

**GOVERNMENT OF INDIA
MINISTRY OF EARTH SCIENCES
LOK SABHA
UNSTARRED QUESTION NO. 2803
TO BE ANSWERED ON FRIDAY, 12TH MARCH, 2021**

Deep Ocean Mission

**2803. SHRI KRIPANATH MALLAH:
SHRI FEROZE VARUN GANDHI:
DR. KALANIDHI VEERASWAMY:**

Will the Minister of EARTH SCIENCES be pleased to state:

- (a) whether the Government proposes to launch Deep Ocean Mission in the country;
- (b) if so, the details thereof along with the aims and objectives and the goals set by the Government under the Mission;
- (c) the details of funds allocated under Deep Ocean Mission along with the states/UTs likely to be covered thereunder;
- (d) whether the Government is also collaborating with the Non-Governmental organisations for research and explorations and if so, the details thereof; and
- (e) the details of the efforts being made by the Government under Deep Ocean Mission for exploring in Central Indian Ocean Basin?

**ANSWER
MINISTER FOR MINISTRY OF SCIENCE AND TECHNOLOGY AND
MINISTRY OF EARTH SCIENCES
(DR. HARSH VARDHAN)**

- (a) Yes, Sir.
- (b) The Deep Ocean Mission is proposed as multi-ministerial multi-disciplinary programme with emphasis on development of deep sea technology, exploration of deep sea mineral resources and biodiversity, acquisition of a research vessel for exploration, deep sea observations, and capacity building. Ministry of Earth Sciences is the nodal agency for implementing the programme. The major objectives proposed under Deep Ocean Mission are as follows:
 - i. Development of technologies for deep sea mining, underwater vehicles and underwater robotics;
 - ii. Development of ocean climate change advisory services;

- iii. Technological innovations for exploration and conservation of deep sea biodiversity;
- iv. Deep ocean survey and exploration;
- v. Proof of concept studies on energy and freshwater from the ocean; and
- vi. Establishing advanced marine station for ocean biology

(c) The year wise and component wise estimates of the scheme are as follows:

S.No	Sub-scheme	2021-22	2022-23	2023-24	Subtotal Phase I		2024-25	2025-26	Subtotal Phase II	TOTAL
1	Development of Technologies for Deep Sea Mining, Underwater Vehicles and Underwater Robotics.	293.4	406.6	377.4	1077.40	Review of Phase-I	268.8	191.8	460.60	1538
2	Development of Ocean Climate Change Advisory Services,	22.3	21.05	23.75	67.1		18.7	14.2	32.9	100
3	Technological innovations for exploration and conservation of deep sea biodiversity,	157.25	143.52	59.78	360.55		43.1	21.35	64.45	425
4	Deep Ocean Survey and Exploration,	189.5	242	298	729.5		307.5	248.5	556	1285.50
5	Energy and freshwater from the Ocean	6.8	19.8	29.2	55.8		27.1	17.1	44.2	100
6	Advanced marine station for Ocean Biology	181	198	188	567		72	81	153	720
	TOTAL	850.25	1030.97	976.13	2857.35		737.2	573.95	1311.15	4168.50
Phase I							Phase II			
2857.35							1311.15			

The Deep Ocean Mission is proposed to be a Central Sector Scheme and no separate allocation for States is envisaged. The funds are expected to be allocated based on the above estimates.

(d) Yes, Sir. It is proposed to collaborate with non-governmental organizations for research collaboration for various components of Deep Ocean Mission.

(e) Under Deep Ocean Mission, it is proposed to develop, test and demonstrate the mining technology for harvesting of polymetallic nodules from the Test Mine Site (TMS) in the allocated area of 75000 sq. km in the Central Indian Ocean Basin (CIOB). A manned submersible for 6000 m depth is also proposed to be developed as an ocean exploratory tool.
