

**GOVERNMENT OF INDIA  
MINISTRY OF EARTH SCIENCES  
LOK SABHA  
UNSTARRED QUESTION NO. 1430  
TO BE ANSWERED ON WEDNESDAY, 31<sup>ST</sup> JULY, 2024**

**DEEP-SEA EXPLORATION**

1430 SHRI PRATAP CHANDRA SARANGI:  
SHRI MAHENDRA SINGH SOLANKY:  
SHRI VIJAY BAGHEL:  
DR. VINOD KUMAR BIND:

Will the Minister of EARTH SCIENCES be pleased to state:

- (a) whether the Government has taken steps for deep-sea exploration;
- (b) if so, the details thereof;
- (c) whether the Government has taken any steps to increase the activities of ocean-mining; and
- (d) 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) Yes.
- (b) Ministry of Earth Sciences signed a contract with International Seabed Authority (ISA), a body established under United Nations Convention on the Law of the Sea (UNCLOS) for exploration of polymetallic nodules from Central Indian Ocean Basin (CIOB) and extensive survey and other developmental activities have been carried out in 75000 sq km area retained by India in CIOB. MoES has undertaken exploration and other developmental activities related to polymetallic sulphides under another contract signed with International Seabed Authority (ISA) for exploration of polymetallic sulphides in the allotted area of 10,000 sq km along Central Indian Ridge (CIR) & Southwest Indian Ridge (SWIR) region of the Indian Ocean. Geological Survey of India (GSI) under Ministry of Mines has delineated prospective offshore areas within Exclusive Economic Zone (EEZ) of India for marine mineral resources like limemud, heavy mineral placers [ilmenite, monazite, rutile, sillimanite, garnet, zircon], and construction sand.
- (c) Yes.
- (d) National Institute of Ocean Technology (NIOT) under Ministry of Earth Sciences has developed, demonstrated and operated unmanned remotely operated systems to harness ocean resources. Locomotion trials of the machine were undertaken in 2021 at the Central Indian Ocean Basin (CIOB) at depths of 5270 m. An Autonomous Underwater Vehicle (AUV) rated for 6000 m depth was acquired and has been used for seabed survey and photography of the polymetallic nodules fields at the CIOB and polymetallic sulphide in the mid-ocean ridge region in the Indian Ocean.

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