



Managing mountain hazards in Austria: The influence of different vulnerability approaches

S. Fuchs and R. Totschnig

Institute of Mountain Risk Engineering, University of Natural Resources and Applied Life Sciences, Vienna, Austria
(sven.fuchs@boku.ac.at, +43 1 47654-4390)

The concept of vulnerability is pillared by multiple disciplinary theories underpinning either a technical or a social origin of the concept and resulting in a range of paradigms for either a qualitative or quantitative assessment of vulnerability. However, efforts to reduce susceptibility to hazards and to create disaster-resilient communities require intersections among these theories, since human activity cannot be seen independently from the environmental setting. Acknowledging different roots of disciplinary paradigms, issues determining structural, economic, institutional and social vulnerability are discussed with respect to mountain hazards in Austria. It is argued that structural vulnerability as originator results in considerable economic vulnerability, generated by the institutional settings of dealing with natural hazards and shaped by the overall societal framework. Moreover, recent developments in the quantification of vulnerability relations are presented with respect to torrent hazards. Furthermore, these relations are compared with similar studies ongoing in other alpine countries.

If vulnerability and its counterpart, resilience, is analysed and evaluated by using a comprehensive approach, a better understanding of the vulnerability-influencing parameters could be achieved, taking into account the interdependencies and interactions between the disciplinary foci. Thereby the overall aim of this study is not to develop another integrative approach for vulnerability assessment, different approaches are rather applied by using a vulnerability-of-place criterion, and key issues of vulnerability are reconsidered aiming at a general illustration of the situation in a densely-populated mountain region of Europe.