

**GOVERNMENT OF INDIA
MINISTRY OF EARTH SCIENCES
RAJYA SABHA
UNSTARRED QUESTION No. 511
TO BE ANSWERED ON MONDAY, July 23, 2018**

EARTHQUAKE PREDICTION SYSTEM

511. SHRI NARAYAN RANE :

Will the Minister of EARTH SCIENCES be pleased to state:

- (a) whether earthquake prediction system of the country is capable of predicting earthquake of any magnitude;**
- (b) if so, the extent to which it can be accurately predicted and alert sent across to save human lives; and**
- (c) if not, the reasons therefor ?**

ANSWER

**MINISTER FOR MINISTRY OF SCIENCE AND TECHNOLOGY AND
MINISTRY OF EARTH SCIENCES
(Dr. HARSH VARDHAN)**

- (a) – (c) To date, there is no proven scientific technique available, anywhere in the world, to predict the occurrence of earthquakes with reasonable degree of accuracy with regard to space, time and magnitude. However, National Centre for Seismology (NCS), maintains a country wide national seismological network, to detect and locate earthquakes occurring in and around the country. The network consists of state-of-art digital broadband seismographs, VSAT based communication systems and latest tools for dissemination of earthquake information to the concerned disaster management authorities and other user agencies in least possible time. The earthquake information is also made available on India Meteorological Department (IMD) website and on mobile App IndiaQuake.**

The national seismological network also includes a 17-station real time seismic monitoring system to monitor and report large magnitude earthquakes capable of generating tsunamis on the Indian coastal regions. An tsunami early warning system is also in place at Indian National Centre for Ocean Information Services (INCOIS), Hyderabad to provide early warning on tsunamis likely to be generated on the Indian Coastal areas by large magnitude under sea earthquakes.

The seismic hazard analysis for the whole country has been done. Under the aegis of Bureau of Indian Standard(BIS) [IS 1983 (Part I):2016], seismic hazard vulnerability of the country has been assessed and the seismic zoning map covering whole of India has been prepared. The country is grouped into four seismic zones viz. Zone-II, -III, -IV and -V. Of these, Zone V is seismically the most prone region, while Zone II is the least.

Guidelines have been published by the Bureau of Indian Standards (BIS), Building Materials & Technology Promotion Council (BMTPC) and Housing and Urban Development Corporation (HUDCO) etc. for the design and construction of earthquake resistant structures to minimize the loss of life and damage to property caused by earthquakes. These guidelines are in wide circulation amongst the public and the administrative authorities responsible for the design and construction of earthquake resistant structures in earthquake prone areas.
