Sagar Manthan

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

Why in News?

Recently, Kolkata-based GRSE has launched the indigenous ocean research vessel 'Sagar Manthan', marking a boost to India's maritime research capabilities.

- The facility is being constructed for the **National Centre for Polar and Ocean Research (NCPOR)**.
- Developed as part of the **Deep Ocean Mission**.
- Expected to be operational by **early 2028**.
- **Objective –** To enhance India's capabilities in **deep-sea exploration, oceanographic research, and geophysical surveys**.

Deep Ocean Mission (DOM)
• **DOM –** It is a Government of India initiative aimed at developing technologies and capabilities for the **exploration and sustainable use of deep-ocean resources**. • **Nodal ministry –** Ministry of Earth Sciences (MoES) • **Six thematic areas** - Development of Technologies for Deep Sea Mining, Manned Submersible, and Underwater Robotics, - Development of Ocean Climate Change Advisory Services, - Technological innovations for exploration and conservation of deep-sea biodiversity, - Deep Ocean Survey and Exploration, - Energy and freshwater from the Ocean and - Advanced Marine Station for Ocean Biology

- **Key features**
- **Oceanographic research –** It includes ocean measurements, sampling, CTD profiling,

and current and meteorological observations.

- **Deep-sea and geophysical surveys –** It involve multibeam bathymetry, seismic surveys, and sub-bottom profiling to **depths of up to 6 kilometers.**
- **Autonomous and remotely operated systems –** It deploy AUVs for autonomous surveys and data collection, as well as ROVs for remote inspection and operations.
- **Marine sampling –** It covers water, biological, seabed, and rock sampling, along with mooring and buoy operations.
- **Atmospheric and weather research** – It utilizes Doppler radar, meteorological instruments, and upper-air systems to support ocean-climate studies.
- **Geographic reach –** It extends from the Indian Ocean to Antarctica, operating in both coastal and deep waters, including severe sea conditions.
- **Marine mineral resource activities –** It focus on exploring deep-sea manganese nodules and polymetallic sulphides for strategic minerals.

Reference

The Hindu | Sagar Manthan