



Natural Hazard Risk Management - A Participatory Approach applied for Glacier Hazards

M. Wegman (1), A. Bruderer , Martin Funk (2) , E. Bardou (3), C. Wuilloud (4)

(1) Ernst Basler + Partner AG, Zollikon, (matthias.wegmann@ebp.ch), (2) VAW, ETH Zentrum, Zürich, (3) QUANTERRA, Lausanne, (4) Natural Hazard Office, SFP, Sion.

Glaciers can give rise to various different types of hazards such as natural glacier fluctuations, ice avalanches and glacier floods. Critical situations could arise from one of these three types of hazards (sometimes in an interconnected way) and pose a threat to life and to belongings.

Within the framework of the EU Project GLACIORIK (2001-2003) a procedure has been developed, which allows a sustainable risk based planning of safety measures on the basis of the inventory of hazardous glaciers in Switzerland. This so called "participatory approach" has been successfully applied on the well-known hazardous glaciers in the Canton Valais (Switzerland). The approach combines existing knowledge and experience of numerous persons in glaciology as well as in risk management techniques. As a consequence, risks and the cost-effectiveness of different safety measures can be estimated quantitatively. The present knowledge basis of natural hazards and the assessment of potentials damage are presented in a systematic manner thereby allowing decisions by consensus between knowledge carriers (local people that have an empirical knowledge of the glacier), hazard experts and decision-makers on all different levels (local, regional, national). All necessary data and information are collected in moderated meetings and analyzed with specially design software tools.