

GOVERNMENT OF INDIA
MINISTRY OF EARTH SCIENCES
RAJYA SABHA
UNSTARRED QUESTION NO. 3085
ANSWERED ON 19/03/2026

DEEP-SEA MINING

3085 DR. BHAGWAT KARAD:
SHRI KESRIDEVSINH JHALA:
SMT. KIRAN CHOUDHRY:
SHRI RAJIB BHATTACHARJEE:
SHRI NARAYANA KORAGAPPA:

Will the Minister of Earth Sciences be pleased to state:

- (a) whether the indigenous human submersible MATSYA-6000 is on schedule for its 500-meter shallow water dive planned for May 2026,
- (b) if so, the details thereof;
- (c) how the successful testing of the deep-sea mining system at 5,270 meters in 2025 has influenced the current roadmap for commercial mineral extraction;
- (d) whether the Ministry has established a framework for private sector participation in sustainable development of Blue Economy resources; and
- (e) if so, the details thereof?

ANSWER

THE MINISTER OF STATE (INDEPENDENT CHARGE) FOR
MINISTRY OF SCIENCE AND TECHNOLOGY
AND EARTH SCIENCES
(DR. JITENDRA SINGH)

- (a) MATSYA-6000 has been successfully designed and completed wet/harbour trials demonstrating functionality (including floatation, vehicle stability, manoeuvrability, power, communication, and control devices) and human support and safety systems in January-February 2025. The 500-meter shallow-water dive requires the realisation and integration of several components, including a critical component: custom-designed syntactic foam. This foam is being designed by India and developed by a designated firm in Europe. Unfortunately, this component is not yet ready due to some manufacturing defect. It is expected to arrive in India by the end of May. After the integration and testing of this material, the shallow-water dive is scheduled to be executed in the last quarter.
- (b) The Ministry of Earth Sciences, through the National Institute of Ocean Technology in Chennai, has developed a seabed mining system to collect and crush polymetallic nodules. The mobility and system-powering trials for this system were conducted at a depth of 5,270 m in 2021 in the Central Indian Ocean. Therefore, no deep-sea mining system trials have been conducted at 5,270 m in 2025. Further, commercial mining is governed by the Exploitation Code, which has not yet been developed by the International Seabed Authority, entrusted with this mandate.
- (c)-(e) The Ministry is actively engaged in promoting private sector participation in the sustainable development of “Blue Economy” resources. To achieve this goal, the ministry employs a variety of methods, one of which is tendering.
