

**GOVERNMENT OF INDIA
EARTH SCIENCES
LOK SABHA**

UNSTARRED QUESTION NO:67
ANSWERED ON:05.12.2013
TSUNAMI WARNING SYSTEM
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Will the Minister of EARTH SCIENCES be pleased to state:

- (a) whether Tsunami Warning System has been installed and is fully functional in the Indian Ocean;
- (b) if so, the details thereof and the extent of data collection from this system;
- (c) the reaction time to alert people in the country about any imminent danger of Tsunami or earthquake?

Answer

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

(a) Yes Madam.

(b) The Indian Tsunami Early Warning Centre (ITEWC) was established and made fully functional since 2007 and is now rendering operational services as a Regional Tsunami Watch Provider (RTWP) for whole of the Indian Ocean Region by the Earth System Science Organization - Indian National Centre for Ocean Information Sciences (ESSO-INCOIS) of the Ministry of Earth Sciences located in Hyderabad.

ITEWC comprises real-time seismic monitoring network of 17 broadband seismic stations apart from other national and international seismic stations to detect under- sea tsunamigenic earthquakes from the two known subduction zones of Andaman-Sumatra and Makran in Indian Ocean which can potentially affect entire Indian coastal states and Island regions, a network of real-time sea-level sensors with Bottom Pressure Recorders (BPR) in the open ocean, HF Radars for coastal currents and coastal tide gauge stations to capture tsunami wave speed and amplitude on 24 X 7 basis. All types of data collected from the ITEWC are fully archived and is fully accessible to the Decision Support System (DSS).

(c) The tsunami wave arrival time to different coastal locations depends upon the location of the under-sea earthquake and intensity. In general the tsunami reaction time will be around 2h for the Indian mainland if the earthquake has occurred in the vicinity of the two known subduction zones. As far as the Andaman & Nicobar Islands is concerned, the reaction time is around 30-minutes. Hence the standard operational procedure (SOP) and the emergency response plans are formulated in consultation with the Ministry of Home Affairs and the disaster management agencies of coastal states and UTs.