

**GOVERNMENT OF INDIA
MINES
LOK SABHA**

UNSTARRED QUESTION NO:1579

ANSWERED ON:13.12.2013

MAPPING OF LAKES BY GSI

Bapurao Shri Khatgaonkar Patil Bhaskarrao;Chitthan Shri N.S.V.;Gaikwad Shri Eknath Mahadeo;Paranjpe Shri Anand Prakash

Will the Minister of MINES be pleased to state:

- (a) whether the Geological Survey of India(GSI) has decided to map all moraine-dammed lakes in the Himalayan catchments and assess their geotechnical stability;
- (b) if so, the details and the objective thereof;
- (c) the expenditure involved therein; and
- (d) the progress made in this regard and the time by which the study is likely to be completed?

Answer

THE MINISTER OF MINES (SHRI DINSHA PATEL)

(a) Geological Survey of India (GSI) initiated the work of mapping moraine-dammed lakes in the Himalayan catchments for Glacial Lake Outburst Floods (GLOF) risk assessment in 2007-08.

(b) During 2007-08 GSI carried out preliminary inventory of glacial lakes in Chandrabhaga basin in Lahaul-Spiti district in Himachal Pradesh (HP). For one particularly risky lake in Himachal Pradesh, namely, the Gepang Gath Glacial Lake GLOF-risk mapping in field area was done in 2008, 2012 and 2013 field seasons. The report of the survey carried out in the area has been compiled and a copy has been sent to the Chief Secretary, Himachal Pradesh for preventive remedial measures. Further, in Uttarakhand, GSI has proposed a two year Remote Sensing based mapping work during 2014-2016 to compile a complete inventory of Glacial Lakes of Uttarakhand Himalaya. The objective of the proposed study is to identify high-risk areas related to outburst of Moraine dam lakes which could be potentially dangerous to human settlements and structures in downstream areas.

(c) GSI carried out these surveys from the Central budget provided to GSI by the Government of India. There is no separate fund for carrying out these investigations.

(d) So far, only one particularly risky lake (Gepang Gath Glacial Lake), which threatens the Manali-Leh National Highway and the downstream Sissu village, has been taken up by detailed field mapping and GSI proposes to keep monitoring it in field, every year. For mapping work of Uttarakhand through remote sensing, a programme has been proposed initially for two years, 2014-15 and 2015-16. After completing Uttarakhand mapping project, similar work will be taken up for other Himalayan states - Himachal Pradesh, Sikkim, Jammu & Kashmir and Arunachal Pradesh. The work involves vast critical detailed study and preparation of remotely sensed maps from large number of satellite imageries, subsequently taking traverses all along the Himalayan region within a very short time span when the areas become accessible. These kind of specialized studies require ample data assimilation, analysis and data synthesis for arriving at a logical conclusion. Hence, the study can be completed in a phased manner and no clear time schedule can be spelt out at this stage for the coverage of entire Himalayan region. Himachal Pradesh and Uttarakhand have been prioritized for taking up the work in the first phase.