

The landslide distribution in Mangde-chu River basin

Go Sato^{1*}, Daisuke Higaki², Jun Umemura³, Toru Koike⁴, Tshering Penjore⁵, Jiro Komori⁶

¹Teikyo Heisei Univ., ²Hirosaki Univ., ³Nihon Univ., ⁴Earth System Science Co., Ltd.,

⁵Department of Geology and Mines, Bhutan, ⁶Nagoya Univ. (JICA Expert)

There are many glacial lakes in the upper basin of Mangde-chu river (Fig. 1-A). It is important to clarify the landslide distribution along the river because the occurrence of glacial lake outburst flood (GLOF), induces lateral erosion, and it makes the potential of landslides higher. The authors are making a landslide distribution map in the Mangde-chu basin, as a part of "Study on GLOFs in the Bhutan Himalayas" supported by JST-JICA, SATREPS. In this presentation, we introduce the landslide distribution in the middle basin of 1,200 m ASL, based on interpreted satellite images and results of field survey. For example, 13 large-scale landslide body (A to M) are recognized from a character of topography (Fig. 1-B). The landslide body A has over 4 km in length and 3 km in width. In addition, there is a linear-depression, 2km in length on the east outside of landslide body B. There are many secondary-landslide body on these large-scale landslide body (Fig. 1-C). Some landslide body are thought active since cracks are found on the body. In this year, we bring the landslide map of the entire area to completion and estimate the landslide risk against GLOF.

Keywords: landslide, GLOF, Bhutan Himalaya, Mangde-chu

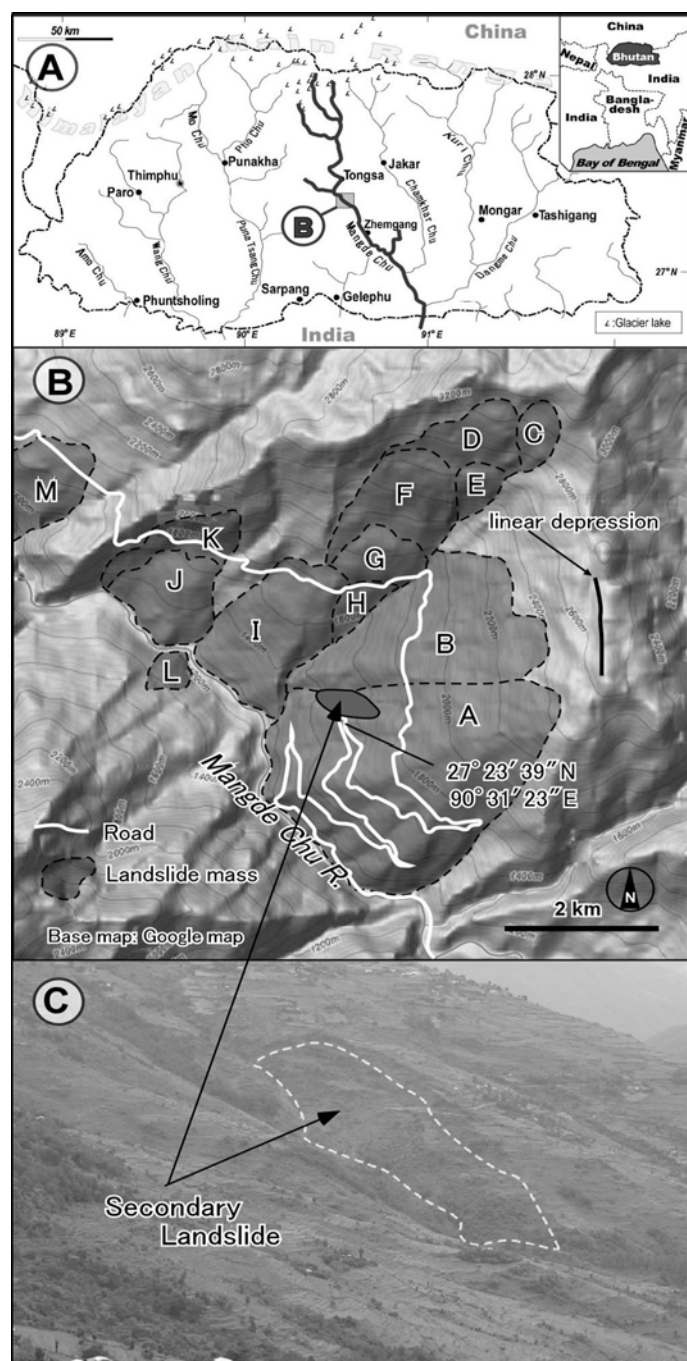


Fig. 1 A: Study area B: Landslide distribution map
 C: A secondary landslide body