GOVERNMENT OF INDIA
EARTH SCIENCES
LOK SABHA

UNSTARRED QUESTION NO:1945
ANSWERED ON:23.07.2014
EARTHQUAKE PRONE AREAS
Shetti Shri Raju alias Devappa Anna;Solanki Dr. Kirit Premjibhai

Will the Minister of EARTH SCIENCES be pleased to state:

(a) whether the Government has identified the earthquake prone areas in the country and if so, the details thereof, location-wise;

(b) whether any scientific study has been undertaken/scheme drafted to track the intensity of seismic movements;

(c) if so, the details thereof and the time by which the said system is likely to be installed;

(d) whether the Government of India has set up/proposes to set up earthquake research centers inthe country; and

(e) if so, the details thereof, location- wise and the steps taken by the Government in this regard?

Answer

MINISTER FOR MINISTRY OF SCIENCE AND TECHNOLOGY AND MINISTRY OF EARTH SCIENCES (Independent Charge) (DR. JITENDRA SINGH)

(a) Yes Madam. Earthquake - prone areas of the county have been identified on the basis of scientific inputs relating to seismicity, earthquakes occurred in the past and tectonic setup of the region. Based on these inputs, Bureau of Indian Standards [IS 1893 (Part L):2002], has grouped the country into four seismic zones, viz. Zone-ll, -lll, -IV and -V. Of these, Zone V is seismically the most active region, while zone ll is the least. Broadly, Zone - V comprises entire northeastern India, parts of Jammu and Kashmir, Himachal Pradesh, Uttaranchal, Rann of Kutch in Gujarat, part of North Bihar and Andaman & Nicobar Islands. Zone - IV covers remaining parts of Jammu and Kashmir and Himachal Pradesh, National Capital Territory (NCT) of Delhi, Sikkim. Northern Parts of Utter Pradesh, Bihar and West Bengal, parts of Gujarat and small portions of Maharashtra near the west coast and Rajasthan. Zone- lll comprises Kerala, Goa, Lakshadweep islands, remaining parts of Uttar Pradesh, Gujarat and West Bengal, Parts of Punjab, Rajasthan, Madhya Pradesh, Bihar. Jharkhand, Chhattisgarh, Maharashtra, Orissa, Andhra Pradesh, Tamilnadu and Karnataka. Zone - tl covers remaining parts of country.

(b-c) Earth System Science Organization- India Meteorological Department (ESSO- IMD) has installed a number of Seismic and Global Positioning System (GPS) stations across major faults to monitor the seismicity and crustal movement of the Indian subcontinent. ESSO-1MD operates a national network of seismographs to monitor the earthquake activity in the country on 24 X 7 bases. Making use of earthquake records, the magnitude and other source parameters are estimated in an automated mode.

Under the Koyna Deep Borehole programme, studies have been initiated to carry out scientific investigations for deep borehole drilling in the Koyna-Warna region. The investigations include, Seismological, Geophysical (seismic, gravity, magnetic), LIDAR., geomorphology and structural geological studies, apart from a few exploratory boreholes.

(d) Yes Madam.

(e) ESSO of the Ministry of Earth Sciences (MoES) has established a National Centre for Seismology (NCS) as an independent organization by separating of seismology activities from IMD. The broad objectives of the Center are as follows:

i) Provide earthquake (M:3.0 and above) related information to all user agencies in shortest possible time, ii) Provide earthquake hazard and risk related products of specific region, required by various agencies for institutionalizing various preventive measures for design and construction of earthquake resistant structures, land use planning and for enacting building bye-laws towards minimizing damage to property and loss of lives due to earthquakes, iii) Carry out reseaixh in pure and applied seismology and earthquake precursory phenomena, earthquake processes and modeling.