



In Partial Fulfillment of the Requirements for the Degree of

Master of Science
Sonam Futi Sherpa

Will present her scientific paper

**Cryospheric Hazards and Risk Perceptions in the Mt. Everest
region, Nepal, Himalaya**

Abstract

Risk of Glacial Lake Outburst Floods (GLOFs) has increased alarmingly in the recent decades with more rapid melting of glaciers, caused in large part by climate in the Mt. Everest region of Nepal along with dozens of smaller englacial outburst floods that are occurring more frequently in recent years. Despite the heightened sense of vulnerability to these glacial flood events and other cryospheric hazards among locals, there have been no systematic study to assess local people's perceptions of risk to GLOFs and other cryospheric hazards in the region. This research seeks to address two key research questions: 1) how do the local people perceive the risk of cryospheric hazards in comparison to other natural hazards in the region? What are the major factors that directly influence their risk perceptions? Answers to these questions are sought through an in-depth analysis of people's risk perceptions of GLOFs and other natural hazards and risks captured in a socio-economic dataset generated from 138 household surveys, focus group discussions and semi-structured interviews. This study uses simple statistical analysis, multiple response ranking of household survey data and analysis of focus group discussions to understand socio-demographic characteristics of the system and to rank natural hazards based on their likelihood and potential to damage. Further, Hazard Risk Vulnerability Assessment method is used to develop a perceived risk index of the natural hazards in the region. This paper concludes that the Sherpa's perception towards cryospheric hazard seems to vary based on where they are located, level of severity and likelihood to the event and mainly if the hazardous event was recent or not. Household survey and pairwise ranking data showed earthquake as a most hazardous which might referable to the recent devastating earthquake happened in Nepal in April 2015 and the presence of fresh memories. Cryospheric hazard like glacial floods which came as consequences of glacial changes is nevertheless considered as one of the most hazardous events, mostly by the people living near to larger glacial lakes or other supraglacial lakes and along the riverbanks.

Monday, March 26, 2018

9:00 AM

Wrigley Hall, Room 401

Faculty, students, and the general public are invited.

Supervisory Committee:

Dr. Milan Shrestha, chair

Dr. Christopher Boone, member

Dr. Hallie Eakin, member