

## Study results of GLOF SATREPS Project in the Bhutan Himalayas

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During the recent decades the melting of glaciers and rapid expansion of glacial lakes have caused series of disasters in the entire Himalayan region. Bhutan lies in the eastern part of the Himalayan range and is not an exception. Ever since the 1994 GLOF due to a partial outburst from Lugge lake which claimed lives, devastated infrastructures and agricultural lands in downstream valley of Punakha-Wangdue, urgent need to study glacier and glacial lakes in the upper streams of the water basins remained the priority. In line with other researches in those areas, the researches on glacier and glacial lakes through Science and Technology Research Partnership Project for Sustainable Development has filled up the gaps and updated the only inventory that existed.

Through this project, ground verifications for many lakes which were considered to be potentially dangerous have been carried out. Studies on water volume, bottom lake topography through bathymetry survey, existence of ice bodies in the damming moraines, tracking changes in those dams both through ground checks and Remote Sensing data analysis were engaged. In addition to one or two existing Automatic Weather Stations in the higher elevations, we have installed another one at an elevation of 5230 m asl. recording around nine parameters.

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