GOVERNMENT OF INDIA
EARTH SCIENCES
LOK SABHA

STARRED QUESTION NO:270
ANSWERED ON:12.12.2012
POLYMETALLIC NODULES PROGRAMME
Lal Shri Kirodi

Will the Minister of EARTH SCIENCES be pleased to state:

(a) whether any polymetallic nodules programme is being implemented by the Government;

(b) if so, the details thereof including its strategic and economic importance to the country;

(c) whether the Government is considering exploration and extraction of the polymetallic nodules of various metals from the Indian ocean;

(d) if so, the details thereof including the sites identified for the purpose; and

(e) whether China is way ahead in this field and if so, the details thereof and the measures taken/being contemplated by the Government to promote our efforts in this regard?

Answer

MINISTER FOR MINISTRY OF SCIENCE AND TECHNOLOGY AND MINISTRY OF EARTH SCIENCES (SHRI S. JAIPAL REDDY)

(a) to (e): A statement is laid on the Table of the House.

STATEMENT LAID ON THE TABLE OF THE LOK SABHA IN REPLY (a) to (e) TO STARRED QUESTION NO. 270 REGARDING "POLYMETALLIC NODULES PROGRAMME" TO BE ANSWERED ON WEDNESDAY, DECEMBER 12, 2012

(a) Yes, Madam. India is implementing the Polymetallic Nodules Programme.

(b) India's Polymetallic Nodules programme is oriented towards exploration and development of technologies for harnessing of nodules from the Central Indian Ocean Basin (CIOB) allocated to India. It has 4 components viz. Survey & Exploration, Environmental Impact Assessment, Technology Development (Mining), and Technology Development (Metallurgy). In the 75,000 sq. km area of CIOB, the estimated polymetallic nodule resource potential is 380 million tones, containing 4.7 million tonnes of nickel, 4.29 million tonnes of copper and 0.55 million tonnes of cobalt and 92.59 million tonnes of manganese. Cobalt and nickel are strategically important metals.

(c) Yes, Madam.

(d) While, the extraction of metals from the polymetallic nodules lying at the deep ocean floor is not yet found to be economically viable at this stage, an area of about 7860 square km has been identified in the CIOB for the First Generation Mine Site on the basis of detailed surveys & analysis. Environmental studies for mining of deep-sea polymetallic nodules were also carried out to evaluate the possible impacts of mining on deep-sea environment. A Remotely Operable Submersible (ROSUB 6000), capable of operating at 6000 m water depth was also developed and tested successfully at a depth of 5289 m for assessing environmental conditions beyond 5000 m. A remotely operable in-situ soil testing equipment was also developed for obtaining detailed geotechnical properties of the mining area at Central Indian Ocean Basin (CIOB) and tested successfully at 5462 m water depth. A mining system is under development. A demonstration pilot plant with a capacity to process 500 kg nodules per day was commissioned on semi-continuous basis successfully for extracting copper, nickel and cobalt at Hindustan Zinc Limited, Udaipur. Another pilot plant has been commissioned at National Metallurgical Laboratory, Jamshedpur with processing capacity of 500 kg per day for production of ferro-sillico-manganese ore from the residue obtained from the HZL plant.

(e) India has entered into a 15-year contract with the International Seabed Authority in the year 2002 for pursuing developmental activities for polymetallic nodules in the Indian Ocean. India continues to pursue the polymetallic nodules programme coupled with research and development efforts. China Ocean Mineral Resources Research and Development Association (COMRA), China has been engaged in carrying out the activities pertaining to exploration of Polymetallic Nodules in the Pacific Ocean. The details of its activities are not known.