

**GOVERNMENT OF INDIA
OCEAN DEVELOPMENT
LOK SABHA**

UNSTARRED QUESTION NO:5625
ANSWERED ON:02.05.2000
EXPLORING OF OCEAN BED
SRIKANTA DATTA NARASIMHARAJA WADIYAR;VILAS BABURAO MUTTEMWAR

Will the Minister of OCEAN DEVELOPMENT be pleased to state:

- (a) the details of the ocean bed explored by the government during the last three years and the current year;
- (b) whether copper, nickel, cobalt and manganese were found in certain areas of the ocean bed in the form of polymetallic nodules;
- (c) if so, the details thereof;
- (d) the programmes drawn up by the government for the proper exploration and exploitation of these metals;
- (e) whether India has developed World's first under water mining system to exploit vast reserves of resource rich polymetallic nodules deep in the ocean bed;
- (f) if so, the details thereof; and (g) the extent to which it is likely to be further expanded?

Answer

MINISTER OF OCEAN DEVELOPMENT

(DR. MURLI MANOHAR JOSHI)

(a) With respect to the polymetallic nodules, the Department of Ocean Development has explored 1,50,000 sq. km. Area allotted by the United Nations in the Central Indian Ocean Basin (CIOB) and an assessment of the potential of polymetallic nodules at the CIOB has been made.

(b), (c) & (d) Yes Sir. Polymetallic nodules are found at a depth of about 6,000 m in the CIOB. The programmes drawn up for exploring and exploiting the polymetallic nodules are:

- Survey & Exploration
- Environmental Impact Assessment studies
- Technology Development (Mining)
- Technology Development (Metallurgy)

These components are needed to exploit the resources in a sustainable manner.

(e), (f) & (g): The Government has recently demonstrated successfully a technology for shallow bed mining up to 410 m off tuticorin coast which has helped in pumping out clay bearing slurry. A number of sub-systems developed under this programme have the capability to reach up to 6000 m for deep sea mining. It is likely to take about five years from now on to establish its technical capabilities to explore the oceanic resources particularly the polymetallic nodules.