

**GOVERNMENT OF INDIA
EARTH SCIENCES
LOK SABHA**

UNSTARRED QUESTION NO:2206
ANSWERED ON:02.12.2009
EARTHQUAKE IN HIMALAYAN PLATEAU
Raghavan Shri M. K.

Will the Minister of EARTH SCIENCES be pleased to state:

- (a) whether the Himalayan plateau is more prone to earthquake of high intensity;
- (b) if so, the details thereof;
- (c) whether the huge population living in cities/towns in Himalayan plateau are vulnerable to these earthquakes; and
- (d) if so, the steps taken/proposed to be taken by the Government in this regard?

Answer

THE MINISTER OF STATE (INDEPENDENT CHARGE) MINISTRY OF SCIENCE AND TECHNOLOGY, MINISTRY OF EARTH SCIENCES, MINISTER OF STATE IN THE PRIME MINISTER'S OFFICE, MINISTER OF STATE IN THE MINISTRY OF PERSONNEL, PUBLIC GRIEVANCES & PENSIONS AND MINISTER OF STATE IN THE MINISTRY OF PARLIAMENTARY AFFAIRS (SHRI PRITHVIRAJ CHAVAN)

- (a) Yes Madam, Himalayas are more prone to earthquake than other parts of India.
 - (b) The region forms part of the seismically most active parts of the country, viz., Zone-V and -IV, as per the Seismic Zoning Map of India published by the Bureau of Indian Standards [IS-1893 (Part-1): 2002]. From the concept of plate tectonics, the Indian plate is moving in a north-north-east direction and colliding with Eurasian plate along the Himalayan mountain range. This collision is responsible for the formation of faults in and along the Himalaya. The Himalayan region has witnessed four great earthquakes of the world in the past, viz., the 1897-Shillong Plateau (M: 8.7), 1905-Kangra (M: 8.0), 1934-Bihar-Nepal (M: 8.3) and 1950-Assam (M: 8.5) earthquake. In the recent past, the Himalayan region has also experienced three more disastrous earthquakes, viz., the Uttarkashi earthquake of 1991 (M: 6.6), Chamoli earthquake of 1999 (M: 6.8) and the Muzaffarabad earthquake of 2005 (M: 7.6). These earthquakes have caused damage to property and loss of life in the region.
 - (c) In the event of an earthquake, there is always a danger to life and property and would depend upon the intensity of the earthquake.
 - (d) Various earthquake disaster management and mitigation measures are in place through the efforts coordinated by the Ministry of Home Affairs (MHA) in the country. Significant of them is the issuance of guidelines for earthquake resistant design and construction of structures that have been laid down by Bureau of Indian Standards (BIS), Housing Urban Development Corporation (HUDCO) and Building Material Technology Promotion Council (BMTPC) etc for their adoption by appropriate planning and development authorities.
- Notable actions initiated by MHA include:
- i) Strengthening the capacity building of engineers, architects, lead masons and masons in earthquake resistant construction.
 - ii) Structural safety audit and retrofitting.
 - iii) Creating greater awareness on earthquake risk, vulnerability and emergency response.
 - iv) Strengthening of the techno-legal regime.
 - v) Selective retrofitting of lifeline infrastructure like district hospitals etc. to ensure earthquake impact minimization.

Further, National Disaster Management Authority (NDMA) has issued National Disaster Management Guidelines for management of earthquakes and is widely circulated among Ministries of Government of India and states/UTs administrations. National and state level disaster management plans are envisaged to be prepared in accordance with the NDMA guidelines by appropriate authorities to minimize the loss of life and property due to earthquakes. National Executive Committee (NEC) constituted under the Chairmanship of Secretary, MHA will recommend such various disaster management plans to NDMA for approval and funding support for effective implementation.