

**GOVERNMENT OF INDIA
EARTH SCIENCES
LOK SABHA**

UNSTARRED QUESTION NO:88

ANSWERED ON:10.08.2007

RESEARCH ON EARTHQUAKES IN HIMALAYAN REGION

Gaikwad Shri Eknath Mahadeo;Mane Smt. Nivedita;Patel Shri Kishanbhai Vestabhai;Singh Shri Sugrib

Will the Minister of EARTH SCIENCES be pleased to state:

- (a) Whether IIT, Roorkee has made any research regarding Earthquakes in Himalayan Region;
- (b) If so, the findings thereof;
- (c) Whether IIT, Roorkee has developed any technology to reduce the losses/ damages from Earthquakes in the said region; and
- (d) If so, the details thereof?

Answer

MINISTER OF SCIENCE AND TECHNOLOGY AND MINISTER OF EARTH SCIENCES (KAPIL SIBAL)

(a) Yes Sir.

IIT, Roorkee is not our organization. However, India Meteorological Department coordinates with them on these issues

a. Following are the details of the research findings in Earthquakes in Himalayan Region by IIT, Roorkee

Seismic Hazard and Risk Assessment of Dehradun city suggests that possibilities of minimal structural damages exist up to a Earthquake of magnitude 5.0 on a Richter Scale.

Tehri Dam is found to be Earthquake Resistant for a maximum possible magnitude of 8.5 magnitude quake on a Richter Scale occurring at 15Km depth just below the dam reservoir system

Micro-Earthquake studies around Tehri Dam are used to monitor seismicity changes due to reservoir filling on continuous basis and also help in designing suitable structural interventions

(b) Yes Sir

(c) Following are the details of technologies/methodologies developed to reduce the losses/damages from Earthquakes

Developed technologies for seismic retrofitting of existing deficient low cost as well as reinforced cement buildings consisting of roof, lintel, plinth bands and vertical reinforcement at corner and jambs.

Developed earthquake resistant designs in respect of major structures such as Tehri rock-fill Dam, Koteswar Dam etc.

Knowledge dissemination of Earthquake Resistant Technologies through short term courses, training programmes and various community level sensitization/awareness generation programmes.