Seasonal differences in visitor perceptions: a comparative study of three mountainous national parks in Central Europe

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This research focuses on a comparison of the views and attitudes of visitors to three key mountain national parks, biosphere reserves and Natura 2000 sites: Sumava National Park (Sumava NP, Czech Republic), Krkonose National Park (KRNAP, Czech Republic) and Karkonoski Park Narodowy (KPN, Poland). These areas are located relatively close to each other in seemingly homogeneous geographical regions of two neighboring post-communist countries. Their cultural and historical development, utilization and management rules however, were relatively heterogeneous in the past. Tourism is one of the most important economic factors in these regions, but large visitor numbers in protected areas threaten sustainability and create problems for the management of these areas. Tourists visit these destinations both in summer (hikers, cyclists) and in winter (hikers, skiers). A comprehensive understanding of visitor use, including visitors' attitudes and perceptions, is fundamental for effective park management (Cooper et al. 2005). Charles University in Prague (Institute for Environmental Studies), has been monitoring the tourism use of Czech national parks since 1997 (e.g. Cihar, Trebicky 1997; Cihar et al. 2002). In this study, data were collected by the means of questionnaires. Using a standardized socio-environmental survey, we attempt to characterize the basic features of the visitor population and differences in the results, in order to better understand existing processes and help management professionals in seeking optimal methods of sustainable development. Standardised personal interviews were conducted during the summer and winter of 2000 (KRNAP and KPN) and 2006 (Sumava NP), over nine days; This included five weekdays and two weekends. There were 695 respondents in KRNAP, 476 in KPN and 1081 respondents in Sumava NP. The refusal rate was low (less than 10%). The survey explored visitor's attitudes towards nature protection, park management, tourism and related issues. Preferences and perceptions were measured by respondents rating their responses using a 5-point Likert scale (Babbie 2004). In addition, standard demographic information (age, gender, occupation and nationality) was also collected to obtain a profile park users.

The primary data were entered into an MS Access database and statistically processed in the NCSS program (Hintze 2001). In the next stage, the primary data were statistically analyzed using the $\chi 2$ test to evaluate cases where results differed between the winter and summer season. There were fifteen common questions for these three national parks. Three issues yielded significantly different results ($P<0.05$) between the two seasons in all monitored national parks – visitor's nationality, type of accommodation and financial costs. In the case of visitor's nationality, foreigners preferred the summer season in KRNAP (34.3% compared to 19.8% in winter) and Sumava NP (5.6% against 2,5% in winter). Apart from this, domestic tourists visited KPN more frequently in summer (85.5% in comparison with 67.4% in the winter season). As far as accommodation was concerned, visitors gave priority to hotels in the winter season and to private accommodation in the summer. The question concerning financial costs was connected to this issue. Winter visitors spent more money in comparison with summer tourists. The study found other significant differences for an additional seven issues – size of the visitor's city, perception of tourism intensity on hiking tracks (both KPN and Sumava NP), perception of tourism intensity in centers and their vicinity (both KRNAP and Sumava NP), length of stay, satisfaction with financial costs (KPN), means of transport to the NP (KRNAP), visitor's occupation, and visitor's level of education (Sumava NP).

Results from this study, together with data about local residents in Czech national parks, provide appropriate indicators of sustainable development in (not only) Czech protected areas. Outcomes

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of the survey are being used to design priorities for the management of environmental protection on local, regional and national levels.

This comparative overview of national park users' attitudes in two main tourist seasons has been and will be very important for several reasons. First, it revealed various dynamic user profiles and their attitudes between two main tourist seasons in the selected national parks. Whereas most research is carried out during the summer season in these national parks, we demonstrate that the results from the relatively economically crucial winter season may be different. For example, in KRNAP, the feeling that tourism is too concentrated is more widely held by tourists in the winter season than in summer. The carrying capacity of visitor numbers seems to have nearly been reached. Some management options like periodic traffic limitations, new construction development or willingness to pay, could improve this situation.

Tourists also have different perceptions of environmental problems in the summer and winter seasons. Winter tourists don't see tourism as a threat, in contrast to the summer research at the same site. Management of the park should focus on consistency and the direct and indirect effects of summer and winter tourist seasons, as well as tourist awareness of the negative impacts of tourism on the sensitive mountain environment in winter (information centers, brochures, tourist guides, rangers).

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