

Crossing Borders for Nature

European examples of transboundary conservation

Edited by Maja Vasiljević and Tomasz Pezold



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15. Regional Economic Impact of Bavarian Forest National Park

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1. Introduction

National parks are primarily an instrument for large-scale preservation of natural areas. Traditionally it was the uniqueness of natural phenomena that determined the designation of national parks. Today, ecological reasons such as the preservation of biodiversity are decisive. National parks are about unimpaired ecosystem dynamics or, more simply, "letting nature follow its course". This is a difficult task in densely populated Central Europe with its long cultural history and, consequently, a landscape with strong anthropogenic influences. National parks are often perceived as limiting factors within a region due to the restrictions they impose. The spatial-functional limitations and their associated economic limitations often lead to a lack of acceptance among the adjacent local population and local politicians. As a natural disturbance of forest ecosystems, the bark beetle (*Ips typographus*) is seen as an additional negative factor in the Bavarian Forest. This raises questions concerning the management of national parks and of visitor perceptions over the changed forest landscape. In turn, this complicates the sometimes very emotional debates in the region concerning the virtues and vices of national parks. Besides the goal of nature conservation, national parks offer an experience value, such as unspoiled wilderness, which can be used by the tourism industry. National parks and their attractions represent a scarce good, as there are few suppliers on the market (14 national parks in Germany). They cannot be replicated, transferred or imitated due to their legal status. Thus, national parks are the highlights of nature tourism in many countries.

National parks in Germany, however, do not always exploit their uniqueness sufficiently for tourism purposes.

In the context of national park tourism in the structurally weak periphery of Lower Bavaria (Niederbayern), the study⁵ examines the following questions:

- How important is tourism as an economic and employment factor?
- From a cost-benefit perspective, what is the relation of governmental inputs into the national park with these results?
- Has the potential of the brand "national park" previously not been recognised or used enough in tourism marketing?
- What economic interrelations exist between individual businesses in the national park surroundings, and how do they benefit directly or indirectly from the presence of the protected area?
- Are visitors of the neighbouring Šumava National Park (Czech Republic) a potential target group for the Bavarian Forest National Park, and could stronger cooperation between the two parks in the field of tourism reach this target group?

2. Methods

The methods are explained in more detail in the full version of the report. Therefore, only an overview of the surveys carried out is provided below.

In order to survey the number and distribution of visitors in Bavarian Forest National Park during the course of 2007, visitor counts and interviews were carried out on 22 days (weekdays and weekends) in the winter, summer and off-peak season. Short interviews asking about place of origin and type of accommodation were conducted with 11,140 persons. Of these, 1,990 persons were interviewed in more detail about their spending behaviour and travel motivation.

Enterprises in the counties of Freyung-Grafenau and Regen were asked to fill in a written questionnaire. Samples were taken using a stratified random selection process to ensure representativeness. With the sample quota adapted for each industry, 1,832 questionnaires were mailed out between July and October 2007. A total of 197 were returned, equalling a return rate of 10.8%.

3. Visitor numbers

The survey area (Map 15.1) includes the counties of Freyung-Grafenau and Regen. Figure 15.1 shows the development of overnight stays in the region since the 1980s, compared to its development in the whole of Bavaria and to the booming branch of city tourism.

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⁵ This paper is a summary of a study entitled *Die Destination Nationalpark Bayerischer Wald als regionaler Wirtschaftsfaktor*. A short English version of the study can be downloaded from: www.nationalpark-bayerischer-wald.de/detail/veroeffentlichung/publikationen/d_berichte/doc/en_studie_job-kurz_ba.pdf

Overnight stays in accommodations > 9 beds (index 1983 = 100)

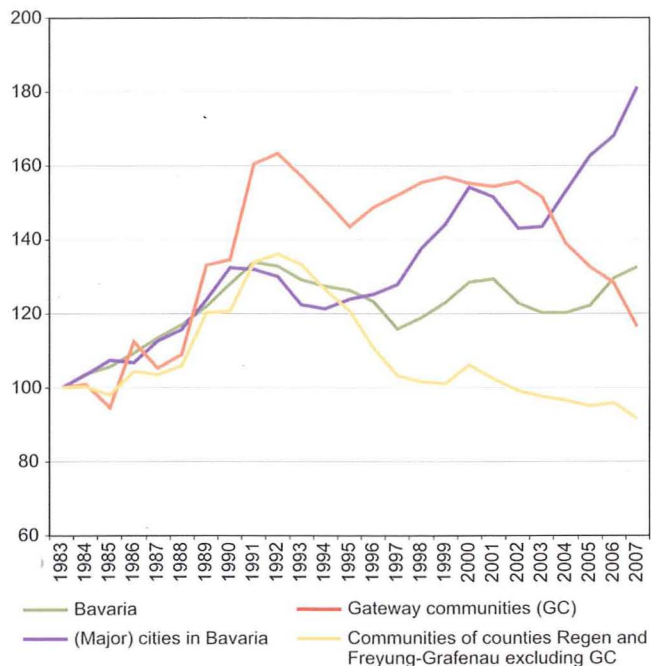


Figure 15.1: Development of overnight stays in the survey area and comparison areas

Source: Own illustration adapted from LfStad 2008

With a total of 760,000 visitors in 2007, the national park is the most visited attraction in the region and receives almost three times as many visitors as the Mt Arber ski resort. A previous study estimated that between 1.3 and 1.4 million people visited the national park in 1981.

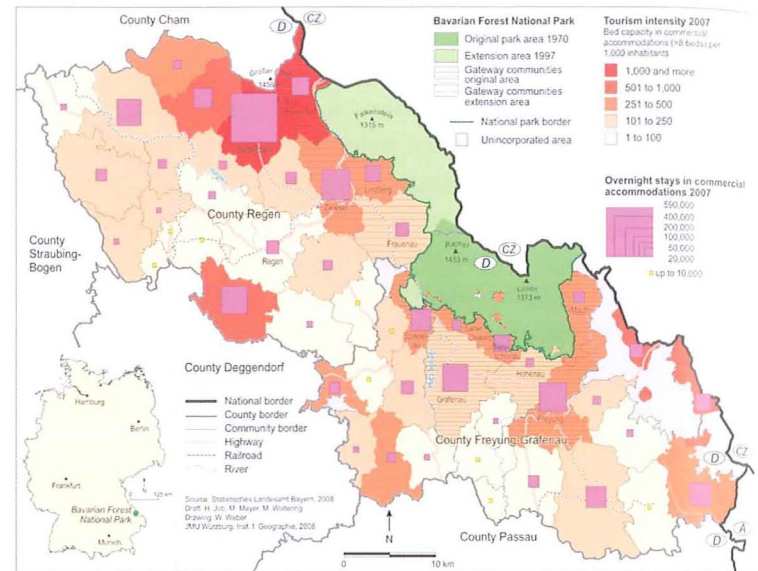
In the study from the early 1980s, however, no systematic year-round and area-wide visitor counts were carried out; the quoted figures were based on estimations by the national park administration. It is therefore impossible to compare the present study with its predecessor. Thus it would be wrong to conclude that the interest of tourists in Bavarian Forest National Park has declined over the years.

Visitor counts from the visitor centres Hans-Eisenmann-Haus and Haus zur Wildnis (opened in 2006), provide a more reliable comparison. In 1982, 211,000 people visited the Hans-Eisenmann-Haus centre and in 2007 around 255,000 visitors came to both visitor centres.

According to our survey from 2007, visitors are mainly concentrated around the primary tourist attractions (visitor centres and their wildlife parks) whereas the remainder of visitors are distributed widely across the entire protected area. Given this concentration on the visitor centres and the visitor numbers of the latter reported above, a visitor number of more than one million, either now or then, does not seem very realistic.

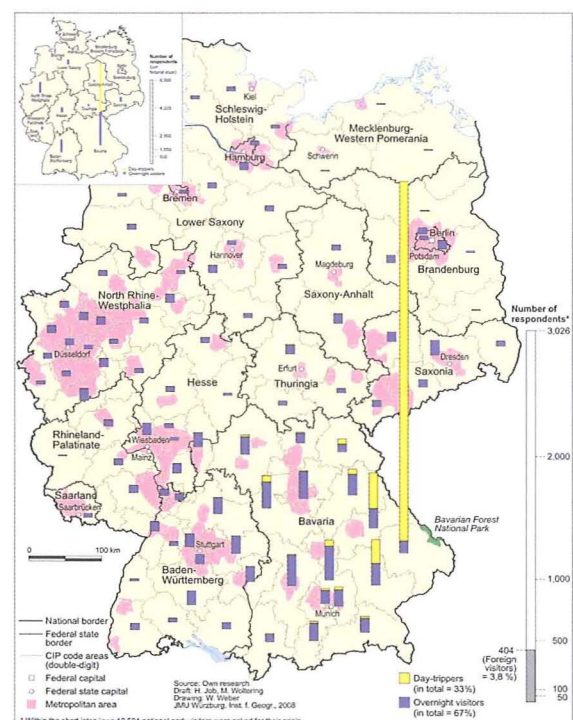
A total of 67% of visitors stay overnight (around 511,000 visitors). The remaining 33% (around 249,000 visitors) are day-trippers. The seasonal changes of these visitor numbers confirm the seasonal visitation pattern in the

region: the majority of visitors arrive in the summer and winter season, with fewer arrivals in the off peak months. There are, however, a few exceptions to the rule, for example during the Easter holidays and the autumn holidays. The highest visitor numbers in the summer season are registered during July.



Map 15.1: Survey area Bavarian Forest and tourism intensity of its communities

The majority of visitors come from Germany. Only 3.9% come from foreign countries (Map 15.2), primarily from neighbouring countries such as the Czech Republic, Austria or The Netherlands. The main place of residence for around 28% of the respondents is in the postal code area 94, i.e. from the area surrounding the national park, reflecting a vast majority of day-trippers.



Map 15.2: Origin of visitors to the Bavarian Forest National Park

4. Importance of the national park brand in the Bavarian Forest

The visitors of the national park are divided into two groups according to their affinity to the national park: visitors with high affinity to the national park (45.8%) and other visitors (54.2%) (Figure 15.2).

According to the total number of visitors in 2007, the following division between visitors with high national park affinity and other visitors, and the respective percentage of day-trippers and overnight visitors (Figure 15.3) can be derived from the visitor structure of the national park: almost half of the tourists are motivated to visit the region because of the presence of the national park. This shows the leading position of Bavarian Forest National Park as a German national park destination. This result is a positive outcome for Bavarian Forest National Park when compared to others, as the park lies ahead of both Müritz National Park (43.7%) and Berchtesgaden National Park (10.1%).

Only 57.3% of the respondents in Berchtesgaden National Park were able to answer the question about the legal conservation status of the area correctly. In Müritz, the number was 76.7%, which was topped by Bavarian Forest with 86.1%.

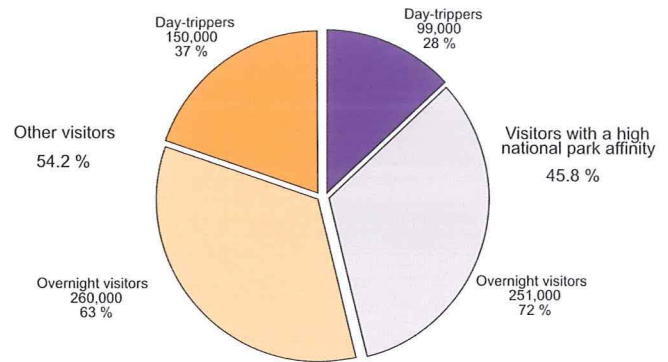


Figure 15.3: Visitor structure in Bavarian Forest National Park
Source: Own research 2007

The share of visitors with a high national park affinity visiting Müritz National Park, which is 20 years younger, already lies just below that of the Bavarian Forest. The main reason for this is the much longer existence of market-based tourism in the Bavarian Forest. Thus, even without the national park, the region is part of tourists' mental map when it comes to their travel decision because of other attractions.

Secondly, interviews with tourism entrepreneurs (owners of tourism businesses) show that the identification of the local population with Bavarian Forest National Park is weaker than it is in the Müritz region.

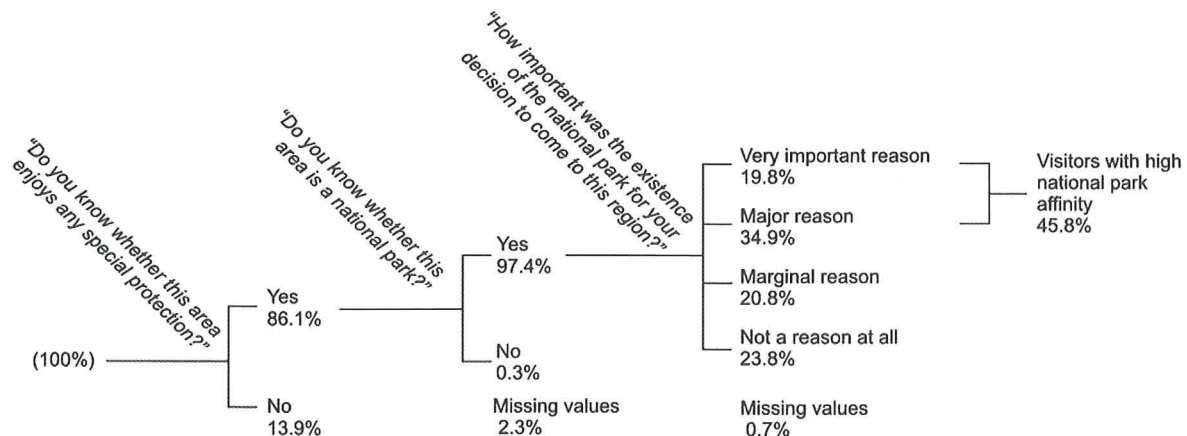


Figure 15.2: Affinity to the label "national park"⁶
Source: Own research 2007

The role of the conservation status of the area in the visitors' decision to visit the region varies significantly. The majority of respondents (54.7%) placed themselves under the two top categories "the national park was a very important reason for this visit" and "...was a major reason for the visit". It is interesting to note that the national park has a higher significance for overnight visitors than for day-trippers. Nevertheless, it should be remarked that the share of visitors with a high national park affinity is not completely satisfactory.

The national park only plays a relatively small role in the marketing mix of the responding enterprises, despite the fact that the national park has existed in the region for almost four decades and despite the high interest of tourists in the protected area (Figure 15.4).

The national park has a similar importance as in Berchtesgaden and a much lower importance than in Müritz National Park (Figure 15.5).

There are, however, significant regional differences between the original part of the national park in the county Freyung-Grafenau and its extension area in the county of Regen. In the original part of the park, a higher percentage

⁶ The proportion of tourists with a high national park affinity refers to the total number of visitors. Visitors who do not know the conservation status of the region (13.9%) or the national park (2.6%) are not included in this percentage.

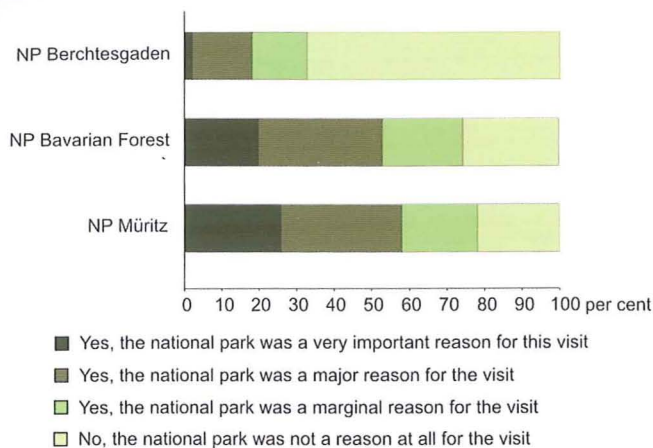


Figure 15.4: The role of the national park in the decision to visit the area
Source: Job/Metzler/Vogt 2003, Job et al. 2005, own research 2007

(95%) of respondents believed the park to play an important role in the marketing than those interviewed in Müritz National Park (85%). In the extension area, however, the Bavarian Forest National Park plays a less important role (42%) compared to the alpine Berchtesgaden National Park (76%).

There is still a lot to be done where internal marketing in the region is concerned, as accommodation providers (particularly in the extension area) do not promote the national park enough to their guests. Though the East Bavarian Tourism Association has recently started more intensive promotion of the national park, many of the local enterprises have yet to recognize this marketing opportunity due to a lack of own initiatives. In marketing outside of the region, there is also a lack of tourism products that are specific to the national park and take the market demands into consideration. In addition, tourism management, a department not previously present, should become more important within the national park administration.

In general, the large gap between guests that are aware of the protected area status (86.1% of the visitors recognize the national park) and those for whom the status is the dominant reason for visiting the area (45.8%) illustrates

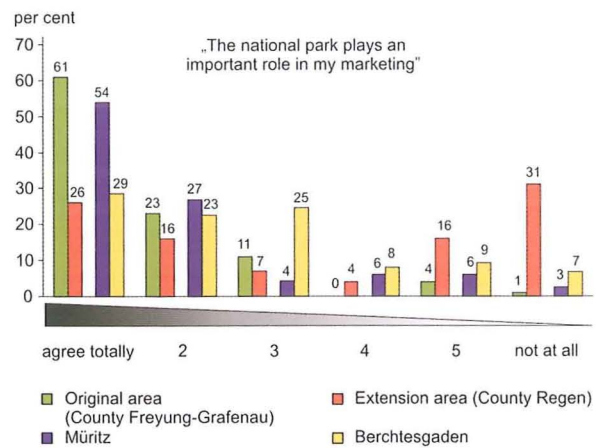


Figure 15.5: Distribution of answers to the question "The national park plays an important role in my marketing"
Source: Job et al. 2004a,b and own research 2007

a rather large communication problem in tourism marketing. This is a critique which is directed primarily at regional accommodation and gastronomy enterprises and not at the national park administration or the East Bavarian Tourism Association.

5. The regional economic impact of tourism in the Bavarian Forest National Park

Tourists in the Bavarian Forest National Park spend a daily average of EUR 38.70 per person. It is necessary, however, to distinguish between day-trippers and overnight visitors.

5.1 Day-trippers

- The mean daily expenditure of visitors with high national park affinity is around EUR 11.40 per person. Of this sum, 64% is spent on catering, 25% on retail and 11% on other services.
- The mean daily expenditure per person of other visitors is EUR 9.30, of which 69% is spent on catering, 19% on retail and 12% on other services.

The following expenditure structure (Figure 15.6) is created from the total number of day-trippers in the national park.

	Berchtesgaden National Park	Bavarian Forest National Park	Müritz National Park
Number of visitors	114,000 (1,129,000*)	350,000 (760,000*)	167,000 (390,000*)
Ø daily expenditure per person	EUR 44.27	EUR 38.70	EUR 33.80
Gross tourist spending	EUR 9.3 million**	EUR 13.5 million	EUR 5.6 million
Direct income	EUR 3.1 million	EUR 4.3 million	EUR 1.9 million
Indirect income	EUR 1.5 million	EUR 2.2 million	EUR 0.9 million
Total income	EUR 4.6 million	EUR 6.5 million	EUR 2.8 million
Income equivalent	206 persons	456 persons	261 persons
*all national park visitors			
**Different basis of calculation due to different survey methods			

Table 15.1: Summary of the economic impact of visitors with a high national park affinity
Source: Job/Metzler/Vogt 2003; Job et al. 2005; own research 2007

	Number of visitors	Daily expenditure in EUR	Gross tourist spending in million EUR
Visitors with a high national park affinity	350,000		13.5
Day-trippers	100,000	11.40	1.1
Overnight visitors	250,000	49.60	12.4
Other visitors	410,000		14.3
Day-trippers	151,000	9.30	1.4
Overnight visitors	259,000	49.60	12.9

Table 15.2: Gross tourist spending of visitors in the Bavarian Forest National Park
Source: Own research 2007

The sum that day-trippers spend in the Bavarian Forest National Park is a much lower than the daily German average of EUR 28 per person. There are a number of reasons for this difference.

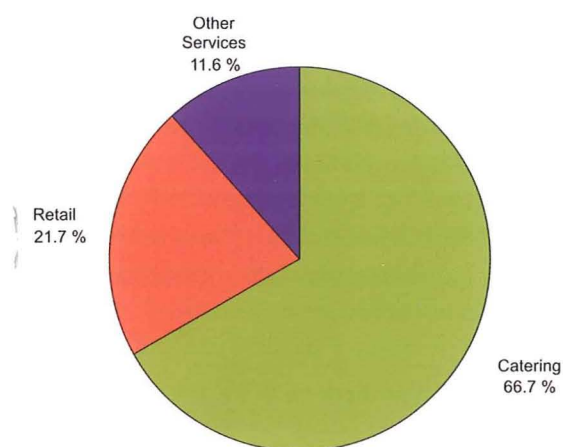


Figure 15.6: Distribution of the expenditures of day-trippers
Source: Own research 2007

Day-trippers interviewed in the national park do not just encompass classic day visitors but also a fairly large percentage of local inhabitants who spend their leisure time in the surrounding area. Naturally, the expenditure by these locals is low, because they only consume little or even nothing during their activities in the park. This fact is clearly highlighted by the high proportion of day-trippers in the national park who do not spend anything (around one-third).

It is also worth noting that the amount day-trippers spend usually depends on their leisure activity. Hiking is one of the most popular activities in national parks, but is traditionally an activity where people tend to spend less money. Different possibilities to consume also occur depending on how natural an area is: the more natural the area the less money is spent there, which is the case in most national parks. This explains the difference in expenditure behaviour compared to more urban regions, which strongly influence the German average. This information explains the comparatively low expenditure of day-trippers in the Bavarian Forest National Park. They visit the park in particular for the nature experience and not to consume.

5.2 Overnight visitors

Overnight visitors of the national park spend a daily average of EUR 49.60 per person, which is again much lower than the German average (EUR 93.30). The level of expenditure is strongly influenced by the choice of accommodation and, thus, the accommodation structure of the survey area. Again, there are several reasons that explain the lower average expenditure:

- The national park is situated in a structurally weak, rural region where cheaper accommodation dominates in comparison to cities. High-price hotels are rare.
- National park visitors tend to prefer private accommodation or holiday flats (with less than 9 beds) over hotels. The national daily expenditure level in these non-commercial "private accommodations with less than 9 beds" also lies clearly below the national daily expenditure levels in commercial accommodation and only adds up to EUR 48.30.

A differentiation of overnight visitors in visitors with a high national park affinity and other visitors does not reveal differences in the Bavarian Forest. Both groups spend EUR 49.60 per person per day. However, smaller variations can be noticed in the different economic sectors that benefit from the guests.

Among visitors with a high national park affinity, 71% of the expenditure goes to the accommodation and catering industry, 22% to the retail industry and 7% to other services.

Other visitors spend slightly more on the accommodation and catering industry (75%) and slightly less on the retail industry (18%). As above, 7% is spent on other services.

The following figure illustrates the expenditure structure of the total number of overnight visitors in Bavarian Forest National Park (Figure 15.7).

Compared to the Berchtesgaden and Müritzt National Parks, the average daily expenditure of visitors in Bavarian Forest National Park lies in the middle (Table 15.1).

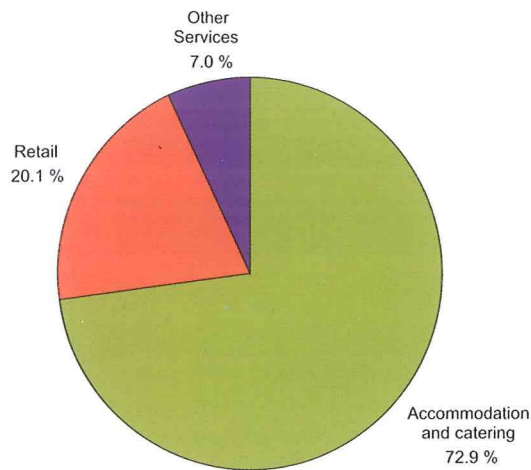


Figure 15.7: Distribution of the expenditure of overnight visitors
Source: Own research 2007

5.3 Gross tourist spending

Gross tourist spending is calculated by multiplying the daily expenditure by the number of days the visitors spend in the park. Each year, park visitors realise gross tourist spending of EUR 27.8 million. Of this, EUR 13.5 million, or almost 49%, can be traced back to visitors with a high national park affinity and EUR 14.3 million to other visitors. Differentiation between these two target groups shows the pattern in Table 15.2.

Net tourist spending is calculated by subtracting the VAT from the gross tourist spending. The total VAT of all visitors in the Bavarian Forest National Park is EUR 3.8 million. If this amount is subtracted from the gross tourist spending (EUR 27.8 million), net tourist spending of EUR 24 million remains.

5.4 Employment effects: income equivalents

Several parameters are required to calculate the income equivalent, i.e. the number of full-time job equivalents deriving from the total income captured. The average aggregate income per person can be derived from the number of inhabitants in the gateway-communities and their aggregate income and equals EUR 14,387. To calculate the income equivalent, the added value generated by the national park visitors is divided by the average aggregate income per person. Differentiating between visitors with a high national park affinity and other visitors the following results occur:

Visitors with a high national park affinity:
 EUR 6.56 million : EUR 14,387 = 456 persons
 Other visitors:
 EUR 6.95 million : EUR 14,387 = 483 persons

This shows that national park visitors generate an income equivalent of 939 persons whose income relies totally on tourism in the national park.

This figure is, however, merely a book value and in reality, it is likely that more people live at least partly from tourism. This can be attributed to the fact that those employed in tourism sometimes:

- live only partially from tourism (e.g. renting holiday flats as a sideline), and
- are not employed on a full-time basis (e.g. part-time position, seasonal employment, temporary work).

It should be made clear that tourism as a mode of employment definitely has a higher significance than can be derived from the mathematically calculated figures above.

Thus, tourism revenues generated by the Bavarian Forest National Park have a significant regional economic impact in this peripheral, rather structurally weak Bavarian region. If the income of all national park visitors is taken as being EUR 13.5 million, it is (in absolute terms) almost twice the income generated for the region from the ski resort at Mt Arber. This shows that both nature-based national park tourism and infrastructure-based forms of tourism are very important for the tourism products in the area and are not mutually exclusive within one destination.

6. The economic significance of tourism in the region

The results of the study on the regional economic impact of the national park tourism need to be interpreted correctly by examining their relation to the total economic impact of tourism in the survey area derived from the survey of the tourism and non-tourism enterprises. This economic impact is 11.1% for the counties Freyung-Grafenau and Regen and 13.2% for the more tourism orientated gateway communities. This share encompasses the added value for the accommodation and catering industry, the respective shares of businesses from the cultural, sport and leisure, manufacturing, and trade sectors and other services that directly or indirectly generate turnover from tourists or tourism enterprises. The indirect effects of investments induced by tourism in the region are also taken into consideration.

If the added value generated by tourism in the national park is compared to the total added value of tourism in the region, it becomes clear that around 10% of the added value at the gateway community level is generated by visitors with a high national park affinity and one-fifth by all national park visitors. As expected, the significance of national park tourism decreases if the added value is observed separately at the county level: between 2 and 4.5% of the added value of tourism for the entire region can be traced back to the national park.

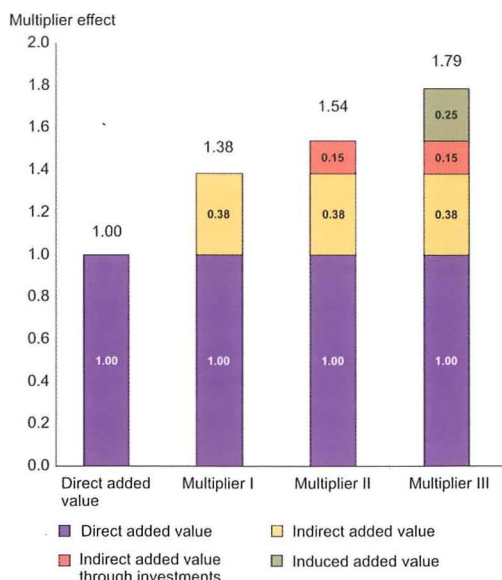


Figure 15.8: Tourism income multipliers in the counties of Freyung-Grafenau and Regen
Source: Own research 2007

It is not just the tourism industry that benefits from tourism in the region. Indirect (tourism enterprises sourcing intermediate inputs in the region, investments in the region) and induced effects (salaries and wages from tourism employees) increase the tourism added value of the region by factors between 1.38 (indirect effects only), 1.53 (taking tourism induced investments into account) and 1.79 (including the effects induced through salaries and wages) (Figure 15.8).

This means that every Euro spent in the region leads to a maximum added value of EUR 1.79 in the region. Thus, intermediate input linkages create an indirect and induced additional income of a minimum of 38 and a maximum of 79 cents for each Euro spent on tourism services. These multipliers decrease slightly within the gateway communities, due to the less diversified economy in these smaller areas.

If the number of people employed in tourism is compared with the 456 persons that are estimated to be working in tourism jobs directly connected to the national park, the following results are obtained: 3.5% of tourism employees in the counties of Regen and Freyung-Grafenau are dependent on the tourism created by the national park.

When observed at the gateway community level, this figure rises to 13.5%. If only the number of people working directly in accommodation and catering is taken into consideration, the figure increases to 14.2%. This proves that national park tourism is an important employment factor for the region. It is also worth noting that more than 200 persons are employed by the national park administration.

7. Transboundary destination - Šumava National Park and Bavarian Forest National Park?

There is still a long way to go before a common transboundary tourism destination can be created across the two neighbouring national parks, Šumava (Czech Republic) and the Bavarian Forest. Cooperation between the tourism industries is currently not being used to its full potential and is also not being accepted by tourists.

Šumava National Park is a popular and attractive holiday destination with more than one million visitors per year. Like in the Bavarian Forest National Park, a large number of visitors, particularly domestic ones, visit Šumava more than once. However, the full potential of Czech visitors for the Bavarian Forest National Park has not yet been utilised: more than half of the Šumava visitors have never been to the Bavarian Forest.

The potential of this target group can be seen in their answers to the question whether they would be interested in visiting the Bavarian Forest. Just over half of the tourists in Šumava said that they would definitely be interested and almost a quarter said that they might be interested in visiting the national park. 90% of the tourists who had already visited the national park said that they would definitely return to the Bavarian Forest. In order to attract potential first time visitors to the Bavarian Forest National Park, better networking in tourism is required (also linguistically) and a better network of paths and transport connections between both areas is needed. The legal requirements were already established when the Czech Republic was admitted into the Schengen Agreement in 2008. These should provide the impetus for change in the direction indicated above.