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Snowshoeing in Protected Areas: Bridging the Gap between Attitude and Behaviour

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Introduction

The frequency and diversity of outdoor activities increased in the last years. New leisure activities such as snowshoeing are very popular and growing constantly, but they might affect sensitive wildlife habitats. Snowshoe walkers especially like half-open forests, which are at the same time the habitat of rare species. Efforts of recreation management tend to solve these conflicts not by means of strict regulations, but reducing disturbance by active steering through information and infrastructure.

For example, outdoor managers try to reduce recreational conflicts between snowshoeing and wildlife by defining a limited number of trails, to channel visitors. In a case study, we evaluate the impact of such steering efforts in a social psychological framework. We don't focus on the planning process or the ecological component, but on the influence of behaviour.

From a survey among Swiss snowshoe walkers, we know that they are willing to avoid protected areas if they are informed. Furthermore, they think that it makes sense to install signposts to inform and sensitise visitors. On the other hand our survey among more than 350 foresters showed that forest visitors often ignore behaviour appeals and that snowshoeing causes severe ecological problems especially in the subalpine area. Furthermore social psychological research indicates that self-reported behaviour and attitude are often inconsistent with observed behaviour.

Therefore we focus on the following questions in our case study:

- Can the behaviour of snowshoe walkers be influenced by steering efforts?
- Under which conditions are steering efforts successful in protecting wildlife?
- Are observed behaviour of snowshoe walkers and their self-reported behaviour and attitudes towards protected areas consistent, and if not, how can the consistency be increased?

Methods

Contrary to many social psychological studies our data collection is not limited to self-reported behaviour or to an artificial setting, but we observe evident behaviour in a natural and applied setting. In cooperation with local authorities we planned and implemented several snowshoe trails in combination with a theory-based communication concept and a quasi-experimental research design. Our conceptualisation was based on previously conducted surveys among foresters and snowshoe walkers.

In a three-step design we analyzed how visitors reacted to steering efforts. First we marked trails and installed signposts at the starting points with basic trip information and maps with protected areas (setting A). During a second phase, we combined setting A with additional signposts which contained behaviour appeals (not to leave the trail),

ecological information (sensitivity of wildlife in winter) and information about the protected area and alternative trails (setting B). In a third step we additionally installed signposts at critical points, where snowshoe walkers tend to leave the trail (setting C).

In all of those three phases we assessed if people stayed on the trail and if the contingent of deviating snowshoe walkers changed depending on the setting.

Results

Our preliminary results indicate that in setting A the influence on behaviour was rather weak. A lot of snowshoe walkers still left the marked trail and crossed the protected area, and only 30% stayed on the trail. So the contingent of visitors who respected the protected area was much lower, as could have been expected based on attitudes and self-reported behaviour assessed in previously conducted surveys. We registered a rather high inconsistency between reported and observed behaviour.

In setting B (additional signposts with appeals and information), the number of visitors who stayed on the trail and respected the protected area increased significantly to 80%. In setting C we assessed a declining level of people staying on the trail (50%), but it was still higher than in setting A.

Conclusion

Our observations so far suggest that snowshoe walkers overrate their ecological attitudes and their self-reported ecological behaviour in questionnaires if we compare it to observed behaviour in the natural settings. However, the gap between attitude and behaviour can be bridged partly if snowshoe walkers are provided with appropriate information, ecological education, rationale and appeals. Additional signposts at critical deviation points don't increase the consistency between attitude and behaviour. It's necessary to combine on-site information with communication and education, which starts earlier, because snowshoe walkers hardly change their route once they started a trip. Moreover efforts must be reinforced continuously to avoid a decrease of achieved positive effects.

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