

Climate change and tourism in Switzerland: impacts, vulnerability and possible adaptation measures



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Summary

This thesis is part of the MIADAC project (Modeling Sectoral Climate Change Policies: Mitigation, Adaptation, and Acceptance) included in Work Package 4 of the NCCR Climate. It deals with adaptation and acceptance of Switzerland for the tourism sector. In particular, it addresses the vulnerability of this domain towards climate change, the costs and benefits involved and the costs and benefits generated by the possible adaptation measures. The general objectives of this work are three: first, we will assess and evaluate the environmental, economic and social effects of climate change on tourism in Switzerland. Secondly, we will investigate and select the appropriate and most effective public and private adaptation strategies on a national, regional and/or local level. Thirdly, we will evaluate the environmental, economic and social costs and benefits of these strategies. Finally, it will help to identify the elements needed to overcome barriers in order to bring adaptation issues to the upfront of political discussion. For better analyzing the implementation of adaptation measures, their costs and benefits, a case study region of particular vulnerability (Aletsch) has been additionally selected and will be studied by means of a participative process.

Keywords : *climate change; adaptation; vulnerability; tourism; Alps; Switzerland; vulnerability hotspots; participative process*

Research questions

- How is distributed climate change vulnerability of Swiss tourism and which are the main vulnerability hotspots?
- What will be the costs and benefits related to climate change, Swiss tourism and adaptation measures?
- What is the role of adaptation in regional and national climate policies and what is their acceptance?

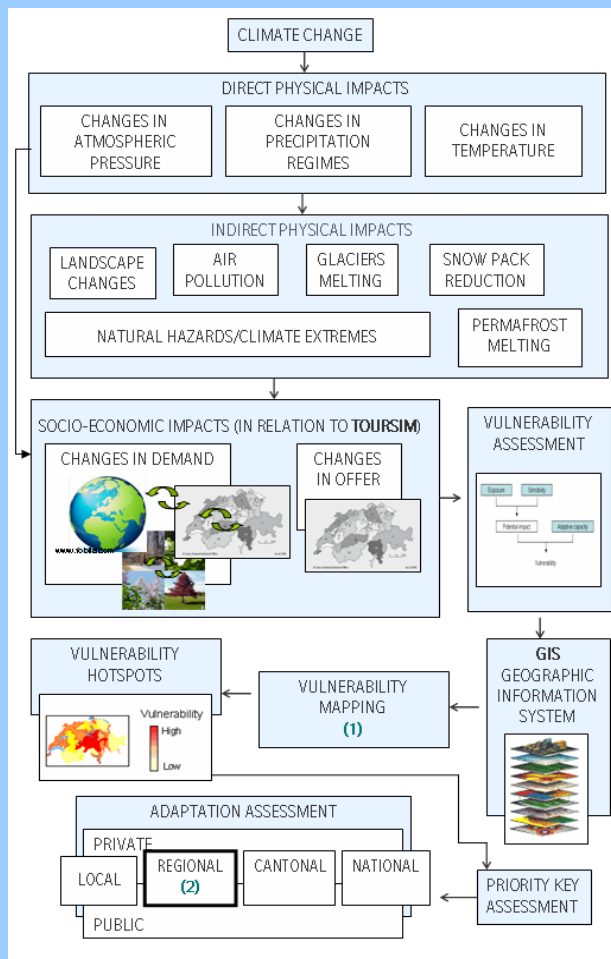


Figure 1. Illustration of the method used to assess the impacts of climate change on tourism, vulnerability hotspots and possible adaptation measures.

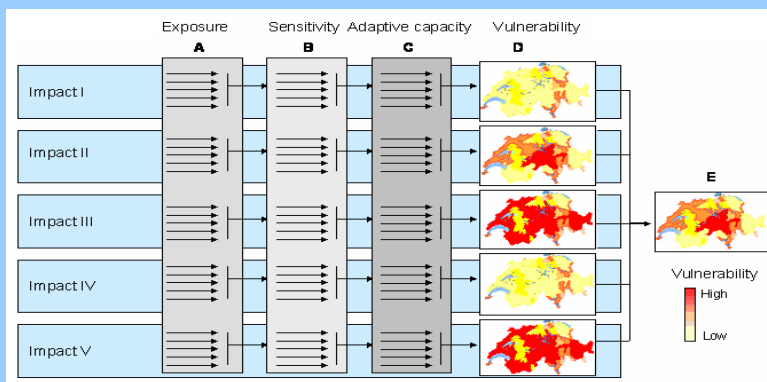


Figure 2. Vulnerability mapping - Conceptual model for creating and assembling vulnerability maps. Maps of the components of vulnerability (A, B, and C) are developed from multiple indicators, and then summed to develop vulnerability maps (D). Vulnerability maps are subsequently weighted and summed to develop a map of net climate change vulnerability for Switzerland (E), after Preston *et al.* (2008).

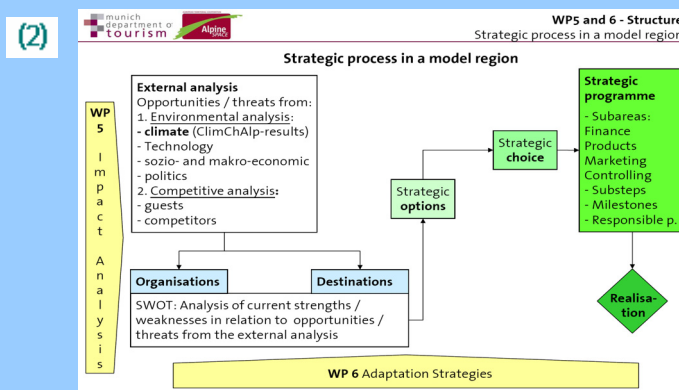


Figure 3. Regional adaptation assessment - Participative process in a case study region (ClimAlpTour, 2009).