GOVERNMENT OF INDIA
MINISTRY OF EARTH SCIENCES
LOK SABHA
UNSTARRED QUESTION No. 5502
TO BE ANSWERED ON WEDNESDAY, 5TH APRIL, 2023

FREQUENT EARTHQUAKE

5502. SHRI M. BADRUDDIN AJMAL:

Will the Minister of Earth Sciences be pleased to state:

(a) whether the Government has taken note of the fact that frequent earthquakes have been striking various areas in the country specially the capital city of Delhi and adjoining areas as well as North East States and hill-States during the last few years;
(b) if so, the facts in this regard;
(c) if so, whether this is due to the increasing impact of climate change; and
(d) if so, the details of the preventive steps taken/proposed to be taken by the Government?

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

(a) to (d) National Centre for Seismology (NCS) under the Ministry of Earth Sciences is the nodal agency of Government of India for monitoring earthquakes through a National Seismological Network consisting of 152 observatories spread across the country. The information of earthquakes reported by NCS is disseminated to the concerned central and state disaster authorities in least possible time through its website and other social media platforms to help initiate the adequate mitigation measures. The detailed information about the earthquakes are also made available on the website of NCS (www. seismo.gov.in).

A total of ~59% of the land mass of India is prone to earthquakes of different shaking intensities. As per the seismic zoning map of the country, the entire country is classified into four seismic zones. Zone V is seismically the most active region, while zone II is the least. Approximately, ~ 11% area of the country falls in zone V, ~18% in zone IV, ~ 30% in zone III and remaining in zone II.

Details of states and areas in the country falling in seismic zones V and IV (based on seismic zoning map of India) are given below:

Zone V Parts of Jammu and Kashmir (Kashmir valley), western part of Himachal Pradesh, Eastern part of Uttarakhand, Rann of Kutch in Gujarat, part of Northern Bihar, all northeastern states of India and Andaman & Nicobar Islands

Zone IV remaining parts of Jammu & Kashmir, Ladakh, remaining part of Himachal Pradesh and Uttarakhand, Some parts of Haryana, Parts of Punjab, Delhi, Sikkim, northern part of Uttar Pradesh, small portions of Bihar and West Bengal, parts of Gujarat and small portions of Maharashtra near the west coast and small part of western Rajasthan.

Recent studies have unraveled that climate changes may modulate the occurrences of micro-level seismicity in the Polar and the Himalayan regions due to melting of thicker ice sheets by reducing the loads on the crust to bring the brittle failures interns of very micro-level earthquakes (M <3.0), acting as one of the proxies of the climate change.

Several awareness programs are being regularly organized for taking precautionary steps during earthquakes through the Mock Drills on earthquake safety programs to sensitize several agencies towards earth quack risk mitigations.

NCS is disseminating earthquake related parameters to various stakeholders of national, and state levels to understand the earthquake potential zones in different parts of the targeted areas. Additionally, seismic microzonation work of NCT-Delhi carried out on 1:10000 scale and report was also made available to Bureau of Indian Standards (BIS) to revise the present Building Design code into Earthquake Risk resilient code for structures and buildings in NCT-Delhi. There is a need for retrofitting of older buildings and the same are being adopted by DDMA and state Government for enhancing resilience to earthquake shakings.

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