

**GOVERNMENT OF INDIA
EARTH SCIENCES
LOK SABHA**

UNSTARRED QUESTION NO:3441
ANSWERED ON:15.12.2006
IDENTIFICATION OF NATURAL CALAMITY AREAS
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Will the Minister of EARTH SCIENCES be pleased to state:

- (a) Whether the Government has made any study regarding Natural Calamities like Landslides and `Avalanche` in some areas in India recurring almost every year;
- (b) if so, the details thereof;
- (c) whether there is any machinery to identify such places for precautionary measures; and
- (d) if so, the details thereof?

Answer

MINISTER OF THE STET IN THE MINISTRY OF SCIENCE & TECHNOLOGY AND EARTH SCIENCES (SHRI KAPIL SIBAL)

(a) & (b) Yes Sir. Geological Survey of India (GSI) undertakes study of all conspicuous landslides including recurring type, almost every year in the northeastern and northwestern Himalayas, northeastern states of the country and also in the western ghats / Nilgiri hills in the southern part of India, to delineate the tentative causative factors and to suggest suitable slope protective measures. In the landslide prone regions of the country there are several types of landslides like old stabilized, dormant etc. (.) GSI carries out detailed investigations of all these slides.

Some of the recurring types of landslide studied recently are

- (i) Sonapur slide on Shillong -Silchar National Highway, Meghalaya;
- (ii) 9- Mile slide on NH-31A, Lantakhola slide, B-2 slide, Elachi slide, Serwani slide etc. in Sikkim;
- (iii) Paglajhora slide, Darjeeling, W. Bengal;
- (iv) Devastating Varunavat slide, Uttarkashi, Survee slide, Mussouri, Uttaranchal;
- (v) Bhilar and some other conspicuous slides in Raigarh District of Maharashtra;
- (vi) Hospital slide, Coonoor, Tamil Nadu.

The study on snow avalanches in India is done by Snow and Avalanche Study Establishment,(SASE) Defence Research and Development Organization, Ministry of Defence. The focus is on helping troops deployed in snow bound avalanche prone areas in their day to day movement. All avalanche prone areas that affect troops movement in western Himalayan region have been registered by SASE. IMD is providing meteorology data for predicting the avalanches.

(c) & (d) Yes, Sir. There are methodologies by which landslide vulnerable zones can be demarcated to identify such vulnerable zones. GSI has already completed inventory of about 1150 landslides spread over north eastern states, northeast and north west Himalayas, western ghats and Nilgiri hills. GSI is also engaged in carrying out landslide hazard zonation mapping on different scales to demarcate the landslide prone hilly terrain into different zones according to their degree of susceptibility to landslides. The main purpose of this study is to guide the planners regarding the land use pattern.

The risk reduction due to avalanches is attempted by the following emethods:

- (i)Avalanche Awareness
- (ii) Avalanche Forecasting

Regular Avalanche forecasting bulletins are issued from Snow and Avalanche Study Establishment to people living in avalanche prone areas about impending danger. Civilian population living in the interior region of Himalayas are also informed through Press Information Bureau and local broadcasting stations about the impending danger.

