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Sustainability and Tourism in Protected Areas: Leaving Nothing Behind but Footprints?

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Introduction

"Nature is the Adventure!", or "Inspired by Iceland" are slogans which promote travels to the wilderness of Iceland. In many other circumpolar countries, tourism has become a major industry and creates income in rural areas, but threaten its very fragile natural environment. Tourism areas are *'fueled'* by their rich natural environment, but its not only footprints what tourists leave behind!

Figure 1 and 2: *Advertisements for outdoor tourism in Iceland*

We use the natural environment as a resource in some form every day: space for living and education, natural services (fresh water, air, nutrients), income and occupation (farming, taxes, etc.), human wellbeing (recreation), or also as representation for our identity, spirituality and culture.

But tourism within natural environments is not only a driving force for economic development in rural areas. The physical impact of tourism in sensitive environments is also a threat to the prosperity of business and social wellbeing. Its impact degrades the environment and thus compromises rural development plans.

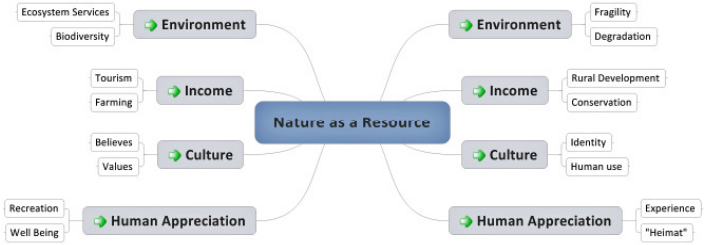

Figure 3: *Factors which Nature influences, and Impacts on the Environment*

Goal

This research aims to support sustainable management of tourism within protected areas. Sound management decision with the consensus of stakeholders requires a solid base of knowledge. Thus, this research promotes a practical approach and focus on: 1) techniques how to acquire data needed for a well informed decision-making process, 2) the acknowledgment that a sustainable future of tourism is only within reach if management of protected areas opens towards many different stakeholders, and hence, 3) the empowerment of the public in a co-management process.

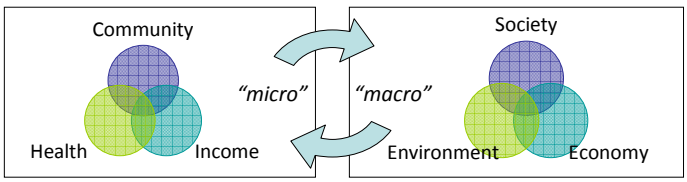

Figure 4: *Sustainability on different levels of society (micro to macro level)*

The basis for a sustainable future of tourism within protected areas and the decision for the future of the limits of the utilization of nature by man, has to lay within the questions: "What can ***I*** do?" – "What can ***we*** do?" – "How to define the footprint of tourism?"

The project – Outline

The project shades light on the utilization of the natural environment from different perspectives, to get a better *'picture'* of the aspects behind sustainable management of tourism. The research is therefore divided into four different phases: 1) literature study, 2) assessment of hiking trails, 3) socio-economic impacts of tourism in protected areas, and 4) management implications for sustainable tourism in protected areas.

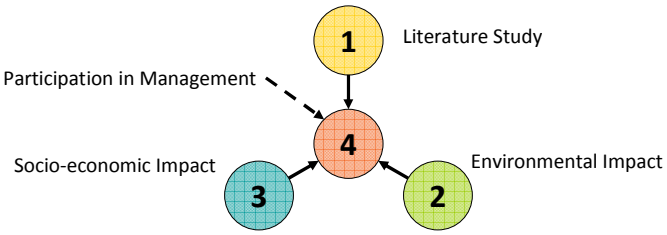

Figure 5: *The four Phases in the Research Project and their Focus*

Preliminary Results

Currently, the research projects is in phase 2, but already indicates some results. Nowadays, the management of protected areas faces the reality of public participation from both sides: demanded by the public and enabled by governments. This development marks modern protected area management that answers the need for a partnership in conservation and tourism to be able to face complex environmental problems, and balance environmental stability with current human use. The case studies in Iceland and Japan highlights areas sensitive to physical impact of tourism. The assessment is not completed yet, but indicate that attention has to be paid to environmental factors, defining the sensitivity to mitigate future environmental degradation.

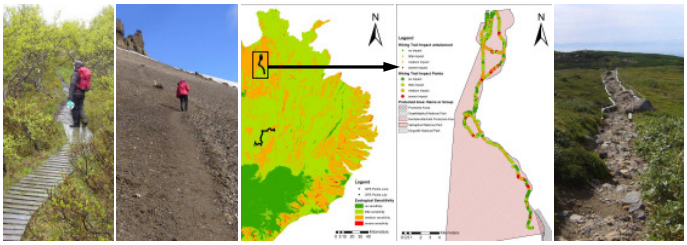

Figure 6 to 10: *Current Research on Hiking Trails in Iceland and Japan*

Future research phases will combine interviews and surveys about current perceptions with analysis of tourism opportunities.

Significance for the Future

Each of the four phases focuses on a different aspect of sustainability and the impact of tourism on the natural and human environment. Though this research can not provide a complete picture of the situation form all aspects, it provides a snapshot of tourism within protected areas. The project helps forming sustainable tourism solutions in protected areas by:

- Collection of data about current state and use of the environment
- Identification of hot spots for further management action
- Promotion of shared responsibility among all levels of society and therefore safeguarding of resources for future generations by a informed decision-making framework

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