



Human dimension in scientific models in high-mountain climate change and risk projects: Peruvian-Swiss experiences

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Models in a range of scientific disciplines are increasingly seen as indispensable for successful adaptation. Governments as well as international organizations and cooperations put their efforts in basing their adaptation projects on scientific results. Thereby, it is critical that scientific models are first put into the particular context in which they will be applied.

This paper addresses the experience of the project ‘Glaciers 513- Climate change adaptation and disaster risk management for glacier retreat in the Andes’ conducted in the districts of Carhuaz (Ancash region) and Santa Teresa (Cusco region) in Peru. The Peruvian and the Swiss governments put their joint efforts in an adaptation project in the context of climate change and the retreat of the glaciers. The project is led by a consortium of Care Peru and the University of Zurich with additional Swiss partners and its principal aim is to improve the capacity for integral adaptation and reduce the risk of disasters from glaciers and high-mountain areas, and effects of climate change, particularly in the regions of Cusco and Ancash.

The paper shows how the so called “human dimension” on the one hand, and models from a range of disciplines, including climatology, glaciology, and hydrology on the other hand, were conceptualized and perceived by the different actors involved in the project. Important aspects have been, among others, the role of local knowledge including ancestral knowledge, demographic information, socio-economic indicators as well as the social, political and cultural framework and the historical background. Here we analyze the role and context of local knowledge and the historical background.

The analysis of the implications of the differences and similarities of the perceptions of a range of actors contributes to the discussion about how, and to what extent scientific models can be contextualized, what kind of information can be helpful for the contextualization and how it can be obtained. The results, thus, should contribute to more concerted, locally based and accepted risk and adaptation measures.