

GOVERNMENT OF INDIA
MINISTRY OF EARTH SCIENCES
LOK SABHA
UNSTARRED QUESTION NO. 658
TO BE ANSWERED ON WEDNESDAY, 6TH DECEMBER, 2023

INCIDENTS OF EARTHQUAKES

658. SHRI RAVNEET SINGH BITTU:

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

- (a) whether there has been an increase in the number of incidences of earthquakes including those emanating from Nepal causing tremors especially in the northern parts of the country on regular basis;
- (b) if so, the details thereof during the last three years, year-wise along with the reasons therefor;
- (c) whether the Government is taking any measures to insulate the people, buildings and installations in the country from any potential damage due to the increasing earthquake related incidents in the future;
- (d) if so, the details thereof; and
- (e) if not, the reasons therefor?

ANSWER
THE MINISTER OF EARTH SCIENCES
(SHRI KIREN RIJJU)

- (a) and (b) Data indicates increase in earthquake activity in the year 2023 and it was mainly attributed to the activation of the Almora fault in Western Nepal. This activation triggered significant mainshock earthquakes on January 24, 2023 (M:5.8), October 3, 2023 (M:6.2), and November 3, 2023 (M:6.4). These mainshocks, accompanied by subsequent aftershocks, have led to an increased frequency of earthquakes in the year 2023. However, the background seismicity remained unchanged during this period.

It is common for northern India and Nepal to occasionally experience moderate earthquakes, and fluctuations in seismic activity. Nepal and the neighbouring northern part of India, situated near the active faults of the Himalayan region, are highly seismically active areas prone to frequent earthquakes due to collision tectonics, where the Indian plate subducts beneath the Eurasian Plate.

The details of earthquake occurrences (for Magnitude 3.0 and above) in these regions as recorded by National Center for Seismology, New Delhi during the last 3 years and the current year are given below:

Earthquake Magnitude range	Number of earthquakes during the period			
	Year 2020	Year 2021	Year 2022	January to Nov. 2023
3.0 to 3.9	42	41	41	97
4.0 to 4.9	18	18	20	21
5.0 to 5.9	1	1	3	4
6.0 to 6.9	0	0	1	2

(c) and (d) Yes Sir, the Bureau of Indian Standards (BIS) has published the Seismic Zoning Map of India, ranging from Zone II to V and offers guidelines for implementing the essential engineering codes and practices to construct earthquake-resistant buildings. The National Disaster Management Authority (NDMA) has been responsible agency for various precautionary measures such as earthquake drills, awareness programs, earthquake management, etc., to enhance preparedness and response to earthquake related incidents.

(e) Does not arise.
