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## Glacial lake outburst and hazardous lakes in the Bhutan Himalaya

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In our country has been threatened by glacial hazard such as glacial lake outburst flood (GLOF) as well as the other high mountain region. In order to assess the possibility of GLOF hazard in the Bhutan Himalaya, we observed 27 lakes in the northern Bhutan under the JICA/JST project. In this presentation we will introduce the history of the GLOF hazard in Bhutan and summary of the preliminary result of the GLOF hazard assessment. The field surveys for the evaluation were carried out in/around the lakes in 2009 and 2010 by the authors and tenth other Japanese and Bhutanese researchers. Especially, bathymetric survey achieved to obtain more reliable information for assessing the stability of the moraine dam and flood analyses. Glacial lakes in the researched area show relatively stable at the moraine dam and surrounding slope. However, we need make plans continuous monitoring using satellite data and field observation in the future.

Keywords: GLOF, natural hazard mitigation, risk evaluation, field survey, disaster map