

The Impact of Climate Change on Alpine Leisure Tourism in Germany and Austria

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Abstract

This paper presents an interacting multi-agent model as a new method of examining the impact of climate change on Alpine leisure tourism and ski areas in a complex interacting model network. Since tourism varies at a small scale concerning natural resources as well as offered market segments, a regional differentiated analyse of the effects of climate change on both the tourism supply side and demand side is essential. Therefore, we have developed a high-resolution simulation model to rate the tourism development under different climate and societal scenarios in the German and Austrian Upper Danube catchment. As a result, we evaluate implications on the tourism industry for the next fifty years. As the model analyses tourism development on a high level of individualisation, it fosters the finding of economically reasonable investment strategies and supports the policy makers' outward reasoning by making the decisions more objective and transparent. The effects on climate change are very different on a small spatial scale: Some larger and higher located ski resorts will operate very successful in the next decades. They will profit from the shift of guest caused by the problems that smaller and no more snow-reliable ski areas are facing.