

**GOVERNMENT OF INDIA
MINISTRY OF EARTH SCIENCES
LOK SABHA
UNSTARRED QUESTION No. 3952
TO BE ANSWERED ON WEDNESDAY, AUGUST 10, 2016**

OCEAN RESOURCES

3952. SHRI RABINDRA KUMAR JENA:

Will the Minister of EARTH SCIENCES be pleased to state:

- (a) the efforts being made by the Government to conduct detailed study and research on ocean resources in Indian Ocean;**
- (b) whether the Government is working on a plan along with other countries for proper and long standing use of ocean resources;**
- (c) If so, the details thereof; and**
- (d) the total number of ocean research vessels functioning for ocean research along with the number of vessels which have outlived their utility?**

ANSWER

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

- (a) Government of India signed a 15 year contract with International Seabed Authority (ISA) for exploration of polymetallic nodules from Central Indian Ocean Basin (CIOB) in 2002. Extensive survey has been carried out in 75000 sq km area retained by India in CIOB.**

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 Cabinet has recently approved the signing of contract with ISA for exploration of polymetallic sulfides.

Exploration of Gas Hydrates has been carried out by conducting 3D seismic survey in the Krishna-Godavari and the Mahanadi basins.

Preliminary exploration has been carried out to identify occurrence of cobalt-enriched ferromanganese crusts and assessment of resource potential of cobalt rich deposits in the Afanasiy-Nikitin Seamount region.

Central Marine Fisheries Research Institute under Indian Council of Agricultural Research, Ministry of Agriculture undertakes the study pertaining to marine fisheries including fishery resource monitoring; fisheries and ecosystem modelling; sustainable management of fishery resources; fish genetics and genomics; fish nutrition; fish health and bio prospecting; brood stock development and seed production; marine biodiversity; and marine habitats etc.

(b&c) Yes, Madam. A Test Mine Site (TMS) has been tentatively identified with in the First Generation Mining Site (FGMS) for further detailed studies pertaining to polymetallic nodules. In this regard, as a part of development of a pilot mining system in a phased manner, a crawler based prototype shallow bed mining system has been developed and demonstrated at a water depth of 512 m. Extraction of copper, nickel and cobalt from polymetallic nodules has been demonstrated in a pilot plant with a capacity to process 500 kg nodules per day at Hindustan Zinc Limited, Udiapur. There is no collaboration with foreign government/foreign organisation in this regard.

(d) Oceanographic Research vessels Sagar Kanya, Sagar Sampada, Sagar Manjusha and Sagar Nidhi of Ministry of Earth Sciences, Samudra Ratnakar of Geological Survey of India (GSI), Ministry of Mines and Sindhu Sankalp and Sindhu Sadhana of National Institute of Oceanography (NIO), Council of Scientific & Industrial Research are deployed for ocean research. Oceanographic Research vessels Samudra Manthan of GSI and Gaveshani of NIO have outlived their utility.
