

**GOVERNMENT OF INDIA  
MINISTRY OF EARTH SCIENCES  
LOK SABHA  
UNSTARRED QUESTION No. 3302  
TO BE ANSWERED ON MARCH 13, 2020  
EARTHQUAKE PREPAREDNESS MEASURES**

**3302. DR BHARATIBEN DHIRUBHAI SHIYAL:**

**SHRI SHANKAR LALWANI:**

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

- a) whether there is need for undertaking earthquake preparedness measures in the earthquake prone zones and densely populated areas;**
- b) if so, the details thereof;**
- c) whether there is need to improve the present model of "National Monsoon Mission" for improving forecasts relating to monsoon; and**
- d) if so, the details thereof and if not, the reasons therefor?**

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

**(a)and (b) Sir, Earthquake preparedness is the key to reduce losses due to future large earthquakes in seismically vulnerable areas. National Centre for Seismology (NCS), under the Ministry of Earth Sciences (MoES), monitors the earthquake activity in and around the country on 24X7 basis and the information about the earthquake parameters is disseminated to all the user agencies and the disaster management authorities soon after the earthquake occurrence to help initiate taking mitigative measures.**

**MoES has also undertaken Seismic hazard Microzonation studies for various cities like, Delhi, Kolkata, Jabalpur, Sikkim, Guwahati, Bengaluru etc. The**

**studies are useful in land use planning and formulation of site-specific design and construction criteria for the buildings and structures towards minimizing the damage to property.**

**Bureau of Indian Standards (BIS) has also published criterion for construction of earthquake resistant structures. In addition, regulatory authority like NDMA and State Disaster Management Authorities carry out mock drill and organise earthquake awareness programme for the general public from time to time.**

**(c)and (d) The 'National Monsoon Mission' initiative has been taken-up by Ministry of Earth Sciences, Government of India to improve the current models to predict Indian monsoon rainfall & its variability with reasonably good prediction skill using dynamical ocean-atmosphere models. After the successful completion of Phase-I (2012-2017), MoES has launched the Monsoon Mission Phase II (2017-2020) in September 2017, with emphasis on predicting extremes and development of climatic applications based on monsoon forecasts, especially in the field of agriculture and hydrology, while continuing model development activities.**

**\*\*\*\*\***