



## DAILY CURRENT AFFAIRS-

1. Tigers Outside Tiger Reserves (TOTR) Initiative
2. Pan-India Molecular Surveillance of Dengue Serotypes (2023–2025)
3. National Technical Textiles Mission (NTTM)
4. Western Ghats Ecologically Sensitive Area (ESA) – Seventh Draft Notification
5. World's Largest Grain Storage Plan in the Cooperative Sector.

## 1.Tigers Outside Tiger Reserves (TOTR) Initiative

### Why in News?

The Ministry of Environment, Forest and Climate Change (MoEFCC) has launched the **Tigers Outside Tiger Reserves (TOTR)** initiative to manage the increasing presence of tigers outside protected areas and promote **human-tiger coexistence**.

### Key Highlights

| Aspect                  | Details                                                               |
|-------------------------|-----------------------------------------------------------------------|
| Initiative              | Tigers Outside Tiger Reserves (TOTR)                                  |
| Implemented by          | Ministry of Environment, Forest and Climate Change (MoEFCC)           |
| Pilot Coverage          | 40 forest divisions across 9 States                                   |
| Background              | About <b>35–40%</b> of India's tigers now live outside Tiger Reserves |
| Tiger Population (2022) | <b>3,682</b> (over 70% of the world's wild tigers)                    |

### Why was TOTR Introduced?

- The success of **Project Tiger** has increased tiger populations, leading to the saturation of many tiger reserves.

- Young tigers naturally disperse into **forest divisions, buffer zones and human-dominated landscapes** in search of territory.
- This has increased incidents of **human fatalities, livestock depredation and crop damage**, necessitating a landscape-level conservation strategy.

## Key Features

- Establishment of **Rapid Response Teams (RRTs)** for timely conflict mitigation and rescue operations.
- Strengthening rescue centres and veterinary infrastructure.
- Deployment of **camera traps, GPS collars, drones and AI-based monitoring** for early detection and surveillance.
- Streamlining compensation for loss of human life, livestock and property.
- Community participation through awareness programmes and coexistence-based conservation.

## Significance

- Shifts conservation from **reserve-centric** to **landscape-based management**.
- Promotes coexistence between wildlife and local communities.
- Enhances protection of **wildlife corridors**, ensuring genetic exchange between tiger populations.
- Supports long-term conservation as tigers increasingly occupy shared landscapes.

### UPSC Prelims MCQ

**Q. With reference to the 'Tigers Outside Tiger Reserves (TOTR)' initiative, consider the following statements:**

1. It aims to promote coexistence between humans and tigers in landscapes outside notified Tiger Reserves.
2. It emphasizes the use of technologies such as camera traps, GPS and AI-based monitoring.
3. It is being implemented as a pilot project in selected forest divisions across multiple States.

Which of the statements given above is/are correct?

(a) 1 and 2 only

(b) 2 and 3 only

(c) 1 and 3 only

(d) 1, 2 and 3

#### UPSC Mains Question (10 Marks)

The success of tiger conservation has created new challenges beyond protected areas. Discuss the significance of the 'Tigers Outside Tiger Reserves (TOTR)' initiative in promoting landscape-level conservation and human-wildlife coexistence.

## 2. Pan-India Molecular Surveillance of Dengue Serotypes (2023–2025)

### Why in News?

A nationwide ICMR-VRDL study has found that **all four dengue virus serotypes (DENV-1 to DENV-4)** are circulating simultaneously across India, indicating **hyper-endemicity** and increasing the risk of severe dengue and challenges for vaccine effectiveness.

### Key Highlights

| Aspect               | Details                                                          |
|----------------------|------------------------------------------------------------------|
| Study                | Pan-India Molecular Surveillance of Dengue Serotypes (2023–2025) |
| Conducted by         | ICMR–Virus Research and Diagnostic Laboratory (VRDL) Network     |
| Coverage             | 6,889 samples from 45 laboratories across 25 States/UTs          |
| Major Finding        | All four dengue serotypes circulating simultaneously             |
| Predominant Serotype | DENV-2                                                           |
| Concurrent Infection | Around 7% patients infected with multiple serotypes              |

### Key Findings

- **DENV-2** accounted for more than half of all laboratory-confirmed infections.

- **Eight States/UTs** reported the circulation of **all four serotypes**, while **15 States/UTs** reported three serotypes simultaneously.
- Around **7%** of patients were infected with **two or more serotypes** at the same time.
- Concurrent infections showed a higher risk of **severe dengue**, including thrombocytopenia (low platelet count), bleeding manifestations and severe joint pain.
- The study confirms that dengue has become **hyper-endemic** in several parts of India.

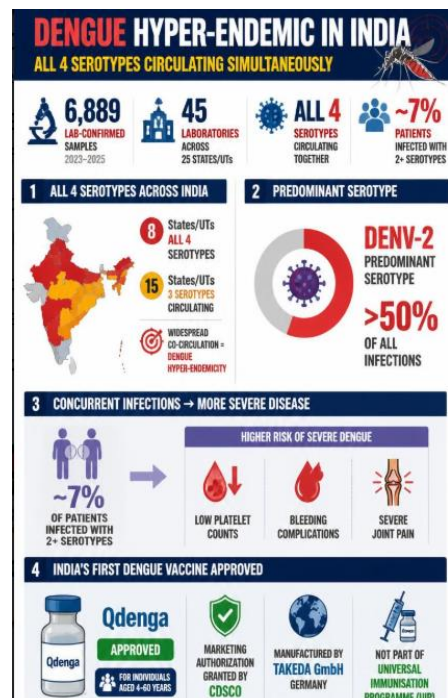
## Why is Serotype Surveillance Important?

- Infection with one serotype provides **lifelong immunity only against that serotype**.
- Subsequent infection with a different serotype increases the risk of **Severe Dengue** due to **Antibody-Dependent Enhancement (ADE)**.
- Continuous monitoring helps identify changes in dominant serotypes and supports outbreak prediction.
- Serotype distribution is important for evaluating the **effectiveness of dengue vaccines**.

### Dengue Virus Serotypes (DENV-1 to DENV-4)

Dengue is caused by four closely related but antigenically distinct serotypes. While they share approximately 65% of their genomes, the differences are significant enough that infection with one does not provide long-term protection against the others. **Characteristics of the Four Serotypes**

- **DENV-1:** Often the most widespread serotype globally. It frequently causes classic dengue fever (high fever, rash, and muscle pain) but is generally associated with lower mortality compared to DENV-2.
- **DENV-2:** Historically considered the **most virulent** strain. It is frequently linked to severe forms of the disease, such as Dengue Hemorrhagic Fever (DHF) and Dengue Shock Syndrome (DSS).
- **DENV-3:** Known for causing major outbreaks and possesses a high potential for severe manifestations, especially in populations where it hasn't circulated for a long time.
- **DENV-4:** Traditionally viewed as the least common and often associated with milder clinical symptoms, though recent surveillance



shows it is establishing a stronger presence in South India.

★ **KEY FACT**

Dengue belongs to the genus **Flavivirus** and is a single-stranded RNA virus. Lifelong immunity is serotype-specific; you can be infected four times in a lifetime.

## Implications for Vaccination

- India has recently approved **Qdenga (TAK-003)** for individuals aged **4–60 years**.
- Vaccine effectiveness varies against different dengue serotypes, making continuous molecular surveillance essential.
- Dengue vaccine has **not yet been included in the Universal Immunisation Programme (UIP)**.

### UPSC Prelims MCQ

**Q. With reference to the recent ICMR study on dengue in India, consider the following statements:**

1. The study found simultaneous circulation of all four dengue virus serotypes in several parts of India.
2. DENV-2 was identified as the predominant circulating serotype.
3. Concurrent infection with multiple dengue serotypes may increase the risk of severe dengue.

Which of the statements given above is/are correct?

- (a) 1 and 2 only  
(b) 2 and 3 only  
(c) 1 and 3 only  
(d) **1, 2 and 3**

**Answer: (d)**

### UPSC Mains Question (10 Marks)

**The co-circulation of multiple dengue virus serotypes poses new public health challenges for India. Discuss the significance of molecular surveillance in dengue control and vaccine policy.**

### 3.National Technical Textiles Mission (NTTM)

#### Why in News?

The Ministry of Textiles informed that India recorded a **trade surplus of ₹3,420.20 crore** in **Technical Textiles** during **FY 2025–26**, reflecting the growing impact of the **National Technical Textiles Mission (NTTM)** in promoting domestic production and exports.

#### Key Highlights

| Aspect                 | Details                                                       |
|------------------------|---------------------------------------------------------------|
| Mission                | National Technical Textiles Mission (NTTM)                    |
| Launched               | 2020                                                          |
| Nodal Ministry         | Ministry of Textiles                                          |
| FY 2025–26 Achievement | Trade surplus of <b>₹3,420.20 crore</b>                       |
| Focus                  | R&D, market development, exports and indigenous manufacturing |

#### Objectives

- Promote **indigenous development** and commercialization of high-value technical textile products.
- Increase domestic production and reduce import dependence.
- Expand exports and improve India's share in the global technical textiles market.
- Foster research, innovation, skill development and standardization.
- Create awareness among user industries regarding applications of technical textiles.

## Focus Areas

- **Agrotech** – Agriculture and horticulture.
- **Meditech** – Healthcare and medical applications.
- **Geotech** – Roads, railways and civil engineering.
- **Protech** – Protective clothing and defence.
- **Indutech** – Industrial filtration and manufacturing.

## Key Initiatives

- Promotion of technical textiles through **47 national and international conferences**.
- Encouraging mandatory use of technical textiles by various Ministries and State Governments for specified applications.
- Support for R&D, product development and commercialization.
- **PLI Scheme for Textiles** complements NTTM by promoting **Man-Made Fibre (MMF)** and Technical Textiles through investment and technology upgradation.

## Significance

- Enhances India's competitiveness in high-value textile manufacturing.
- Supports import substitution and export growth.
- Promotes innovation-driven manufacturing under **Make in India** and **Atmanirbhar Bharat**.
- Expands the use of technical textiles in infrastructure, healthcare, agriculture and defence.

### UPSC Prelims MCQ

**Q. With reference to the National Technical Textiles Mission (NTTM), consider the following statements:**

1. It was launched to promote indigenous manufacturing and commercialization of technical textiles.
2. The Mission covers sectors such as medical, agricultural, industrial and protective textiles.
3. The Production Linked Incentive (PLI) Scheme for Textiles also identifies Technical Textiles as a focus segment.

Which of the statements given above is/are correct?

(a) 1 and 2 only

(b) 2 and 3 only

(c) 1 and 3 only

(d) **1, 2 and 3**

**Answer: (d)**

**UPSC Mains Question (10 Marks)**

**Discuss the role of the National Technical Textiles Mission (NTTM) in strengthening India's manufacturing competitiveness. How can technical textiles contribute to industrial growth and export diversification**

## 4. Western Ghats Ecologically Sensitive Area (ESA) – Seventh Draft Notification

### Why in News?

The Ministry of Environment, Forest and Climate Change (MoEFCC) has issued the **seventh draft notification** proposing **56,825.7 sq km** of the **Western Ghats** as an **Ecologically Sensitive Area (ESA)**, while extending the **Sanjay Kumar Committee** till **July 2027** to resolve pending issues with States.

### Key Highlights

| Aspect         | Details                                                   |
|----------------|-----------------------------------------------------------|
| Notification   | 7th Draft ESA Notification                                |
| Area Proposed  | <b>56,825.7 sq km</b>                                     |
| States Covered | Gujarat, Maharashtra, Goa, Karnataka, Kerala & Tamil Nadu |
| Legal Basis    | Environment (Protection) Act, 1986                        |
| Committee      | Sanjay Kumar Committee (extended till July 2027)          |

### Major Provisions

- **Complete prohibition on:**
  - Mining and quarrying.
  - Sand mining.
  - New thermal power plants.
  - Establishment and expansion of **Red Category** (highly polluting) industries.
- Restricts new **building and construction projects** with a built-up area exceeding **20,000 sq m**.
- Prohibits new township projects exceeding **50 hectares**.
- Agriculture, horticulture and other sustainable livelihood activities continue to be permitted.

#### **Why is the Notification Contentious?**

- **Karnataka and Kerala** have opposed the proposal, citing its impact on farmers, plantations and local livelihoods.
- States have sought exclusion of **human habitations, plantations and agricultural lands** from the proposed ESA.
- The Centre favours ecological protection, while States seek greater developmental flexibility.

## **Background**

- **Madhav Gadgil Committee (WGEEP), 2011** recommended extensive ecological protection across the Western Ghats through graded Ecologically Sensitive Zones.

- **Kasturirangan Committee, 2013** adopted a balanced approach by recommending ESA over **about 37% of the Western Ghats**, reducing the area proposed by the Gadgil Committee.
- Since then, multiple draft notifications have been issued due to lack of consensus among States.

## Significance

- Protects one of the world's **eight hottest biodiversity hotspots** and a **UNESCO World Heritage Site**.
- Conserves endemic flora, fauna and critical watersheds of peninsular India.
- Regulates environmentally harmful activities while promoting sustainable development.
- Supports India's commitments under the **Convention on Biological Diversity (CBD)**.

### UPSC Prelims MCQ

**Q. With reference to the proposed Ecologically Sensitive Area (ESA) in the Western Ghats, consider the following statements:**

1. The proposed ESA has been notified under the **Environment (Protection) Act, 1986**.
2. The seventh draft notification prohibits mining, quarrying and new thermal power plants within the proposed ESA.
3. The proposal covers parts of **six States**.

Which of the statements given above is/are correct?

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) **1, 2 and 3**

**Answer: (d)**

### UPSC Mains Question (10 Marks)

**The prolonged deadlock over the Western Ghats Ecologically Sensitive Area (ESA) reflects the challenge of balancing conservation with development. Discuss.**

## 5. World's Largest Grain Storage Plan in the Cooperative Sector

### Why in News?

The **World's Largest Grain Storage Plan in the Cooperative Sector** has achieved significant progress, with **313 Primary Agricultural Credit Societies (PACS)** completing godowns, creating a storage capacity of **1.80 Lakh Metric Tonnes (LMT)** to strengthen food security and reduce post-harvest losses.

### Key Highlights

| Aspect                         | Details                                                  |
|--------------------------------|----------------------------------------------------------|
| Scheme                         | World's Largest Grain Storage Plan in Cooperative Sector |
| Implementing Ministry          | Ministry of Cooperation                                  |
| PACS with Completed Godowns    | 313                                                      |
| Storage Capacity Created       | <b>1.80 LMT</b>                                          |
| Total PACS Identified          | 1,015                                                    |
| FCI Storage Requirement Mapped | <b>26.03 LMT</b> across 216 locations                    |

### Objectives

- Create decentralized grain storage infrastructure at the **PACS** level.
- Reduce post-harvest losses and transportation costs.
- Strengthen India's food security and procurement system.
- Transform PACS into **multi-service rural institutions** through convergence of existing schemes.

## Key Features

- Development of godowns, Custom Hiring Centres (CHCs), Primary Processing Units (PPUs), and Fair Price Shops (FPS).
- Convergence with the Agriculture Infrastructure Fund (AIF), Agricultural Marketing Infrastructure (AMI) Scheme, and the Food Corporation of India (FCI) storage network.
- The Food Corporation of India (FCI) provides a 9-year warehouse hiring assurance for eligible warehouses developed under the scheme

## Recent Reforms

- **Agriculture Infrastructure Fund (AIF):**
  - Credit guarantee period extended from **2+5 years to 2+8 years**.
- **Agricultural Marketing Infrastructure (AMI):**
  - Margin money reduced from **20% to 10%**.
  - Subsidy enhanced to **33.33%**.
  - Additional assistance for internal roads, weighbridges and boundary walls.

## Significance

- Expands scientific rural storage infrastructure.
- Minimizes post-harvest losses and distress sale by farmers.
- Strengthens decentralized procurement under **FCI**.
- Diversifies the role of PACS beyond agricultural credit, enhancing rural livelihoods.

### UPSC Prelims MCQ

**Q. With reference to the World's Largest Grain Storage Plan in the Cooperative Sector, consider the following statements:**

1. The plan aims to create decentralized grain storage infrastructure through Primary Agricultural Credit Societies (PACS).
2. It converges existing schemes such as the Agriculture Infrastructure Fund (AIF) and Agricultural Marketing Infrastructure (AMI).

3. The Food Corporation of India (FCI) provides long-term warehouse hiring assurance under the plan.

Which of the statements given above is/are correct?

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) **1, 2 and 3**

**Answer: (d)**

**UPSC Mains Question (10 Marks)**

**Discuss the significance of the World's Largest Grain Storage Plan in the Cooperative Sector in strengthening India's food security, agricultural value chain and cooperative movement.**

