

**GOVERNMENT OF INDIA  
EARTH SCIENCES  
LOK SABHA**

UNSTARRED QUESTION NO:2664

ANSWERED ON:16.03.2007

UNEXPLORED MINERALS IN SEA

Gaikwad Shri Eknath Mahadeo;Mane Smt. Nivedita;Singh Shri Kirti Vardhan

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

(a) whether an unexplored seabed south of Kanyakumari in the Central Indian Ocean has been spotted containing rich minerals as reported in `The Times of India` dated December 16, 2006 ;

(b) if so, the details thereof;

(c) whether the Government has any plan to explore this area ;

(d) if so, the likely expenditure involved and the benefits expected; and

(e) the time by which it is likely to be explored ?

**Answer**

MINISTER OF SCIENCE & TECHNOLOGY AND MINISTER OF EARTH SCIENCES(SHRI KAPIL SIBAL)

(a)&(b) Yes Sir. An unexplored seabed, south of Kanyakumari in the Central Indian Ocean Basin (CIOB) was spotted in early 1980s. Recognizing the exploratory efforts, India was accorded the status of first pioneer investor on 17th August, 1987 and was allocated an area of 150000 sq. km. for carrying out exploration and developmental activities for polymetallic nodules lying at seabed. Upon detailed exploratory surveys, India has retained an area of 75,000 sq. km. in CIOB.

(c),(d)&(e) Yes sir. As a registered pioneer investor, the Government is pursuing various developmental activities in the Area. They are surveys & exploration, Environmental Impact Assessment study, development of mining activities and development of process technology for extraction of metals from nodules. This Ministry has collected 250 tonnes of nodules from the Indian ocean site over a period of time for extraction of metals (copper, nickel, cobalt & manganese). The deep seabed mining is not yet found economical at this stage. There is no plan to have commercial mining of deep seabed minerals as of now. However, technology development for mining the nodules are under progress in phases. As a first phase of development, National Institute of Ocean Technology (NIOT), Chennai, a technical arm of the Ministry has designed and developed a prototype shallow bed mining system capable of working up to a depth of 500 m. The system has been demonstrated successfully at a depth of 451 meters in the Arabian Sea off Goa during 2006. Development of integrated mining module with collector and crusher is under progress. A Remotely Operated Submersible (ROSUB-6000) capable of operating up to a water depth of 6 km. is being developed jointly by NIOT and Experimental Design Bureau of Oceanological Engineering (EDBOE). ROSUB-6000 is undergoing field trials in the sea in phase-wise manner.