

**GOVERNMENT OF INDIA**  
**MINISTRY OF EARTH SCIENCES**  
**LOK SABHA**  
**UNSTARRED QUESTION No. 3499**  
**TO BE ANSWERED ON WEDNESDAY, 22<sup>ND</sup> MARCH, 2023**

**EARTHQUAKE PRONE AREAS**

**3499. DR. M.P. ABDUSSAMAD SAMADANI:**

Will the Minister of Earth Sciences be pleased to state:

- (a) whether the Government has any plans to identify the earthquake-prone areas of India and to re-assess the seismic zones considering the recent incidents of earthquake in Turkey;
- (b) if so, the details thereof;
- (c) whether the Government has any new innovative technology for earthquake prediction; and
- (d) if so, the details thereof?

**ANSWER**

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

- (a) & (b) The entire country has already been divided into four seismic zones viz., zone V (highest seismically active), IV, III and II (least seismically active). A total of ~59% of the land mass of India (covering all states of India) is prone to earthquakes of different shaking intensities. As per the seismic zoning map of the country, ~ 11% area of the country falls in zone V, ~18% in zone IV, ~ 30% in zone III and remaining in zone II.

With reference to the recent incidents of Turkey earthquake, it may be mentioned that the Himalayan belt is considered as one of the most seismically active intra-continental regions of the world. This region has witnessed several moderate to great magnitude earthquakes along its about 2400 km long belt. The seismicity in this region is mainly attributed to the Main Himalayan Thrust along which Indian plate under thrusts beneath the Himalayan wedge. The prominent earthquakes in this region are 1897 Shillong plateau (M:8.1), 1905 Kangra (M:7.8), 1934 Bihar-Nepal border (M:8.3), Arunachal-China border 1950 (M:8.5), 2015 Nepal (M:7.9) indicating the process of strain accumulation in the Himalayan region.

- (c) & (d) To date, there is no proven scientific technique available, anywhere in the world, to predict the occurrence of earthquakes with reasonable degree of accuracy in location, time and magnitude. National Centre for Seismology (NCS), maintains a country wide national seismological network, to detect and locate earthquakes occurring in and around the country. The earthquake parameters are disseminated to all the concerned stake holders including the State Disaster Management Authority after occurrence of earthquake. In addition, data generated are being shared to use for R & D on various aspects of Seismology.

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