

Large Scale Protected Areas + Tourism = Regional Development?

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Abstract: The results of this research clearly indicate that tourism in Large Scale Protected Areas can generate considerable benefits for the regional economy, especially in peripheral and structurally disadvantaged regions. For instance, in Mueritz National Park it is estimated that guests whose key motivation for visiting was the brand 'National Park' (a share of nearly 44% of all 390 000 visitors in 2004) created the equivalent of 261 full time job equivalents. In Berchtesgaden National Park only about 10% of 1.13 million visitors in 2002 have been attracted by the Protected Area brand, generating about 206 jobs. In the regions of Hoher Flaeming and Altmuehltal 211 respectively 483 jobs were created by Nature Park related tourism. But in the latter cases these impacts are largely not ascribable to the status as a Protected Area.

As indicated by this research, more importance should be attached to the issue of tourism in Large Scale Protected Areas. Financial benefits of tourism in National Parks and Nature Parks may contribute to increasing acceptance of nature conservation. Therefore decision-making processes in nature protection and regional tourism policy need to more fully incorporate aspects of durable economic development. Therefore decision-making processes concerning nature protection and tourism policy need to more fully incorporate the concept of sustainability, whether with regard to nature-based and ecotourism in Protected Areas in general, or with specific regard to Nature Parks and conservation as well as development of cultural landscapes therein.

Introduction

What kind of regional economic benefits can tourism induce in National Parks and other Protected Areas? This is the central question of our conference contribution.

On an international level Protected Areas have represented most important tourism destinations for a long time, notably the category of National Parks e.g. in North America, Africa or Australia. Only recently, in Central Europe Large Scale Protected Areas have been integrated into tourism planning strategies as part of a holistic approach that seeks to account for both economic and ecological well-being. The regional economic impacts on local communities as a result of tourism in Protected Areas are of particular importance, although they cannot be covered sufficiently because of data gen-

erating problems. So far this topic formed the focal point of interest of only a few research studies (Küpfer 2000, Job et al. 2003) which can hardly be compared because of their different methodological approaches. For this reason a Research and Development project funded by the German Federal Ministry of Environment was carried out in one National Park and two Nature Parks during 2004 in Germany. The target was to generate a standardized procedure for estimating the economic benefits of tourism in Large Scale Protected Areas. The introduced method of a value-added analysis could be a basis for future studies with respect to the comparability of their results.

This contribution is structured as follows: section II deals with the economic perspective on Large Scale Protected Areas in general, while section III explains the relationship between Large Scale Pro-

tected Areas and tourism in detail; section IV introduces the method used for estimating the economic impacts and section V then shows the results of the case studies; section VI discusses the outcomes and section VII finally gives a short summary and some reasoning for future research.

Large Scale Protected Areas in a Regional Economic Perspective

In principle Large Scale Protected Areas are a kind of public good characterized by their non-excludability as well as their non-rivalness, i.e. it is not possible to exclude an individual from their consumption. Furthermore there does not exist any process of price-building in the market for these goods as it is common for private goods (e.g. clothing, furniture). Hence it is difficult to determine the financial value of public goods, e.g. of a National Park.

Economic values of Large Scale Protected Areas comprise different components: use values and non-use values. The latter are characterised by the dependency of their revenues on the direct 'utilisation' of the reserve like forestry. Use values can be further distinguished in three types of values: the so-called existence values are closely associated with the intrinsic significance of nature. They reflect the benefit of knowing that the Large Scale Protected Area exists even though the probability of visiting the Protected Area or getting direct use of it in another way is quite low. Rather similar are the intentions of the bequest values which refer to the will of some people to protect e.g. special natural phenomena for future generations. At last the option values are also related to the future possibilities of using Large Scale Protected Areas respectively their resources, e.g. because of its biodiversity as an untested gene pool for pharmaceutical or agricultural products (WCPA 1998).

Within the use values a distinction has to be made between direct and indirect ones: While the latter comprise primarily ecological functions like e.g. avalanche or watershed protection, which are usually unmeasured by any market, the former are of particular interest for a local economy. Amongst others they include activities such as agriculture, hunting, recreation and tourism – values derived

from the direct use of a Large Scale Protected Area. The focus of the following case study will be on this last issue, i.e. on the direct use values and especially the economic effects created by tourism investigated in terms of a value-added-analysis.

Large Scale Protected Areas and Tourism

Large Scale Protected Areas are normally characterised by a size of more than 10 000 ha and an established full time management. Their primary function is the conservation of valuable nature landscapes, but also of man-made environments which are not in excessive use. In Germany there are three categories of Large Scale Protected Areas: National Parks (IUCN category II), Biosphere Reserves (VI) and Nature Parks (V). In principle Protected Areas categorised this way are provided with positive attitudes. Especially National Parks represent a well-known brand standing for intact nature landscapes, one of the most important unique selling propositions in tourism nowadays. That is why beside their original dedication nearly all Large Scale Protected Areas are used in a more or less touristic fashion.

In general the relationship between nature conservation and tourism can be seen as ambivalent: on the one hand tourism is often based on a sound environment, whereas on the other side unmanaged tourism may affect natural processes adversely. In spite of the numerous drawbacks, tourism can also have some positive effects on the nature. On the part of the local population missing acceptance for the goals of nature conservation often can be found. Many inhabitants of buffer zones of Large Scale Protected Areas feel that they are restricted in their private, but also job-related actions through the conservation restrictions. Positive economic impacts and possibilities to participate in tourism-related jobs and income help to show that regions with Large Scale Protected Areas do not necessarily end up as black holes of economic development. Therefore tourism represents an opportunity to conserve endangered ecosystems while it may also have positive effects on regional development. Because of their mostly peripheral position – mostly within economically laggard regions

– it is thought about Large Scale Protected Areas as a conscious instrument for sustainable development, even in Central Europe (e.g. Hammer 2001). For this reason the main emphasis of regional studies on the impacts of tourism are their effects on income and employment.

With a value-added analysis it is possible to estimate the effects, which emanate from special supplies – in our case: Large Scale Protected Areas. Added value thereby means the sum of wages, salaries and profits. For the calculation, results of visitor counts that comprise total number of visitors as well as structural data on visitors and interviews on expenditures of visitors have to be linked to the detailed analysis of selected companies. The latter is needed to reveal the cost structures of the businesses profiting from tourism demand and provides data on the amount of added value that is gained from touristic turnover. Additionally, to these first-round effects, it is accounted for effects in the second round when directly benefiting companies buy inputs from other businesses.

Methods

The application of input-output analysis or similar advanced research methods fail as a result of non-existing appropriate premises like e.g. regionalised input-output-tables and the associated prohibitive expensive data gathering. For this reason one National Park and two Nature Parks were examined by a value-added analysis within the R&D project (see map 1). The thereby selected Mueritz National Park in the north-east of Germany represents the central tourist attraction of the region in the south of Mecklenburg-Western Pomerania. Such a dominant role of the Protected Area as a destination's highlight is rarely the case: for instance the alpine Berchtesgaden National Park is just one among several attractions in the region that is one of the oldest tourism destinations in Germany with a tradition over 150 years old. The situation in Berchtesgaden will also be considered in this paper because of a nearly identical pilot study conducted in 2003 (Job et al. 2003).

Because of the numerous Nature Parks in Germany (95) with their multifaceted structures it is hard to draw general conclusions about this category of

Large Scale Protected Areas. Several factors were included to select the two case study examples Altmuehltal in Bavaria and Hoher Flaeming in Brandenburg, e.g. the size of the conservation area or their spatial relation to more densely populated areas. The particular extent of the four investigation areas is defined by the community boundaries: They include all municipalities located within the conservation area and those which are intersected by the boundary of the Large Scale Protected Area. In the case of the National Parks also communities outside the conservation area will be included, if they are adjacent to the territory of the park.

One critical factor of the research is the total number of guests visiting the reservation (both day trippers and tourists). In Germany no access limitations for Protected Areas exist. Therefore reliable figures about visitor numbers are hard to assess. At the moment only unsatisfying approximate estimates can be obtained. Especially, for statistical purposes this fact aggravates sound analysis as the basic population is unknown. To solve this problem a random sample survey that is obtained by seasonally distributed counts and short interviews at different sites within the Large Scale Protected Area, accounting for possible activities is advocated. Moreover this method covers the ratio between day trippers and overnight staying tourists. The results of the counts in combination with the findings of the short interviews enable a reliable estimation of the touristic turnovers on the basis of the daily expenditures – surveyed in the long interviews – to all Park visitors. Basis for weighting of the results are temporal, spatial and structural factors as well as parameters caused by the weather.

Altogether eight steps are necessary to calculate the economic impact in terms of full time jobs with the findings of the different surveys: by multiplication of the visitor number and the average daily expenditures (differentiated by the varied target groups), the gross turnover of all park visitors can be calculated. Afterwards these total revenues are analysed by the different profiting sectors with their special VAT and value added rates. Thus it is possible to identify the importance of different visitor groups for a Large Scale Protected Area. The next step is to estimate the net turnover by subtraction of the VAT from the gross turnover. The direct

income of the region (i.e. wages, salaries and profits) derives from the multiplication of the net turnover and the respective value added rates. The indirect effects on income of preliminary businesses have also been calculated in a separate step. The sum of the direct and indirect income effects is the added value within a region and measures the total impact on regional income. At last to get the equivalent of full time jobs the total income effects have to be divided by the average regional social income per person. This results in an indicator describing the hypothetical number of individuals who could live on the basis of the income created by tourism in a Large Scale Protected Area.

Results

National Parks Mueritz/Berchtesgaden

For Mueritz National Park about 390 000 visitors could be estimated in 2004, while there were approximately 1.13 million visitors in Berchtesgaden National Park in 2002. The visitors of both reservations were divided into two groups with reference to the National Park as the decisive criterion to visit the region (Job et al. 2003). Using this procedure results in a proportion of 44% of National Park tourists in a narrower sense in the Mueritz region. The other 56% are designated as non-National Park tourists. 77% of all interviewed visitors in the National Park Mueritz knew the category of the Large Scale Protected Area correctly. Also the question about the role of the status as a Large Scale Protected Area can be assessed positively: for about 57% of the guests the status of a National Park affected their decision to visit the region to a high or very high degree. Rather different are the findings in this context for the National Park Berchtesgaden: just about 18% of the visitors answered that question in the same way described above. Nevertheless 57% of them knew the right category, although altogether just about 10% of all interviewed visitors could be designated as National Park tourists in a narrower sense. This severe discrepancy in the structure of the visitors can be explained by the different history of the National Parks, but also because of the very long tradition of Berchtesgaden as an alpine tourism destination where the Park only plays a subordinate role.

All visitors of the National Park Mueritz generate an annual gross turnover of approximately 13.4 million euros. The value added rate for day trippers was about 37%, for the overnight tourists of about 40%. Thus a sum of income (direct and indirect) of 6.9 million euros can be estimated that is caused by tourism in the National Park. About two-thirds of this sum account for the direct side and one-third for the indirect side of income. Taking into account only the National Park tourists in a narrower sense (generating an income of 2.9 million euros) and the average gross regional income per person in the Mueritz region (10 918 euro in 2004), the tourism originally induced by the Large Scale Protected Area creates 261 full time job equivalents. The results for the National Park Berchtesgaden are stated as follows: with a gross turnover of about 9.3 million euros and a total added value of 4.6 million euros as well as an average gross regional income per person of 22 500 euros (2002), 206 full time job equivalents are generated by the National Park tourists in a narrower sense. This less total effect – despite of the more than two-times higher attendance compared to the National Park Mueritz – reflects the rather low share of true National Park tourists in a clearer way.

Nature Parks Altmuehltal/Hoher Flaeming

Approximately 300 000 guests visited Hoher Flaeming Nature Park in 2004, whereas this figure is more than three times higher in Altmuehltal (about 910 000 visitors). From a tourism perspective Hoher Flaeming Nature Park is characterized by its proximity to Berlin and therefore the majority of day trips (83% share of all trips) are mostly undertaken from there. With a share of 63% the day trippers in Nature Park Altmuehltal are also the dominant visitor group, but the overnight staying tourists have a greater effect than in Hoher Flaeming. Compared to the category of National Parks in the case of the Nature Parks there is no distinction between the ‘Nature Park tourists’ and ‘non-Nature Park tourists’ because the mostly diffuse border will pose problems in the operationalisation.

To estimate the equivalents of full time jobs created by the complete tourism in both cases, the average gross social income per person in Bavaria (21 214 euros) and Brandenburg (14 182 euros) have

	Altmuehltal	Hoher Flaeming	Berchtesgaden	Mueritz
Visitors	910 000	300 000	114 000* (1 129 000**)	167 000* (390 000**)
Ø Daily expenditures per person	EUR 22.80	EUR 20.60	EUR 44.27	EUR 33.80
Gross turnover	EUR 20.7 million	EUR 6.2 million	EUR 9.3 million	EUR 5.6 million
Direct income	EUR 6.9 million	EUR 2.0 million	EUR 3.1 million	EUR 1.9 million
Indirect income	EUR 3.4 million	EUR 1.0 million	EUR 1.5 million	EUR 0.9 million
Sum of direct/indirect income	EUR 10.3 million	EUR 3.0 million	EUR 4.6 million	EUR 2.9 million
Full time jobs	483 persons	211 persons	206 persons	261 persons
*National Park tourists in a closer sense				
**All National Park visitors				

Table 1: Economic effects of tourism in four Large Scale Protected Areas in Germany (Job et al. 2003; Job et al. 2005).

been applied. For the Nature Park Hoher Flaeming a total added value of 3.0 million euros can be derived from the gross turnover of about 6.2 million euros. This leads to approximately 211 full time job equivalents within the investigation area. In Nature Park Altmuehltal a gross turnover of 20.7 million euros causes a total added value of about 10.3 million euros and hence an equivalent of 483 job equivalents. A final overview of the founded estimates gives table 1.

Discussion

As the results stated above show, primarily two variables influence the regional economic impacts significantly: firstly the total number of visitors and secondly the extent of their average daily expenditures during the stay. Especially the former should be estimated most accurately because deviations of this figure have a strong effect on the subsequent calculations. Furthermore the structure and the particular level of spending have to be surveyed separately for each region as it is not possible to generalise present findings at the moment. The surveys confirm previous studies in a way that tourists staying overnight – even when neglecting their expenditures on accommodation – cause a higher added value than day trippers.

For this reason overnight staying tourists seem to be the more worthwhile target group, especially because of their different spatial behaviour that agrees in a better way with the concern of conservation of a Large Scale Protected Area. This aspect implies two dimensions: first the absolute number of visitors could be diminished by a higher propor-

tion of this segment as a result of their longer duration of stay (quantitative dimension). To achieve this, it could be expedient to upgrade the existing supply and thereby make new sources of income accessible (qualitative dimension). Packages in the tourism sector normally consist of many actors which have to collaborate positively to submit their offers. That is why close partnerships between all actors including the tourism, but also the conservation sector are necessary and e.g. successfully implemented within the region of National Park Mueritz (Job et al. 2005).

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