

**GOVERNMENT OF INDIA**  
**MINISTRY OF EARTH SCIENCES**  
RAJYA SABHA  
UNSTARRED QUESTION NO. 2201  
**ANSWERED ON 21/12/2023**

MINERAL RESERVES HIDDEN BENEATH THE SEA SURFACE

2201. # SHRI HARNATH SINGH YADAV:

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

- (a) whether Government is aware of the fact that innumerable precious mineral reserves like iron, copper, zinc, gold, platinum etc. are hidden beneath the sea-bed, if so, the details thereof; and
- (b) whether, keeping in view the prosperity and economic structure of the country, Government has formed any action plan to discover the boundless mineral wealth hidden beneath the sea, if so, the details thereof?

**ANSWER**  
THE MINISTER OF EARTH SCIENCES  
(SHRI KIREN RIJU)

- (a) Yes Sir. Various minerals are available in the form of polymetallic nodules, polymetallic sulphides and cobalt rich ferromanganese Crusts at the seabed. Polymetallic nodules present in the seafloor contain metals like nickel, copper, cobalt and manganese. Polymetallic sulphides are massive deposits in the hydrothermal vent area and contains precious metals like copper, zinc, lead, iron, silver, gold and platinum etc. The Cobalt-rich ferromanganese crusts occur at shallower depths in areas of seamounts and ridges and contains high concentration of cobalt along with other metals like nickel, manganese and platinum.
- (b) Yes Sir. Ministry of Earth Sciences has carried out deep sea mineral explorations in Indian Ocean under two exploration contracts with International Seabed Authority (ISA), a body under the United Nation Convention of the Law of the Sea (UNCLOS). Under the exploration contract for Polymetallic Nodules, resource characterisation and technology development activities are carried out in an area of 75000 sq. km of the Central Indian Ocean basin (CIOB). Survey activities are carried out in an allocated area of 10,000 sq. km. along central Indian Ridge (CIR) and South West Indian Ridge (SWIR) region in Indian Ocean under the contract for exploration of Polymetallic sulphides (PMS).

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