

Research Project

Climate Change Extremes and Adaptation Strategies considering Uncertainty and Federalism (CCAdapt)

Third-party funded project

Project title Climate Change Extremes and Adaptation Strategies considering Uncertainty and Federalism (CCAdapt)

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Project Website <http://www.ccadapt.unibe.ch>

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Mitigation is the most important response to the threat of climate change, but due to the inertia of the global climate system there is also increasing need for adaptation. This calls for an accurate assessment of adaptation strategies, in particular since most of the existing studies abstract from three important characteristics of adaptation: (1) Future impacts of climate change are uncertain; (2) there exist several options for adapting to a particular impact, which exhibit different temporal and spatial characteristics; (3) adaptation can take place in a federalist setting, where actors differ with respect to information, financial resources and legislative power.

The present project aims for developing tools and methods that facilitate a more detailed characterization of climate change adaptation from an economic and policy analysis perspective. These tools and methods are then applied to the specific case of adaptation to a changed probability and magnitude of flood events in Switzerland. Obviously this requires an interdisciplinary approach, which integrates environmental economics, hydrology, meteorology, and political sciences. In four research groups, we develop a theoretical basis of adaptation that takes into account the three aforementioned characteristics, which are then used in Computable General Equilibrium (CGE) models of Switzerland for evaluating feasible adaptation strategies. Both theory development and application will be based on a prediction of climate impacts on hydrological extremes in Switzerland and take into account political barriers to adaptation due to strategic interaction between different levels of Switzerland's federalist structure.

The leading house is at the University of Berne (Oeschger Center). The subproject at the University of Basel will focus on the economic theory of adaptation, in particular on the questions of adaptation policy in a federalist setting and on the influence of uncertainty on the choice adaptation measures.

Keywords climate change, economics, adaptation, policy, uncertainty, simulation, federalism, strategic interaction

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Add publication

Add documents

Specify cooperation partners

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2851757	Krysiak, Frank Christian	Winkler, Ralph	University of Berne	01.08.2014	31.07.2017
2851767	Krysiak, Frank Christian	Weingartner, Rolf	University of Berne	01.08.2014	31.07.2017
2851768	Krysiak, Frank Christian	Stephan, Gunter	University of Berne	01.08.2014	31.07.2017
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