

## Visitors' use of national park services and their affinity to the Gesäuse National Park

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### Introduction

Protected areas register due to their recreational value and the existence of natural landscapes increasing visitor numbers. In the last decades, the popularity of these areas led to an enhancement of peripheral regions and a stimulation of the regional economy (LUCKER & KÖLSCH 2009; HASSE et al. 2009; JOB et al. 2009; HENNIG 2003). Furthermore, they have the potential to change current conventions of society and present new perceptions of traditional views on nature by showing the applications of resources apart from their economic advantages (MÜLLER et al. 2008; MAYER et al. 2010; HAMMER & SIEGRIST 2008).

On the other hand, protected areas had to face an impairment of their carrying capacity due to an augmented use, which led to conflicts with their aim of protecting ecologically sensitive areas (HENNIG & GROßMANN 2008; JOB et al. 2008). In addition, particularly in the designing phase of new national parks, residents were usually not included enough in the planning and had to deal with use restrictions causing low acceptance of the national parks amongst them. But as Winiwater stated: 'Regional and local identification is a precious resource for planning a sustainable future, especially in rural areas' (HASITSCHKA et al. 2014, p.5 [translation by the author]). To solve these conflicts the former philosophy of top-down management of protected areas has been amended to a bottom-up philosophy where all concerned stakeholders are invited to take part in the planning process. Besides, the visitor information and environmental education obtained an important role in the management of protected areas to show and establish environmentally compatible behavior (JOB et al. 2013; WOLTERING 2012; HASSE et al. 2009; REVERMANN & PETERMANN 2002; HAMMER 2003).

Meanwhile, there are many different offers for recreation, information and education in protected areas available, e.g. guided excursions, exhibitions, brochures, theme trails or guidance systems with signs (HENNIG 2003). With the rise of new information and communication technologies in broad sectors of population, protected areas started to supply offers using the so-called 'new media' like homepages or applications for smartphones (ARNBERGER et al. 2014; HENNIG 2014).

However, inventing, designing and provisioning a broad variety of offers for visitors are time and resource consuming. The precondition for the successful development of useful offers is the knowledge of the various interests, expectations and demands of the different brackets of visitors, which are surveyed with one-time questionnaires or periodic socioeconomic monitoring. Currently, the latter is less often implemented than ecological monitoring. Nevertheless, it has been better structured and systematized in the recent years (REVERMANN & PETERMANN 2002; MUHAR et al. 2002, BUER et al. 2013).

The concept of affinity to national parks has been already used in different scientific contexts. Namely, to estimate the economic value of protected areas for the municipalities surrounding a national park (JOB 2008; MAYER et al. 2010) or to examine the association between the affinity of visitors to national parks and their attitudes towards management measures, like semi-natural forest management or restrictions of recreational use for protection of ecologically sensitive areas, implemented by the national park administration (ARNBERGER et al. 2012; MÜLLER et al. 2008).

The present thesis was considering the interface of environmental education offers, their resonance among the visitors and the affinity of visitors to the Gesäuse National Park (GNP). In particular, the following research questions are addressed:

- Do visitors catch up on the GNP? If yes, which sources are used?
- Which offers of the national park are perceived and get used?
- Is different utilization of offers related to sociodemographic and visit-related characteristics of the visitors?
- What is the percentage of visitors with an affinity to the GNP in winter?
- Is there any difference between affine visitors and regional visitors concerning the knowledge and the use of offers?

## Methods

The study was carried out in the GNP with a structured questionnaire based on former surveys of ARNBERGER et al. (2009) and ARNBERGER et al. (2012) in winter 2006/2007 and summer 2007/2008 to allow a direct comparison. The questionnaire consisted of seven parts (modalities of the trip, affinity to the GNP, special part I: search for information, special part II: use of services and offers provided by the GNP, special part III: smartphone application of the GNP, attitudes to the GNP and his services, visitor structure).

In total 293 questionnaires were collected, 17 questionnaires were excluded due to insufficient answering. The questionnaire was distributed by addressing visitors personally in a restaurant in the valley of Johnsbach, a standardized welcoming and information text was read for each participant.

Analysis was made with the IBM SPSS Statistics 21 software, with the following tools to analyze data: descriptive statistics, relative frequencies, cross tables, multiple answer sets, diagrams and non-parametric tests. Chi-square tests and non-parametric tests were carried out to analyze relations between the previously stated variables and the affinity towards the national park, socio-demographic features as well as characteristics concerning the national park trips of the surveyed visitors.

## Results

Visitor characteristics: the average age was 47 (youngest 12, oldest 80 years old), people between 41-60 years made 60% of all, 34% were female, most of the visitors came with car (99%) from Styria, Lower or Upper Austria (each around 30%). 35% attained a degree of university or similar level, 30% completed a high school. 61% were daytime visitors, 29% overnight visitors with an average of 2,8 nights of stay and 10% residents of the region.

Most of the visitors used the internet, tour guides and the homepage of the GNP as information sources. The most common recreational offers were information boards and the visitor centers 'Weidendom' and 'National Park Pavillon'. 80% of the visitors had heard about these offers, but more than half of them hadn't used any of them. In the winter season 2014, only a few visitors knew the smartphone-app of the GNP.

The percentage of visitors with an affinity towards the national park was 21%. The affinity to the GNP played a minor role regarding the use of information sources and recreational offers of the national park. In contrast, socio-demographic features and characteristics concerning the trips of the visitors were more often associated with the use of information sources and recreational offers of the national park. Most of the visitor services are better known amongst residents and visitors who are regularly in the national park. The protection status as 'national park' played a role for first-time-visitors to come to the region. This group of visitors are mainly using brochures, internet and the homepage of the national park, while information boards are rarely used. The visitor centers as well as printed media were particularly used by women. For older visitors theme trails and the magazine of the GNP were interesting. Younger visitors (<30) more often use the internet or the homepage of the national park. This is also true for guests who are coming just during the winter time; this visitor bracket is in general not easily reached by the offers of the GNP.

## Discussion and conclusion

The findings of the study were in line with former investigations concerning the knowledge and use of offers from the national park provided for visitors in the GNP although around 3-5 years had passed meanwhile (ARNBERGER et al. 2009; ARNBERGER et al. 2012). Particularly the winter guests are not very well reached by services of the national park. In order to provide visitors with important information, new approaches have to be developed. WASEM & MÖNNECKE (2006) 'point towards the importance of informing users about visitor management as early and as detailed as possible using so-called information gates such as sport shops or touring books' (STERL et al. 2010, p. 36,37). The latter (2010) suggested the integration of important information in touring guide books and on websites, which is along the findings of this study. Furthermore, the authors state that ski tour guides, teachers in ski touring courses (e.g. organized by alpine associations) could also share information. As national organizations like 'National Parks Austria' offer their own media and usually have a broader coverage, they play an important role in communicating the effects of recreational activities on wildlife (STERL et al. 2010).

This leads to the conclusion that the services still need to be more adapted to the demands, expectations and needs of the visitors and that new ways of communicating important information have to be found. Regular socioeconomic monitoring can function as a basis for planning and adapting the services provided by national parks.

Limitations of the study were the location of the survey, the chosen timeframe of 3 weeks in the winter and some methodological inelegances.

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