



## **MultiRISK – a tool for coherent multi-hazard risk analyses**

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Multi-hazard risk analyses pose a variety of practical/technical and scientific challenges including the interdisciplinarity of the topic, the multitude of single steps which combine to the overall procedure, the differences of the hazard characteristics as extent, time of onset, return period, duration etc. and hazard interactions. However, multi-hazard risk analyses are a fundamental basis for decision-making and planning of further steps in the framework of risk management. Software tools such as HAZUS in the US, RiskScape in New Zealand and CAPRA in Latin America are user-friendly applications offering the quick and reproducible performance of hazard and risk analyses due to multiple threats. Each one is designed for a specific purpose at a defined scale and for a certain set of hazards and elements at risk.

With MultiRISK, a software tool for multi-hazard risk analyses is proposed. It is in the first phase designed for the consideration of typical mountain hazards at a regional scale and includes in addition to the modeling itself a validation step and a concept for the consideration of hazard interactions. Following the modeling, the results can directly be visualized on a web-mapping platform which communicates the multi-dimensional output in a structured way. The methodological approach of the MultiRISK concept, the MultiRISK modeling platform as well as the MultiRISK visualization platform will be presented.