

**GOVERNMENT OF INDIA  
MINISTRY OF EARTH SCIENCES  
LOK SABHA  
UNSTARRED QUESTION NO. 2924  
TO BE ANSWERED ON WEDNESDAY, 17TH DECEMBER, 2025**

**OCEAN MINING AND TECHNOLOGY UPGRADATION**

2924. SHRI NARAYAN TATU RANE:

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

- (a) whether the Government has taken steps to promote ocean mining and technology upgradation in the said area;
- (b) if so, the details thereof;
- (c) the number of heliport warning systems installed by the Government; and
- (d) the details of mobile applications developed for disseminating weather warnings?

**ANSWER**  
THE MINISTER OF STATE (INDEPENDENT CHARGE) FOR  
MINISTRY OF SCIENCE AND TECHNOLOGY  
AND EARTH SCIENCES  
(DR. JITENDRA SINGH)

- (a)&(b) Yes Sir. National Institute of Ocean Technology (NIOT), an autonomous Institute under the Ministry of Earth Sciences has designed a deep-sea bed mining system aiming at sustainable harvesting of polymetallic nodules from depths of up to 5500 m. A remotely operable submersible (ROSUB 6000) and a remotely operable in-situ soil testing equipment was also developed. NIOT has also designed the manned submersible namely MATSYA 6000.
- (c) India Meteorological Department (IMD) has installed fifteen (15) Heliport Automatic Weather Observing Systems (AWOS) in the country.
- (d) The mobile applications used for the dissemination of weather warnings are MAUSAM (for weather forecasting and warnings), MEGHDOOT (for Agricultural Meteorology (Agro-Mets services), DAMINI (for lightning warning), and UMANG (for Weather forecasting and warnings).

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