

**GOVERNMENT OF INDIA  
MINISTRY OF EARTH SCIENCES  
LOK SABHA  
UNSTARRED QUESTION NO. 4222  
TO BE ANSWERED ON WEDNESDAY, 26<sup>TH</sup> MARCH, 2025**

**PRITHVI Scheme**

4222. SHRI ADHIKARI SOUMENDU:

Will the Minister of EARTH SCIENCES be pleased to state:

- (a) whether the PRITHVI scheme provides advanced warning services for natural disasters like cyclones, floods, heat waves and earthquakes and if so, the details thereof;
- (b) whether the scheme ensures precise weather forecasts for land and oceans to enhance safety and minimize property damage in adverse weather conditions and if so, the details thereof; and
- (c) whether the scheme encourages the development of technology for exploring and sustainably harnessing oceanic resources and if so, the details thereof?

**ANSWER**

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

- (a) Yes Sir. The PRITHVI scheme provides advanced warning services for various natural disasters. Following are the efforts of MoES institutions in delivering the required early warning services for natural disasters:
  - India Meteorological Department (IMD) is dedicated for monitoring, detection and forecasting of severe weather and climate including early warning for severe weather events such as cyclones, heavy rainfall, Heat wave, etc. IMD uses a suite of quality observations from satellites, radars, and conventional & automatic weather stations for monitoring cyclones and prediction of weather. IMD follows a seamless forecasting strategy for long range (for a season as a whole) to nowcast for severe weather events (up to 3 hrs).
  - National Centre for Seismology (NCS) monitors the earthquake activity through National Seismological Network (NSN) comprising of 166 permanent seismological observatories in and around the country on 24x7 basis and this information is disseminated after the occurrence of the earthquake to all nodal state and central disaster management authorities in the least possible time.
- (b) Yes Sir. IMD issues short to medium-range forecasts and warnings daily valid for up to the next five days with an outlook for the subsequent two days. The short to medium-range forecast is followed by a very short-range forecast of severe weather up to three hours (nowcast) for all the districts and for about 1171 cities and towns at present.

Indian National Centre for Ocean Information Services (INCOIS) utilizes data from a well-maintained ocean observation platform, assimilating it into ocean models, and provide accurate forecasts, which enhances the safety of the coastal population and minimizes property damage to the extent possible in adverse weather conditions.

- (c) Yes Sir. The National Institute of Ocean Technology (NIOT) under the Ministry of Earth Sciences is involved in the realization of deep-sea manned and unmanned vehicles to explore deep-sea resources. An Autonomous Underwater Vehicle (AUV) capable for exploring deep sea upto 6000 meters is realized and deployed for ocean resource exploration activities in Indian Ocean.

Also, an indigenous technology Low-Temperature Thermal Desalination (LTTD) technology has been developed and demonstrated in various islands of Lakshadweep Islands for desalination of sea water.

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