

India's First Manned Deep Ocean Mission To Be Launched By 2026 End



Kochi: India's first manned deep ocean mission 'Samudrayaan' into a 6,000-metre depth using the manned submersible vehicle 'Matsya' is expected to be launched by the end of 2026, National Institute of Ocean Technology (NIOT) Director Balaji Ramakrishnan said on Tuesday. He was speaking after inaugurating a five-day national training programme on the 'role of fisheries in the blue economy' at the ICAR-Central Marine Fisheries Research Institute (CMFRI) here. "The mission will enable deep-sea exploration down to 6000 metres, carrying three

scientists on board 'Matsya.' The NIOT, under the Ministry of Earth Sciences, is the implementing nodal agency of the deep ocean mission," he said.

Developed with India's indigenous technology, this advanced 25-tonne 4th generation vehicle is specifically engineered to withstand extreme pressure and temperature in the deeper ocean, with a hull made of titanium. "This mission is expected to be a game-changer for India's deep-sea research, opening avenues for the assessment of both living and non-living resources in the deep ocean, comprehensive ocean observation, and the potential for deep-sea tourism," Ramakrishnan said. The launch is planned as a step-by-step process, and a crucial phase of the 500 m depth trial is anticipated by the end of this year," he said, adding the journey to dive deep will take four hours, and the same time is expected to come out.

The mission will be instrumental in collecting critical samples from the deeper oceanic zone, offering opportunities for scientists to understand the unique characteristics of the organism and the water in the region, the NIOT director said. Citing another breakthrough in the sector, he said an innovative technology named 'Samudrajivah' has been developed to focus on improved large-scale open sea age farming.

"The technology is currently in the demonstration phase," he said, pointing out that these electronically monitored submerged fish cages are designed for offshore regions, capitalising on the nutritionally rich deep-sea environment to optimise the fish growth. Having different sensors, Samudrajivah is capable of remote monitoring of individual fish biomass, growth and movement and water quality parameters, he added. "The technology is expected to be one of the major developments in India's food security," he said. These emerging technologies would be crucial for sustainable development in the marine fisheries sector and will significantly support the country's blue economy initiatives, Dr Ramakrishnan said.

The training programme on fisheries is being jointly organised by the CMFRI and Vijnana Bharati (VIBHA). In his presidential address, CMFRI director Dr Grinson George said integrating NIOT's technology with CMFRI's marine research achievements would be instrumental in the advancement of a healthy blue economy in India. "Technological enhancement is an urgent need to fully exploit the potential of mariculture activity in India, especially seaweed cultivation", he said and stressed the need for advisories or early warning systems for jellyfish blooms and harmful algal blooms to support fishermen and fish farmers. Former director of Indian National Centre for Ocean Information Services Satheesh Shenoi, VIBHA secretary general Vivekananda Pai, and former director of National Institute of Oceanography (NIO) Dr S Prasanna Kumar also spoke on the occasion, a release from the CMFRI here said.