Pichavaram Ecosystem

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

Why in News?

A recent study of the Pichavaram mangrove ecosystem estimated its Total Economic Value (TEV).

Pichavaram Mangrove Forest

- **Situated in –** Cuddalore District of Tamil Nadu, India, in proximity to the town of Chidambaram.
- **Geographical Context –** The forest lies between the Vellar estuary to the north and the Coleroon (Kollidam) estuary to the south.
- It forms part of the **Vellar-Coleroon estuarine complex,** contributing to the formation of the Killai backwaters.
- **Coverage –** An area of approximately 1,478 hectares (14.78 square kilometres).

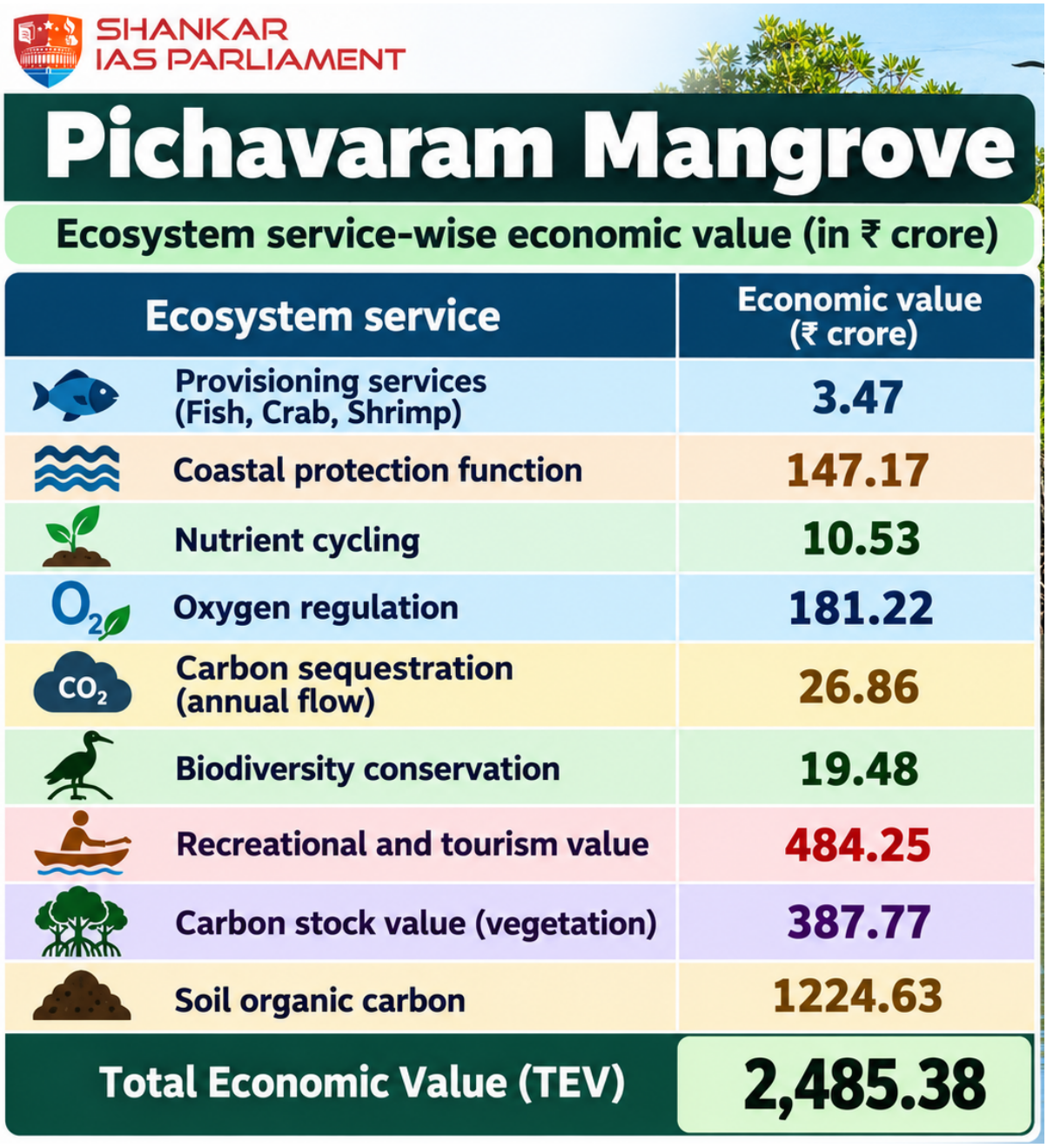
Ecological Significance: *Pichavaram is one of India's largest mangrove forests, with trees rooted in shallow water and an extensive canal network.*

Global Risk: *According to the IUCN 2024 assessment, 50% of the world's mangroves are at risk of collapse.*

Carbon Reservoir: *The Pichavaram mangroves serve as a major blue-carbon sink and play a vital role in climate regulation.*

- **Ecosystem Services**
  - **Provisioning services – support for fisheries and provision of** livelihood resources
  - **Regulating services – C**oastal protection, carbon sequestration, and climate regulation
  - **Supporting services – Maintenance of biodiversity and enhancement of** ecosystem productivity
  - **Cultural services – Tourism opportunities** and recreational values
- A significant challenge is that many ecosystem services are **non-market** in nature and are consequently undervalued in conventional economic planning.
- **Policy Recommendations**
  - Integrate **ecosystem service valuation** in coastal planning.

- Recognise mangroves as nature-based **solutions** for climate adaptation and disaster risk reduction.
- Develop **blue carbon financing, payment for ecosystem services (PES) schemes, and Green GDP frameworks**.
- Promote **sustainable livelihoods, including fisheries, eco-**tourism, restoration, and community conservation.
- Strengthen **climate resilience and biodiversity** through long-term ecosystem-based management.



Reference

[The Hindu | Pichavaram Ecosystem]

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