

Gulf of Mannar Biosphere Reserve

March 29, 2021

In News: Recently, The Madurai Bench of the Madras High Court ordered notice to the Centre and the State in a public interest litigation petition that sought a direction to the authorities concerned to collect and dispose of 'ghost nets' (fishing nets lost or abandoned at sea) from the Gulf of Mannar Biosphere Reserve.

About Gulf of Mannar Biosphere Reserve

- The Gulf of Mannar Marine National Park is a protected area of India consisting of 21 small islands (islets) and adjacent coral reefs in the Gulf of Mannar in the Indian Ocean.
- It lies 1 to 10 km away from the east coast of Tamil Nadu, India for 160 km between Thoothukudi (Tuticorin) and Dhanushkodi.
- Core area of the Gulf of Mannar Biosphere Reserve which includes a 10 km buffer zone around the park, including the populated coastal area.
- The park has a high diversity of plants and animals in its marine, intertidal and nearshore habitats.

Flora

- Mangroves dominate the intertidal zones of the park islands. They consist of species of the genera *Rhizophora*, *Avicennia*, *Bruguiera*, *Ceriops* and *Lumnitzera*.
- The flowering herb *Pemphis acidula* (family Lythraceae) is the only endemic plant species.
- 12 species of sea grass and 147 species of seaweeds were recorded.

Fauna

- The dugong, a vulnerable marine mammal, is the flagship mammal of the park.
- It is an important habitat for the cetaceans: Indo-Pacific bottlenose dolphin, finless porpoise, spinner dolphin, common dolphin, Risso's dolphin, melon-headed whale, and dwarf sperm whale.
- About 510 (23%) of the 2,200 fin fish species in Indian waters are found in the Gulf, making it the most highly diverse fish habitat in India.

Biosphere Reserve

- Biosphere Reserve (BR) is an international designation by the United Nations Educational, Scientific and Cultural Organization (UNESCO) for representative parts of natural and cultural landscapes extending over large areas of terrestrial or coastal/marine ecosystems or a combination of both.
- There are currently 714 biosphere reserves in 129 countries, including 21 transboundary sites, that belong to the World Network of Biosphere Reserves.

Structure of Biosphere Reserve

- **Core Areas**
 - Most protected area of a biosphere reserve may contain endemic plants and animals.
 - A core zone is a protected region, like a National Park under the Wildlife (Protection) Act, 1972.
 - It is kept free from human interference.
- **Buffer Zone**
 - The buffer zone surrounds the core zone.
 - Activities are managed in this area in the ways that help in the protection of the core zone in its natural condition.
 - Activities include restoration, limited tourism,

fishing, grazing, etc; which are permitted to reduce its effect on the core zone.

- Research and educational activities are to be encouraged.

- **Transition Zone:**

- Outermost part of the biosphere reserve.
- Zone of cooperation where human ventures and conservation are done in harmony.
- Activities include settlements, croplands, managed forests and areas for intensive recreation and other economic uses characteristics of the region.

There are 18 biosphere reserves in India

1. Cold Desert, Himachal Pradesh
2. Nanda Devi, Uttrakhand
3. Khangchendzonga, Sikkim
4. Dehang-Debang, Arunachal Pradesh
5. Manas, Assam
6. Dibru-Saikhowa, Assam
7. Nokrek, Meghalaya
8. Panna, Madhya Pradesh
9. Pachmarhi, Madhya Pradesh
10. Achanakmar-Amarkantak, Madhya Pradesh-Chhattisgarh
11. Kachchh, Gujarat (Largest Area)
12. Similipal, Odisha
13. Sundarban, West Bengal
14. Seshachalam, Andhra Pradesh
15. Agasthyamala, Karnataka-Tamil Nadu-Kerala
16. Nilgiri, Tamil Nadu-Kerala (First to be Included)
17. Gulf of Mannar, Tamil Nadu
18. Great Nicobar, Andaman & Nicobar Island