



Economic and Ethical Consequences of Natural Hazards in Alpine Valleys (EE-Con)

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The Alps and their population are particularly vulnerable to geomorphological and hydrological hazards and this problem might be amplified by ongoing climate change. Natural disasters cause severe monetary damage which often leads to the difficult question whether it socially pays to protect settlements at high costs or whether alternatively settlement areas should better be abandoned. By investigations in the Johnsbachtal and the Kleinsölkta (Styria), the interdisciplinary project “Economic and Ethical Consequences of Natural Hazards in Alpine Valleys” (EE-Con), funded by the Austrian Academy of Sciences, seeks to answer the following questions: (1) Are natural hazards and associated damages in fact increasing, and is this due to meteorological triggers, to anthropogenic factors or to internal process dynamics? (2) What is the perception and knowledge of local people, how is risk and risk prevention communicated? (3) What is the respective cost ratio between protection infrastructure, soft measures of adaptation and other options (e.g. reduction of settlement area)? (4) What legitimate claims to compensation do people have, how far does societal responsibility go and where does individual responsibility start if parts of the settlement area had to be abandoned? These questions will be tackled in an interdisciplinary cooperation between geography, economics and normative theory (philosophy).

EE-Con will follow broadly the path of risk analysis and risk assessment, focusing on the temporal dimension (past – present – future) with the aim to unravel the history of natural hazards in the areas and to analyse the economic values involved. In the following, natural hazard scenarios for the future (2050 and 2100) will be developed considering the economic consequences. Besides this, the project deals with local knowledge, risk perception and risk communication, which will be investigated via group interviews and stakeholder workshops and be integrated into a human-ecological model. Therefore, local people and stakeholders are going to be involved in a transdisciplinary approach from the start of the project. The geographic and economic information will then be used to find proper weighing mechanisms answering the normative questions mentioned above. The questions of enduring the respective costs and of responsibility for protecting the respective entitlements will be investigated from an ethical, a legal, and an economic viewpoint. The overall outcome of the results should provide an integrative view on the economic and ethical consequences of natural hazards in alpine valleys.