GOVERNMENT OF INDIA
MINISTRY OF EARTH SCIENCES
RAJYA SABHA
UNSTARRED QUESTION NO. 3719
ANSWERED ON 03/04/2025

DEEP OCEAN MISSION

3719. **SHRI DIGVIJAYA SINGH:**

Will the Minister of **Earth Sciences** be pleased to state:

(a) the total budgetary allocation and utilisation for the Deep Ocean Mission since its inception, year-wise;
(b) the data on public and private sector entities involved in developing the indigenous deep-sea submersible technology;
(c) the progress made in developing the submersible vehicle intended to explore depths of up to 6,000 metres, and by when its deployment is expected; and
(d) the key findings which have been made from the exploration of polymetallic nodules in the Central Indian Ocean Basin and the manner in which these findings would impact the country's resource strategy?

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

(a) The Ministry of Earth Sciences launched the Deep Ocean Mission in 2021. The year-wise total budgetary allocation and utilisation for the Deep Ocean Mission since its inception is provided in the table below.

(Rs. In Crore)

Financial Year →	**2021-22**	**2022-23**	**2023-24**	**2024-25**
Budget Allocation	150	650	600	600
Expenditure	59.93	98.07	214.42	585.95*

* As on 28/3/2025.

(b) The public sector entities involved in developing Matsya-6000 include ISRO, DRDO, IITs, Indian Navy, laboratories of DRDO, ISRO, MIDHANI, and SAMEER-Chennai. The private sector entities include Larson & Toubro, TEAM-Chennai, TiNI industries-Chennai, VMX Connector-Kochi, Rangsons Aerospace-Bangalore, Unique Hydra-Mumbai, and Mishra Dhatu Nigam Ltd-Hyderabad.

(c) Matsya-6000 is India's flagship human submersible aimed to carry three persons to a depth of 6000 meters, developed by the National Institute of Ocean Technology, Chennai, under the Ministry of Earth Sciences. The design, realisation of components, and integration of Matsya 6000 are complete. The system has been designed and tested as per international standards. It is successfully demonstrated with three crew onboard at the Katupalli harbour near Chennai for its functionality (including floatation, stability, manoeuvrability, power and control devices, and human support and safety).

(d) The International Seabed Authority has allocated a 75,000 sq. km area in the Central Indian Ocean to India for the survey and exploration of polymetallic nodules. Deep sea surveys for polymetallic nodules have been conducted. Further, exploratory mining trials for polymetallic nodules were successfully conducted in the Andaman Sea EEZ through a self-propelled seabed nodule mining system developed by the National Institute of Ocean Technology, Chennai. Commercial extraction of polymetallic nodules is governed by the Exploitation Code, which the United Nations-International Seabed Authority has yet to publish. The preliminary assessed polymetallic nodule resource potential is an estimated 380 million tonnes, containing nearly 4.7 million tonnes of nickel, 4.29 million tonnes of copper, 0.55 million tonnes of cobalt and 92.59 million tonnes of manganese to the country's mineral resources.

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