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If risks cumulate - Analysis and management of cumulative risks in Switzerland

Nadine Salzmann (1), Christian Huggel (2), Raphael Neukom (1,2), Veruska Mucchione (2), Sabine Kleppek (3), and Roland Hohmann (3)

(1) University of Fribourg, Department of Geosciences, Switzerland (nadine.salzmann@unifr.ch), (2) University of Zurich, Department of Geography, Switzerland, (3) Federal Office for the Environment (FOEN), Switzerland

With the study on 'climate-related risks and opportunities' by Köllner et al. (2017) the Swiss Federal Office for the Environment (FOEN) had conducted a comprehensive analysis of climate-related risks and opportunities for Switzerland until 2060. The synthesis of the study results provide the basis for the development of adaptation strategies and measures in Switzerland. Moreover, the study also identified knowledge gaps and related missing planning tools for risks, which are difficult to assess as they have a very low probability of occurrence but potentially very high impacts for the society and/or the environment. Such risks refer in particular to risks which cumulate through process chains or are triggered by meteorologic/climatic extremes events which return at unusual high frequency.

To respond to these gaps, FOEN is funding a consecutive three year project in order to explore and analyse the potential of and actions needed to manage such cumulative risks in Switzerland. The project was very recently launched jointly with a consortium of Swiss universities. Two case studies will build the back bone of the project, and relevant stakeholders will be integrated from the very beginning.

The case studies will focus on risks triggered by climatic/meteorologic events based on projected and recently published Swiss Climate Scenarios CH2018, but will consider rare but plausible cases where such events cumulate and/or occur in combinations.

We will present and discuss international terminologies and experience with such type of extreme events and put them in relation to the Swiss context. We further outline the planned case studies in Switzerland and suggest methods and approaches for their conduction.