

## UPSC Daily Current Affairs| Prelim Bits 07-06-2025

### Coringa Wildlife Sanctuary

*Prelims: Environment | Science and technology | Current events of national and international importance*

#### Why in news?

*Recently Wildlife Institute of India experts collared three fishing cats in Coringa Wildlife Sanctuary in Andhra Pradesh to study the behaviour of the species.*

- **Coringa Wildlife Sanctuary** - It is located in **East Godavari district**, Andhra Pradesh, India.
- **Established** - **1978** under the **Wildlife Protection Act, 1972**.
- It is situated at the **Godavari River delta**, rich in backwaters and estuarine systems.
- **Mangrove forest** - It is a significant mangrove forest ecosystem and is rich in **flora and fauna** adapted to brackish water ecosystems.
- **Estuarine ecosystem** - It supports a **mix of freshwater and marine life** due to tidal influences.

#### Key Fauna & Flora

- **Endangered species** - Fishing cat, Otters, Smooth-coated Otter and Small-clawed Otter.
- **Birdlife** - Over 120 species, including Pond Herons, Egrets, Flamingos, and Darters.
- **Reptiles & Amphibians** - It includes crocodiles, snakes, and frogs native to estuarine habitats.
- **Aquatic & Avian Richness** - It is a vital nursery for marine fish and crustaceans.
- **Migratory birds** - It is important stopover site for winter migratory species.
- **Fish diversity** - It includes estuarine and marine species adapted to salinity variations.
- **Vegetation** - Dominant mangrove species such as Avicennia, Rhizophora, Sonneratia.
- It also features dense mangrove thickets, tidal creeks, and mudflats.

#### Fishing Cat Collaring Project (2025)

- It is initiated by **Wildlife Institute of India (Dehradun)** to track endangered fishing cats.
- **Fishing cats** - It is found in Coringa and Krishna sanctuaries, primarily inhabiting mangrove ecosystems.
- **Scientific name** - *Prionailurus viverrinus*



- It is aggressive, nocturnal, active near water bodies while hunting.
- It dwells deep within dense mangrove cover.
- It is one of the first of its kind in India to monitor home range and behaviour.
- **Conservation Status**
  - IUCN - Endangered.
  - CITES - Appendix II.
  - Indian Wildlife (Protection) Act, 1972 - Schedule I.
- **Threats** - Encroachment, pollution, and shrimp farming coastal erosion and climate change impacts.
- Three fishing cats collared in May 2025 using lightweight GPS-enabled collars.
- It will record environmental or human-induced threats that impact survival.
- Seven more fishing cats will be collared to study the home range, behaviour, feeding, breeding, and prey pattern of the endangered species

## Reference

[The Hindu| WII collar three fishing cats in Coringa Wildlife Sanctuary](#)

## ECI upgrades mechanism for Index Cards on Electoral Data

**Prelims: Science and technology | Current events of national and international importance**

### Why in news?

Recently, the Election Commission of India (ECI) announced that it had upgraded the mechanism for generating Index Cards, making it more technology-driven.

- **Index Cards** - They are **non-statutory formats** used after elections to compile **detailed statistical data** at the constituency level.
- These cards serve as a foundation for analytical reports about elections and are useful for researchers, policy analysts, and academics.
- Using the data from these cards, the ECI generates statistical reports for Lok Sabha (Parliamentary) and State Assembly elections, which includes,

## Elector and Polling Information

- Details about electors broken down by state, parliamentary and assembly constituencies.
- Number and location of polling stations.
- Voter turnout percentages.
- Gender-wise participation, highlighting trends in women's voting.

### Candidate and Party Performance

- Total votes polled and counted
- Vote share of each candidate and political party
- Performance analysis of-
  - National parties
  - State parties
  - Registered Unrecognised Political Parties (RUPPs)
- Details on winning candidates, including margins and voter base
- Summary and constituency-wise results for analytical purposes

Traditional method of Index card generation	Upgraded method of Index card generation
<ul style="list-style-type: none"> <li>• The older system relied on <b>manual data entry</b>.</li> <li>• Data was first written on physical cards at each constituency.</li> <li>• These were later entered into an online system.</li> <li>• This process had several drawbacks-               <ul style="list-style-type: none"> <li>- It was <b>slow</b> and required <b>multiple steps</b>.</li> <li>- It often led to <b>delays in the release of reports</b>.</li> <li>- There was a risk of <b>errors</b> during transcription.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• The ECI has now introduced a <b>technology-based system</b> to automate the Index Card process.</li> <li>• <b>Automation and data integration</b> allow-               <ul style="list-style-type: none"> <li>- <b>Faster</b> and more <b>accurate reporting</b>.</li> <li>- <b>Reduced manual intervention</b>, minimizing errors.</li> <li>- <b>Quicker data dissemination</b> to the public and researchers.</li> </ul> </li> </ul>

- **Significance** - ECI aims to make electoral data more **transparent, accessible, and research-friendly**.
- A **real-time voter turnout dashboard** and it is planned to roll out before the Bihar elections.

### Reference

[The Hindu| ECI upgrades mechanism for Index Cards on electoral data](#)

## Nano Plastics Can Make E. Coli Infections Worse

**Prelims: Science and technology | Current events of national and international importance**

### Why in news?

*Recently, a new study from researchers at the University of Illinois, Urbana-Champaign, has revealed that nano plastics aren't just risky on their own*

- **Nano plastics** - It is extremely **small plastic particles** typically ranging from 1 to 100 nanometres in size.
- They are found everywhere- in mountaintops, deep-sea trenches, human bloodstream, tissues, and even newborns.
- It is known for **toxic effects** including damage to cells and genetic material.
- **E. coli (Escherichia coli)** - It is a group of bacteria that usually lives in your gut without hurting you.
- It is a gram-negative bacillus foodborne pathogen and is a causative agent of many diarrheal illnesses.

*Gram-negative bacteria appear pink or red under a microscope during lab test because they have a thin cell wall and an outer membrane that prevents the primary stain (crystal violet) from being retained.*

### **Findings of the study**

- **Impact of Nano plastics** - Researchers found that nano plastics make E. coli (*Gram-negative*) can be more virulent.
- The charged nano plastics increases stress on E. coli, prompting it to produce more **Shiga-like toxins** — proteins responsible for causing disease.
- The charged nano plastics initially **inhibited bacterial growth**.
- But over time, some E. coli cells **adapted**, resumed growth, and showed **genetic changes**.
- Both **positively and negatively charged** nano plastics led to these effects, although **positive charges** had more severe outcomes.
- **Significance** - Nano plastics can **exacerbate bacterial infections** by enhancing virulence
- It also poses indirect threat by making microbes more dangerous and resistant to antibiotics.

### **Reference**

[The Hindu| Nanoplastics can make E. coli infections worse](#)

### **Rising black carbon heating the Himalayan snow**

**Prelims : Current events of national and international importance**

### **Why in News?**

*A recent study by the think-tank Climate Trends stated that Levels of black carbon-ultra-fine particles of carbon in the Himalayas have been rising.*

- The study analysed satellite-based measurements of black carbon and changes in snow temperature between 2000 and 2023.
- **Findings** - Eastern Himalaya records warmest snow surfaces, followed by the central and western Himalayas.
- This is contributing to warmer snow, increasing the risk of unseasonal flooding by glacier-fed rivers.
- **Sources** - Biomass combustion, fossil fuel use, Fertiliser, Vehicle exhaust, and open burning, particularly in the Indo-Gangetic plain, which acts as a hotspot for emissions.
- **Effects** - Light-absorbing particles like black carbon reduces the snow's ability to reflect sunlight, accelerating surface heating.
- Aerosols particulate matter emissions from a variety of sources, from fertiliser to vehicle exhaust, clog the atmosphere, deflecting sunlight away from the carbon and mask the heating effect of greenhouse gases.
- Continued temperature rise in snow-covered areas can shorten snow season duration and advance melting onset, impacting hydrological systems and water security for millions downstream.
- Thus, temperature increases, in conjunction with black carbon presence, are significantly altering the snow thermal regime in the Himalayas.
- Black carbon is different in that it absorbs sunlight and, if it settles on the surface, can thus heat the ground.

*Black carbon is considered as a catalyst to global warming, even though it is relatively short-lived in the atmosphere, unlike carbon dioxide, the most pervasive greenhouse gas.*

## Reference

[The Hindu | Black carbon' heating Himalayan snow](#)

## Ayush Nivesh Saarthi portal

**Prelims : Current events of national and international importance | Governance**

### Why in News?

*The Government of India has launched the Ayush Nivesh Saarthi portal during the Ayush Stakeholder/Industry Interaction meet held at Vanijya Bhawan recently.*

- It is an investor-centric digitalised platform in the Ayush sector.
- **Created by** - Ministry of Ayush in partnership with Invest India, is focused on attracting investors.
- **Aim** - To transform India's traditional wellness systems into a significant economic

force.

- It is designed to support both domestic and global investors.
- It consolidates policy frameworks, incentive structures, and investment-ready projects into a single user-friendly interface.
- It provides real-time data, clear policy guidance, and access to a dynamic and growing market, reinforcing India's aspiration to be a premier destination for investments in traditional medicine.

*The sector is experiencing a 17% annual growth rate from 2014 to 2020 and has seen a rising global interest in natural and preventive healthcare.*

- This portal is poised to be a crucial driver for foreign direct investment, empowering entrepreneurs and highlighting India's leadership in the field of traditional wellness.

## Reference

[The Print | Ayush Nivesh Saarthi Portal](#)

## Waste Picker Enumeration App

**Prelims : Current events of national and international importance | Governance**

### Why in News?

*Ministry of Social Justice and Empowerment (MoSJE) launches a Nationwide Digital Application for Profiling Waste Pickers under the NAMASTE Scheme.*

- It is a digital platform designed to catalog, recognize, and assist waste pickers through social security measures and livelihood support initiatives under the NAMASTE Scheme.
- **Involved Ministries** - Ministry of Social Justice & Empowerment (MoSJE), Ministry of Housing & Urban Affairs (MoHUA) & Department of Drinking Water and Sanitation (DoDWS).
- **Implemented by** - National Safai Karamcharis Finance and Development Corporation (NSKFDC).
- **Objectives** - Acknowledge waste pickers as vital contributors to India's solid waste management framework.
- Ensure they receive proper identification and protection.
- Facilitate their integration into formal urban systems for improved recognition and support.
- It offers health insurance through the Ayushman Bharat initiative.

## NAMASTE Scheme

- NAMASTE is a ***central sector scheme*** for improving the living standards of sanitation workers in urban areas.
- It is a joint initiative of Ministry of Social Justice and Empowerment (MoSJE), Ministry of Housing and Urban Affairs (MoHUA) and Department of Drinking Water and Sanitation.
- The scheme focuses on preventing hazardous cleaning practices, promoting safe cleaning through trained and certified workers, and formalizing/rehabilitating those involved in hazardous sewer and septic tank cleaning.
- The intended outcome is to eliminate direct contact with human faecal matter, achieve zero fatalities, and empower sanitation workers through various means.

## Reference

[PIB | NAMASTE Scheme](#)

