Geophysical Research Abstracts, Vol. 7, 09172, 2005
SRef-ID: 1607-7962/gra/EGU05-A-09172

Temporal and spatial assessments of damage potential as a basis for risk management – comparative studies in Davos (CH) and Galtür (A)

S. Fuchs (1), M. Keiler (2) and A. Zischg (3)

(1) alpS Centre for Natural Hazard Management, Innsbruck, Austria (fuchs@alps-gmbh.com), (2) Department of Geography and Regional Research, University of Vienna, Austria, (3) Geo Information Management, Gargazzone, Italy

The concept of risk assessment has become increasingly important for the protection of settlements against natural hazards. The risk resulting from natural hazards is usually described by a function of probability of occurrence of a hazardous process and the corresponding damage potential. Until now, high efforts were undertaken to assess the former, while only few approaches were developed to consider the latter.

In this study, the development of avalanche-related damage potential is presented for two characteristic alpine settlement types. Temporal changes in the spatial extent were studied for the urban municipality of Davos (CH) and the rural municipality of Galtür (A). Important influencing factors affecting the development of damage potential were determined.

The results indicate that the damage potential rose considerably in number and value since 1950. Most of the studied indicators show a similar trend. However, there have been distinct differences for the two types of settlements, resulting from their different socio-economic history.

Endangered tangible assets have a major influence on the development of risk. Thus, having detailed knowledge of the development of damage potential, the risk assessment, and consequently the risk management, can be improved. This would essentially contribute to the idea ‘from hazard aversion to a culture of risk’.