

HDS025-03

会場:103

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## ヒマラヤにおける氷河湖の危険度再評価 Re-evaluation of potential of glacial lake outburst flood in the Himalayas

藤田 耕史<sup>1\*</sup>, 坂井 亜規子<sup>1</sup>, Arzhan B. Surazakov<sup>2</sup>, 山之口 勤<sup>3</sup>, 竹中修平<sup>4</sup>  
Koji Fujita<sup>1\*</sup>, Akiko Sakai<sup>1</sup>, Arzhan B. Surazakov<sup>2</sup>, Tsutomu Yamanokuchi<sup>3</sup>, Shuhei Takenaka<sup>4</sup>

<sup>1</sup>名古屋大学大学院環境学研究科, <sup>2</sup>アイダホ大学, <sup>3</sup>財団法人リモートセンシング技術センター, <sup>4</sup>地球システム科学  
<sup>1</sup>Nagoya University, <sup>2</sup>University of Idaho, <sup>3</sup>RESTEC, <sup>4</sup>Earth System Sciences

Hazard of glacial lake outburst flood (GLOF) is an urgent environmental issue in the Himalayan countries such as Bhutan and Nepal. The GLOFs have frequently occurred since the 1960s, accompanied with shrinkage of glaciers and attendant expansion of glacial lakes. A previous study has reported that potentially dangerous glacial lakes existed 20 in Nepal and 24 in Bhutan. No obvious criteria, however, is not shown so far. In addition, some "real dangerous" glacial lakes, which have been pointed out by several field researchers, were not listed in the previous inventory.

We attempt to re-evaluate potential risk of GLOF by using ASTER images and digital elevation models (DEMs). Relative angles of surrounding topography against a lake surface are calculated. By adopting a threshold of 10 degree, a place surrounding glacial lake, where field researchers have felt as dangerous, is successfully marked. In addition, we validate the threshold angle by assessing the pre-GLOF lakes by Hexagon KH-9 satellite images and its DEM. We re-evaluate the 44 dangerous glacial lakes in Bhutan and Nepal.

キーワード: ヒマラヤ, 氷河湖, ASTER, Hexagon, DEM

Keywords: Himalayas, Glacial lake, ASTER, Hexagon, DEM