

## **1. Marine Protected Areas**

**Prelims Syllabus:** Biodiversity and its threat

**Mains Syllabus:** GS-III Conservation, environmental pollution and degradation, environmental impact assessment.



### **Why in News?**

- Recently, the Ministry of Earth Sciences, Government of India has announced that India will support setting up two Marine Protected Areas (MPA) in Antarctica to protect marine life and its ecosystem services.

### **What are the MPAs?**

- MPA is a defined region managed for the long-term conservation of marine resources, ecosystem services or cultural heritage.
- Within the region, certain activities are limited, or entirely prohibited, to meet specific conservation, habitat protection, ecosystem monitoring or fisheries management objectives.
- MPAs do not necessarily exclude fishing, research or other human activities; in fact, many MPAs are multi-purpose areas.

### **Need for Setting MPAs in Antarctica:**

- The Southern Ocean that encircles Antarctica covers around 10 % of the global ocean and is home to nearly 10,000 unique polar species.
- Climate change is altering habitats such as sea ice and the sheltered seafloor under ice shelves that are home to a variety of species.

- Commercial fishery harvest krill, to produce fish meal for feeding farmed fish and nutritional supplements for people.
- Increased harvesting of krill threatens animals that feed on them. These include fish, whales, seals, penguins and other seabirds.
- A 2022 study that analysed over forty years of krill fishery data found that krill fishing was highest in the regions surrounding the Western Antarctic Peninsula and near the South Orkney Islands.
- Climate change and commercial fishing of the region need to be minimised, and therefore MPA is necessary.

### **What is the Status of MPAs in Antarctica?**

- The Southern Ocean has two MPAs, one in the southern shelf of the South Orkney Islands and the other in the Ross Sea. These fully protect only 5% of the ocean.
- All types of fishing, other than scientific research, are prohibited within the southern shelf of the South Orkney Islands MPA. Discharges and dumping from fishing vessels are also not allowed.
- In Ross MPA, 72% of the waters are closed to commercial fishing.
- Since 2012, the European Union and Australia have proposed an MPA in East Antarctica. An MPA was proposed in the Weddell Sea by the EU and Norway and in the waters surrounding the Antarctic Peninsula by Chile and Argentina.
- In 2021, India extended its support for designating East Antarctica and the Weddell Sea as MPA.
- But according to reports, China and Russia blocked these efforts at the 41st annual meeting of the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR).

### **What is Krill?**

- Krill are small, shrimp-like crustaceans that are found in all the world's oceans. They are an important part of the marine food chain, serving as a primary food source for many species of fish, birds, and whales.
- Krill are typically 1 to 6 centimeters in length and are known for their distinctive appearance, which includes large eyes, a translucent body, and long, feathery antennae.
- Krill plays a crucial role in regulating the Earth's climate by removing carbon dioxide from the atmosphere and storing it in the deep ocean.