, there was a risk that the Games might be postponed to 2027 or cancelled entirely. For a brief period Gold Coast (Queensland) along with **Singapore and Malaysia** tried to host but **backed up** for similar reasons.

Indian Relevance:

1. Preparation for the 2030 Commonwealth Games (Ahmedabad)

- i. **India will host the 2030 Commonwealth Games in Ahmedabad**, the 2026 Games provide valuable experience for Indian athletes, coaches, and sports administrators before hosting the next edition.
 - ii. Offers valuable **organisational and administrative** experience.
 - iii. Demonstrates a **financially sustainable model of hosting**, encouraging greater use of existing infrastructure and reduced event costs for future multi-sport competitions.
2. Provides **international exposure to young and emerging athletes** before major global events.
 3. **Preparation event for the upcoming 2026 Asian Games**, Acts as a stepping stone towards the Asian Games, World Championships and Olympic Games.
 4. Helps sports federations assess the effectiveness of coaching, sports science and high-performance training programmes.
 5. Maintains India's **international sporting presence** despite the reduced scale of the Games.

Source: THE HINDU - <https://www.thehindu.com/sport/glasgow-2026-commonwealth-games-india-preview/article71255062.ece>

3. FCRA (Amendment) Bill, 2026

Prelims:

Indian Polity

Mains:

GS Paper II-Government Policies and Interventions

Current relevance:

The **Press Information Bureau (PIB)** has highlighted the role of the **Foreign Contribution (Regulation) Act (FCRA)** in ensuring transparency, sovereignty, and democratic accountability.



Highlights:

1. The FCRA (Amendment) Bill, 2026 has recently attracted attention due to **concerns raised** by **religious and charitable institutions** regarding the proposed **Designated Authority provision**.
2. In response, the Government clarified that the amendment does not empower the government to permanently seize or repurpose religious institutions or their assets. Instead, the objective is to establish **a clear legal mechanism for managing assets created using foreign contributions** when an organisation's FCRA registration lapses, is surrendered, or is cancelled.
3. **Recent Proposal (2026)**
 - i. **Designated Authority for Foreign-Funded Assets:** A Designated Authority will temporarily manage foreign-funded assets of organisations whose FCRA registration expires or is cancelled.
 - ii. **Protection of Religious Institutions:** The Designated Authority cannot alter the religious character, ownership, or religious practices of places of worship.
 - iii. **Provisional, Not Permanent Vesting:** Asset vesting is initially provisional and becomes permanent only if FCRA registration is not restored within the prescribed period. After which assets are applied for public purposes, with sale proceeds credited to the **Consolidated Fund of India**.
 - iv. **Judicial Safeguards:** Organisations can challenge the Designated Authority's orders through revision **within 90 days** and appeal before the District Judge.

Source: PIB - <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2287897®=48&lang=1>

4. Bharat Taxi

Prelims:

Polity & Governance, Indian Economy

Mains:

GS Paper II-Government policies and interventions for development, GS Paper III – Indian Economy

Current relevance:

The launch of **Bharat Taxi** in **Maharashtra**, after **Delhi and Gujarat**, marks an effort to extend India's cooperative movement beyond agriculture into the urban transportation sector.



Highlights:

1. **Bharat Taxi** is a **cooperative-based ride-hailing platform** that seeks to provide an alternative to conventional aggregator models. Unlike private platforms where drivers work independently while paying commissions to the platform, Bharat Taxi is owned collectively through a cooperative structure.
2. **Under this model:**
 - i. **Sarathis (drivers)** are members of the cooperative.
 - ii. They become shareholders and participate in the institution's profits.
 - iii. The platform follows a fixed service fee instead of charging high commissions.
 - iv. There is no surge pricing and no hidden charges for passengers.
 - v. The objective is to create a **driver-centric transportation** ecosystem rather than an intermediary-centric one.
3. **Shift in Cooperation revolution:**
 - i. India's cooperative movement has traditionally focused on agriculture, dairy, credit societies and sugar cooperatives. But now it has expanded the cooperative model into new sectors.

- ii. Bharat Taxi represents the **application of cooperative principles to urban mobility**, demonstrating that cooperation can also be used in service industries.

Source: PIB - [The launch of Bharat Taxi in Maharashtra, after Delhi and Gujarat, marks an effort to extend India's cooperative movement beyond agriculture into the urban transportation sector.](#)

5. India's Resilient Economy Amid a Weakening Rupee

Prelims:

Indian Economy

Mains:

GS Paper III – Indian Economy

Current relevance:

The **RBI's July 2026 Bulletin** highlighted that **the Indian economy remains resilient**, supported by strong domestic demand, industrial and services sector growth. However, despite this resilience, **the Indian rupee depreciated to ₹96.53 per US dollar**.



Highlights:

1. RBI's Assessment of Economic Resilience:

- i. The **RBI's July 2026 Bulletin** states that India has effectively navigated global uncertainties and supply chain disruptions.
- ii. Growth is supported by **robust domestic demand, Strong industrial production, Resilient services sector.**

2. Domestic Indicators Reflect Economic Strength

The health of the domestic economy is reflected through:

- i. GDP growth,
- ii. Industrial production,
- iii. Expansion of the services sector,
- iv. Private consumption,
- v. Investment,
- vi. Employment,
- vii. Agricultural output

Strong performance in the above indicates that economic activity within the country continues to expand despite an uncertain global environment.

3. Why Is the Rupee Under Pressure?

The recent depreciation of the rupee is largely driven by **external sector developments** rather than weaknesses in the domestic economy.

4. Factors Behind the Rupee's Depreciation

- i. **Crude Oil Imports:** International crude oil is largely traded in US dollars, **rising crude oil prices** therefore **increase the demand for dollars**, putting downward pressure on the rupee.
- ii. **Net FDI** turned **negative in May 2026** as outward investments exceeded fresh inflows. This reduced the net availability of foreign capital.
- iii. **Foreign Portfolio Outflows (FII/FPI):** FII may withdraw investments from Indian financial markets during periods of global uncertainty or when higher returns become available in advanced economies, Such outflows increase the **demand for dollars**, leading to **rupee depreciation.**
- iv. A **strong US dollar globally**, geopolitical tensions, and changes in US monetary policy often strengthen the dollar against most currencies, including the rupee.

Source: THE HINDU -<https://www.thehindu.com/business/markets/rupee-rises-5-paise-to-9648-against-us-dollar-in-early-trade/article71256595.ece>



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UPSC Daily Current Affairs –24.07.2026

Index

1. Endangered Kutki Herb	-01
2. Building Climate Resilience for Older Persons	-02
3. Global Aerosol Diversity	-04
4. BHAVYA Rasayan Scheme	-06
5. Start-up Village Entrepreneurship Programme (SVEP)	-07

1. Endangered Kutki Herb

Prelims:

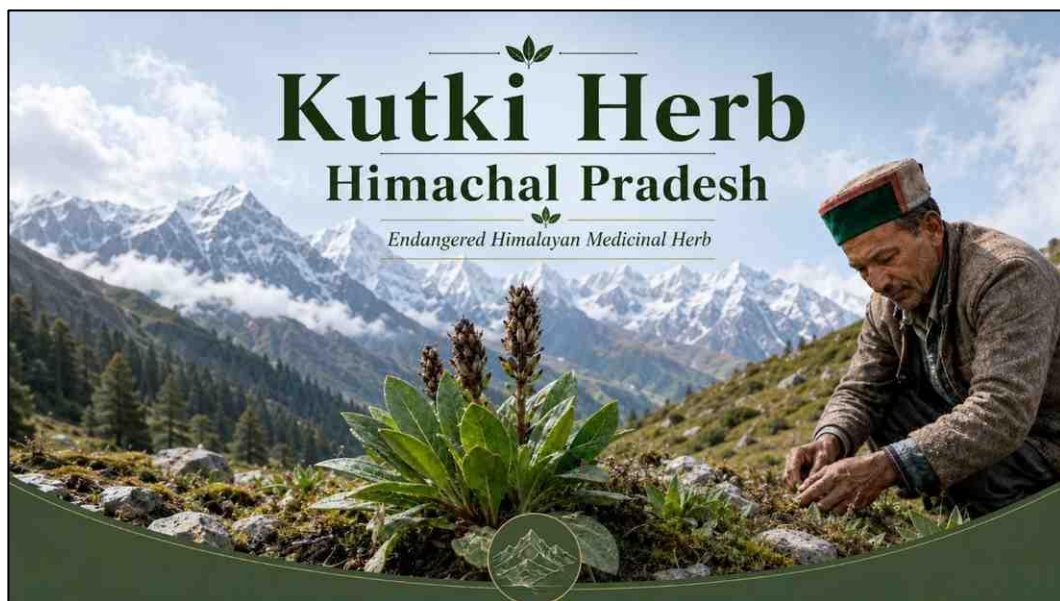
Environment and Ecology, International Environmental Conventions, Geography

Mains:

General Studies Paper II-Government Policies and Interventions, Environment and Biodiversity

Current relevance:

Farmers in the **Mandi district of Himachal Pradesh** have adopted a **sustainable cultivation** and harvesting model for **Kutki (Picrorhiza kurroa)**, an **endangered** Himalayan medicinal herb.



Highlights:

1. Kutki is native to the **alpine and sub-alpine regions** of the Himalayas.
2. It is widely used in traditional and modern medicine, with its **stolon, node-bearing stem that grows along the soil surface serving as the medicinally valuable part**.
3. It has been categorised as an **endangered species on the IUCN Red List**, one of the most threatened medicinal plants in the Himalayan region.
4. It is included in **Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)**.

Benefits of the Initiative:**1. Conservation of an Endangered Species**

Cultivating on private farmland helps reduce harvesting pressure on wild populations and **contributes to its ex-situ conservation**.

2. Sustainable Rural Livelihoods

Kutki cultivation offers an **additional source of income** to farmers living in remote Himalayan areas.

3. Reduction in Illegal and Destructive Collection

A steady supply of farm-grown Kutki can lessen dependence on illegal and unsustainable collection from natural habitats.

4. Scientific Agriculture

The initiative promotes the adoption of scientifically developed cultivation and sustainable harvesting techniques among farmers.

5. Medicinal Plant Economy

Organised production of Kutki can support stable supply chains for **pharmaceutical companies and traditional medicine systems**.

6. Climate-resilient Mountain Agriculture

The cultivation of **high-value medicinal plants** can diversify farmers' incomes in mountain regions where conventional agriculture is constrained by difficult terrain and climatic conditions.

Source: THE HINDU - <https://www.thehindu.com/news/national/himachal-pradesh/himachal-farmers-pioneer-sustainable-cultivation-of-endangered-himalayan-herb-kutki/article71257294.ece>

2. Building Climate Resilience for Older Persons**Prelims:**

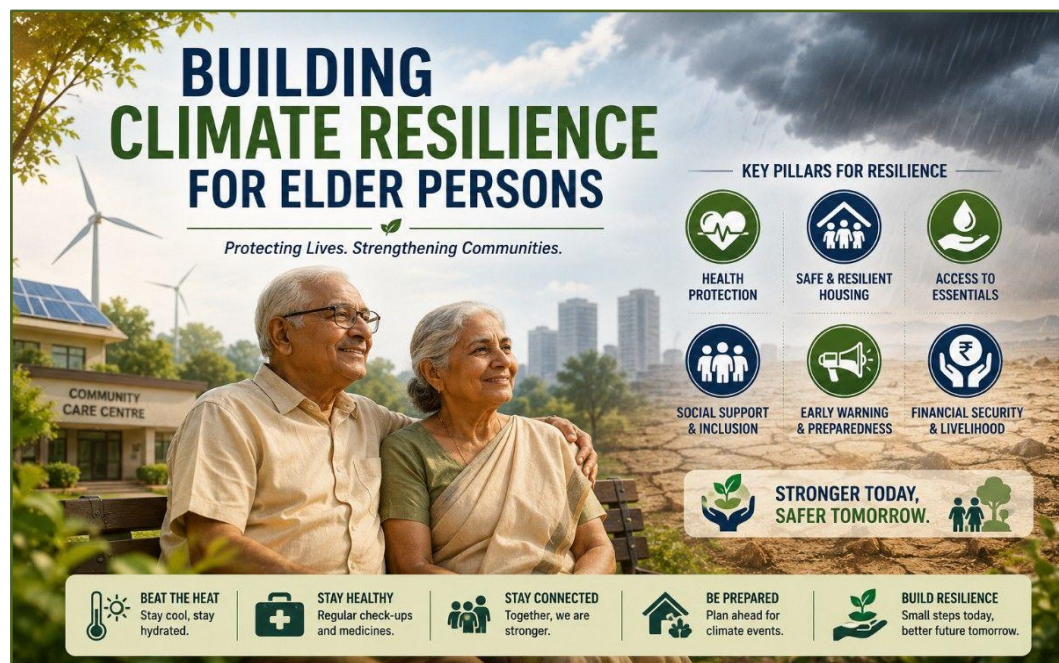
Environment & Ecology, Social Issues

Mains:

GS Paper I-Social empowerment, GS Paper II-Welfare schemes for vulnerable sections, GS Paper III-Disaster management.

Current relevance:

A recent study by HelpAge India highlights that **senior citizens are among the most vulnerable groups to climate change.**



Highlights:

1. Elderly are disproportionately affected by climate change due to age-related **health limitations, financial dependence, and social vulnerabilities.**
2. India's elderly population is projected to increase from **149 million (2022)** to about **347 million by 2050**, making climate resilience increasingly important.
3. **Climate Stressors Affecting Older Persons:**
 - i. **Rising Temperatures:** Rising temperatures increase the risk of **heat stress, dehydration, and heat-related illnesses** among older persons due to reduced physiological tolerance.
 - ii. **Poor Ventilation and Indoor Heat** expose older adults to prolonged heat stress, aggravating chronic illnesses and reducing overall well-being.
 - iii. **Environmental degradation** contributes to **poor air quality**, declining living conditions, and **increased respiratory and physical health problems.**
 - iv. Some other factors are erratic rainfall, droughts, floods, coastal Erosion, water Scarcity.
4. The report recommends **strengthening community resilience** through family support, **neighbourhood check-ins**, volunteer networks, community shelters, relocation assistance, **age-inclusive early warning systems**, and robust local care networks to protect older persons during climate-related emergencies.

5. Best Practice:

Odisha's cyclone preparedness model, involving early warning systems and timely evacuation of older persons to community shelters, is cited as a successful example of age-inclusive disaster management.

Source: THE HINDU - <https://www.thehindu.com/sci-tech/health/no-country-for-old-people-building-resilience-to-protect-elderly-from-climate-stressors/article71254834.ece>

3. Global Aerosol Diversity

Prelims:

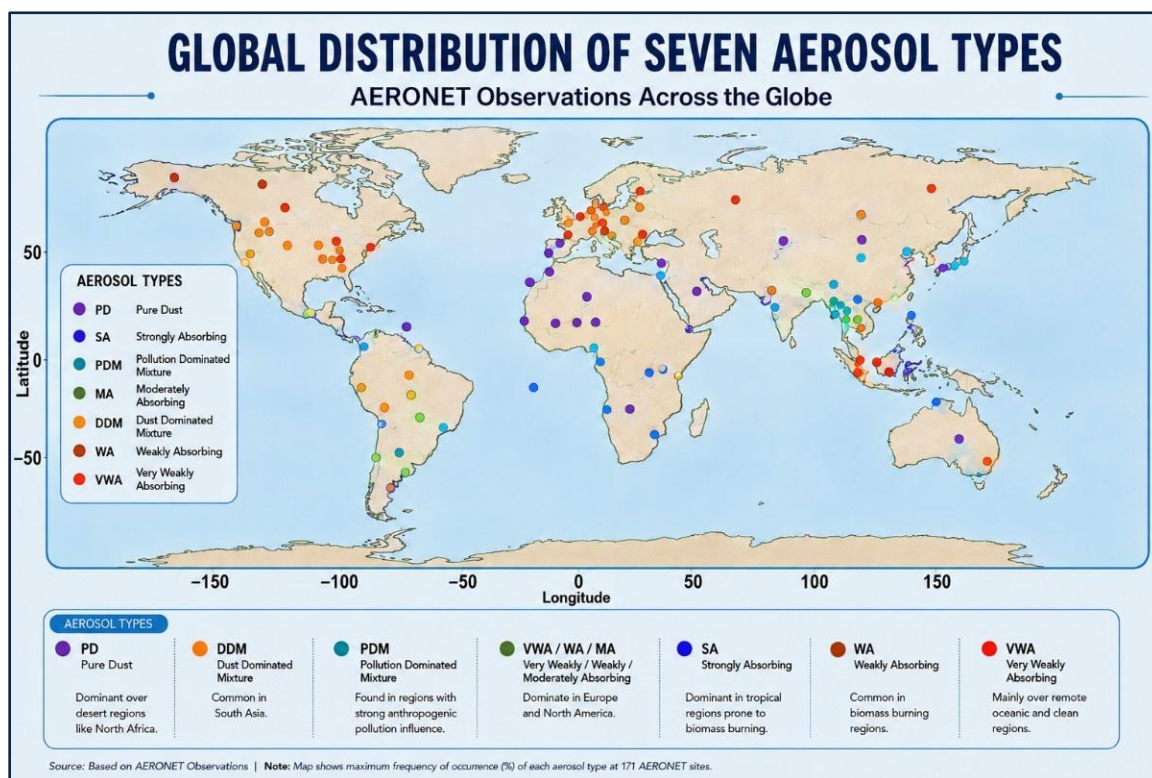
Environment & Ecology, Science & Technology

Mains:

GS Paper III- Conservation and Environmental Pollution

Current relevance:

A recent study by researchers from the **Indian Institute of Astrophysics (IIA)**, **ARIES**, **ISRO**, **NASA**, and other international institutions, published in the Atmospheric Environment Journal, has identified **seven major aerosol types** and mapped their global distribution.



Highlights:

1. **Aerosols** are tiny particles suspended in the atmosphere that influence Earth's climate by scattering, absorbing, and interacting with sunlight, thereby affecting the planet's energy balance, clouds, weather, and rainfall.
2. **Objective:**
The study provides a long-term global assessment of aerosol diversity and their radiative effects to improve climate models and enhance the accuracy of climate predictions.
3. The study classified aerosols into **seven major types**:
 - i. Pure Dust (PD)
 - ii. Dust-Dominated Mixtures (DDM)
 - iii. Pollution-Dominated Mixtures (PDM)
 - iv. Very Weakly Absorbing (VWA)
 - v. Weakly Absorbing (WA)
 - vi. Moderately Absorbing (MA)
 - vii. Strongly Absorbing (SA)
4. **South Asia** experiences the **highest Aerosol Radiative Forcing and atmospheric heating** because of the predominance of **dust mixed with pollution (Dust-Dominated Mixtures)**.
5. **Climate Implications:**
 - i. **Strongly absorbing aerosols**, particularly those rich in black carbon, absorb large amounts of solar radiation, causing significant atmospheric heating and influencing **regional weather patterns and cloud formation**.
 - ii. **Very weakly absorbing aerosols** primarily scatter and reflect incoming sunlight back into space, producing a **cooling effect on the Earth's surface**.
 - iii. The varying radiative properties of different aerosol types significantly influence **the Earth's energy balance**, making accurate aerosol characterization essential for understanding and predicting climate change.
6. **Applications:**
 - i. Climate models
 - ii. Satellite-based remote sensing
 - iii. Air quality monitoring
 - iv. More accurate aerosol retrieval algorithms
 - v. Support the assessment of air pollution impacts

Source: PIB - <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2288312®=48&lang=2>

4. BHAVYA Rasayan Scheme

Prelims:

Indian Economy, Environment

Mains:

GS Paper II-Government Policies and Interventions for Industrial Development, GS Paper III- Environmental Conservation.

Current relevance:

The **Union Cabinet** has approved the **BHAVYA Rasayan Scheme (Bharat Audyogik Vikas Yojana Rasayan)** to establish **three dedicated Chemical Parks** across India for promoting the sustainable and globally competitive growth of the chemical industry. The scheme was announced in the Union Budget 2026–27.



Highlights:

1. BHAVYA Rasayan aims to establish **three dedicated Chemical Parks** to strengthen India's **chemical manufacturing ecosystem** through world-class industrial infrastructure.
2. **Central Financial Assistance**
The **Central Government** will provide up to **₹1,000 crore per Chemical Park**, subject to a **minimum contribution of ₹500 crore** from the respective State Government.
3. Each Chemical Park will provide **plug-and-play infrastructure**, including:
 - i. Common Effluent Treatment Plant (CETP),

- ii. Treatment, Storage and Disposal Facility (TSDF),
 - iii. Water supply and distribution systems,
 - iv. Solvent recovery and distillation facilities,
 - v. Steam generation and distribution network,
 - vi. Interconnected pipeline network,
 - vii. Logistics and warehousing facilities
4. The scheme will strengthen the **entire chemical value chain**, including upstream, downstream, and ancillary industries, while improving resource efficiency and reducing logistics costs.
 5. Shared infrastructure will enhance **cost competitiveness**, facilitate integration into **Global Value Chains (GVCs)**, promote exports, and encourage import substitution.
 6. The parks will support **environment-friendly industrial development** through centralized pollution-control infrastructure, hazardous waste management, and improved compliance with environmental regulations.
 7. The scheme will support the production of chemicals and petrochemicals that serve key downstream industries such as **agriculture, textiles, pharmaceuticals, nutraceuticals, construction, automobiles, and electronics**.

Source: PIB - <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2288863®=3&lang=1>

5. Start-up Village Entrepreneurship Programme (SVEP)

Prelims:

Indian Economy

Mains:

GS Paper II-Government Policies and Interventions for Rural Development, GS Paper III- Indian Economy

Current relevance:

The **Start-up Village Entrepreneurship Programme (SVEP)** has significantly expanded rural entrepreneurship, supporting **4.32 lakh rural enterprises** across the country.



Highlights:

1. Background:

Start-up Village Entrepreneurship Programme (SVEP) was launched in 2016 as a sub-scheme of **the Deendayal Antyodaya Yojana – National Rural Livelihoods Mission (DAY-NRLM)** to promote non-farm enterprises in rural areas through training, finance, mentoring, and institutional support.

2. Objective:

To promote sustainable livelihoods and self-employment by supporting rural households, particularly Self-Help Group (SHG) members and their families, in establishing non-farm enterprises.

3. Beneficiaries:

The programme prioritizes **women, SCs, STs, OBCs, minorities, persons with disabilities, and first-generation entrepreneurs**, ensuring equitable access to entrepreneurship opportunities.

4. It provides **financial assistance**, business management training, **soft-skill development**, mentoring, banking linkages, and convergence with government schemes to support the establishment and growth of rural enterprises.

5. **Implementation:** Through **State Rural Livelihoods Missions (SRLMs)** in collaboration with **Block Resource Centres–Enterprise Promotion (BRC-EPs)**, **Community Resource Persons–Enterprise Promotion (CRP-EPs)**, **Self-Help Groups (SHGs)**, **banks**, and **Community Enterprise Funds (CEF)** to facilitate enterprise development.

6. It is monitored through quarterly reviews, periodic assessments, and a **centralized Management Information System (MIS)** to track enterprise performance, fund utilization, and overall programme progress.
7. It promotes **community-led entrepreneurship** by generating employment, strengthening local economies, reducing poverty, and advancing the **vision of a self-reliant** and developed India.

Source: PIB - <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2289268®=48&lang=1>



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Index

1. Ancient Buddhist Site of Sarnath	-01
2. E-courts	-03
3. Nuclear Energy Mission & Three-Stage Nuclear Programme	-04
4. India Placed in Lower Tariff Tier	-06
5. Mangrove Encroachments Threaten the Indian Sundarbans	-08

1. Ancient Buddhist Site of Sarnath

Prelims:

Art & Culture, History

Mains:

GS Paper I-Indian Culture, GS Paper II- International Organisations

Current relevance:

At the **48th Session of the World Heritage Committee** held at Busan, South Korea, the **Ancient Buddhist Site of Sarnath** was inscribed on the **UNESCO World Heritage List**, becoming India's **45th World Heritage Property**.



Highlights:

Historical Significance:

1. Sarnath is the sacred site where **Gautama Buddha** delivered **his first sermon**, known as **Dharmachakra Pravartana** (Turning of the Wheel of the Law).
2. The establishment of the **Buddhist Sangha** and the dissemination of the teachings of the **Noble Eightfold Path**.
3. It is regarded as **one of the four principal Buddhist pilgrimage sites**, as identified by the Buddha himself.
4. Flourished as an important Buddhist centre under **royal, monastic, and lay patronage** for centuries, before falling into decline after the **12th century CE** and being rediscovered in the **18th century**.
5. Excavations at Sarnath led to the discovery of the **Ashokan Lion Capital**, later adopted as the **National Emblem of India**, and the **Dharmachakrapravartan Buddha** of the Classical Gupta period.

About the Ancient Buddhist Site of Sarnath:

1. It is located near **Varanasi** in **Uttar Pradesh**.
2. Sarnath was historically known as **Rishipatana, Ishipatana, and Mrigadava**.
3. The inscribed serial property comprises two component parts:
 - i. **Chaukhandi Stupa**
 - ii. Archaeological Remains of Sarnath, including **Dhamekh Stupa, Dharmarajika Stupa, Mulagandhakuti Vihara, Ashokan Pillar**, and other monuments.
4. The site contains a continuous sequence of monuments dating from the **pre-Mauryan period (5th–4th centuries BCE)** to the **12th century CE** and is one of the most extensively excavated archaeological sites studied by the **Archaeological Survey of India (ASI)**.

UNESCO Inscription Process:

1. Sarnath was placed on the **UNESCO Tentative List** in **1998**.
2. In **2026**, the **Ancient Buddhist Site of Sarnath** was inscribed on the UNESCO World Heritage List, becoming India's **45th World Heritage Property**.
3. India now has 45 World Heritage Sites, ranking **6th globally** and **2nd in the Asia-Pacific region**.
4. The site was inscribed under **Criteria (iii)** and **(vi)** for:
 - i. Its enduring spiritual significance as **one of the four principal Buddhist pilgrimage sites**.
 - ii. Its direct association with **Buddha's first sermon** and his meeting with the **first disciples**.

Source: PIB- <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2289399®=48&lang=1>

2. E-courts

Prelims:

Polity, Science & Technology

Mains:

GS Paper II- E-Governance, GS Paper III-Science and Technology

Current relevance:

The Government has accelerated the **digital transformation** of the judiciary under the **eCourts Phase III Project (2023–2027)** to enable faster case disposal.



Highlights:

1. Adjudication and disposal of cases remain the responsibility of the judiciary, the Government is facilitating judicial efficiency by expanding **digital infrastructure**, promoting **paperless courts**, and **integrating advanced technologies**.
2. **Phase I (2011–2015): Building the Digital Foundation:**
With an outlay of **₹935 crore**, the project laid the foundation for the digital transformation of the judiciary by **computerising courts**, strengthening digital infrastructure, enhancing **judicial capacity** through training, and enabling technology-driven services such as **video conferencing**.
3. **Phase II (2015–2023): Expanding Digital Judicial Services:**
With an outlay of **₹1,670 crore**, the project significantly expanded the digital judicial ecosystem by computerising courts, strengthening digital connectivity, establishing the **National Judicial Data Grid (NJDG)**, and introducing citizen-centric services such as **e-Filing, e-Payments, Virtual Courts, mobile**

applications, the multilingual e-Courts portal, and e-Sewa Kendras. It also enhanced **virtual hearings** and **online case disposal** through wider adoption of video conferencing and Virtual Courts.

4. **Phase III** approved in September 2023 with a financial outlay of **₹7,210 crore**, It represents the next stage in India's vision of a **technology-driven, transparent, and citizen-centric justice delivery system**.

Initiatives under e-Courts Phase III

1. Transition to digital and **paperless courts** through large-scale digitization of judicial records.
2. Large-scale digitisation of court records, robust digital connectivity, online case filing and payments, **integrated case management systems, electronic transmission of judicial documents**.
3. **Judicial Digital Trustworthy Repository** developed for secure digital preservation of court records.
4. AI-based **Legal Research Analysis Assistant (LegRAA)** developed to assist judges in legal research and document analysis.
5. **e-Sewa Kendras** provide digital assistance to litigants and lawyers, while Virtual Courts facilitate the online adjudication of **traffic challans**, and secure court websites hosted on the **S3WaaS platform** enhance accessible and reliable digital judicial services.

Source: PIB- <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2289461®=48&lang=2>

3. Nuclear Energy Mission & Three-Stage Nuclear Programme

Prelims:

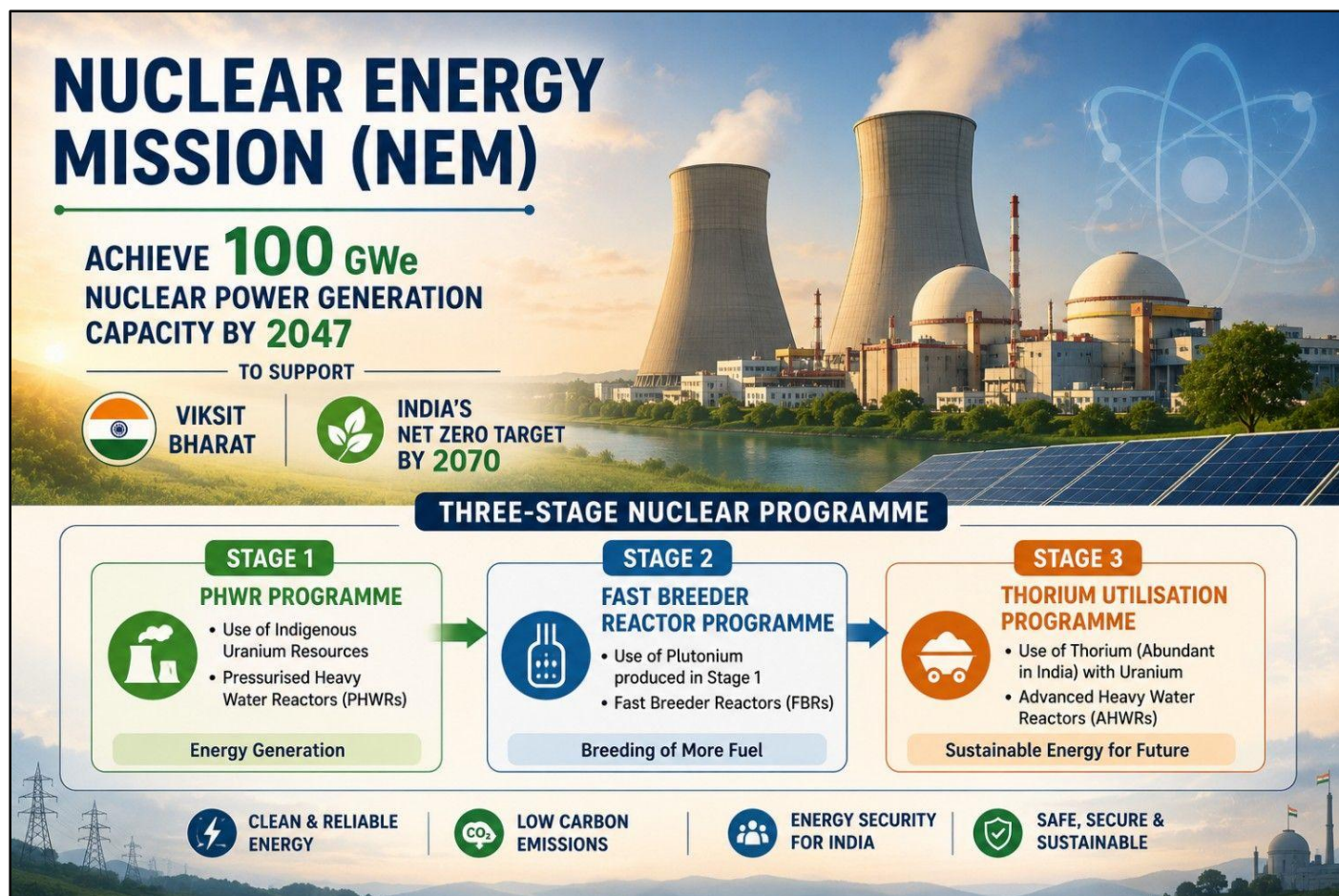
Science & Technology, Environment

Mains:

GS Paper III-Science and Technology, Energy

Current relevance:

India has taken a significant step towards strengthening its long-term energy security by simultaneously advancing the **Nuclear Energy Mission (NEM)** and the **Three-Stage Nuclear Power Programme**.



Highlights:

Nuclear Energy Mission (NEM):

1. The **Nuclear Energy Mission (NEM)** was announced in the **Union Budget 2025–26** with the objective of achieving **100 GWe** nuclear power generation capacity by **2047** to support **Viksit Bharat** and India's **Net Zero target by 2070**.
2. The mission also aims to develop and operationalise at least **five indigenous Small Modular Reactors (SMRs)** by **2033**.

Three-Stage Nuclear Power Programme:

1. India follows a **closed fuel cycle**, where spent fuel from one stage becomes fuel for the next.
2. The success of this strategy depends on the sequential development of all three stages. While the **first stage** has already been **mastered**, the country has recently crossed a historic milestone by entering the second stage.
3. **Stage I – Pressurised Heavy Water Reactors (PHWRs)**
Natural uranium is used as fuel in PHWRs to generate power. The spent fuel from these reactors produces **plutonium**, which becomes the primary input for the next stage.
4. **Stage II – Fast Breeder Reactors (FBRs)**

- i. The **Prototype Fast Breeder Reactor (PFBR)** at **Kalpakkam, TN** marks India's entry into this stage. These reactors will be used to breed **Uranium-233** from **thorium**, laying the groundwork for Stage 3.
- ii. The PFBR uses **Uranium-Plutonium Mixed Oxide (MOX) fuel**.
- iii. The reactor is designed to eventually use **Thorium-232** in the blanket. Through transmutation, Thorium-232 will be **converted into Uranium-233**, the fuel that will power India's third stage of nuclear energy based on thorium.
- iv. **Closed Fuel Cycle:** The spent fuel generated by the PFBR will be reprocessed and recycled back into the reactor. This closes the second-stage fuel cycle and paves the way for large-scale use of India's abundant thorium reserves in Stage 3.

5. Stage III – Thorium-Based Nuclear Power:

- i. This stage will **harness India's vast thorium reserves** at scale, using the Uranium-233 bred in Stage 2 as fuel. Thorium is considered a practically vast energy source and this stage holds the key to India's long-term energy security.
- ii. For large-scale commercial deployment of thorium, conventional reactor technologies alone may not be sufficient. Therefore, the **Department of Atomic Energy** is simultaneously **developing advanced reactor systems** capable of efficiently utilizing thorium.

Source: PIB - <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2288294®=48&lang=1>

4. India Placed in Lower Tariff Tier

Prelims:

Indian Economy

Mains:

GS Paper II-India and its Bilateral Relations, GS Paper III-Indian Economy

Current relevance:

The **United States Trade Representative (USTR)** announced the final measures under **Section 301 of the U.S. Trade Act, 1974**, imposing an **additional 10% ad valorem duty on imports from India**, while placing India in the lower tariff tier.



Highlights:

1. **Sustained diplomatic engagement** by the Government of India, the proposed **12.5%** additional tariff has been **reduced to 10%**, placing India in the **lower tariff tier** among the affected economies.
2. The decision limits the impact on Indian exports while **preserving India's relative competitiveness** in the U.S. market.
3. **Section 301 of the U.S. Trade Act, 1974:**
Empowers the **United States Trade Representative (USTR)** to investigate foreign government acts, policies, or practices that are considered unreasonable, discriminatory, or harmful to U.S. commerce.
4. **Final Measures favorable for India:**
 - i. Provides India with a relative advantage over several other economies facing higher tariff incidence.
 - ii. However an additional tariff has been imposed, the overall impact remains limited because **several major export sectors have been kept outside its scope** ie, Exports Exempt from the Additional Tariff.
 - iii. Nearly **45% of India's exports** to the United States remain exempt from the additional 10% Section 301 duty. Major Exemptions are **generic pharmaceuticals, smartphones**, certain specified products.
5. **Implications for India:**
 - i. Around **55%** of exports to the U.S. will face the additional **10%** duty.
 - ii. India's tariff burden is **lower than** that of many **competing economies**, helping preserve export competitiveness.
 - iii. The proposed **textile-specific mechanism** under the final measures is yet to become operational.
 - iv. India continues to engage with the U.S. on **sector-specific issues**.
 - v. The tariff decision is also linked to the broader objective of strengthening bilateral economic ties through an ongoing trade agreement, **India–U.S. Bilateral Trade Agreement (BTA)**.

Source: PIB - <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2289348®=48&lang=1>

5. Mangrove Encroachments Threaten the Indian Sundarbans

Prelims:

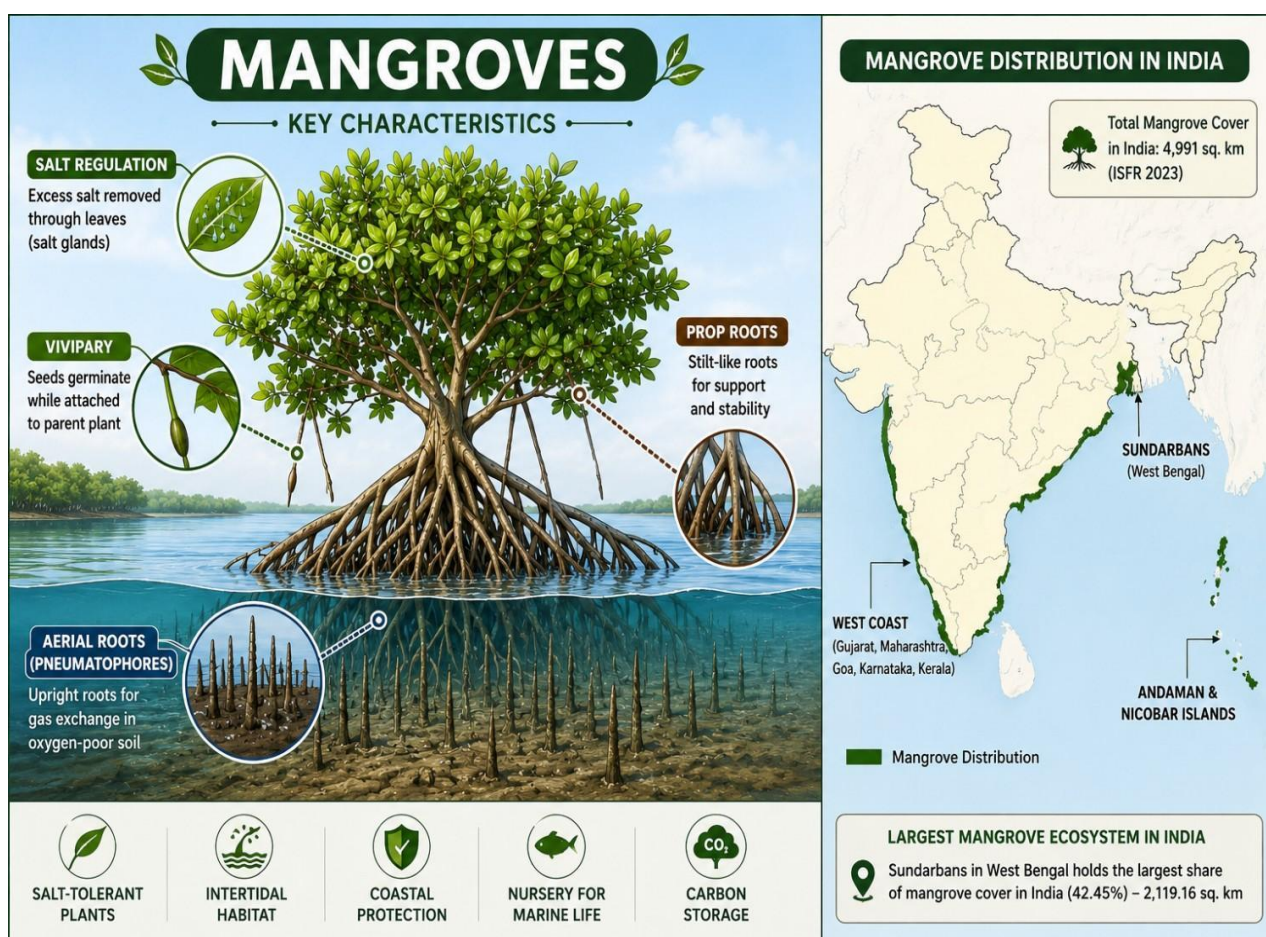
Environment & Ecology

Mains:

GS Paper III- Biodiversity and Environmental Protection

Current relevance:

The **West Bengal Environment and Forest Minister** highlighted large-scale **encroachment of mangrove forests in the Sundarbans** for the construction of shallow fishponds and announced that the affected areas would be restored.



Highlights:

1. Hundreds of acres of **mangrove forests in the Sundarbans** have been encroached upon, primarily for the construction of **bheries (shallow fishponds)**, resulting in significant loss of mangrove cover.
2. The issue was discussed at a workshop titled "**Strengthening Mangrove Governance in the Indian Sundarbans through Technology Driven Innovation, Knowledge Partnership and Co-**

management", organised by the **Nature Environment and Wildlife Society (NEWS)** in collaboration with the **State Forest Department**.

Nature Environment and Wildlife Society (NEWS):

1. A report prepared by **NEWS** identified **over 600 hectares of mangrove forests** encroached for the construction of **bheries** at **10 locations**, while indicating that the actual extent of encroachment could be much higher.
2. It recommended the establishment of a **Mangrove Management and Conservation Authority** in West Bengal to strengthen mangrove conservation and governance.

About mangroves:

1. **West Bengal**, particularly the **Sundarbans**, contains the **largest share of India's mangrove cover**, accounting for **42.45%** of the national total cover.
2. They are **salt-tolerant (halophytic) trees and shrubs** that grow in the intertidal zones of tropical and subtropical coastal regions.
3. Found along **estuaries, river deltas, lagoons, mudflats, and sheltered coastal areas** where freshwater and seawater converge.
4. Possess **aerial roots (pneumatophores)**, prop roots, or stilt roots for respiration and anchorage in waterlogged soils.
5. **Remove excess salt** through specialized glands or store salt in leaves, which are later shed.
6. **Vivipary**: Seeds germinate on the parent plant before detachment, enhancing their survival and successful establishment in tidal environments.
7. **Low-Oxygen Adaptation**: Specialized roots enable gas exchange in oxygen-deficient (anaerobic) soils.

Source: THE HINDU - <https://www.thehindu.com/news/cities/kolkata/west-bengal-minister-vows-to-restore-mangroves-lost-to-encroachments-in-sundarbans/article71262808.ece>



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UPSC Daily Current Affairs –26.07.2026

Index

1. India's Rice Fields Among the World's Largest Methane Emission Sources	-01
2. Zoopharmacognosy	-02
3. Ken–Betwa River Linking Project	-04
4. Corporate Mitra Scheme	-06
5. India–Panama Maritime Partnership	-08

1. India's Rice Fields Among the World's Largest Methane Emission Sources

Prelims:

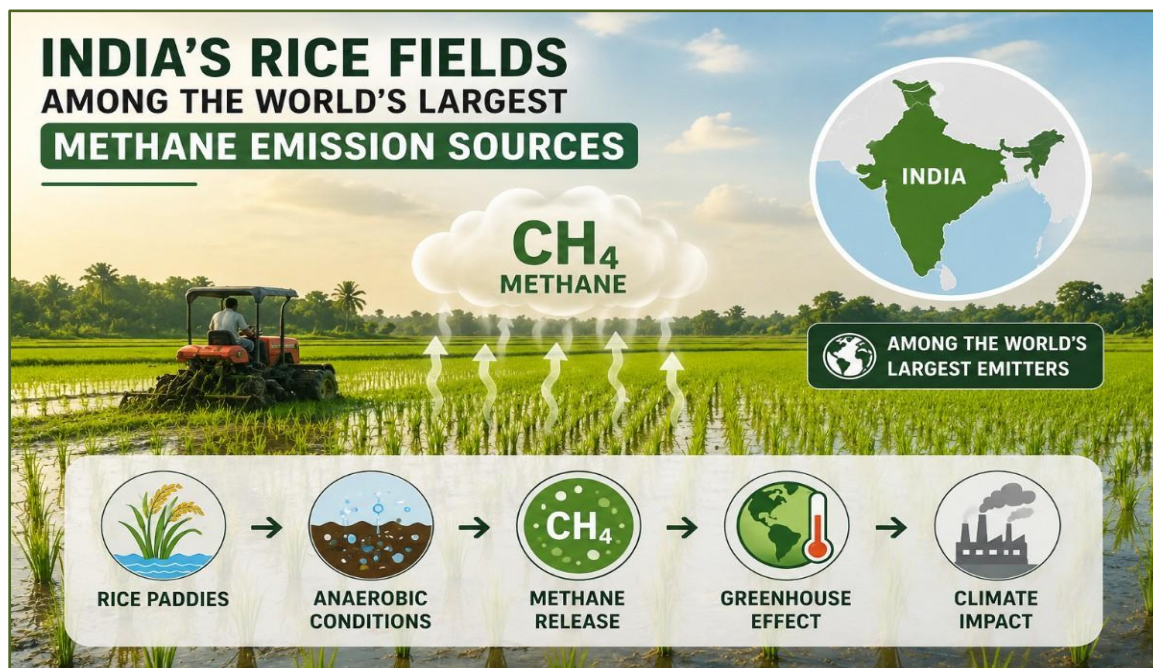
Environment & Ecology, Agriculture

Mains:

GS Paper III- Environment & Ecology, Agriculture

Current relevance:

A study published in **Nature Food** has found that **greenhouse gas (GHG) emissions** from paddy fields have doubled since the 1960s, with India's rice fields, particularly in eastern India, ranking among the **world's major methane emission hotspots**.



Highlights:

1. The study found that **greenhouse gas emissions** from global paddy fields nearly **doubled between 1961–1980 and 2011–2020**, with annual emissions reaching around **1.1 billion tonnes of CO₂ equivalent (CO₂-e)**.
2. The rise in methane emissions is driven by the **depletion of soil organic carbon, methane generation under flooded paddy conditions**, continuous irrigation, incorporation of **crop residues** into the soil, and increased application of nitrogen fertilizers.
3. **Paddy fields in eastern India** are identified among the **global methane hotspots**, while irrigated paddy fields in India emit around **3.9 million tonnes of methane annually**.
4. **Emission Reduction Measures:**
 - i. **Optimised Irrigation:** Adopt **alternate wetting and drying (AWD)** to reduce the duration of continuous flooding in rice fields to lower methane emissions.
 - ii. **Improved Crop Residue Management:** Adopt practices such as **composting, mulching, biochar production, or removal of crop residues from flooded rice fields** instead of incorporating them into the soil.
 - iii. Promote the balanced and efficient use of nitrogen fertilizers through practices such as **neem-coated urea, split application of fertilizers, and soil test-based nutrient management** to minimise greenhouse gas emissions.
 - iv. **Climate-Resilient Farming:**

The **National Innovations in Climate Resilient Agriculture (NICRA)** promotes the **System of Rice Intensification (SRI)**, which involves transplanting young seedlings and avoiding continuous flooding to reduce methane emissions.
 - v. Collectively, these measures can **reduce global greenhouse gas emissions** from rice cultivation by around **10%** by the middle of the century, even under a warming climate.

Source: THE HINDU - [https://www.pressreader.com/india/the-hindu-international-](https://www.pressreader.com/india/the-hindu-international-9bn2/20260726/281968909472157?srsid=AfmBOopJZF4QgQsQms9VEzzzj2DD5uBKSf2V7WH6vsbIVIQsBw_0vnNJ)

[9bn2/20260726/281968909472157?srsid=AfmBOopJZF4QgQsQms9VEzzzj2DD5uBKSf2V7WH6vsbIVIQsBw_0vnNJ](https://www.pressreader.com/india/the-hindu-international-9bn2/20260726/281968909472157?srsid=AfmBOopJZF4QgQsQms9VEzzzj2DD5uBKSf2V7WH6vsbIVIQsBw_0vnNJ)

2. Zoopharmacognosy

Prelims:

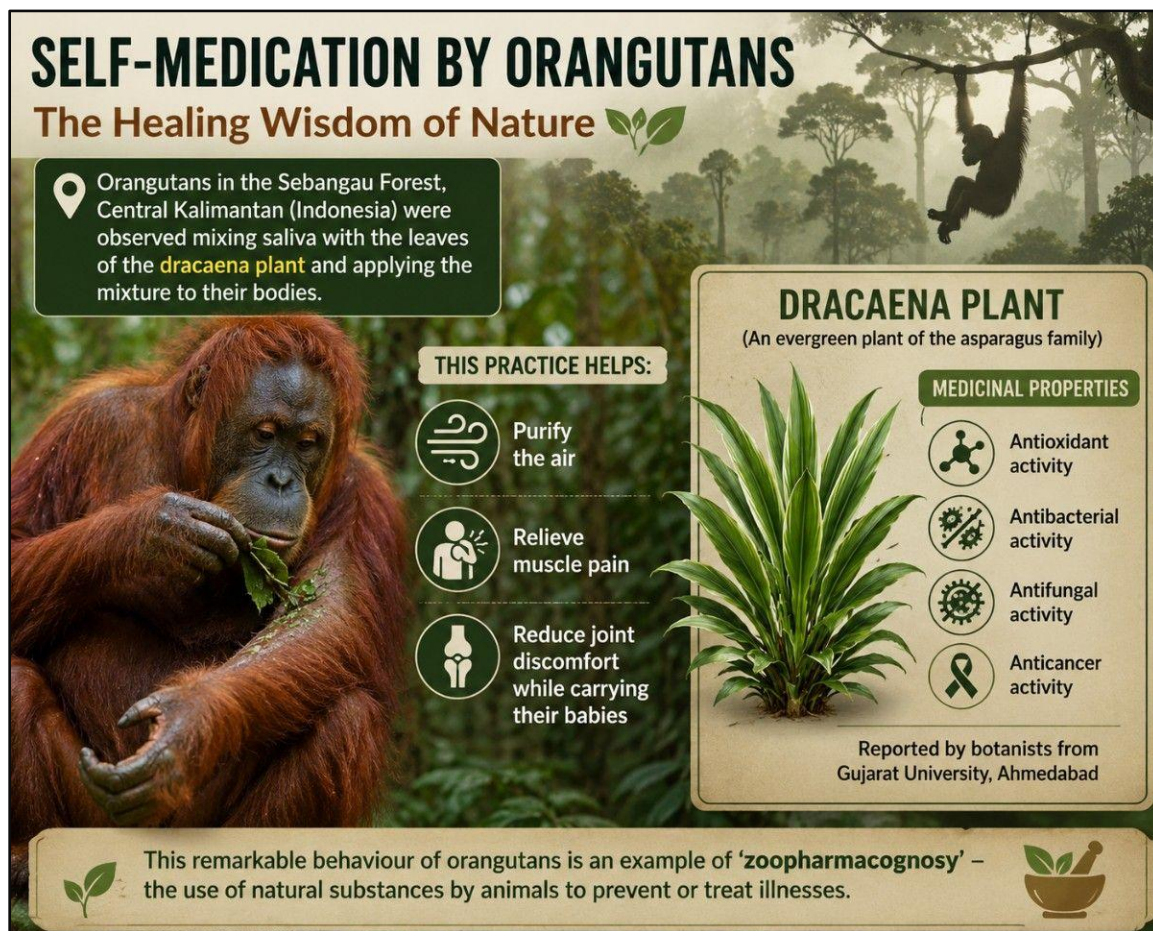
Environment & Ecology, Science & Technology

Mains:

GS Paper III-Environmental and Biodiversity

Current relevance:

A review by G. Allen et al., published in **Scientific Reports (2026)**, highlighted how **orangutans in Indonesia** use medicinal plants for self-treatment, demonstrating the phenomenon of **zoopharmacognosy**.



Highlights:

1. Zoopharmacognosy:

It refers to the behaviour of animals using **plants, roots, fruits, soil, or other natural substances** to prevent or treat illnesses.

2. Self-Medication by Orangutans:

- Orangutans in the Sebangau Forest, Central Kalimantan (Indonesia) were observed preparing a **mixture of saliva and dracaena leaves** and applying it to their bodies.
- This self-treatment is believed to **purify the air, relieve muscle pain, and reduce joint discomfort** while carrying their babies.

3. Dracaena plant:

It is an **evergreen plant belonging to the asparagus family** and has been reported to possess **antioxidant, antibacterial, antifungal, and anticancer properties**, making it a plant of medicinal significance.

4. Examples of Self-Medication in Animals:

- i. **Chimpanzees** in Nigeria swallow the **leaves of *Desmodium gangeticum* (Shalaparni)** to eliminate parasites affecting their skin.
- ii. **Elephants** chew **oregano leaves** to obtain relief from phlegm.
- iii. **Monkeys, sheep, dogs, and cats** consume **grass** to eliminate parasites such as worms and amoeba. They also ingest **clay or soil particles** for pain relief, a behaviour known as **geophagy**.
- iv. **Birds** use **herbs** to protect their nests from invaders.

Source: PIB - <https://www.thehindu.com/sci-tech/science/zoopharmacognosy-when-animals-medicate-themselves/article71248990.ece>

3. Ken–Betwa River Linking Project

Prelims:

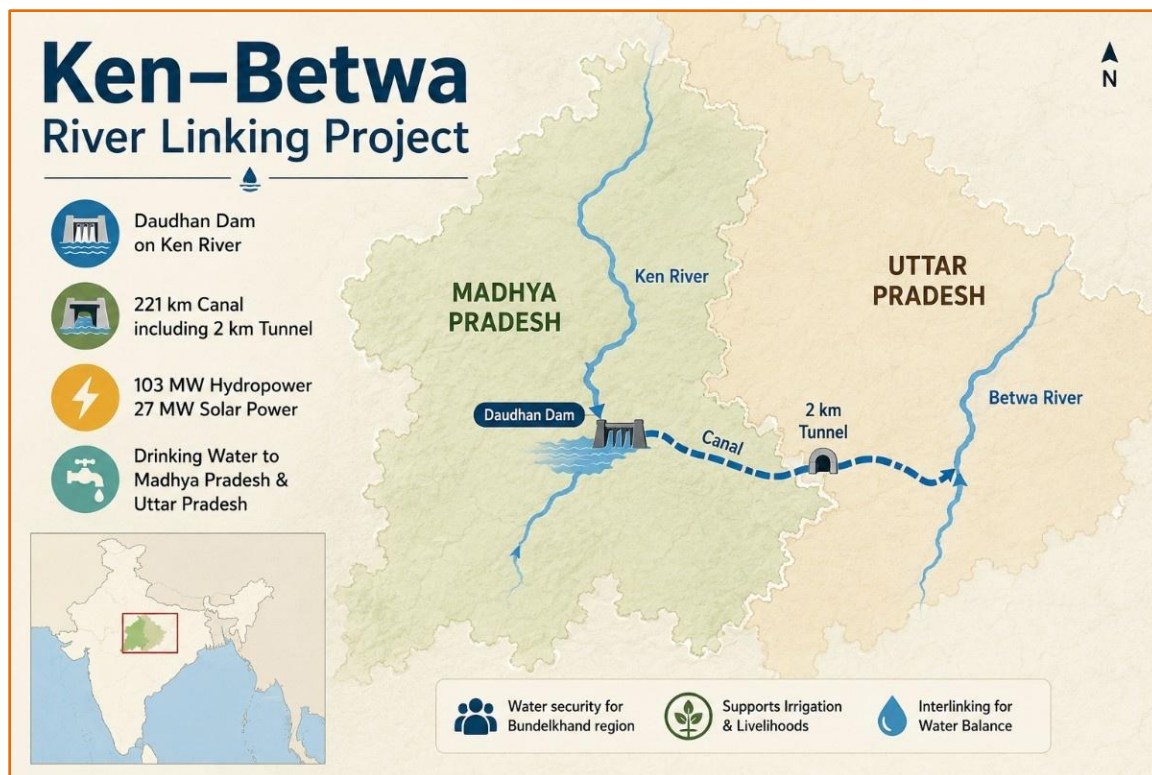
Indian Geography, Environment & Ecology, Polity

Mains:

GS Paper II-Welfare Schemes for Vulnerable Sections, Centre–State Relations, GS Paper III-Infrastructure

Current relevance:

Protests were held in **Chhatarpur district, Madhya Pradesh**, against the **Ken–Betwa River Linking Project** and two State irrigation projects.



Highlights:

About Ken–Betwa River Linking Project:

1. The Ken–Betwa River Linking Project is the **first of the 30 proposed river-linking projects** under the **National Perspective Plan (NPP)**.
2. The National Perspective Plan, formulated in **1980** by the then **Union Ministry of Irrigation** and the **Central Water Commission**.
3. **Aim:** To transfer water from rivers with a perceived surplus to rivers facing water deficits.
4. The NPP is divided into two components:
 - i. **Himalayan Rivers Development**
 - ii. **Peninsular Rivers Development**
5. Transfer the declared surplus water of the **Ken River** to the **Betwa River** through the construction of the **Daudhan Dam** and a **221-km canal**, including a **2-km tunnel**.
6. Generate **103 MW of hydropower** and **27 MW of solar power**.
7. It also aims to address water scarcity in the drought-prone **Bundelkhand region**.

Key Demands of the Tribal Communities:

1. Treat **each adult as an individual beneficiary**, rather than as part of a family, for the **₹12.5 lakh rehabilitation package**.
2. Provide rehabilitation and compensation for the **Majhgaon and Runjh irrigation projects** on par with the Ken–Betwa project.

Environmental concerns:

1. A significant portion of the project falls within the **Panna Tiger Reserve**.
2. The **Jal Shakti Ministry** reported that approximately 17,101 trees had been identified for felling for the **Daudhan Dam** and related infrastructure.
3. A total of 12,404 trees had been felled within the **Reserve Forest** as part of the project implementation.
4. The project has **raised concerns** over its possible impact on:
 - i. The tiger reintroduction programme in the **Panna Tiger Reserve**
 - ii. Endangered vultures
 - iii. Mahseer fish
 - iv. Gharials in the **Ken Gharial Sanctuary**

Source: THE HINDU - <https://www.thehindu.com/news/national/why-are-there-protests-over-the-ken-betwa-project/article71267449.ece>

4. Corporate Mitra Scheme**Prelims:**

Economy

Mains:

GS Paper II-Government Policies and Interventions for Development, GS Paper III- Indian economy

Current relevance:

The **Indian Institute of Corporate Affairs (IICA)**, Shillong, under the **Ministry of Corporate Affairs**, organised an awareness webinar on the **Corporate Mitra Scheme** for the youth, students, MSMEs, professionals, and enterprises of **Arunachal Pradesh** as part of the **Corporate Mitra Scheme Awareness Campaign for the North East Region (NER)**.



Highlights:

1. The **Corporate Mitra Scheme**, launched by the **Ministry of Corporate Affairs**, aims to strengthen the **MSME sector**, particularly in **Tier-2** and **Tier-3** cities, by creating a robust support ecosystem of trained and accredited Corporate Mitras.

2. **Objective:**

Promote a **formalized, financially sustainable MSME sector** by facilitating access to **qualified, accredited, and trusted para-professionals** for business support.

3. **Role of Corporate Mitras:**

They are expected to assist enterprises in:

- i. Regulatory compliance
- ii. Financial management
- iii. Taxation
- iv. Accounting
- v. Governance-related requirements

This enables MSMEs to focus on **innovation, expansion, and business growth** while meeting regulatory obligations.

4. **Skill Development and Employment**

- i. The scheme seeks to create a **pool of trained para-professionals** by equipping young graduates with **industry-relevant knowledge and practical skills**.

- ii. It is expected to strengthen the MSME ecosystem while enhancing employment opportunities, particularly in the **North Eastern Region (NER)**.

5. Implementation:

- i. The scheme has an **initial pan-India target of 2,000 participants**, including **200 participants** exclusively from the **North Eastern Region**.
- ii. A **50% fee concession** has been provided for candidates from the **North Eastern Region**.

Source: PIB - <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2289729®=48&lang=1>

5. India–Panama Maritime Partnership

Prelims:

International Relations, Economy

Mains:

GS Paper II- Bilateral, Regional and Global Groupings, GS Paper III

-Infrastructure

Current relevance:

The **Union Minister of Ports, Shipping and Waterways**, held bilateral talks with **Panama's Minister of Foreign Affairs**, to strengthen maritime cooperation.



Highlights:

1. India and Panama agreed to deepen cooperation in **shipping, logistics, maritime security, skill development, and digital transformation**, recognising these as the key pillars of their expanded strategic partnership.
2. India identified **Panama as its natural gateway to Central America, Latin America, and the Caribbean**, while recognising its role as one of the world's foremost **maritime logistics hubs**.
3. Both countries agreed to leverage **Panama's strategic logistics strengths** and **India's expanding maritime capabilities** to:
 - i. Build resilient supply chains
 - ii. Strengthen global connectivity
 - iii. Promote trade and investment
 - iv. Foster innovation and sustainable growth
4. Panama identified **four priority areas** for expanding maritime cooperation:
 - i. Maritime security.
 - ii. Technical collaboration between **India's Directorate General of Shipping** and the **Panama Maritime Authority**.
 - iii. Maritime education and skilling.
 - iv. Digital maritime transformation, including artificial Intelligence (AI), smart port logistics, maritime single-window systems.
5. India highlighted its ongoing transformation through investments in **Ports, Shipping, Inland waterways, Logistics, shipbuilding, cruise tourism, green maritime** initiatives.
6. **Future Collaboration:**
 India proposed cooperation in maritime transportation and port development, **Green ship recycling**, Seafarer welfare and skill development, **Port modernization**, warehousing, **digital innovation**, maritime infrastructure.

Source: PIB - <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2288042®=48&lang=1>



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Index

1.	India Moved to Take Down BitChat Repositories	-01
2.	Achievers of commonwealth games	-02
3.	Blue Straggler Star	-04
4.	Madanapalle's Journey Towards a Zero Waste City	-06
5.	India's Fight to Combat Hepatitis	-07

1. India Moved to Take Down BitChat Repositories

Prelims:

Indian Polity and Governance, Science and Technology

Mains:

GS Paper II – Governance and Constitution, GS Paper III – Internal Security

Current relevance:

The **Indian Cyber Crime Coordination Centre (I4C)**, functioning under the **Ministry of Home Affairs**, directed GitHub on **July 23** to remove three repositories hosting **BitChat**.



Highlights:

1. The government stated that **BitChat's decentralised and anonymous communication system** could be misused to:
 - i. Coordinate unlawful assemblies and violent protests
 - ii. Circumvent lawful restrictions during public-order situations
 - iii. Evade surveillance and lawful interception
 - iv. Spread misinformation and facilitate radicalisation
 - v. Support terrorism, organised crime and criminal conspiracies
2. The government order directs GitHub to:
 - i. Remove and disable access to **three BitChat repositories**, including the Android application and associated release files, **within three hours** of receiving the communication, while preserving all relevant evidence.
 - ii. The notice also warns that failure to comply may result in **criminal prosecution**.
3. **Legal Framework:**
 - i. Section 79(3)(b) of the **Information Technology Act, 2000**
 - ii. Rule 3(1)(d) of the **Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021**
4. **BitChat:**
 - i. It is a **decentralised peer-to-peer messaging application**, creates temporary communication networks among devices located near one another.
 - ii. It operates through **Bluetooth mesh networks** and does not require internet connectivity, centralised servers, phone numbers, mandatory user registration.

Source: THE HINDU - https://www.pressreader.com/india/the-hindu-kochi-9ww8/20260727/282398406203390?srltid=AfmBOoon3Zj2MKg2mhww0mXoVT0X9_INfDh8lUnbZsZrW7l0NaC7bVKV

2. Achievers of commonwealth games

Prelims:

Current events of national and international importance

Mains:

GS Paper I – Indian Society, GS Paper II – Government policies and interventions for the development of the sports sector

Current relevance:

Indian weightlifters made a strong start at the **Commonwealth Games in Glasgow** by winning two medals on the opening day of the weightlifting competition.



Highlights:

About the Commonwealth Games:

1. The Games originated in **1930**, when the **first edition** was held in Hamilton, Ontario, **Canada**.
2. Glasgow is hosting the Games in **2026**, making it only the **third city** in Commonwealth Games history to host the **event twice**.
3. The Commonwealth Games are a **quadrennial international multi-sport event** in which athletes from Commonwealth countries and territories compete under the framework of the Commonwealth Sport Movement.

Achievers of 2026:

1. Mirabai Chanu's Gold-Medal Performance:

- i. She won her **third successive Commonwealth Games gold medal** in the women's 48kg category.
- ii. The achievement highlights her continued dominance in **Commonwealth weightlifting**.
- iii. **Future Focus:** Following her Commonwealth Games success, **Mirabai** stated that she would shift her focus to the **Asian Games**.

2. Rishikanta Singh Chanambam's Silver Medal

- i. Rishikanta Singh Chanambam secured the **silver medal** in the men's 60kg category.

- ii. He became the **first male weightlifter** from **Manipur** to win a Commonwealth Games medal.

Significance of the Achievements:

1. Indian Dominance in Weightlifting

The gold and silver medals demonstrate India's continued strength in Commonwealth weightlifting.

2. Mirabai's Sporting Consistency

Winning three consecutive Commonwealth Games gold medals reflects Mirabai's consistency, technical excellence and ability to perform under pressure.

3. Women's Empowerment through Sports

Mirabai's achievement highlights the growing success of Indian women in international sports.

4. Contribution of Manipur

Both Mirabai and Rishikanta **belong to Manipur**. Their achievements underline the State's important contribution to Indian weightlifting and national sports.

5. National Pride and Inspiration

Winning medals at an international multi-sport event enhances national pride and encourages younger athletes to pursue sporting careers.

Source: THE HINDU - https://www.pressreader.com/india/the-hindu-kolkata-9ww9/20260727/281517937907718?srsId=AfmBOop7D6-zvhCM_zwUOgzNBuoj1zBrdc9qagpcs8mUVy-YaxCCmEn-

3. Blue Straggler Star

Prelims:

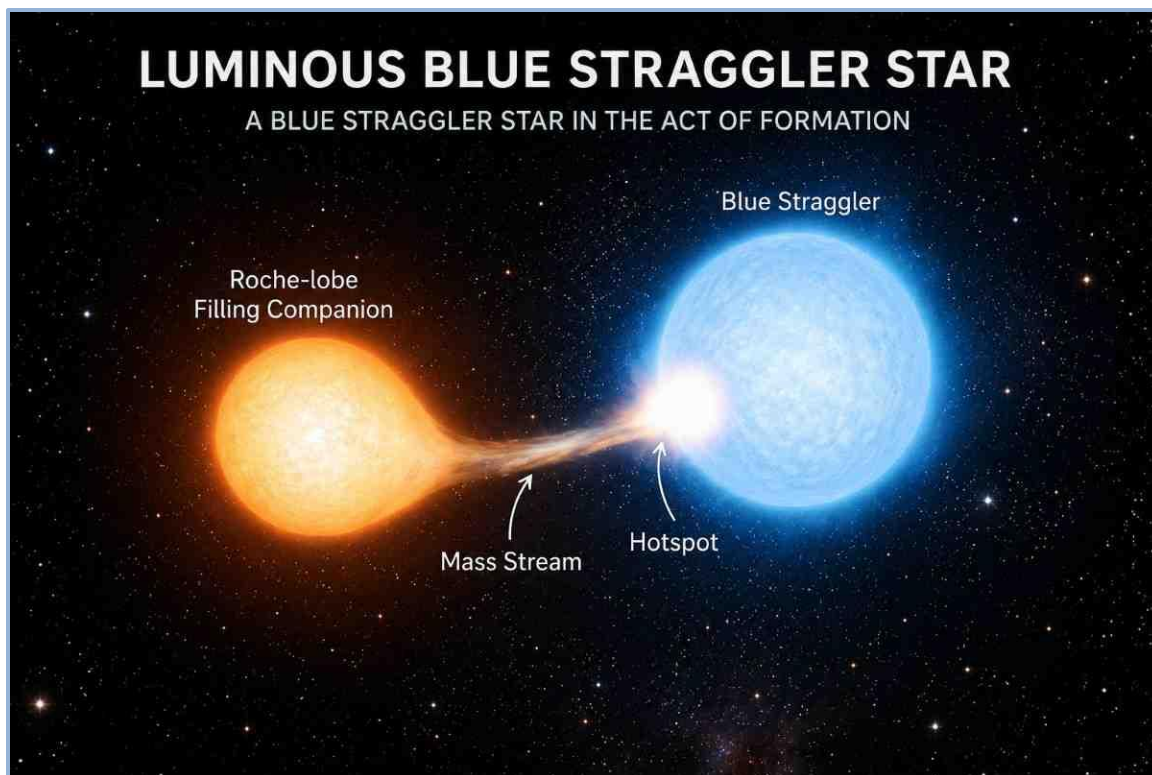
Science and Technology

Mains:

GS Paper III – Science and Technology

Current relevance:

Indian astronomers, along with international collaborators, have reported the rare discovery of a **Blue Straggler Star (BSS)** caught in the process of formation.



Highlights:

About Blue Straggler Stars:

- i. Blue Straggler Stars are an unusual class of stars found in star clusters. Compared with other stars in the same cluster, they appear **hotter, brighter, more massive, younger than expected**.
- ii. They are believed to form either by **gaining matter from a companion star or through the merger of two stars**, which increases their mass and makes them appear rejuvenated. However, direct observational evidence of these formation processes has remained **extremely rare**.

Significance of the Discovery:

- i. The discovery offers **strong direct evidence** that Blue Stragglers can form through **mass transfer between stars** in a binary system.
- ii. It explains **stellar rejuvenation** by showing how an older star can gain matter and become hotter, brighter and apparently younger.
- iii. The system serves as a **valuable natural laboratory** for studying the evolution of interacting binary stars.
- iv. Understanding Blue Straggler formation helps astronomers assess the **age and evolutionary history of star clusters** more accurately.
- v. The continuing transfer of matter shows that interactions between **binary stars can persist for billions of years**.

Source: PIB - <https://www.pib.gov.in/PressReleaseDetail.aspx?PRID=2290027®=48&lang=1>

4. Madanapalle's Journey Towards a Zero Waste City

Prelims:

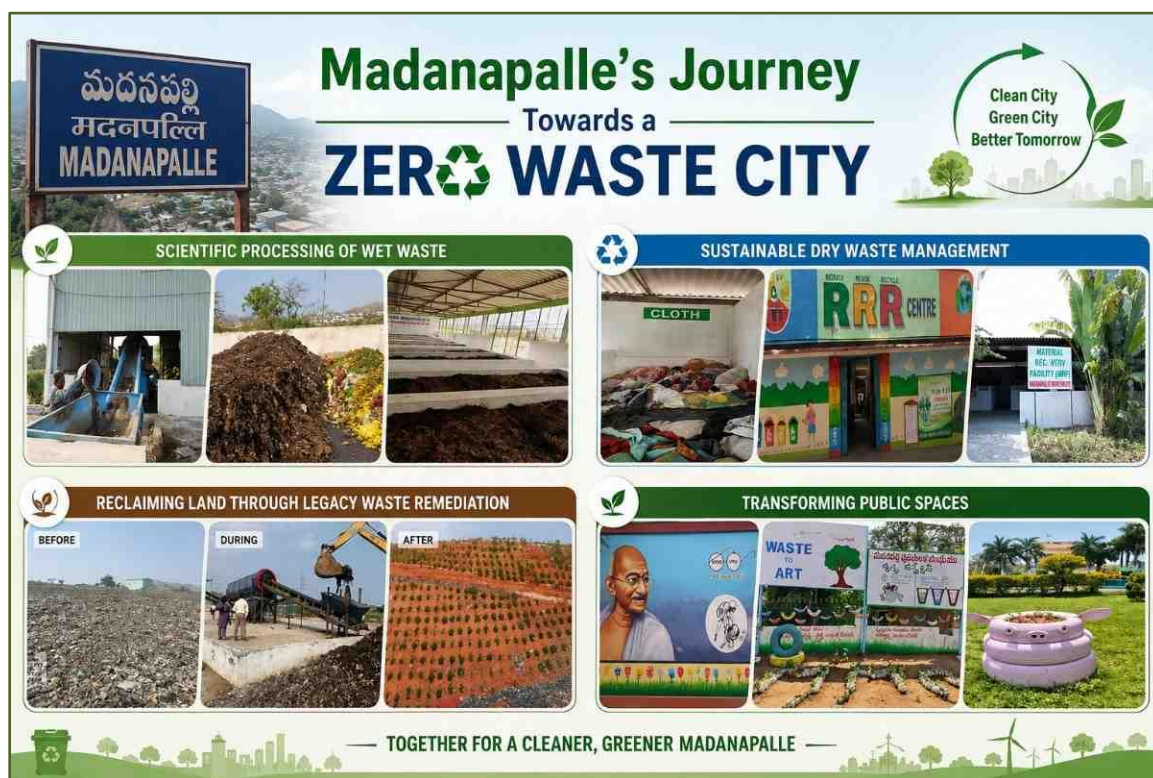
Environment & Ecology, Government Schemes

Mains:

GS Paper II-Government Policies and Interventions, GS Paper III-Environmental Conservation

Current relevance:

Madanapalle Municipality in **Andhra Pradesh** is implementing an integrated scientific waste management system under **Swachh Bharat Mission–Urban (SBM-U) 2.0** to transform the city into a **Zero Waste City**.



Highlights:

- Zero Waste City Initiative:** Driven by the vision of Swachh Bharat Mission–Urban 2.0, Madanapalle Municipality has adopted an integrated system of **scientific waste management, source segregation, and resource recovery** to transform the city into a **Zero Waste City**.
- Source Segregation:**
 - A systematic source segregation mechanism has been implemented across the municipality.
 - Waste is segregated into **biodegradable waste, non-biodegradable waste, upcycling waste**.
- Wet Waste Management:**

- i. **Bulk Waste Generators** are encouraged to establish **on-site composting systems**, while citizens are adopting **home composting** and **terrace gardening** to manage wet waste at the source.
- ii. Wet waste is scientifically processed through **windrow composting** to produce **compost for parks, plantations, and gardening** activities across the town.
- iii. It also processes wet waste through **vermi composting**, producing **nutrient-rich compost** that reduces landfill burden and promotes sustainable waste utilization.

4. **Dry Waste Management:**

- i. Dry waste is segregated at the doorstep into **recyclable** and **non-recyclable** categories to facilitate efficient waste management.
- ii. Recyclable waste is processed through the **Material Recovery Facility (MRF)** for resource recovery and recycling.
- iii. Non-recyclable waste is sent to **cement factories for co-processing**, enhancing waste utilization while generating additional revenue for the municipality.

5. **Reduce, Reuse and Recycle (RRR) Centre:**

- i. Through **door-to-door collection drives** and the **RRR Centre**, the municipality collects E-waste, old clothes, toys, books, footwear.
- ii. These items are repaired, reused, or redistributed among **slum communities, homeless individuals, and old age homes**.

6. **Waste-to-Art Initiative**

- i. Discarded **tyre waste** is creatively repurposed into artistic installations in parks and public spaces, promoting environmental awareness and supporting the vision of **zero dumping**.
- ii. The **Waste-to-Art Park at NVR Layout** showcases the innovative reuse of discarded materials as functional and aesthetic public installations.

7. **Integrated Waste Management Model**

- i. **Madanapalle's** integrated approach includes source segregation, composting, recycling, upcycling, waste-to-Art, Bio-mining, legacy waste remediation, citizen engagement.
- ii. The municipality is progressing towards becoming a **Zero Dump and Zero Littering City**.

Source: PIB - <https://www.pib.gov.in/PressReleaseDetail.aspx?PRID=2289853®=48&lang=1>

5. India's Fight to Combat Hepatitis

Prelims:

Science & Technology, Health, Government Schemes

Mains:

GS Paper II- Public Health, GS Paper III- Science and Technology

Current relevance:

India is strengthening its efforts to achieve the **2030 goal of combating hepatitis** through the **National Viral Hepatitis Control Programme (NVHCP)** by integrating prevention, screening, diagnosis, and free treatment services with various national health programmes.

**Highlights:****1. Hepatitis:**

- It is an inflammation of the liver caused by hepatitis viruses, other infections, toxic substances such as alcohol and drugs, and autoimmune diseases.
- The five main hepatitis viruses are **Hepatitis A, B, C, D, and E**, of which **Hepatitis B and C** are the **most common** and can lead to **chronic liver disease, cirrhosis, and liver cancer**.

2. National Viral Hepatitis Control Programme (NVHCP):

- Launched in **2018**, aims to **combat hepatitis** by providing **screening, diagnosis, treatment, free drugs, and diagnostic services** through an **integrated health systems approach** in convergence with various national health programmes.
- Its key focus areas include **awareness generation, improved access to healthcare, diagnosis, and treatment for all eligible individuals**.

3. Prevention and Disease Management

- i. **Hepatitis A and E** are primarily prevented through **safe drinking water, sanitation, and hygiene** measures.
 - ii. **Hepatitis B** is a vaccine-preventable disease covered under the **Universal Immunisation Programme (UIP)**.
 - iii. **Hepatitis C** prevention focuses on **safe injection practices and harm reduction** measures, while treatment is provided using **Direct-Acting Antiviral (DAA) drugs**.
 - iv. **Hepatitis D** is prevented by preventing **Hepatitis B infection** through Hepatitis B vaccination.
4. The NVHCP is integrated with **multiple national programmes** to strengthen prevention and management:
- i. **Integrated Disease Surveillance Programme (IDSP)** for monitoring Hepatitis A and E.
 - ii. **Reproductive, Maternal, Newborn, Child, Adolescent Health and Nutrition Programme** for universal screening of pregnant women for Hepatitis B.
 - iii. **Universal Immunisation Programme (UIP)** to ensure Hepatitis B birth-dose vaccination and Hepatitis B Immunoglobulin (HBIG) for eligible newborns.
 - iv. **National AIDS Control Programme (NACP)** for screening high-risk groups and Hepatitis B vaccination of healthcare workers.
 - v. **National Tuberculosis Elimination Programme (NTEP)** for molecular testing using existing diagnostic infrastructure.
 - vi. **Blood Transfusion Services** for linking Hepatitis B and C positive blood donors to appropriate care.

Source: PIB - <https://www.pib.gov.in/PressReleaseDetail.aspx?PRID=2289761®=48&lang=1>



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Index

1. Public Examinations (Prevention of Unfair Means)	
Amendment Bill, 2026	-01
2. Justice-Centric System	-03
3. India Leads the World in Tiger Conservation	-06
4. Corporate Average Fuel Efficiency (CAFE) III	-08
5. PRAXIS Mission	-10

1. Public Examinations (Prevention of Unfair Means) Amendment Bill, 2026

Prelims:

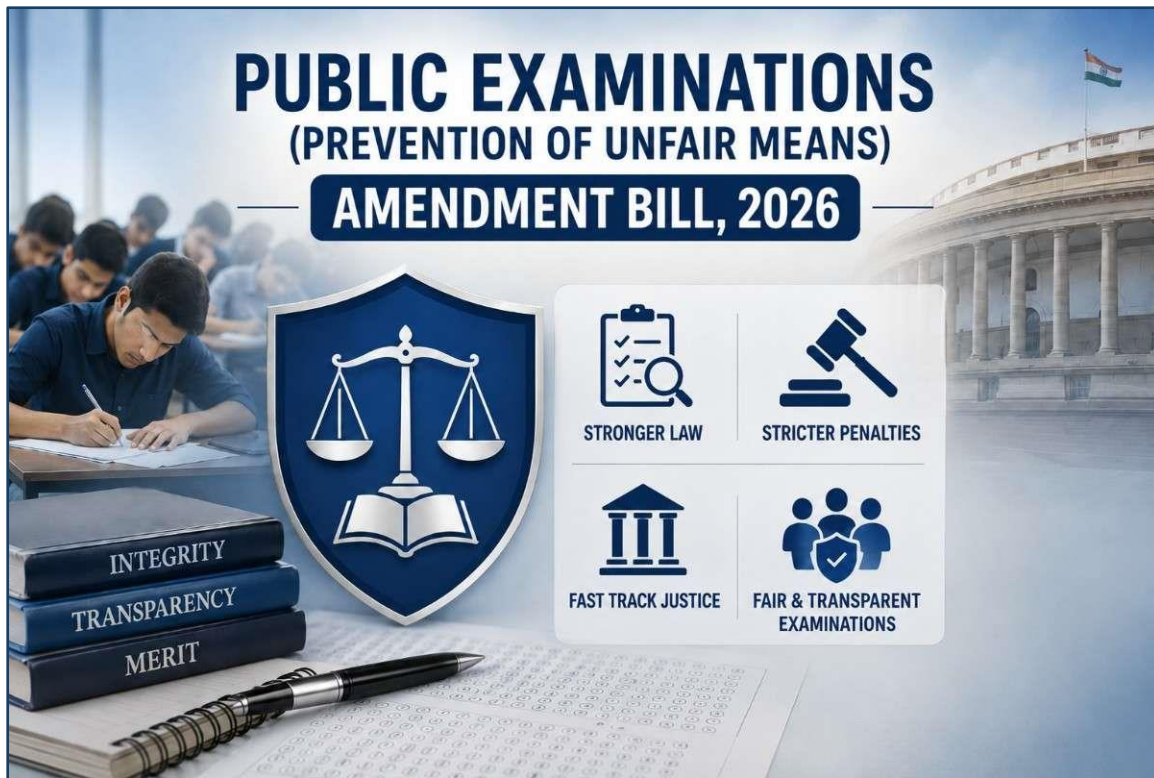
Polity

Mains:

GS Paper II-Government Policies and Interventions, GS Paper IV-Ethics in Public Administration.

Current relevance:

The Public Examinations (Prevention of Unfair Means) Amendment Bill, 2026 was introduced in the Lok Sabha to further strengthen the legal framework.



Highlights:

1. Objective:

The **Public Examinations (Prevention of Unfair Means) Amendment Bill, 2026** seeks to further strengthen the legal framework to **curb examination-related malpractices**, safeguard the interests of students, and enhance the integrity, transparency, and credibility of public examinations.

2. Existing Legal Framework:

The proposed amendments build upon the **Public Examinations (Prevention of Unfair Means) Act, 2024**, incorporating implementation experience to make the law more stringent and effective in addressing examination-related offences.

3. The Act covers examinations conducted by **major recruitment agencies** including,

- i. Union Public Service Commission (UPSC)
- ii. Staff Selection Commission (SSC)
- iii. Railway Recruitment Boards (RRBs)
- iv. Institute of Banking Personnel Selection (IBPS)
- v. National Testing Agency (NTA)

4. Key provisions:

- i. **Individuals using unfair means:** Punishment is proposed to be enhanced from **3–5 years'** imprisonment to **5–10 years' imprisonment**, while the maximum fine is proposed to increase from **₹10 lakh to ₹50 lakh**.
- ii. **Service providers involved in examination malpractices:** The maximum fine is proposed to be increased from **₹1 crore to ₹5 crore**, and the **debarment period** from conducting public examinations is proposed to be extended from **4 years to 8 years**.
- iii. **Directors and senior management of service providers:** Punishment is proposed to be enhanced from **3–10 years'** imprisonment to **5–10 years' imprisonment**, with the **maximum fine** increasing from **₹1 crore to ₹5 crore**.
- iv. **Organised examination-related crimes:** The punishment is proposed to be increased from **5–10 years' imprisonment** to **7–10 years' imprisonment**, while the **maximum fine** is proposed to be enhanced from **₹1 crore to ₹10 crore**.

5. Special provisions:

- i. Establishment of **Special Fast Track Courts** to ensure speedy disposal of offences relating to public examinations.
- ii. It is implementing the recommendations of a **high-level task force** constituted to make the public examination system "**leak-proof**."
- iii. The Central Government is empowered to **refer investigation of offences** under the Act to a **Special Task Force**, enabling swift and effective action against organised examination-related crimes.

Source: PIB–

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2290606®=48&lang=2>

2. Justice-Centric System

Prelims:

Polity

Mains:

GS Paper II-Government Policies and Interventions, GS Paper IV-Justice

Current relevance:

The Government highlighted the justice-centric provisions of the New Sanhitas, emphasizing a **citizen-centric, accessible, transparent, and efficient criminal justice system**.



Highlights:

1. The **New Sanhitas** seek to establish a **citizen-centric, accessible, transparent, and efficient justice system**, shifting the emphasis from punishment towards justice.
2. The **Bharatiya Nyaya Sanhita, 2023** prescribes punishment up to the death sentence for the rape of a minor.
3. **Victim-Centric Provisions:**
 - i. Incidents can be **reported electronically**, eliminating the need to visit a police station physically.

- ii. **Zero FIR** allows an FIR to be filed at any police station, irrespective of jurisdiction.
- iii. Victims are entitled to receive a **free copy of the FIR**.
- iv. Victims are entitled to receive case progress updates within **90 days**.
- v. Copies of the FIR, police report/chargesheet, statements, confessions, and other documents must be supplied to **both the victim and the accused** within **14 days**.
- vi. It **mandates** all State Governments to implement a **Witness Protection Scheme**.
- vii. Women, persons below **15 years**, persons above **60 years**, and persons with disabilities or acute illness are **exempt from attending police stations**.
- viii. Under **Section 360** of the **BNSS**, the victim **must be heard** before any withdrawal from prosecution, ensuring greater participation in the criminal justice process. This statutory right reflects the **Nyaya-centric approach** by making the justice system more responsive to the needs and concerns of victims.

6. **Time-Bound Justice:**

- i. The laws promise a **faster and fair resolution** of cases, instilling confidence in the legal system.
- ii. Investigations relating to **offences against women and children** must be completed **within two months** of recording information.

7. **Reformative Approach:**

- i. **Community service** has been introduced as a punishment for **minor offences**, enabling offenders to **contribute positively to society** and **promote rehabilitation**.
- ii. The scope of **summary trials** has been expanded to cover **more offences**, ensuring speedy disposal of cases.

8. **Rights of the Accused:**

- i. Restrict **arbitrary arrests** solely for initiating judicial proceedings. Arrest is not required for obtaining handwriting, signature, fingerprint, or voice samples.

9. Trial in Absentia:

- i. A new provision enables **trial in absentia** for persons declared as **proclaimed offenders**, allowing courts to proceed with the trial and pronounce judgment even in the absence of the accused.

Source: PIB –

<https://www.pib.gov.in/PressReleaseDetail.aspx?PRID=2290363®=48&lang=1>

3. India Leads the World in Tiger Conservation

Prelims:

Environment & Ecology, International Organisations

Mains:

GS Paper III- Conservation

Current relevance:

On the occasion of **International Tiger Day (29 July)**, the Government highlighted India's remarkable achievements in **science-based tiger conservation**, showcasing the country's leadership in protecting wild tigers and their habitats.



Highlights:

1. India has emerged as a **global leader** in tiger conservation through **science-based policies, strong institutional support, technology-driven monitoring, and community participation**, and is now home to nearly **70% of the world's wild tigers**.
2. **Ecological Importance of Tigers:**
 - i. Tigers are **apex predators and umbrella species** that help maintain healthy forest ecosystems.
 - ii. Conserving tiger habitats also protects **forests, rivers, biodiversity, and ecosystem services**, while enhancing ecological security and supporting sustainable development.
3. **Governance Framework for Tiger Conservation:**
 - i. **Project Tiger:**
It is a **Centrally Sponsored Scheme** implemented by the **Ministry of Environment, Forest and Climate Change (MoEFCC)**. It provides **financial and technical assistance** to tiger-range States through habitat protection, scientific management, and field-based monitoring.
 - ii. **National Tiger Conservation Authority (NTCA):**
It oversees the implementation of **Project Tiger**, approves **Tiger Conservation Plans**, issues management guidelines, and provides scientific, technical, and financial support to tiger-range States.
 - iii. **Tiger Task Force:**
It advocated greater transparency, community participation, and stronger institutional support for **Project Tiger**. Its recommendations strengthened India's tiger conservation framework and led to the **2006 amendments to the Wildlife (Protection) Act**, establishing the **National Tiger Conservation Authority (NTCA)** and the **Wildlife Crime Control Bureau (WCCB)** as statutory bodies.
4. **Science-Based Monitoring:**

i. **All India Tiger Estimation (AITE):**

AITE estimates tiger populations, prey species, co-predators, and habitat quality. Conducted **every four years** by the **NTCA** in collaboration with the **Wildlife Institute of India (WII)**.

ii. **Technology-Driven Monitoring:**

India uses **M-STrIPES, Camera Trap Data Repository and Analysis Tool (CaTRAT), ExtractCompare**, GPS, GPRS, remote sensing, and artificial intelligence to improve the accuracy and reliability of tiger monitoring.

iii. **Management Effectiveness Evaluation (MEE):**

MEE evaluates the management of tiger reserves by assessing planning, protection, management processes, and conservation outcomes, helping strengthen accountability and reserve management.

5. **International Cooperation:**

i. **International Big Cat Alliance (IBCA):**

It is a **global initiative** headquartered in India that promotes international cooperation for the **conservation of seven big cat species**.

ii. **Global Tiger Forum (GTF):**

It is the world's **only intergovernmental organisation exclusively dedicated to tiger conservation**, bringing together **13 tiger-range** countries.

iii. **Integrated Tiger Habitat Conservation Programme (ITHCP):**

It is the **IUCN's flagship tiger conservation initiative**, funded by the **German Government through KfW Development Bank**, supporting science-based conservation across priority tiger landscapes in Asia.

Source: PIB –

<https://www.pib.gov.in/PressReleaseDetail.aspx?PRID=2290233®=48&lang=1>

4. Corporate Average Fuel Efficiency (CAFE) III

Prelims:

Environment & Ecology, Economy

Mains:

GS Paper III-Environment Conservation

Current relevance:

The **Ministry of Power** released the draft **Corporate Average Fuel Efficiency (CAFE) III** norms on 16 July, proposing a revised fuel-efficiency framework.



Highlights:

1. The draft **CAFE III** norms seek to improve the fuel efficiency of manufacturers' passenger vehicle fleets by prescribing **annual sales-weighted average fuel-efficiency targets**, encouraging **cleaner technologies** and reducing dependence on imported crude oil.

2. Background:

CAFE norms were first introduced to reduce oil dependence and later evolved to address **greenhouse gas emissions**, encouraging innovation in fuel-efficient, hybrid, and electric vehicles.

3. **Aim:** To reduce the average emissions of passenger vehicles from **113 gCO₂/km** to **77 gCO₂/km** by **FY 2031–32**.

4. **Mechanisms under CAFE III:**

- i. **Carbon Neutrality Factor:** Provides compliance benefits for vehicles compatible with **higher ethanol blends** and other fuels.
- ii. **Super Credits:** Additional compliance benefits are provided for **battery electric vehicles, plug-in hybrids, strong hybrids, and flex-fuel vehicles**.
- iii. Manufacturers exceeding targets can **bank or trade compliance credits**, while companies with deficits may purchase credits from the **Bureau of Energy Efficiency (BEE)**.

5. **CNG as a Policy Example:**

- i. India's experience with **Compressed Natural Gas (CNG)** demonstrates that clear regulatory support can encourage manufacturers to introduce **cleaner vehicle technologies** and expand market adoption.

Source: THE HINDU - <https://www.thehindu.com/opinion/lead/beyond-compliance-indias-road-to-cleaner-mobility/article71273564.ece>

5. PRAXIS Mission

Prelims:

Science & Technology

Mains:

GS Paper III-Science and Technology

Current relevance:

NASA has selected **PRAXIS (Planetary Rings Autonomous EXploration with In-situ Sampling)** as a **NIAC (NASA Innovative Advanced Concepts) 2026 Phase I** mission.



At a glance:

1. Objective:

- i. The mission seeks to answer key scientific questions on **how planetary rings form, evolve, and what ring particles are made** of through direct in-situ sampling.
2. PRAXIS will use a **bio-inspired robotic explorer** powered by an **Artificial Intelligence (AI) model** to autonomously identify and sample ring particles.
3. Instead of flying through planetary rings, the spacecraft will **graze the ring plane** and perform a **touch-and-go sampling** using a **long deployable boom**, allowing safe collection of surface samples from selected ring particles.
4. The spacecraft will collect free-floating particles and use onboard instruments, assisted by AI, to measure particle **size, porosity, composition**.
5. Selection under **NIAC Phase I** enables PRAXIS to undertake simulations and system design studies, with progression to **Phase II** paving the way for the development of a **physical prototype**.

Source: THE HINDU - <https://www.thehindu.com/sci-tech/science/praxis-a-nasa-mission-to-graze-planet-rings/article71269143.ece>



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UPSC Daily Current Affairs –29.07.2026

Index

1. Western Ghats Ecologically Sensitive Area (ESA)	-01
2. Andromeda Galaxy	-03
3. IndiaAI Mission	-04
4. Telecom Manufacturing Zone (TMZ)	-07
5. Himalayan Chandra Telescope (HCT)	-09

1. Western Ghats Ecologically Sensitive Area (ESA)

Prelims:

Environment & Ecology

Mains:

GS Paper III-Environment Conservation

Current relevance:

The **Union Ministry of Environment** has reissued the draft notification proposing an **Ecologically Sensitive Area (ESA)** in the Western Ghats for the **seventh time**.

Highlights:

Evolution of the ESA Proposal

1. In **2011**, **Madhav Gadgil Committee**, recommended that the **entire Western Ghats** be treated as ecologically sensitive, with graded levels of protection.
2. **Kasturirangan High-Level Working Group**: After objections from the States, it recommended declaring about **37% of the Western Ghats**, covering **59,940 sq. km of natural landscape**, as an Ecologically Sensitive Area.

3. In **2026** draft notification retains the proposed **ESA of 56,825.7 sq. km**, spread across **Gujarat, Maharashtra, Goa, Karnataka, Kerala, and Tamil Nadu**.

About the proposal:

1. The draft proposes prohibition of **mining, quarrying, sand mining, new thermal power plants, certain industries, large construction projects**.
2. Activities such as **hydel power generation** will be regulated.
3. The six Western Ghats States have expressed concerns regarding the impact of the ESA declaration on agriculture, plantations, infrastructure, development activities.
4. The **2026 draft** notification retains the proposed ESA extent, State-wise area, regulatory provisions, and list of villages **without any substantive changes from the 2024 draft** notification.



Source: THE HINDU- <https://www.thehindu.com/sci-tech/energy-and-environment/centre-reissues-notification-on-western-ghats-eco-sensitive-zone-amid-deadlock-with-states/article71277625.ece>

2. Andromeda Galaxy

Prelims:

Science & Technology

Mains:

GS Paper III-Science and Technology

Current relevance:

Astronomers have used data from the **Hubble Space Telescope** to create the clearest map yet of **star formation across most of the Andromeda Galaxy over the last 500 million years**, revealing a steady decline in star-forming activity.



At a glance:

1. The study found that **Andromeda's star formation rate** has been **steadily declining**, with the sharpest decline occurring during the last 40 million years.
2. Recent star formation is mainly concentrated within the galaxy's **ring structures**, where the decline is also most evident.
3. Researchers identified a '**dead zone**' near **M32**, a satellite galaxy of Andromeda, where new star formation has nearly ceased, indicating that **the satellite galaxy likely interacted with or passed through Andromeda's stellar disc**, disrupting the gas clouds needed to form new stars.

4. The findings suggest that **Andromeda is transitioning from an active, star-forming galaxy to a quieter 'middle-age' phase**, gradually moving toward a more **quiescent state**.
5. **Significance:**
Studying Andromeda's evolution can help **improve our understanding of the life cycle of massive galaxies** and develop better methods to measure changes in distant galaxies.
6. **About Andromeda Galaxy:**
 - i. It is **largest galaxy in the Local Group** and the nearest major spiral galaxy to the Milky Way.
 - ii. Located about **2.5 million light-years** from Earth and is approximately **2–2.5 times wider** than the Milky Way.
 - iii. Classified as a **spiral galaxy** with a bright central bulge, spiral arms, and ring structures.

Source: THE HINDU – <https://www.thehindu.com/sci-tech/science/andromeda-galaxy-entering-middle-age/article71276485.ece>

3. IndiaAI Mission

Prelims:

Government Policies & Initiatives, Science & Technology

Mains:

GS Paper II–Government Policies & Interventions, GS Paper III–Science & Technology

Current relevance:

The Government highlighted the progress of the **IndiaAI Mission**, including the identification of **762 AI use cases across 62 Ministries**, approval of **58 AI Centres of Excellence**, establishment of **543 Data & AI Labs**, and initiatives to promote responsible AI for governance and public service delivery.



At a glance:

1. IndiaAI Mission aims to **democratise technology**, create employment opportunities, and promote the safe, inclusive and responsible adoption of Artificial Intelligence in India.

Seven Pillars of the IndiaAI Mission:

1. **IndiaAI Compute:**

Develops a high-end, scalable AI computing ecosystem to support **startups and research**.

2. **Foundation Models:**

Supports **indigenous Large Language Models (LLMs)**, Multimodal Models and Small Language Models for India-specific applications.

3. **IndiaAI Application Development Initiative (IADI):**

To develop, scale, and deploy AI solutions that drive large-scale **socio-economic transformation** across key sectors.

4. **IndiaAI Future Skills:**

Builds AI talent pipeline through **Data & AI Labs**, fellowships and industry-oriented AI education.

5. **AIKosh:**

Provides a **unified platform** for **high-quality datasets**, AI models and tools.

6. **Safe & Trusted AI:**

To promote responsible AI through indigenous governance frameworks and evaluation tools suited to India's **socio-economic and cultural needs**.

7. **IndiaAI Startup Financing:**

To provide financial support to AI startups throughout their lifecycle, from prototype development to commercialization.

II National-Level Hackathons & Innovation Challenges:

1. **IndiaAI Innovation Challenge** – AI solutions for healthcare, agriculture, governance, learning disabilities, and climate change.
2. **IndiaAI I4C CyberGuard AI Hackathon** – AI for classification of cybercrime complaints and identification of emerging crime patterns.
3. **IndiaAI–GSI Mineral Targeting with AI Hackathon** – AI/ML for advanced mineral prognostication using geoscientific datasets.
4. **Cancer AI & Technology Challenge (CATCH)** – AI to strengthen cancer screening, diagnostics, treatment support, and healthcare operations.
5. **IndiaAI Face Authentication Challenge** – AI-enabled de-duplication and one-to-many photo verification to improve the integrity of public examinations.
6. **IndiaAI Intelligent Document Processing (IDP) Challenge** – AI for automated extraction, classification, validation, and structuring of multilingual documents.
7. **IndiaAI Innovation Challenge 2026** – AI solutions for AYUSH healthcare and MSMEs.
8. **IndiaAI Challenge for Transforming Governance** – AI solutions for governance use cases across key government departments.
9. **IndiaAI Financial Compliance Reporting Challenge** – AI-enabled compliance monitoring and risk assessment.

10. **CDSCO–IndiaAI Health Innovation Acceleration Hackathon** – AI-driven automation of regulatory workflows, including document summarisation, anonymisation, and inspection reporting.
11. **PMJAY Auto Adjudication Hackathon** – AI-based adjudication frameworks for PMJAY claims.

IndiaAI Impact Summit:

India hosted the India-AI Impact Summit **2026** in New Delhi, to actively engage with the India AI Impact Expo and identify AI applications relevant to their respective domains to accelerate AI adoption across the Government.

1. The **Digital Personal Data Protection Act, 2023** provides the framework for lawful processing and protection of personal data.
2. **Responsible AI Projects:** Projects focus on AI bias mitigation, explainable AI, algorithm auditing, privacy-preserving AI and deepfake detection.
3. **AI Governance Framework:**

India has established institutional mechanisms including AI Governance and Economic Group (AIGEG), Technology and Policy Expert Committee (TPEC), AI Safety Institute (AISi).

4. **Cyber Security:**

Indian Computer Emergency Response Team (CERT-In) has issued AI security advisories and launched AI security capacity-building initiatives.

Source: PIB–

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2291062®=1&lang=1>

4. Telecom Manufacturing Zone (TMZ)

Prelims:

Government Policies & Initiatives

Mains:

GS Paper II–Government Policies & Interventions, GS Paper III–Science & Technology

Current relevance:

The **Department of Telecommunications (DoT)** and the Government of Madhya Pradesh are set to sign a **Memorandum of Understanding (MoU)** for the establishment of **India's first Telecom Manufacturing Zone (TMZ), Phase-I**, at Gwalior, Madhya Pradesh.



Highlights:

Objectives:

1. Strengthen Domestic Telecom Manufacturing

Build a **world-class manufacturing ecosystem** for telecom equipment and allied technologies.

2. Promote Indigenous Innovation

Encourage **indigenous design, manufacturing, and development** of next-generation telecom products and solutions.

3. Support National Vision

Advance the vision of **Aatmanirbhar Bharat** by strengthening India's domestic telecommunications manufacturing ecosystem.

Projected Outcomes:

1. **Telecom Value Chain:**

To serve as a catalyst for the growth of **telecom equipment manufacturers, technology companies, MSMEs, start-ups**, and other stakeholders.

2. **Investment & Industrial Growth:** Attract investments and foster innovation across the telecom sector.

3. **Employment Generation:** Create substantial employment opportunities and promote regional industrial development.

4. **Supply Chain Resilience:** Strengthen the telecom manufacturing supply chain.

5. **Global Manufacturing Hub:** Position India as a **global hub for telecom manufacturing and innovation**.

Source: PIB –

<https://www.pib.gov.in/PressReleaseDetail.aspx?PRID=2291322®=48&lang=1>

5. Himalayan Chandra Telescope (HCT)

Prelims:

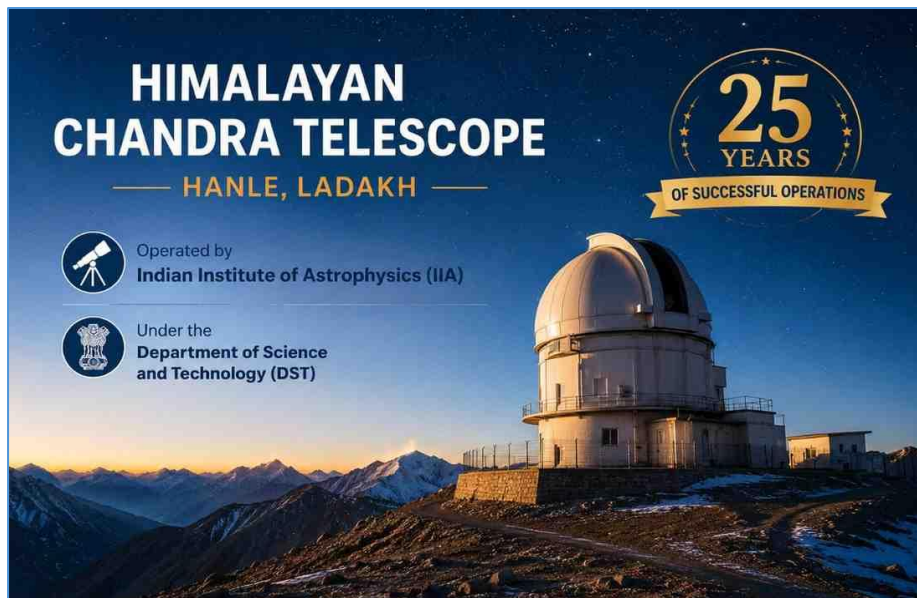
Science & Technology

Mains:

GS Paper III–Science & Technology

Current relevance:

The **2-m Himalayan Chandra Telescope (HCT)** at Hanle, Ladakh completed **25 years of successful operations**, marked by a conference showcasing its history, scientific achievements, engineering milestones, and future expansion plans.



Highlights:

Historical background:

1. The idea of establishing an optical telescope in the trans-Himalayan region had been a long-standing aspiration of the Indian astronomical community.
2. The **2-m Himalayan Chandra Telescope** achieved its **First Light** on **2000**, located at **Hanle, Ladakh**.
3. Operated by the **Indian Institute of Astrophysics (IIA)**, an autonomous institution under the **Department of Science and Technology (DST)**.
4. The telescope was named **Himalayan Chandra Telescope (HCT)** in honour of **Nobel Laureate Subramanyan Chandrasekhar**.

Unique Features:

1. Operated remotely in real time from the **IIA campus at Hosakote, Bengaluru**, through a dedicated **INSAT-3B satellite** link since June 2001.
2. It is equipped with three scientific instruments, the **HFOSC** for optical imaging and spectroscopy, **uTIRSPEC** for near-infrared spectroscopy and imaging, and **HESP**, a high-resolution Echelle spectrograph for detailed spectroscopic observations.

Major Research Contributions:

1. **Planetary Science:** HCT has been used for spectroscopy of comets, studies of exoplanet atmospheres, and participated in the discovery of the TRAPPIST-1b exoplanet.

2. **Stellar Astrophysics:** It has supported research on nebulae, star-forming regions, young stellar objects, variable stars, binary systems, and chemically peculiar stars.
3. **Transient Astronomy:** HCT has contributed to the study of novae, supernovae, and their expanding shells.
4. **Extragalactic Astronomy:** It has enabled research on galaxies, lensed quasars, interacting galaxies, and active galactic nuclei.

Source: PIB –

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2291141®=48&lang=2>



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UPSC Daily Current Affairs –30.07.2026

Index

1. Supreme Court Restricts Ex Post Facto Environmental Clearances	-01
2. Virtual Magnets in EV Motors	-03
3. Purabi Ice Cream	-05
4. DAANVEER	-07
5. The Coal Exchange Rules, 2026	-09

1. Supreme Court Restricts Ex Post Facto Environmental Clearances

Prelims:

Environment & Ecology

Mains:

GS Paper II-Judiciary, GS Paper III-Environment Conservation

Current relevance:

The Supreme Court **quashed, the 2021 Office Memorandum (OM) prospectively,** holding that it created a **permanent mechanism** for granting **ex post facto environmental clearances** to projects that had commenced without prior Environmental Clearance (EC).



At a glance:

Judicial Background:

1. A **Division Bench (May 2025)** declared retrospective environmental clearances a **gross illegality**.
2. In **November 2025**, a **larger Bench** diluted the ruling, observing that abolishing the retrospective clearance regime could have a **devastating effect on ongoing public projects worth thousands of crores of rupees**.
3. **Administrative Orders Cannot Override Law**
 - i. The Supreme Court held that the 2021 Office Memorandum, being an **administrative order**, could **not modify the environmental clearance framework** established under the **2006 Notification**.
 - ii. It ruled that **delegated legislation cannot be replaced** or modified **through administrative instructions**.
 - iii. The Court observed that an **amnesty measure cannot become a permanent parallel mechanism** to bypass the mandatory prior environmental clearance process.

Prior Environmental Clearance Regime:

- i. The Court reaffirmed that **prior Environmental Clearance (EC)** under the **2006 Notification** is **mandatory** for sectors including highways, airports, real estate and township development, mining and resource extraction.
- ii. Any relaxation to the prior EC regime can be introduced **only through an appropriate amnesty notification** for **select deserving projects** involving **supervening public interest**, and not through administrative orders.

Court's Observations:

- i. The Court observed that the 2021 OM **indiscriminately regularised projects** for a **meagre compensation**, promoting a "**pollute and then pay**" approach instead of **sustainable development**.
- ii. The Centre has been **barred from issuing administrative orders** to grant **ex post facto environmental clearances** in the future.
- iii. **Legal framework:**
The judgment clarified that the Supreme Court retains its power under **Article 142** to grant ex post facto environmental clearances in appropriate cases.

Source: THE HINDU- <https://www.thehindu.com/news/national/the-middle-path-explaining-supreme-courts-latest-verdict-on-post-facto-environmental-clearances/article71284888.ece>

2. Virtual Magnets in EV Motors

Prelims:

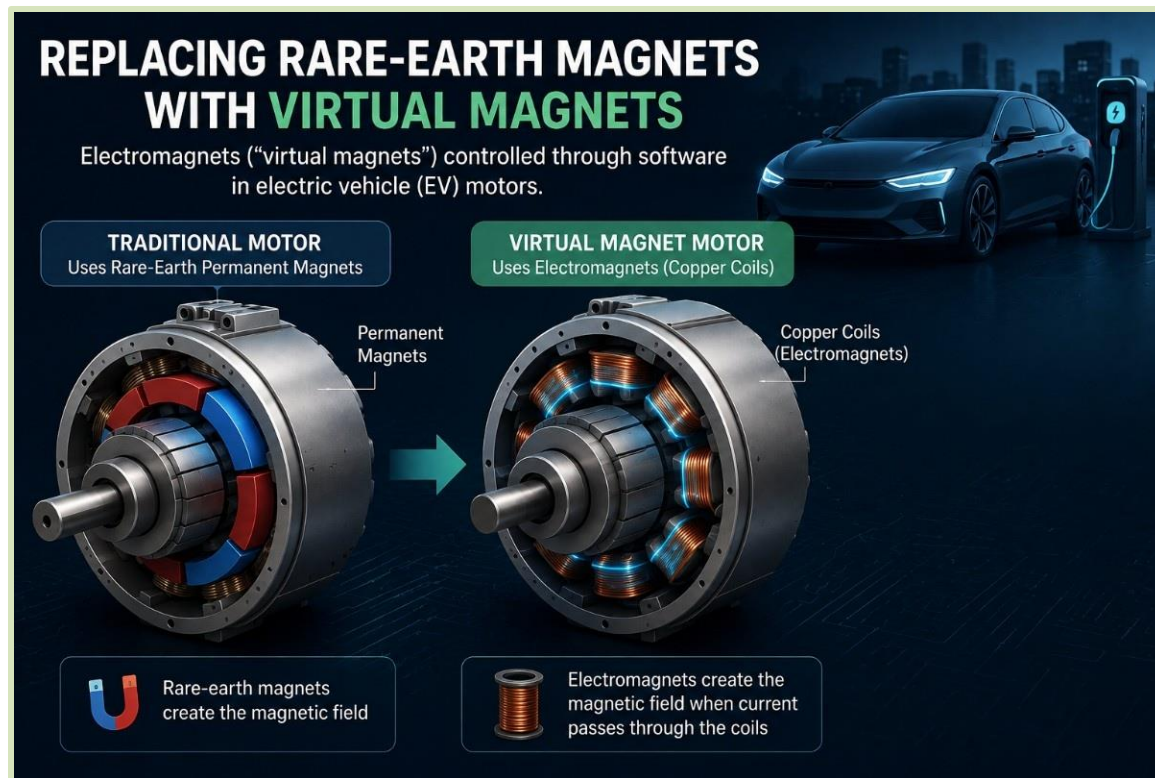
Science & Technology

Mains:

GS Paper III-Science & Technology

Current relevance:

A Bengaluru-based startup, **Vimag Labs**, has claimed to replace **rare-earth permanent magnets** in electric vehicle (EV) motors with **electromagnets ("virtual magnets")** controlled through software.



Highlights:

Virtual Magnets:

1. The motor replaces **permanent magnets** with **copper coils wound** around a **ferromagnetic core**, which become **electromagnets** when supplied with electric current.
2. The software does not generate magnetism but regulates the current supplied to the coils, thereby controlling the **strength and direction of the electromagnetic field**.

Established Use of Electromagnets:

1. Use in Power Generation:

Large generators in **hydroelectric, thermal and nuclear power plants** have long used **electromagnets instead of permanent magnets**.

2. Brushless Excitation System:

As the rotor rotates continuously, a rectifier mounted on it **converts AC into DC to energise the rotor coils**, eliminating the need to supply DC through sliding contacts.

Electromagnets in EVs

1. **Electrically Excited Motors:** BMW and Renault have been working on motors that use **electromagnets** instead of permanent magnets.
2. Even a **0.1%** improvement in **motor efficiency can significantly increase an EV's driving range**, or enable a smaller battery, thereby reducing the vehicle's weight and cost.
3. **Permanent Magnet Synchronous Motors (PMSMs)** currently dominate the EV market because they offer the **highest efficiency**, while the battery pack remains the **costliest and heaviest** component of an EV.

Source: THE HINDU- <https://www.pressreader.com/india/the-hindu-international-9bn2/20260730/281934549743681?srsId=AfmBOopekzUc7JZDP83gsRFBRAVR6igrGplg7VENH7MuLOm9P8RaBpb0>

3. Purabi Ice Cream

Prelims:

Agriculture

Mains:

GS Paper II-Government Policies & Initiatives, GS Paper III-Agriculture

Current relevance:

Assam exported its **first international consignment** of 5,627 litres of **Purabi Ice Cream** to **Bhutan**.



Highlights:

1. Assam exported its first international consignment of Purabi Ice Cream to Bhutan, opening new avenues for **value-added dairy exports** from the **North Eastern Region**.
2. **Purabi Ice Cream:**
 - i. Manufactured by **West Assam Milk Producers' Cooperative Union Limited (WAMUL)**.
 - ii. Produced using milk procured through **Purabi Dairy's cooperative network of dairy farmers** across Assam.
3. **Role of APEDA:**
 - i. The **Agricultural and Processed Food Products Export Development Authority (APEDA)** supported the export by facilitating export documentation, regulatory compliance, market access, stakeholder coordination.
 - ii. It plays a key role in **regional export promotion** by facilitating exports of agricultural and processed food products from the **North Eastern Region** through compliance with **international standards** and improved access to **global markets**.
4. **Gateway to International Markets:**

Bhutan's geographical proximity provides a natural advantage for expanding Made-in-Assam dairy exports to neighbouring countries.

5. **Economic Benefits:**

- i. Strengthen the international presence of dairy products from the North Eastern Region.
- ii. Create sustainable export opportunities for the dairy industry.
- iii. Enhance income prospects for thousands of dairy farmers associated with Assam's cooperative milk network.

Source: PIB-

<https://www.pib.gov.in/PressReleaseDetail.aspx?PRID=2290979®=48&lang=1>

4. DAANVEER

Prelims:

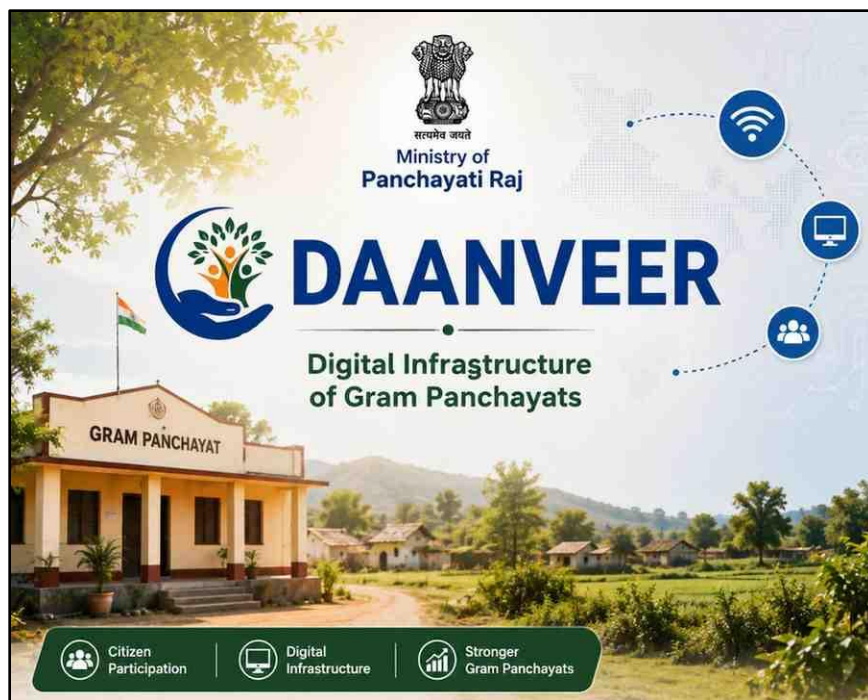
E-Governance

Mains:

GS Paper II-e-Governance, GS Paper III-Science & Technology

Current relevance:

The **Ministry of Panchayati Raj** launched **DAANVEER**, a citizen participation initiative to strengthen the **digital infrastructure of Gram Panchayats** by enabling voluntary contributions of computers through the **Meri Panchayat App**.



Highlights:

1. **DAANVEER** is a **technology-enabled, transparent and verifiable platform** that enables citizens and organisations to contribute towards the digital infrastructure needs of **Gram Panchayats**.
2. It is an initiative of the **Ministry of Panchayati Raj (MoPR)**, developed in collaboration with the **National Informatics Centre (NIC)** and **DigiHaat**.
3. **Objective:**
 - i. Aims to bridge the computer and digital infrastructure gap in **Gram Panchayats** across the country.
 - ii. It establishes a **long-term, citizen-driven mechanism** to strengthen local institutions through voluntary public contributions.
 - iii. To enhance service delivery, transparency, and **grassroots governance** by strengthening digital infrastructure at the Panchayat level.
4. **Key features:**
 - i. Citizens and organizations can donate standardized, quality-verified computer bundles to eligible Gram Panchayats through the **Meri Panchayat mobile** application, which is integrated with the **Digital marketplace**.

- ii. Donors can select pre-approved computer bundles based on **State-specific technical specifications**, with delivery details generated automatically.
- iii. The platform ensures complete transparency through **end-to-end digital tracking** from dispatch to installation and provides a digital certificate of appreciation to every donor.
- iv. Carrying the tagline **“Give Back to Your Village,”** DAANVEER promotes **voluntary public participation** in strengthening digital infrastructure at the grassroots.
- v. It provides a credible platform for citizens, including the **Indian diaspora**, to reconnect with and **contribute to the development of their native villages**.

5. Integration with Digital Governance Ecosystem:

DAANVEER builds upon the Ministry's digital governance ecosystem, including **e-GramSwaraj, Meri Panchayat, Sabha Saar, Audit Online, Gram Manchitra**, Other digital governance platforms.

Source: PIB-

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2291370®=48&lang=1>

5. The Coal Exchange Rules, 2026

Prelims:

Indian Economy

Mains:

GS Paper II-Government Policies and Interventions, GS Paper III-Energy

Current relevance:

The **Ministry of Coal** notified the **Coal Exchange Rules, 2026** under Section 18B of the **Mines and Minerals (Development and Regulation) Act, 1957**, establishing a regulatory framework for transparent and efficient trading of coal and lignite.



Highlights:

Objective:

The Rules establish a **comprehensive regulatory framework** to promote **transparent, efficient** and **competitive trading of coal**, lignite and their processed forms.

Salient features:

1. The **Coal Controller Organization (CCO)** has been designated as the Authority to register, regulate, renew and revoke Coal Exchanges, approve exit schemes, and issue operational guidelines in consultation with the Central Government.
2. A **Coal Exchange** is an **online platform** where buyers and sellers transact, trade and enter into contracts for coal and its processed forms.
3. **Administrative Control:** The Authority will approve bidding and price discovery mechanisms, contract specifications, delivery schedules, coal quality standards, transaction fee ceilings, bye-laws and operating procedures.
4. **Market Surveillance:**
 - i. The Authority will monitor the market to prevent **market manipulation, cartelization, insider trading, abuse of dominant position.**

- ii. It is empowered to conduct **inspections**, issue **interim orders** and intervene in cases of non-compliance.

5. Settlement Guarantee Fund (SGF):

- i. Every Coal Exchange will maintain a **Settlement Guarantee Fund (SGF)** managed by an independent committee.
- ii. At least **50% of the fund** must be invested in **safe and liquid instruments**, including fixed deposits with Scheduled Public Sector Banks, treasury Bills, government Securities.

6. Market Surveillance Mechanism:

Coal Exchanges will establish a **market Surveillance Committee, surveillance Department, automated audit trails, IT security audits**, disaster recovery sites, alternate trading facilities for business continuity.

- 7. Every Coal Exchange will have a **Grievance Redressal Forum**, and the Authority may seek information on grievance resolution.

Source: PIB-

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2291193®=48&lang=1>



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UPSC Daily Current Affairs –31.07.2026

Index

1. Alanine Aminotransferase (ALT)	-01
2. Pellet Guns	-03
3. Online Harassment and Doxing	-05
4. Protection & Indemnity (P&I) Insurance	-08
5. Export of Value-Added Flavoured Makhana	-10

1. Alanine Aminotransferase (ALT)

Prelims:

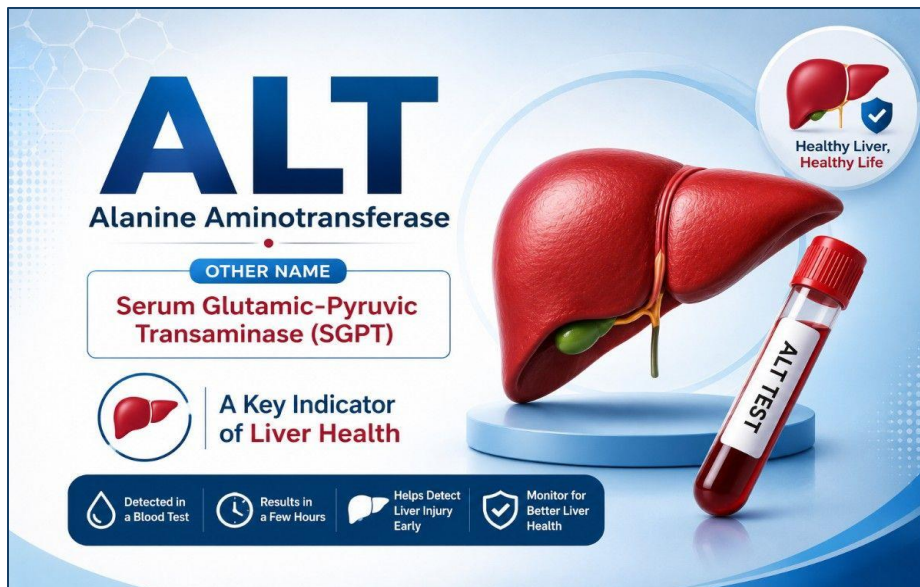
Health

Mains:

GS Paper II-Issues Relating to Public Health, GS Paper III-Science & Technology

Current relevance:

The **Union Health Ministry** has urged people to monitor **Alanine Aminotransferase (ALT)** levels as an early indicator of liver injury, highlighting the growing burden of liver diseases.



Highlights:

Global Burden of Liver Diseases:

1. According to the **WHO**, liver diseases cause around **2 million deaths annually** worldwide.
2. **Viral hepatitis** caused an estimated **1.3 million deaths** in 2022.
3. Around **254 million people** live with **chronic Hepatitis B**, while **50 million** live with **chronic Hepatitis C**.
4. The burden of **Metabolic Dysfunction–Associated Steatotic Liver Disease (MASLD)** is increasing due to rising obesity and diabetes.

Alanine Aminotransferase (ALT):

1. It is an enzyme found predominantly inside liver cells, **also known as Serum Glutamic–Pyruvic Transaminase (SGPT)**.
2. Damage or inflammation of liver cells causes **ALT to leak into the bloodstream**, making it one of the earliest laboratory markers of liver injury.
3. ALT is also present in smaller amounts in **muscles and the heart**; therefore, elevated ALT does not always indicate liver disease.

Role of ALT Testing:

1. ALT is a component of the **Liver Function Test (LFT)**, performed using a **blood sample** to **assess liver enzymes** and function, with results typically available within a few hours.

2. Although many laboratories consider **ALT levels below 40 units/L** as normal, interpretation depends on the patient's clinical condition.

Individuals Recommended for ALT Testing:

1. ALT testing is already included in most **comprehensive health check-ups**.
2. Individuals with the following conditions should undergo **regular evaluation**, they are obesity, diabetes, thyroid disorders, high cholesterol, viral hepatitis, long-term medication use, alcohol consumption, family history of liver disease, sedentary lifestyle.

Elevated ALT may occur in:

1. Acute viral hepatitis
2. Alcohol-related liver disease
3. Metabolic Dysfunction-Associated Steatotic Liver Disease (MASLD)
4. Autoimmune hepatitis
5. Chronic liver diseases

Measures:

1. Maintaining a healthy weight, **reducing alcohol intake**, limiting **saturated fats**, refined **carbohydrates and sugary foods**, and engaging in regular physical activity are essential for liver health, while **viral hepatitis and autoimmune hepatitis** require **specific medical treatment**.

Source: THE HINDU – [What Alanine aminotransferase level can reveal about liver health](#)

2. Pellet Guns:

Prelims:

Polity

Mains:

GS Paper II- polity and Governance

Current relevance:

The **Supreme Court** observed that the use of **pellet guns** forms part of a **graded police response** in exceptional circumstances, while hearing a petition seeking a ban on their use against civilian assemblies.



At a glance:

Graded Police Response:

The **Supreme Court** observed that police rules permit the use of **pellet guns** as part of a **graded crowd-control response** in **exceptional circumstances**, though it did not define what constitutes such circumstances.

Petition Before the Court:

1. The petition sought a **ban on the use of kinetic metallic pellet guns** by law enforcement agencies against civilian assemblies.
2. It argued that **projectile-activated guns (PAGs)** fail the constitutional tests of **necessity, proportionality and reasonableness**.

Peaceful Protests and Public Order

3. The Court agreed that the **State should not respond to students' protests with brutality**.

4. At the same time, it noted that **bona fide protests may be hijacked by unscrupulous elements**, requiring the police to remain prepared with **a graded response**, including the use of force where necessary.

About pellet guns:

1. Pellet guns are **less-lethal crowd-control weapons** that fire multiple small pellets using compressed gas or a propellant and are primarily used by **law enforcement agencies** for **crowd dispersal** and **riot control**.
2. They are intended to be used as part of a **graded crowd-control** response before resorting to more lethal force.
3. After being fired, the pellets disperse over a wide area, making them effective for crowd control but increasing the risk of **serious injuries**, especially to the **eyes, face and upper body**.
4. Their use remains **controversial** due to concerns over **proportionality, human rights and the potential for permanent injuries**.

Source: THE HINDU - https://www.pressreader.com/india/the-hindu-international-9bn2/20260731/281535117787450?srsId=AfmBOooEgeIU6j8okZjc5A2Hc56NP4ENSdJ9dzWgl3xN4eXcRtd_-Ytx

3. Online Harassment and Doxxing

Prelims:

Polity and cyber security

Mains:

GS Paper II- Governance and Internal Security, GS Paper III-Cyber Security

Current relevance:

Several women who participated in the **Jantar Mantar protests** demanding the resignation of the Union Education Minister have reported **online harassment**, including **doxxing, rape threats and death threats** through social media platforms.



Highlights:

Online Abuse

1. Doxxing:

- i. It is the **unauthorised collection, disclosure or dissemination of an individual's personal or sensitive information online**, often with the intent to intimidate, harass, threaten or target the person.
- ii. Videos and photographs of women protesters were widely shared on **X and Instagram**, with posts urging followers to **"teach them a lesson."**
- iii. Personal details, including names, city, phone numbers and addresses, were allegedly circulated online.

2. Legal Framework in India:

- i. The **Right to Privacy**, recognised by the Supreme Court as part of **Article 21 (Right to Life and Personal Liberty)**, provides constitutional protection against unlawful disclosure or misuse of personal information.
- ii. **National Cyber Crime Reporting Portal (NCRP)**, enables citizens to report cybercrimes, including **online harassment, cyber stalking, identity theft, doxxing**, and the unauthorised disclosure of personal information.
- iii. **Information Technology Act, 2000**

Provides a legal framework to address unauthorized access, identity theft, data theft and other cyber offences.

iv. **Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021**

Mandate social media intermediaries to remove unlawful content and provide effective grievance redressal mechanisms for users.

v. **Digital Personal Data Protection (DPDP) Act, 2023**

Regulates the processing and protection of personal digital data and imposes obligations on entities handling personal information.

vi. **Bharatiya Nyaya Sanhita (BNS), 2023**

Depending on the nature of the act, doxxing-related conduct involving **criminal intimidation, stalking, harassment, defamation, identity-related offences, or publication of personal information** may attract relevant provisions of the BNS.

3. **Preventive measures:**

- i. Protect your personal information by limiting what you share online, **strengthening privacy settings**, using strong passwords with **multi-factor authentication (MFA)**, and avoiding oversharing of sensitive details.
- ii. Exercise caution while posting by removing location tags and metadata, **protecting contact information**, monitoring your digital footprint, and staying alert to **phishing attempts**.
- iii. If targeted, **preserve evidence**, report the content to the platform and **law enforcement authorities**, and encourage family members to secure their online privacy to prevent misuse of personal information.

Source: THE HINDU-

<https://www.thehindu.com/news/national/cjp-stir-fir-against-noida-woman-over-objectional-remarks-on-pm-transferred-to-delhi/article71289838.ece>

4. Protection & Indemnity (P&I) Insurance

Prelims:

Indian Economy

Mains:

GS Paper III-Indian Economy, Infrastructure

Current relevance:

The Department of Financial Services (DFS), Ministry of Finance, launched **India's first sovereign-backed Protection & Indemnity (P&I) insurance product** under the **Bharat Maritime Insurance Pool (BMIP)** to strengthen India's maritime insurance ecosystem.



Highlights:

1. The Department of Financial Services launched India's first sovereign-backed **Protection & Indemnity (P&I) Insurance** product under the **Bharat Maritime Insurance Pool (BMIP)**, designed by **The New India Assurance Company Limited**.
2. **About Protection & Indemnity (P&I) Insurance:**
 - i. **Protection & Indemnity (P&I) Insurance** is a specialised form of **marine liability insurance** that provides financial protection to shipowners and operators against **third-party liabilities** arising from the operation of ships.

- ii. It typically covers liabilities related to **crew, cargo, pollution, wreck removal, collisions, and damage to third-party property** that are generally not covered under standard hull insurance.
- iii. It provides financial protection against legal liabilities and compensation arising from **maritime accidents** and **operational risks**, while supporting **financial security, international maritime trade, and effective risk** management in the shipping sector.

3. **Bharat Maritime Insurance Pool (BMIP):**

- i. It is a **sovereign-backed maritime insurance mechanism**, operationalised by the Department of Financial Services (DFS) on 12 May 2026, to ensure **uninterrupted war risk insurance coverage** for India's maritime sector during periods of heightened geopolitical risk.
- ii. The introduction of BMIP has reduced **war risk premium rates by approximately 35–40%** compared to the levels observed during the peak of the West Asia conflict.
- iii. The addition of **P&I coverage** further strengthens India's maritime risk management framework and improves the resilience of the maritime insurance ecosystem.

4. **Significance:**

The initiative advances the **vision of Aatmanirbhar Bharat** by strengthening **domestic insurance capabilities, reducing dependence on foreign insurance markets**, and retaining greater value from India's maritime trade within the domestic economy.

Source: PIB –

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2291922®=48&lang=1>

5. Export of Value-Added Flavoured Makhana

Prelims:

Agriculture

Mains:

GS Paper III- Agriculture, Food Processing

Current relevance:

The **Agricultural and Processed Food Products Export Development Authority (APEDA)** facilitated the **first-ever sea shipment of value-added flavoured Makhana (fox nuts)** from Darbhanga, Bihar, to Canada.



Highlights:

1. The initiative aims to expand **Bihar's value-added agricultural exports** and strengthen its presence in international markets.
2. **Benefits to Farmers:**
 - i. The export of value-added flavoured Makhana has enabled associated farmers to realise **over 50% higher returns**.

- ii. It demonstrates the potential of **processing, branding and export-oriented value addition** in improving the competitiveness of India's agricultural products and **integrating farmers with global value chains**.

3. About Makhana:

- i. **Makhana**, commonly known as **Fox Nut**, is the dried edible seed of the prickly water lily, often referred to as the "**Black Diamond**."
- ii. It is native to **South-East Asia and China** and is now distributed across several parts of the world.
- iii. It grows best in regions receiving an annual rainfall of **100–250 cm** and requires **smooth loamy soil** for optimum cultivation.
- iv. **Bihar contributes nearly 90%** of India's Makhana production.
- v. Besides Bihar, it is cultivated in **Assam, Manipur, West Bengal, Tripura and Odisha**, as well as in **Nepal, Bangladesh, China, Japan and Korea**.
- vi. Gained popularity as a **nutrient-rich superfood** owing to its **rich nutritional profile**, being low in fat, high in protein, and an ideal healthy snack.
- vii. **Health Benefits:**
 - It is **high in fibre**, has a **low glycaemic index**, and contains **phytochemical constituents**.
 - It contains **very little fat** and is **rich in protein**.
 - It helps in managing **high blood pressure** and **blood sugar levels**.
 - Its **high calcium content** and low saturated fat support **bone and muscle health**.
 - Its **low sodium** and **high potassium** content contribute to better cardiac health.

Source: PIB –

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2292004®=48&lang=1>