DAILY CURRENT AFFAIRS 06-06-2026

Mapping Perspective

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Pennar River

Syllabus: GS-1; Geography-Mapping

Context

The Pennar River has drawn attention due to severe water scarcity, even as several other rivers in Andhra Pradesh are witnessing abundant flows.

About Pennar River

- The **Pennar River**, also known as **Penna**, **Pinakini**, or **Penneru**, is an important river of southern India flowing through Karnataka and Andhra Pradesh.
- The name "Penna" originates from the Telugu word **"Pennu"**, meaning silt, reflecting the river's high sediment load.
- The river finds mention in ancient Indian texts such as the **Ramayana** and **Mahabharata**.

Course

- Originates in the **Nandi Hills** of Karnataka.
- Flows across the **Deccan Plateau** before entering Andhra Pradesh.
- Traverses parts of the **Eastern Ghats**, forming waterfalls and rapids.
- Empties into the **Bay of Bengal** near Nellore.
- Covers a distance of approximately **597 km**.
- The basin lies largely in the **rain-shadow region** of the Eastern Ghats.
- It is a **seasonal river**, carrying substantial flows during the monsoon and reduced discharge during dry months.

Major Tributaries

- Chitravati
- Papagni
- Cheyyeru
- Kunderu

Significance

- Supports agriculture in the drought-prone **Rayalaseema** region.
- Several irrigation and water supply projects depend on the river, including:
  - Somasila Project
  - Mylavaram Project
  - Gandikota Project

Virupaksha Temple

Syllabus: GS-1; Indian Art & Culture

Context

The **Archaeological Survey of India (ASI)** recently removed internal walls constructed within the main gopuram of the Virupaksha Temple, where a mantapa had been converted into office space.

About Virupaksha Temple

- Also known as the **Pampapathi Temple**, it is dedicated to **Lord Virupaksha**, a form of Lord Shiva.

- Located at **Hampi** in Karnataka's Vijayanagara district.
- Situated on the southern bank of the **Tungabhadra River**.
- Forms part of the **Group of Monuments at Hampi**, a UNESCO World Heritage Site since 1986.
- It has remained a continuously functioning place of worship since the **7th century CE**, making it one of India's oldest active temples.

Historical Development

- Began as a modest shrine and was expanded during the **Chalukya** and **Hoysala** periods.
- Reached its greatest prominence during the **Vijayanagara Empire** (14th–16th centuries).
- Vijayanagara rulers, particularly **Deva Raya II** and **Krishnadevaraya**, significantly enlarged the complex by constructing major structures such as the eastern gopuram and central pillared hall.

Architectural Features

- Built in the **Dravidian style** of architecture.
- Features:
    - Towering gopurams
    - Intricate sculptures and carvings

- Pillared halls
- Spacious courtyards

- The complex contains:
  - Sanctum sanctorum
  - Multiple pillared halls, including a renowned 100-pillared hall
  - Antechambers
  - Monumental gateway towers
- The eastern gopuram is the tallest, standing about **160 feet** high and comprising **nine tiers**.
- The temple's sculptures depict various Hindu deities and mythological themes.

Scientific Significance

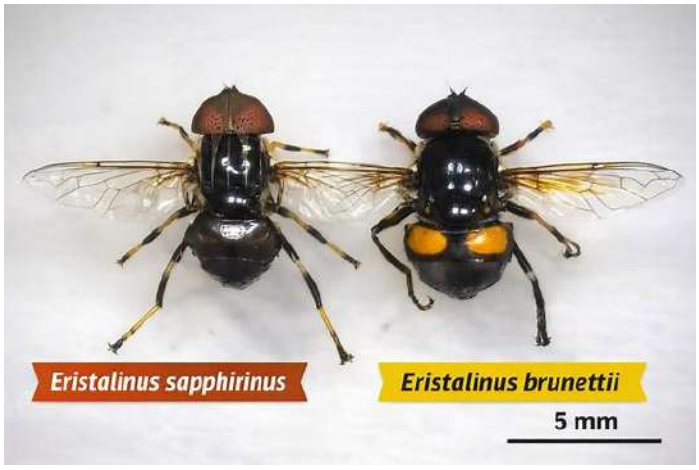
- Incorporates principles associated with **Rectilinear Light Theory**.
- Features a remarkable **pinhole camera effect**, where an inverted image of the temple tower appears on an inner wall, demonstrating advanced understanding of optics and engineering.

Eristalinus sapphirinus and Eristalinus brunettii

Syllabus: GS-3; Environment & Ecology | Biodiversity Conservation

Context

Researchers from the Zoological Survey of India (ZSI) discovered two new species of hoverflies—*Eristalinus sapphirinus* and *Eristalinus brunettii*—from the Gangetic Plains of West Bengal.



About Eristalinus sapphirinus and Eristalinus brunettii

- Two newly discovered species of hoverflies.
- Found in the Gangetic Plains of West Bengal.
- *Eristalinus sapphirinus* is named after its sapphire-blue metallic coloration.
- *Eristalinus brunettii* honours entomologist Enrico Adelelmo Brunetti.
- Expands the known diversity of the *Eristalinus* genus in India.

What are Hoverflies?

- Belong to Order: Diptera; Family: Syrphidae.
- Also called flower flies or drone flies.
- Important pollinators of crops and wild plants.
- Possess only one pair of wings.
- Do not sting despite resembling bees and wasps.

Know more

- Larvae are known as "rat-tailed maggots".
- Adult hoverflies act as pollinators.
- Larvae help in decomposition and nutrient recycling in aquatic habitats.

Jal Sanchay Jan Bhagidari Initiative

Syllabus: GS-1: Indian Geography – Resource – Water.

Context:

- Bidar district of Karnataka has emerged as a winner of the **Jal Sanchay Jan Bhagidari Award** given to top-performing districts under the **Jal Shakti Abhiyan: Catch the Rain** campaign.

About the Initiative

- Launched in **2024**.
- **Aim:** Enhance water recharge through **rainwater harvesting, aquifer recharge, borewell recharge, recharge shafts**, etc.
- **Objective:** Ensure that every drop of water is conserved through collective efforts, following a **whole-of-society** and **whole-of-government** approach.
- Designed to foster active participation from all stakeholders, including:
    - Government agencies

- Local communities
- Industries
- NGOs
- Resident Welfare Associations (RWAs)

Key Features / Outcomes

1. Boost in Groundwater Levels

- Capture and store rainwater and surface runoff to stabilize and increase groundwater levels.

2. Promotion of Water Conservation

- Foster a culture of water conservation through community participation in local water resource management.

3. Enhancement of Climate Resilience

- Mitigate climate change impacts by developing storage solutions for heavy rainfall.
- Provide a buffer against drought conditions through improved water availability.

4. Improvement of Water Quality

- Utilize artificial recharge methods to naturally filter water as it percolates through soil layers.
- Help reduce salinity and contamination of groundwater resources.

Significance

- Strengthens sustainable groundwater management.
- Encourages community-led water governance.
- Supports climate adaptation through improved water security.
- Promotes long-term conservation of water resources.

Nodal Ministry

- Ministry of Jal Shakti.

Hellfire Missile

Syllabus: GS-3: Science and Technology – Defence Technology.

Context:

- The U.S. military fired a **Hellfire missile** at a tanker heading toward Iran as part of a blockade being imposed by Donald Trump, aimed at pressuring Tehran to negotiate a peace agreement.

About Hellfire Missile

- **AGM-114 Hellfire** is a **short-range, air-to-ground, subsonic tactical missile**.
- Manufactured by Lockheed Martin; originated in the **United States** and entered service in **1984** as a potent anti-tank weapon.
- Can also be employed as an **air-to-air weapon** against helicopters and slow-moving fixed-wing aircraft.
- Compatible with multiple platforms:
    - Attack helicopters (**AH-64 Apache**)

- Drones (**MQ-1 Predator**, **MQ-9 Reaper**)
- Fighter aircraft
- Ground launchers

- Currently operated by the **United States military** and around **30 U.S. allies**.
- Capable of defeating **any known tank** in the world today.

Generations of Hellfire Missiles

- **Basic Series:** AGM-114A, AGM-114B, AGM-114C
- **Anti-Ship Missile (AShM) Interim:** AGM-114F
- **Hellfire-II:** AGM-114K, AGM-114M, AGM-114N, AGM-114R
- **Longbow:** AGM-114L

Key Features

- **Dimensions:** Length 1.63–1.75 m; Diameter 0.178 m.
- **Weight:** 45–48.5 kg.
- **Design:** Cylindrical body with dome-shaped nose section and four clipped-delta stabilizing fins arranged in a cruciform configuration.
- **Range:** 7–11 km.
- **Payload:** 8–11 kg.
- **Speed:** Subsonic; maximum speed of **Mach 1.3 (450 m/s)**.
- **Propulsion:** Single-stage solid-propellant, solid-fuel rocket motor.

Guidance Systems

- Supports multiple guidance modes:
  - Laser guidance
  - Radar guidance
  - Imaging Infrared (IIR) guidance
- Enables both:
  - **Fire-and-forget targeting**
  - **Semi-active targeting**

Warhead Types & Targets

- **Modular warhead configuration** with:
  - High-Explosive Anti-Tank (HEAT)

  - Fragmentation
  - Thermobaric payloads
- Effective against:
  - Armoured vehicles
  - Tanks
  - Bunkers
  - Radar installations
  - Small naval vessels

Kye Facts

- **Type:** Air-to-ground tactical missile
- **Origin:** United States
- **Manufacturer:** Lockheed Martin
- **Range:** 7–11 km
- **Speed:** Mach 1.3
- **Guidance:** Laser, Radar, IIR
- **Notable Capability:** Anti-tank, anti-bunker, anti-ship and limited air-to-air roles
- **Key Platforms:** AH-64 Apache, MQ-1 Predator, MQ-9 Reaper, fighter aircraft, ground launchers.