

Economic valuation of birding events: the example of crane tourism at *Vorpommersche Boddenlandschaft national park*, Germany

Yasmin Herget, Julius Maximilian University of Würzburg, Germany, yasmin.herget@uni-wuerzburg.de

Hubert Job, Julius Maximilian University of Würzburg, Germany, hubert.job@uni-wuerzburg.de

Introduction

This study is the first of its kind to explore empirically the economic value of birding events in German national parks. In general, national parks may contribute to a sustainable development and conservation of a region through nature-based tourism (Hvenegaard 1998:701). National parks' potential and economic effects in Germany have been examined and showed the motivation of the visitors, and structure and impact of their expenditures. Embedded in a continuative monitoring project that examines all national parks in Germany using a standardized methodology (Mayer et al. 2010), this research aims to examine the specific nature-based tourism branch of bird-watching in *Vorpommersche Boddenlandschaft national park*, Germany.

For several reasons, national parks attract wildlife watchers, but predominantly for the reason that visitors can witness wild animals in their natural habitat and behavior. Therefore, wildlife experiences such as bird-watching can be considered part of the concept of national parks. Along with the growing interest in nature-based tourism and the increasing popularity of bird-watching, avitourism (tourism directed at bird-watching) is rapidly growing (Biggs 2011: 128). Avitourism destinations are most often related to great birding events, such as the autumn migration where thousands of tourists come to watch the gathering of thousands of birds of one species. Those nature events generate economic, social and conservation benefit at natural areas of the world (Sekercoglu 2002: 282). The economic impact of birding-events has been investigated for many parts of the world. And although several studies provide insights into the economic value of bird-watching in North America or South Africa (e.g. Conradie 2013) no research has been done for Germany.

Survey area

Great birding events in Europe are the crane migrations. A great number of Common Cranes (*Grus grus*) breeding in Scandinavia stage at *Vorpommersche Boddenlandschaft national park* in Germany during their migration to southern winter grounds. Especially throughout autumn migration, up to 60,000 cranes converging at feeding and roosting sites can be observed daily. Within this six to eight week period, cranes attract thousands of birders, which is said to result in a touristic extension of summer high season. But this economic potential of the event of crane migration has so far only been sensed by the local tourist industry. To verify this economic impact, the research aims to show that the generated birding-tourism revenue generates income and contributes directly to the wellbeing of the national park region *Fischland-Darß-Zingst*.

Methods

In order to address the main problem of this research, qualitative and quantitative methods following the example set by Mayer et al. (2010) were used. To obtain the required information about crane tourists at *Vorpommersche Boddenlandschaft national park*, a questionnaire was designed, which was conducted on-site, face-to-face during crane migration in autumn 2013. 292 interviews were completed at eight crane observation points in the area. Four interview sites were

viewpoints near roosting habitats of the Common Crane, where the birds – and thereby the birders – arrive approximately one hour before sunset and leave before sunrise. The other half of the questionnaires, were carried out at the feeding sites during daytime. Additionally to the interview including 50 questions, short interviews and counting helped to calculate number of tourists. Parallel to the methodology proposed by the national park project (Mayer et al. 2010), the questionnaire focused on the structure and size of expenditures by economic sector with an addition of crane-related expenses. Furthermore, it examined the visitor's national park affinity and crane affinity. Based on a set of questions that addressed motivation of visitors, four types of tourists could be distinguished: visitors with high crane affinity, visitors with no crane affinity, visitors with a high national park affinity and visitors with no national park affinity.

Preliminary findings

Visitors with a high crane affinity, which are 74.3% of the respondents of this study, know about the crane migration and stated that it played a central role in their decision to visit *Vorpommersche Boddenlandschaft* national park. Out of this group of crane tourists 46,1% can be considered visitors with a high national park affinity compared to 24,0% in the group of non-crane tourists ($\chi^2_{11,2}$; $p < 0.001$), as they know about the protected area and ranked this label as the central reason for visiting this region. The shares of the proposed visitor types were compared to the findings of the general national park monitoring project, which also highlighted the national park affinity of visitors.

The results of the survey show that, in general, tourists with a high crane affinity spend more money than tourists without a high crane affinity. 1.90 Euros of the average crane-tourist's expenditures were directly crane-related. Other tourists only spend 0.50 Euros averagely on crane-related products or services (e.g. crane boat tours, walking tours, books). On accommodation and food, crane tourists spend 54.60 Euros daily, non-crane tourists only 48.80 Euros. For other categories, no variation in expenditures between crane tourists and non-crane tourist showed.

Many birding spots, like Platte River in Nebraska, USA, are visited for around two days (Edwards & Thompson 2009: 23). In the region of *Vorpommersche Boddenlandschaft* national park avitourists stay on average 6.7 nights. This increases the economic value of crane-related tourism. Visitors watch cranes 4.5 times in the course of their stay. And while 54.1% of the respondents named crane migration as a main reason for their trip in the open question, only 7.5% stated, that they would not have visited *Vorpommersche Boddenlandschaft* national park, if the cranes did not stopover in the area. This implies that most tourists see cranes as an attraction they are interested in observing, but only a small portion of the interviewed tourists took the trip only for the purpose of crane-watching.

For a statistical projection that evaluates the economic impact of the entire crane migration period (September and October) at *Vorpommersche Boddenlandschaft* national park, also data collected by crane-related vendors was used. With this information, the benefit associated with the nature event of crane migration was calculated and shows how nature has economic value and can be translated into economic benefit.

References

Biggs, Duan, et al. 2011. The value of avitourism for conservation and job creation-An analysis from South Africa. *Conservat Soc* 9(1), 80.

Conradie, Nicolene., van Zyl, Cina & Strasheim, Arien 2013. What inspires birders to migrate South towards Africa? A quantitative measure of international avitourist motivation. *Southern African Business Review* 17(1), 127–167.

Edwards, Richard & Thompson, Eric C. 2009. *The Economic Impact of the Rowe Sanctuary and Sandhill Crane Migration on the Central Nebraska Region*: Bureau of Business Research.

Hvenegaard, Glen T. & Dearden, Philip 1998. Ecotourism versus Tourism in a Thai National Park. *Annals of Tourism Research* 25(3), 700–720.

Mayer, Marius, et al. 2010. The economic impact of tourism in six German national parks. *Landscape and Urban Planning* 97, 73–82.

Sekercioglu, Cagan H. 2002. Impacts of birdwatching on human and avian communities. *Environmental Conservation* 29(3), 282–289.