

**GOVERNMENT OF INDIA
MINISTRY OF EARTH SCIENCES
RAJYA SABHA
UNSTARRED QUESTION No. - 2580
ANSWERED ON 23/03/2023**

STATUS OF DEEP OCEAN MISSION

**2580. # SH. JUGALSINH LOKHANDWALA:
SH. K.R. SURESH REDDY:**

Will the Minister of Earth Sciences be pleased to state:

- (a) the details of the current status of the Deep Ocean Mission, including the goals of the Mission and achievements made so far;
- (b) whether there exist any specific measures under the Mission that benefit the coastal States of the country; and
- (c) the steps being taken by the Ministry to promote Blue economy along with the details of the benefits of the Deep Ocean Mission to the country and its Blue economy?

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

- (a) The Deep Ocean Mission is a multi-ministerial, multi-disciplinary programme with emphasis on development of deep-sea technology that includes development of Manned Submersible rated for 6000 metre water depth along with technologies for deep sea mining, exploration of deep-sea minerals resources and marine biodiversity, development of ocean climate change advisory services, deep sea surveys and exploration, and capacity building in Marine Biology.

The design and development of sub-systems of Manned Submersible to carry 3 humans has been completed and integration is in progress. The design of mining machine is ready and demonstration trial is planned during 2024-26. The activities like exploration of Marine biodiversity, development of ocean climate change advisory services, and acquisition of multidisciplinary research vessel for deep sea surveys is in progress.

- (b) The technologies developed under the Mission would help in exploration of the oceans and possible harnessing of non-living resources like energy, fresh water, and strategic minerals. The advisories to be developed under Vertical 2 of the Mission about Sea level, intensity and frequency of the storms etc. would be useful for the societal and economical benefits of the Indian coastal regions.
- (c) Objectives of the Mission are intended for the better understanding of the deep sea living and non-living resources of the Indian Ocean thereby aiding efforts on blueEconomy. Exploration for the strategic minerals like Cobalt, Nickel, Copper and Manganese are expected to pave way for the future commercial exploitation of these resources. Studies on Ocean Thermal Energy Conversion are intended for the offshore generation of energy and fresh water.
