

**GOVERNMENT OF INDIA
MINISTRY OF EARTH SCIENCES
RAJYA SABHA
UNSTARRED QUESTION No. 1994
TO BE ANSWERED ON WEDNESDAY, August 04, 2016**

PREDICTION OF A GIANT EARTHQUAKE BENEATH BANGLADESH AND EASTERN INDIA

1994. SHRIMATI WANSUK SYIEM:

Will the Minister of EARTH SCIENCES be pleased to state:

- (a) whether a study by a renowned geophysicist at Columbia University in USA published in the journal Nature Geoscience predicts a giant earthquake with its epicenter beneath Bangladesh and Eastern India that could endanger as many as 149 million people;**
- (b) whether the study asserts that the earthquake though not imminent, is inevitable as sections of earth's crust press against one another; and**
- (c) whether some 140 million people live within 100 km of the potential epicentre in Eastern India-Bangladesh border?**

ANSWER

**MINISTER OF STATE FOR MINISTRY OF SCIENCE AND TECHNOLOGY AND
MINISTRY OF EARTH SCIENCES
(SHRI Y. S. CHOWDARY)**

- (a) Yes Sir. There is a research paper by Michael S. Steckler, Dhiman, Ranjan, Mondal, Syed Humayun Akhter, Leonardo Seeber, Lujia Feng, Jonathan Gale, Emma M. Hill and Michael Howe titled as “Locked and loading megathrust linked to active subduction beneath the Indo-Burman Ranges, Nature Geoscience, DOI: 10.1038/NNGEO2760” published in Nature Geoscience (2016), which predicts a giant earthquake with its epicenter beneath Bangladesh and Eastern India.**
- (b) The said study has suggested that since strain accumulation is underway for at least past 400 years, such an earthquake can have a major magnitude. However, no time frame of occurrence of such an earthquake has been specified.**

The study uses GPS measurements from Bangladesh, India and Myanmar to suggest that the detachment fault under the part of Bangladesh, and NE India (Tripura, Lower Assam, Mizoram, western Manipur) is locked and is accumulating strain for future great earthquake in the region, which could impact this most densely populated region of the world.

Further, the whole of northeast India is part of Indian plate boundary, colliding and subducting beneath Burmese plate, resulting in strain accumulation in the plate boundary region. This causes occurrence of large earthquakes in the region.

So far earthquake prediction is not possible anywhere in the world with precise degree of accuracy with respect to time, space and magnitude.
- (c) The population of Indian states in the Indo-Burmese arc region is about 23.5 million (2011 census), whereas the population of Bangladesh is about 150 million.**
