

## Mission Samudrayaan

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Why is in news? India suits up for deepest dive yet

Samudrayaan Mission is aimed to **develop a self-propelled manned submersible** to carry three human beings to a water depth of 6,000 meters in the ocean with a suite of scientific sensors and tools for deep ocean exploration.

It has an endurance of 12 hours of operational period and 96 hours in case of emergency.

The **projected timeline is five years** for the period 2020-2021 to 2025-2026.

India has a **unique maritime position**: a 7517 km long coastline, which is home to nine coastal states and 1,382 islands.

The mission **aims to boost the Central government's vision of New India** that highlights the Blue Economy as one of the ten core dimensions of growth.

India will send three personnel to 6,000 metre depth in a vehicle called Matsya 6000 for the exploration of deep-sea resources like minerals.

MATSYA 6000 vehicle is being designed and developed by Chennai-based National Institute of Ocean Technology (NIOT) which is an autonomous society under the Ministry of Earth Sciences.

Indian Space Research Organization (ISRO), IITM, and Defence Research and Development Organisation (DRDO) will actively participate in this mission.

India will be joining the elite club of nations such as the US, Russia, Japan, France, and China to have niche technology and vehicles to carry out subsea activities.

## Significance:

The manned submersible facilitates the direct observation by the human in deep ocean in **exploring mineral resources** rich in Nickel, Cobalt, Rare Earths, Manganese etc. and collection of samples, which can be used for analysis.

The mission has immediate spin-offs in the form of **underwater engineering innovations** in asset inspection, tourism and promotion of ocean literacy.

The manned submersible will enable research experts to **directly examine and comprehend unexplored deep-sea regions**.

It promotes aquaculture, tourism, livelihood, and blue trade.

**The Deep Ocean Mission**: It was approved in June 2021 by the **Ministry of Earth Sciences**. It aims to explore the deep ocean for resources, develop deep-sea technologies for sustainable use of ocean resources, and support the Blue Economy Initiatives of the Indian Government.

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