# GOVERNMENT OF INDIA
# EARTH SCIENCES
# LOK SABHA

STARRED QUESTION NO:157
ANSWERED ON:07.03.2013
DEEP SEA DRILLING SHIP
Mcleod Smt. Ingrid

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

(a) whether the Government proposes to get a drilling ship from United States, or Japan to drill and collect samples from deep sea to build data base for climate assessment;

(b) if so, the details thereof, and the estimated cost of the drilling ship;

(c) the manner in which it would help to make better climate and monsoon predictions; and

(d) the time by which the said ship is likely to be obtained?

## Answer

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

(a) - (d) A Statement is laid on the Table of the House.

STATEMENT LAID ON THE TABLE OF THE LOK SABHA IN REPLY (a) to (d) OF STARRED QUESTION No. 157 REGARDING "DEEP SEA DRILLING SHIP" TO BE ANSWERED ON THURSDAY, MARCH 07, 2013

(a) Yes, Madam.

(b) The Ministry of Earth Sciences, Govt. Of India signed an MoU with National Science Foundation (NSF), USA and Ministry of Education, Culture, Sports, Science and Technology (MEXT), Japan to become an Associate Member of the Integrated Ocean Drilling Program (IODP) - a consortium for scientific drilling in the ocean. The sediment and ocean crust cores obtained by the consortium have helped scientists significantly in unraveling several fundamental discoveries in last three decades. IODP employs two exclusive drilling platforms namely − JOIDES Resolution (managed by USA) and Chikyu (managed by Japan) to obtain deep sea sediment samples.

Soon after joining the consortium, India submitted a scientific proposal for drilling in the Arabian Sea to obtain deep sea sediment samples to decipher the link between the Himalayan uplift and Indian Monsoon. Testing of this hypothesis requires sediment samples from the deep sea fans that are eroded from Himalaya and deposited on the seafloor in Arabian Sea over several million years. The IODP vessel platforms routinely drill and obtain cores from below the ocean bottom for research for unraveling the earths dynamics and reconstruction of the past including the climate. The India IODP proposal, which is currently under scientific review by the consortium, intends to obtain deep sea sedimentary cores up to 1.5 km below the seafloor in the Arabian Sea in around 3.5 km water depth.

The cost estimates would depend upon the availability of the drilling platform (e.g. JR or Chikyu). It will be clear only after the acceptance of the Indian IODP proposal.

(c) The proposed sediment cores would allow scientists to examine the link between past uplift of Himalaya and the variability of Indian Monsoon over several millennia. Based on the principle that knowledge from the past would help us predict the future, the data derived from these sediment cores would allow us to understand long-term monsoonal variability and to construct the climate models which would in turn help us in understanding future dynamics of monsoon.

(d) The availability of the drilling platform depends upon the successful recommendations of the Indian IODP proposal from several IODP review panels. It is under consideration with the external review panel of the IODP.