

**GOVERNMENT OF INDIA  
EARTH SCIENCES  
LOK SABHA**

UNSTARRED QUESTION NO:2716  
ANSWERED ON:05.08.2015  
Exploration for Minerals  
Owaisi Shri Asaduddin

**Will the Minister of EARTH SCIENCES be pleased to state:**

- (a) whether India has for the first time started exploration for mineral deposits and metals like gold and silver in the Indian Ocean;
- (b) if so, the details thereof;
- (c) the total area granted by International Seabed Authority to India for such exploration;
- (d) the present status of exploration activities; and
- (e) the total mineral and metals expected by the Government from such exploration in future?

**Answer**

THE MINISTER OF STATE FOR MINISTRY OF SCIENCE AND TECHNOLOGY AND  
MINISTRY OF EARTH SCIENCES  
(SHRI. Y. S. CHOWDARY)

(a) Yes, Madam.

(b&c) Seven cruises were undertaken to collect scientific data and samples pertaining to polymetallic sulfides along Central Indian Ridge (CIR) & Southwest Indian Ridge (SWIR) region of the Indian Ocean in the year 2012-13. Based on the outcome of these surveys, India submitted an application for exclusive rights of exploration of polymetallic sulfides at a site of 10000 sq km along CIR & SWIR in Indian Ocean in 2013, which was approved by International Seabed Authority (ISA) in 2014. The polymetallic sulfides are expected to contain rare earth minerals including gold and silver. Further, Government of India has an area of 75000 sq km in the Central Indian Ocean Basin (CIOB) for exploration of Polymetallic Nodules.

(d) Close grid bathymetric surveys have been carried out in 75000 sq km are retained by India in CIOB for Polymetallic Nodules. A Test Mine Site (TMS) has been tentatively identified within the First Generation Mine Site (FGMS) for further detailed studies.

(e) The programme is at a stage of developing relevant technologies for harvesting polymetallic nodules lying at 4000m to 5000m water depth. Initial estimated resource of polymetallic nodules in the site retained by India in the Central Indian Ocean Basin is about 380 Million Metric Tonne (MMT) with 0.55 MMT of Cobalt, 4.7 MMT of Nickel, 4.29 MMT of Copper and 92.59 MMT of Manganese. However, the actual estimates will vary depending upon the new results of detailed survey and exploration coupled with results of test mining of nodules upon developing the mining technology.