

Moran, A., Geitner, C., Wastl, M. und Stötter, J. (2003): Natural hazards assessment in the community of Ólafsfjörður, Iceland. A regional-scale risk analysis. *Die Erde*, 134, 2, 147-162.

Abstract

This paper introduces the application of a regional approach to natural hazard assessments in Iceland. Initial investigations take place in the community of Ólafsfjörður and its surrounding area relevant to human occupation. Past events verify that various hazard processes such as snow avalanches, mud and debris flows and, to a lesser extent, rockfall and floods can take place throughout most of the area. Ólafsfjörður, still without the existence of a comprehensive hazard assessment, is a community in which it is vitally necessary to investigate the various hazards and their associated risks. Hence, this study provides an examination of hazards along with a risk analysis, illustrating the damage potential subject to possible natural hazard processes in a worst-case-scenario. Hereby, the calculation of the spatial extent of snow avalanches and rockfall processes is achieved by computer simulation models. The final results show a considerable potential risk of human settlements, especially by snow avalanches, advising further detailed and concise investigations where necessary as well as the implementation of suitable protection measures.