

**GOVERNMENT OF INDIA
MINISTRY OF EARTH SCIENCES
LOK SABHA
UNSTARRED QUESTION No. 2349
TO BE ANSWERED ON WEDNESDAY, DECEMBER 26, 2018**

SEABED MINERAL EXPLORATION

2349. SHRI SHIVKUMAR UDASI:

Will the Minister of EARTH SCIENCES be pleased to state:

- (a) whether the Government plans to develop and test deep sea technologies for seabed minerals;**
- (b) if so, the details of the licenses issued by International Seabed Authority (ISBA) to India to explore deep sea minerals; and**
- (c) whether the Government has conducted any detailed study to assess the damage that exploration and mining could cause to the ecology of deep sea and if so, the details thereof?**

ANSWER

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

- (a) Yes, Madam. Ministry of Earth Sciences has a programme on technology development in Mining and Extractive Metallurgy for polymetallic nodules in a phasewise manner. As a first phase of development, National Institute of Ocean Technology (NIOT), an autonomous Institute under the Ministry of Earth Sciences has designed and developed a prototype shallow bed mining system capable of working upto a depth of 500 m. The system has been demonstrated successfully at a water depth of 512 meters off the Malvan coast. In addition, a remotely operable submersible (ROSUB 6000) and a remotely operable in-situ soil testing equipment was also developed.**
- (b) International Sea Bed Authority (ISBA) has not issued any license to India to explore deep sea minerals. However, Ministry of Earth Sciences signed a 15 year contract with International Sea Bed Authority (ISBA) for exploration of polymetallic nodules from the Central Indian Ocean Basin (CIOB) on 25th March, 2002 which was later extended for a further period of 5 years up to March, 2022. Another 15 year contract was signed with ISBA for exploration of polymetallic sulphides in Indian Ocean basin near Rodriguez Triple Junction on 26th September, 2016.**

- (c) **Yes, Madam. A benthic disturbance was created in seabed in the allocated area in CIOB in 1996-97. Environmental studies for mining of deep-sea polymetallic nodules were undertaken to evaluate the possible impacts of mining on deep-sea environment. In order to study effects of sediment re-suspension and resettlement, monitoring of the environmental parameters were carried out by collection of samples at the test and reference areas for the benthic disturbance experiment. Results of the monitoring cruises have indicated that the benthic conditions are steadily moving towards restoration and the effect of disturbance is waning off.**
