

**GOVERNMENT OF INDIA  
EARTH SCIENCES  
LOK SABHA**

UNSTARRED QUESTION NO:1956  
ANSWERED ON:23.08.2012  
USE OF GPS FOR STUDY OF EARTHQUAKES  
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**Will the Minister of EARTH SCIENCES be pleased to state:**

- (a) whether the Government proposes to set up Global Positioning System (GPS) in the country to monitor and study of earthquakes;
- (b) if so, the number of names of the places where these centres are to be set up;
- (c) whether there is heavy movement in the Indian plate under the Earth resulting in possibility of earthquakes in the country; and
- (d) if so, the details thereof?

**Answer**

MINISTER OF STATE IN THE MINISTRY OF PLANNING, MINISTER OF STATE IN THE MINISTRY OF SCIENCE AND TECHNOLOGY AND MINISTER OF STATE IN THE MINISTRY OF EARTH SCIENCES (DR. ASHWANI KUMAR)

- (a) A number of GPS stations are already in operation by different institutions of the country in R & D campaign mode for understanding the crustal deformation and accumulation of stresses that can possibly lead to the occurrence of earthquakes.
- (b) At present, 46 permanent GPS stations are in operation spread over the country. The location of these stations are: Tezpur (Assam), Bomdilla (Arunachal Pradesh), Lumami (Nagaland), Imphal (Manipur), Anini (Arunachal Pradesh), Zero (Arunachal Pradesh), Aizwal (Mizoram), Agartala (Tripura), Srinagar (J & K), Uri (J & K), Kulgam (J & K), Keran (J & K), Aru (J & K), Almora (Uttarakhand), Nainital (Uttarakhand), Ghuttu (Uttarakhand), Phool Chatti (Uttarakhand), Raithal (Uttarakhand), Sonara (Uttarakhand), Dharali (Uttarakhand), Masta (Uttarakhand), Phurkandakhal (Uttarakhand), Binakkhal (Uttarakhand), Kuner (Uttarakhand), Agrakhal (Uttarakhand), Gangtok (Sikkim), Kulu (Himachal Pradesh), Gandhinagar (Gujarat), Bela (Gujarat), Dharoi (Gujarat), Mount Abu (Rajasthan), Udaipur (Rajasthan), Port Blair (Andaman & Nicobar), Diglipur Andaman & Nicobar, Mayabunder (Andaman & Nicobar), Havelock (Andaman & Nicobar), Hut Bay (Andaman & Nicobar), Arong (Andaman & Nicobar), Campbell Bay (Andaman & Nicobar), Dhanbad (Jharkhand), Allahabad (UP), Varanasi (UP), Kanpur (UP), Gokul (Maharashtra), Kothgudem (Andhra Pradesh) and Vishakhapatnam (Andhra Pradesh).
- (c) Yes Madam.
- (d) The GPS observations have led to inference that the Indian plate is moving in North-North Easterly direction with a speed ranging between 5 and 5.5 cm/yr leading to the accumulation of stresses in weak zones, called faults within Indian plate. However, with the present knowledge advancement in this regard, it is not possible to forecast the earthquake occurrence.