

**GOVERNMENT OF INDIA
SCIENCE AND TECHNOLOGY
LOK SABHA**

UNSTARRED QUESTION NO:1737
ANSWERED ON:07.03.2013
STUDY BY CSIR
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Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

(a) whether the Council of Scientific and Industrial Research has conducted any study on engineering related to infrastructure keeping natural and other disasters in mind; and

(b) if so, the conclusions of the said study?

Answer

MINISTER OF SCIENCE AND TECHNOLOGY AND MINISTER OF EARTH SCIENCES (SHRI S. JAIPAL REDDY)

(a) Yes Madam.

(b) Following knowledge base/expertise has been developed:

Risk assessment & engineering solutions for several buildings and infrastructure along metro corridor have been investigated and based on the recommendations made, the structures were rehabilitated;

Structural integrity and stability of fire damaged buildings of ALTTTC Centre, BSNL; IOCL; and CSIR Hqs. have been carried out. Accordingly repairs and structural strengthening were carried out;

Detailed investigation and vibration monitoring of five flyovers of Delhi namely Sahadra, Ashok Vihar, Janak Setu, Jakhira and Sarai Rohilla were carried out and appropriate strengthening measures were provided;

For long-term Structural Health Monitoring (SHM) of building infrastructures extensive system identification studies of tall buildings of Delhi have been carried out. The knowledge thus generated is being used to evolve a methodology of SHM using wireless sensor network;

Seismic vulnerability of existing building stock spread over different cities such as Delhi and Jabalpur have been carried out and presented in the form of seismic vulnerability of different types of buildings, zone-wise;

Demonstration of design of blast resistant structures through field trials for the first time in the country. It has been adopted by CEES (DRDO Laboratory); and

Classification of the landslide vulnerability in five groups (I-V) with I as completely stable and V as completely unstable (based on detailed study of Patalganga landslide and Kaliasaur landslide on National Highway 58).