



BERICHTE AUS DEM NATIONALPARK HEFT 4/2008

The regional economic impact of Bavarian Forest National Park



Nationalpark
Bayerischer Wald



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The regional economic impact of Bavarian Forest National Park

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Foreword

25 years have passed since the last study on the regional economic impact of the Bavarian Forest National Park. Much has changed in and around the park since then. Left to themselves, ecosystem dynamics have given the forest a different appearance, which, at the same time, has led to lively discussions about the concept of ecological integrity in the national park. With the park's expansion in 1997 and the creation of Šumava National Park in 1992 the concept of national parks in the wild heart of Europe has gained new significance. In addition, the park has created many new interpretive services, including the *Haus zur Wildnis* (The house of wilderness), the Wilderness Camp Falkenstein and the wildlife park with its ice age cave as well as a high quality network of hiking and cycling trails.

Furthermore, the national park has become more involved in regional development, with activities such as the programme of national park partners, the tourism project "*Tierisch wild*" (terribly wild) and the eventful three-year journey of the famous glass ark.

This new study provides its readers with information about the regional economic impact of these changes. It also illustrates existing shortcomings; opportunities created by the existence of the national park, which the region is currently not taking advantage of.

I am convinced that the results of this research will awaken people's interest.

We ask the region's stakeholders to draw appropriate conclusions from the findings and to use them to act collectively to the benefit of the region.

Grafenau, June 2008



Karl Friedrich Sinner
Director of the Bavarian Forest National Park Authority

The regional economic impact of Bavarian Forest National Park

Hubert Job, Marius Mayer, Manuel Woltering, Martin Müller, Bernhard Harrer, Daniel Metzler

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 that they bring with them. 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 is seen as an additional negative factor in the Bavarian Forest. This raises questions concerning the management of national parks as well as visitors’ perception of 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 because there are only few suppliers in the market (14 national parks in Germany). They cannot be replicated, transferred and imitated due to their legal status (Hannemann/Job 2003). Thus, national

2. Methods

The methods are explained in more detail in the full version of the report¹. Therefore, we only provide an overview of the three surveys carried out:

- In order to survey the number and distribution of visitors in Bavarian Forest National Park across the whole year 2007 appropriately visitor counts and interviews were carried out on 22 days (on weekdays and weekends) in the winter, summer and off-peak season. Short interviews asking for the interviewees’ place of origin and type

of accommodation were conducted with 11,140 persons. 1,990 persons were interviewed in more detail about their spending behaviour and their travel motivation.

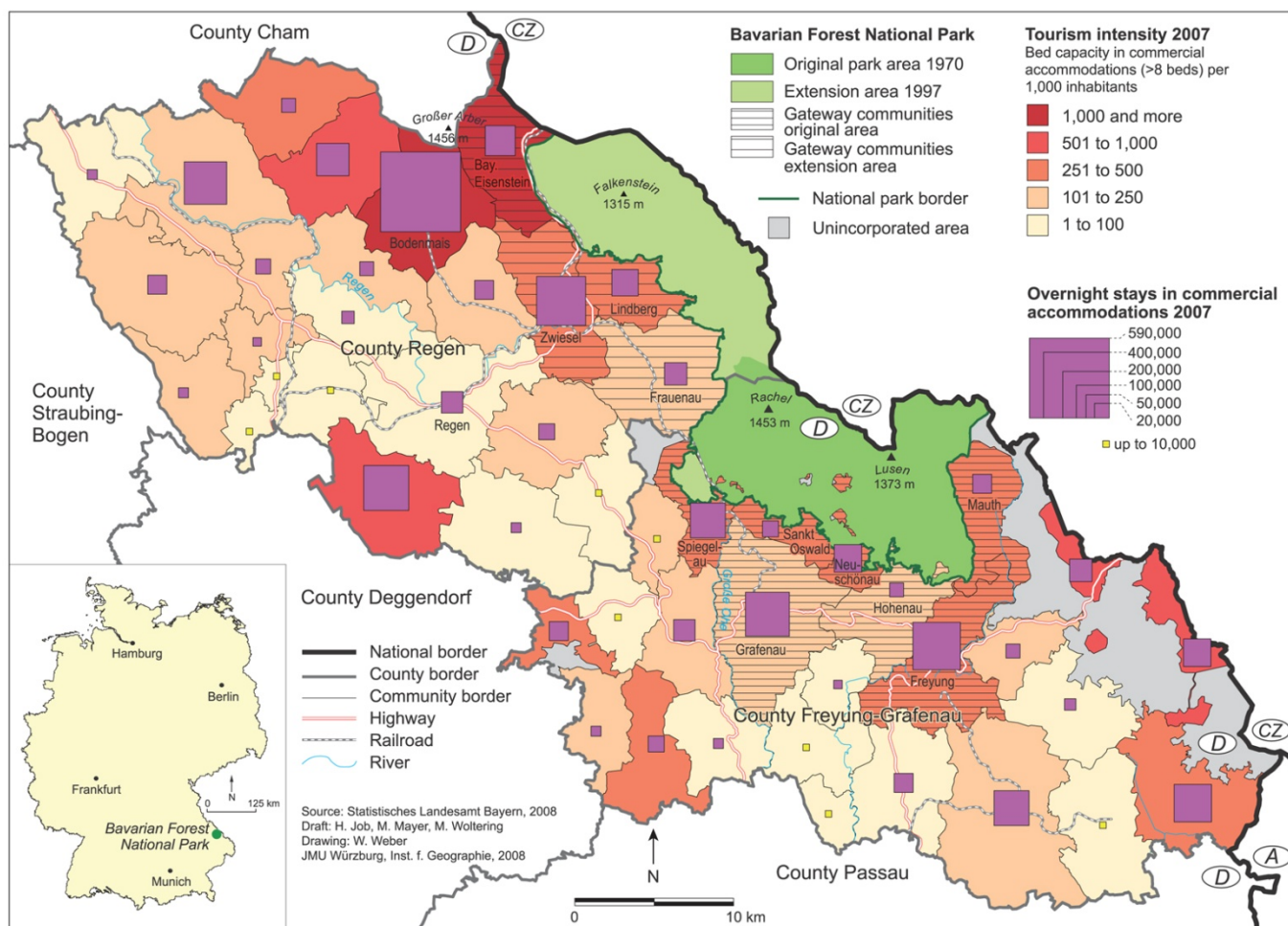
Enterprises in the counties of Freyung-Grafenau and Regen were asked to fill in a written questionnaire. Samples were taken using a stratified random selection process to ensure representativeness. With the sample quota adapted for each industry, 1,832 questionnaires were mailed out between July and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

- How important is tourism as an economic and employment factor?
- From a cost-benefit perspective, what relation do governmental inputs into the national park have to 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?
- How do visitors and tourism entrepreneurs perceive the dead wood areas and the bark beetle in the national park?
- Are the visitors of the neighbouring Šumava National Park (Czech Republic) a potential target group for the Bavarian Forest National Park and could a stronger cooperation between the two parks in the field of tourism reach this target group?

¹ Job, H. (Ed.) (2008): Die Destination Nationalpark Bayerischer Wald als regionaler Wirtschaftsfaktor (= Nationalpark Bayerischer Wald Wissenschaftliche Reihe, Sonderheft). Grafenau.

- The interviews in which tourists were asked about their perception of the dead wood areas in the national park were structured to allow as much comparison as possible with existing studies (Suda/Pauli 1998; Suda/Feicht

2002). The survey took place on weekends and weekdays in the summer of 2007 using a standardised questionnaire. The sample comprises a total of 608 respondents.



Map 1: Survey area Bavarian Forest and tourism intensity of its communities

3. Visitor numbers

The survey area includes the counties of Freyung-Grafenau and Regen. Map 1 illustrates the area and its tourism intensity on a community level. Figure 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.

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 (Harer 2004). A previous study (Kleinhenz 1982: 52ff.) estimates that in 1981 between 1.3 and 1.4 million people visited the national park.

In this study at the beginning of the 1980s, however, no systematic year-round and area-wide visitor counts were carried out; the quoted figures were based on the estimations of 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 recently in 2006), provide a more reliable comparison: In 1982 211,000 people visited the Hans-Eisenmann-Haus 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 rest of the visitors is distributed widely across the whole 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.

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

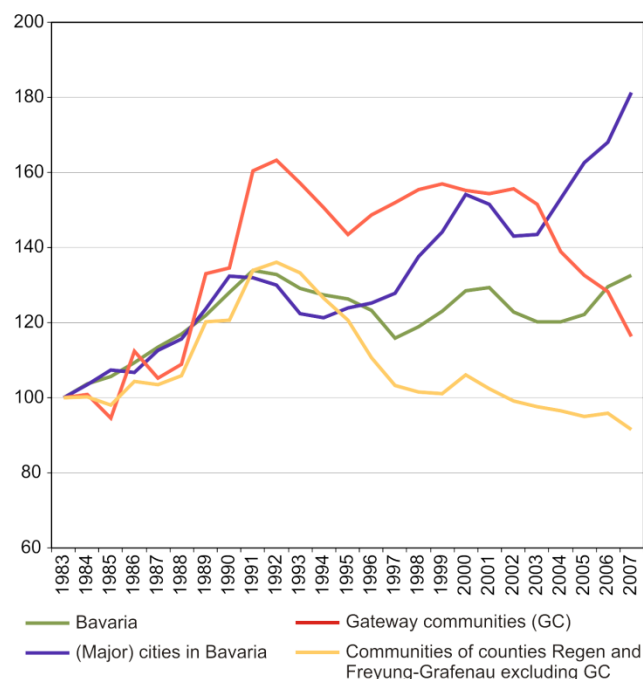
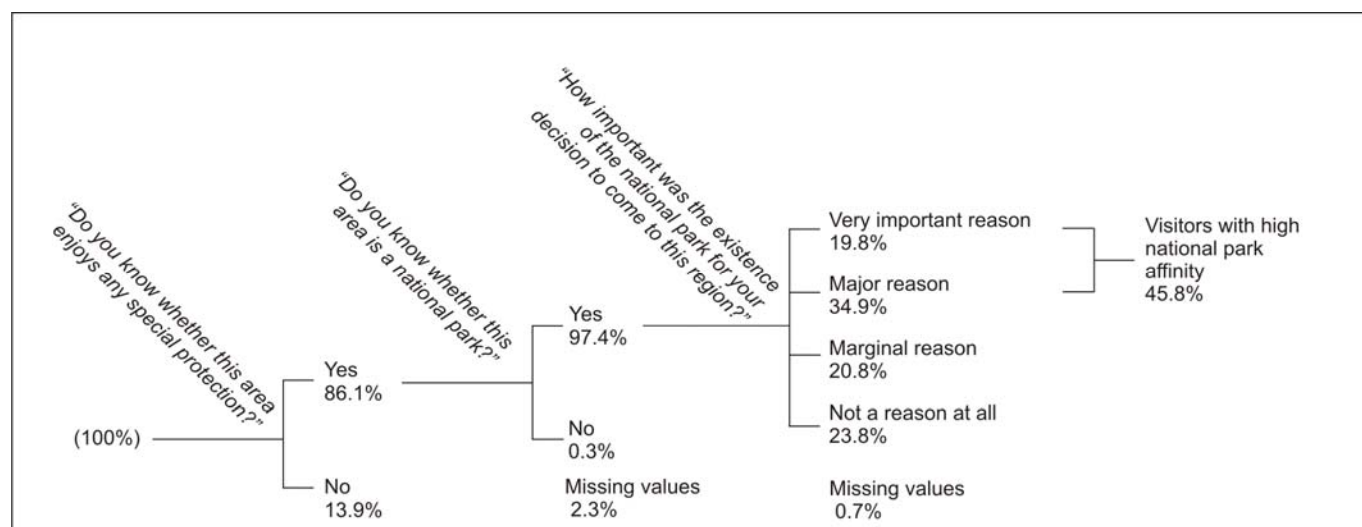


Figure 1: Development of overnight stays in the survey area and comparison areas

Source: Own illustration adapted from LfStad 2008

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 and arrivals are lower 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. The majority of visitors come from Germany. Only 3.9% come from foreign countries (see map 2) and then mainly 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 the day-trippers.

Figure 2: Affinity to the label "national park"²

Source: Own research 2007

²The 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.

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 %, see figure 2) and other visitors (54.2 %).

According to the total number of visitors in 2007, the following division between visitors with high national park affinity and other visitors as well as the respective percentage of day-trippers and overnight visitors (see figure 3) can be derived from the visitor structure of the national park: Al-

most 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: The park lies ahead of both Müritz National Park (43.7%) and Berchtesgaden National Park (10.1%) (Job/Metzler/Vogt 2003: 129; Job et al. 2005: 62).

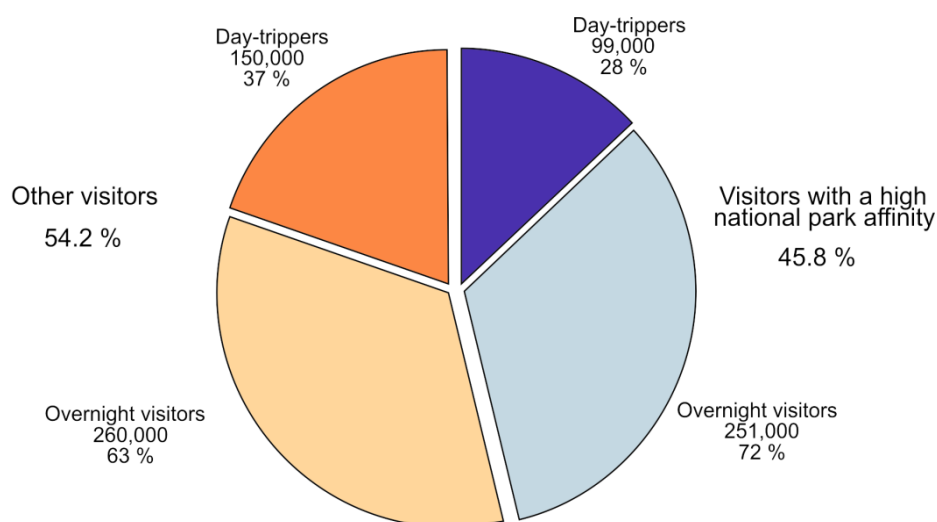


Fig. 3: Visitor structure in Bavarian Forest National Park
Source: Own research 2007

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%, even topped by Bavarian Forest with 86.1 %. The role of the conservation status of the area in 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 here 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 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. Reasons for this are, first, 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.

Second, the interviews with the 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.

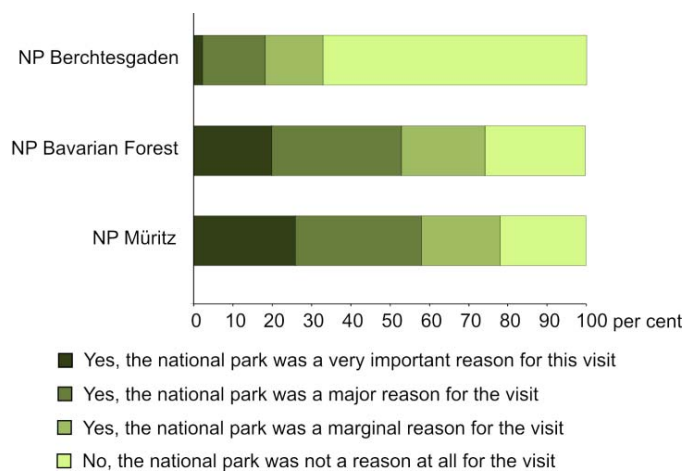


Fig. 4: The role of the national park in the decision to visit the area
Source: Job/Metzler/Vogt 2003, Job et al. 2005, own research 2007

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 now and despite the high interest of tourists in the protected area (see figure 4).

The national park has a similar importance as in Berchtesgaden and a much lower importance than in Müritz National Park (see figure 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 (see figures 5 and 6). In the original part of the park a higher percentage (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%).

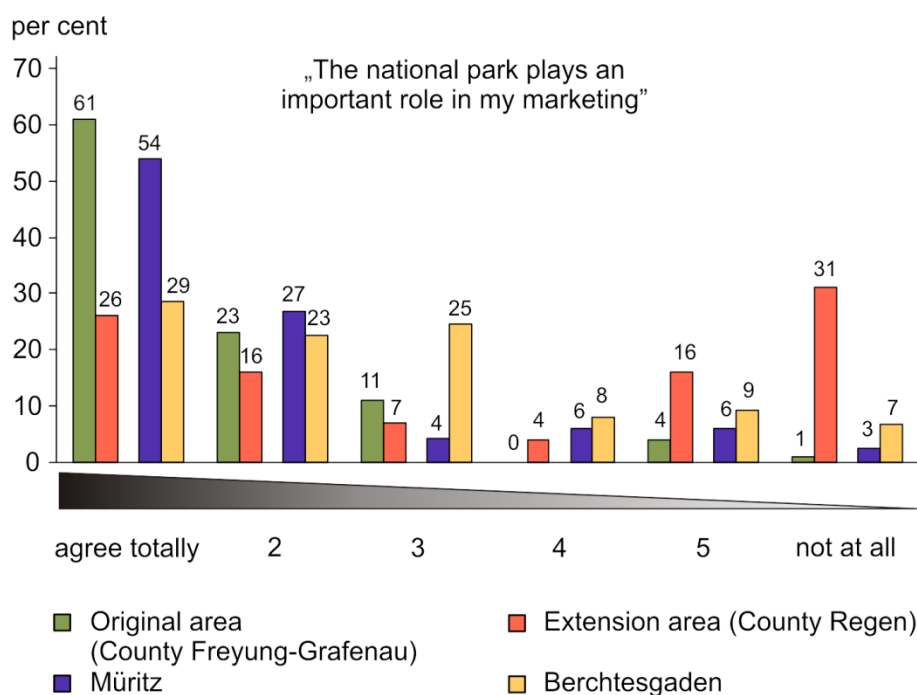
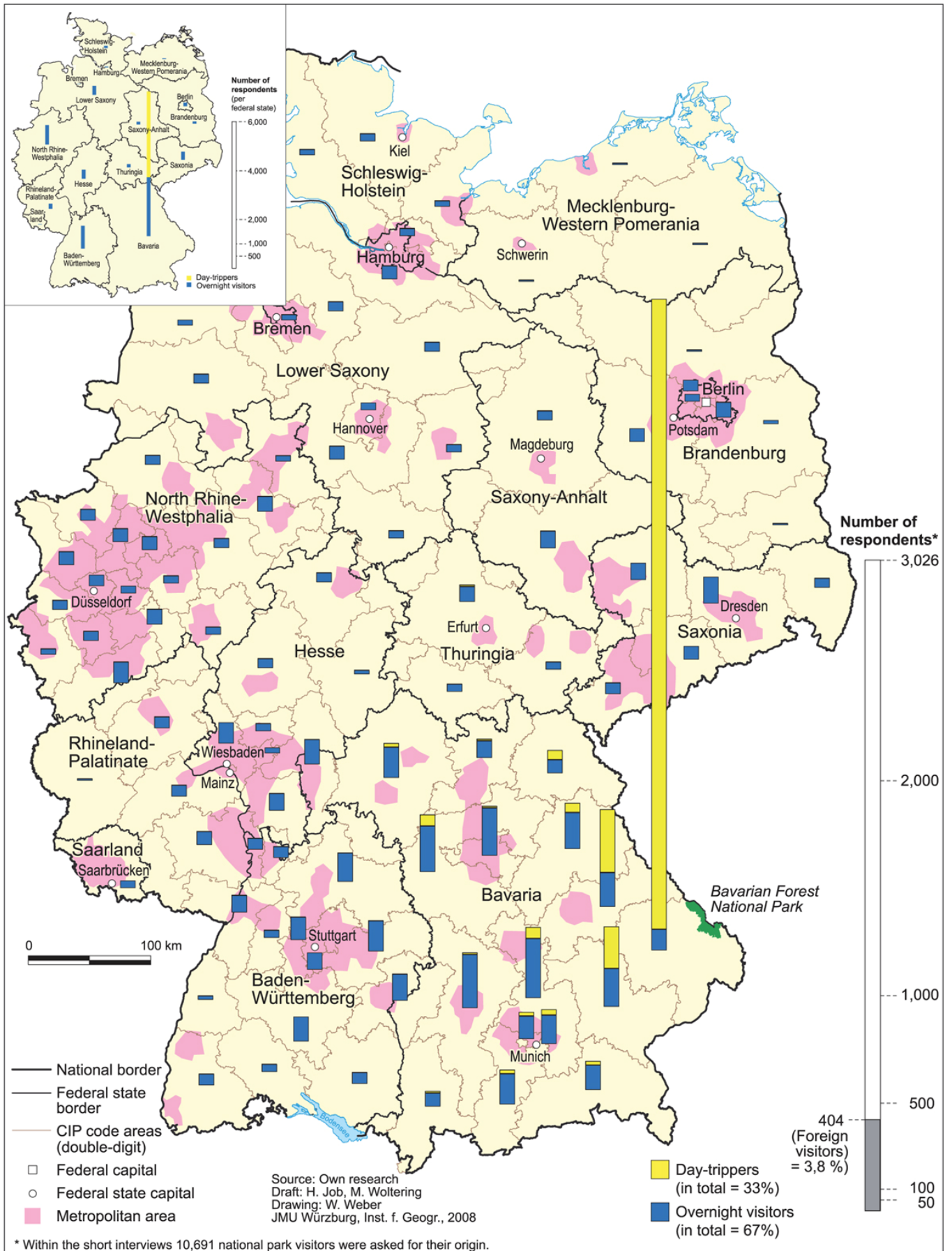


Fig. 5: Distribution of answers to the question "The National Park plays an important role in my marketing"
Source: Job et al. 2004a,b and own research 2007

There is still a lot to be done where internal marketing in the region is concerned, because accommodation providers (particularly in the extension area) do not promote the national park enough to their guests. Even though recently, for example, the East Bavarian Tourism Association has started promoting the national park more strongly, many of the local enterprises do still not recognize this marketing opportunity because they lack own initiatives. However, also in marketing outside of the region there is a lack of tourism products which are specific to the national park and take the market demands into consideration. In addi-

tion, tourism management, a department that has not been present before, 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 a rather large communication problem of the tourism marketing. This is a critique which is directed primarily at regional accommodation and gastronomy enterprises and not for the national park administration or the East Bavarian Tourism Association.



Map 2: Origin of visitors to the Bavarian Forest National Park

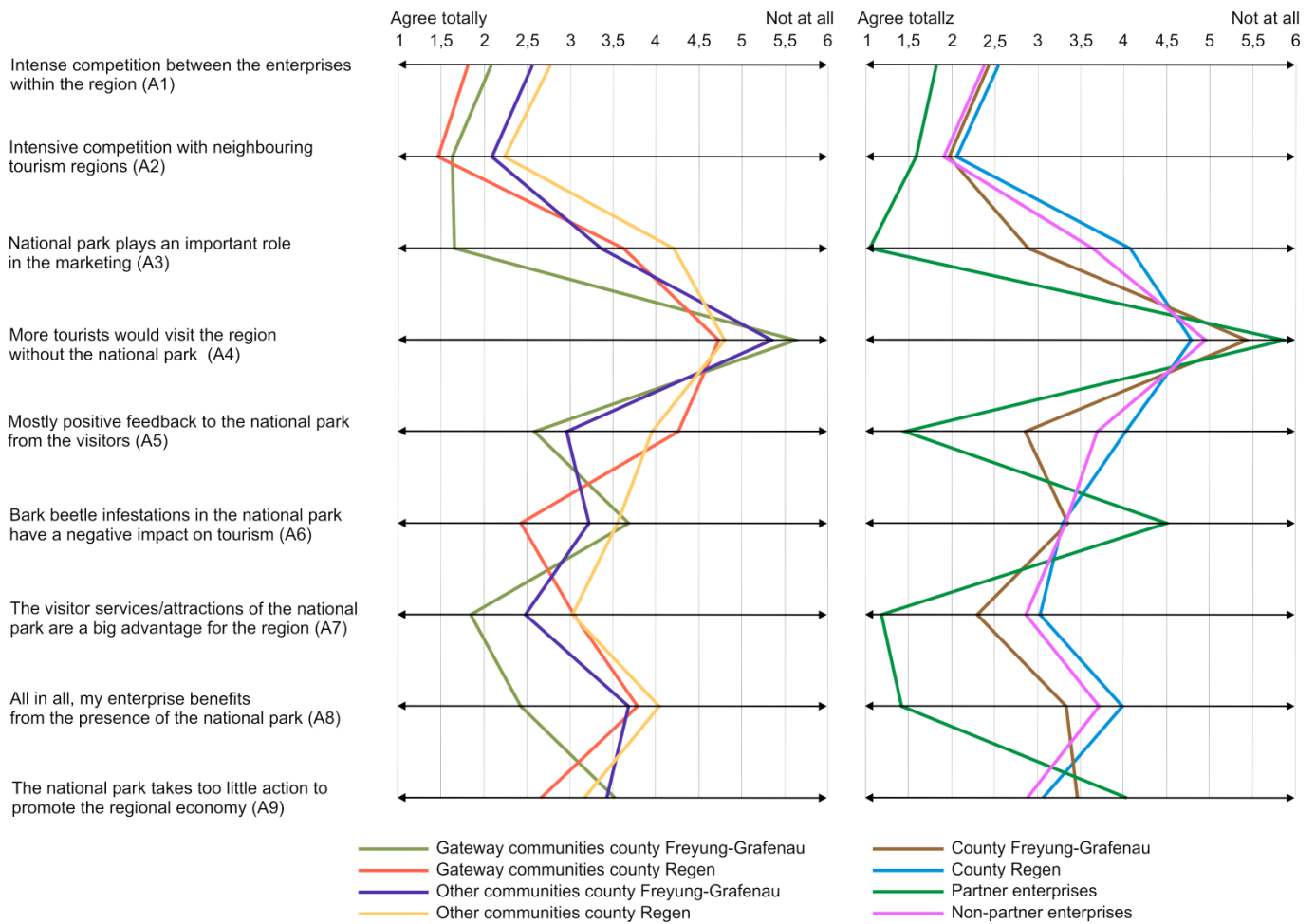


Fig. 6: Statement profiles of owners of tourism businesses
Source: Own research 2007

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. 64% of this sum 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 (see figure 7) is created from the total number of day-trippers in the national park:

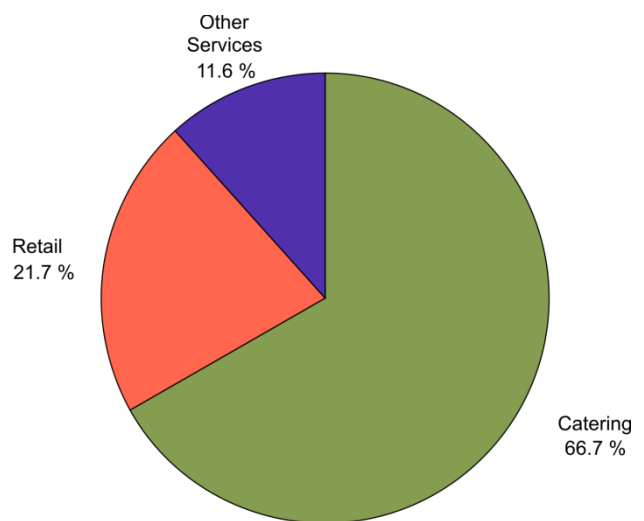


Fig. 7: Distribution of the expenditures of day-trippers
Source: Own research 2007

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

Day-trippers who were 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 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, a sum which is also a lot 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 and per day. However, smaller variations can be noticed in the different economic sectors that benefit from the guests:

- With the 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.

- The 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 the Bavarian Forest National Park (see figure 8):

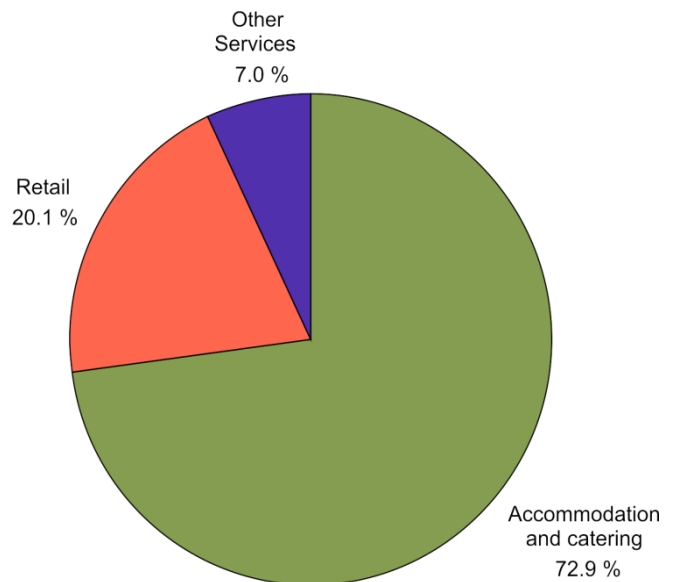


Figure 8: Distribution of the expenditure of overnight visitors
Source: Own research 2007

Compared to the Berchtesgaden and Müritzer National Parks the average daily expenditure of the visitors in the Bavarian Forest National Park lies in the middle of both (see table 2).

5.3 Gross tourist spending

The gross tourist spending is calculated by multiplying the daily expenditure with the number of days the visitors spend in the park. Each year park visitors realise a gross tourist spending of EUR 27.8 million. EUR 13.5 million of this, almost 49%, can be traced back to visitors with a high national park affinity and EUR 14.3 million to other visitors. A differentiation between these two target groups shows the pattern in table 1.

The 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) a net tourist spending of EUR 24 million remains.

Table 1: Gross tourist spending of visitors in the Bavarian Forest National Park

	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	x 11.40	1.1
Overnight visitors	250,000	x 49.60	12.4
Other visitors	410,000		14.3
Day-trippers	151,000	x 9.30	1.4
Overnight visitors	259,000	x 49.60	12.9

Source: Own research 2007

5.4 Income effects

Direct income

The complete gross tourist spending created from the direct expenditure of the tourists leads to the direct income. Here income or added value refers to salaries, wages and profit.

The capture rate, i.e. the percentage of initial expenditure retained in the region, is

- around 37.2 % for day-trippers and
- around 37.5 % for overnight visitors.

These average values are in accordance with the specific conditions in the Bavarian Forest as they were calculated using the expenditure structure of the visitors. The capture rate, which is weighted according to the guest structure, is 37.5% for all visitors.

When compared to the figures from the current study on expenditure structures in Germany, the capture rate of the overnight visitors in the national park is below the national average. Nationwide the capture rate of overnight visitors in commercial businesses, private accommodation (under 9 beds) and camping is around 41.3 %.

Indirect income

The exact capture rates for the businesses that profit from the indirect income can only be derived regionally with the help of detailed analyses. This kind of research is very expensive and time consuming and consequently was not carried out within the framework of this study. For this reason an empirically established figure from the dwif³, which is an average of 30% was used here.

Total income

A total income of almost EUR 13.5 million (direct and indirect income) is derived from the gross tourist spending from day-trippers and overnight visitors in the Bavarian Forest National Park (EUR 27.8 million). Around two-thirds of this can be allocated to the direct income and one-third to the indirect income. The following figure (fig. 9) shows the way in which total income is created from the gross tourist spending in detail:

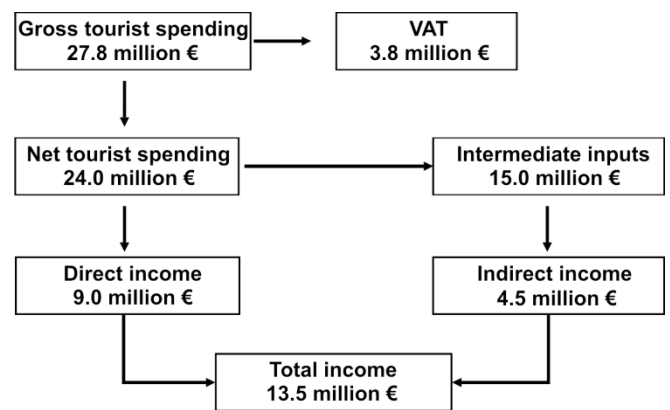


Fig. 9: Calculation of the income effects in the Bavarian Forest National Park

Source: Own research 2007

5.5 Employment effects: Income equivalents

A number of parameters is needed 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 lies at 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 probably 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

³ Deutsches Wirtschaftswissenschaftliches Institut für Fremdenverkehr an der Universität München.

- 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 it 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 as much as the income generated for the region from the ski resort at Mt Arber (see dwif 2003). 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.

Table 2: Summary of the economic impact of visitors with a high national park affinity

	Berchtesgaden National Park	Bavarian Forest National Park	Müritznational 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

Source: Job/Metzler/Vogt 2003; Job et al. 2005; own research 2007

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 looking at 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, 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 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 whole region can be traced back to the national park.

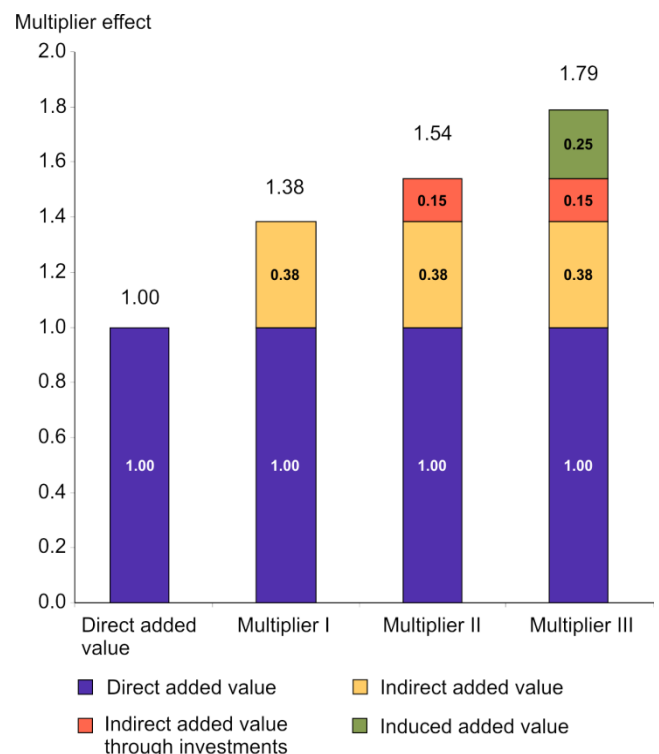


Figure 10: Tourism income multipliers in the counties of Freyung-Grafenau and Regen

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) (see fig. 10).

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.

7. Intermediate input linkages

The large multiplier effect of the tourism added value occurs because the majority of the money spent by tourists in the region stays there and this in turn generates further added value and employment opportunities. This is illustrated by the spatial distribution of intermediate input linkages of the industries that were analysed in the Bavarian Forest and highlights the strong regional basis of the tourism industry: only between 28 and 34% of the intermediate inputs come

Table 3: Spatial distribution of the intermediate input linkages

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 can be seen: 3.5% of the tourism employees in the counties of Regen and Freyung-Grafenau are dependent on the tourism created by the National Park. When observed at gateway community level this figure rises to 13.5%. If it is only the number of people working directly in accommodation and catering that is taken into consideration the figure increases again to 14.2%. This proves that national park tourism is an important employment factor for the region. It is also worth noting that additionally more than 200 persons are employed by the national park administration.

from outside the region. Approximately 40% of the intermediate inputs required by accommodation businesses are sourced from within the community where the business is situated. 93% of the investments on renovations or reconstructions and 76% of the investments on equipment for tourism enterprises are spent in the region. This shows that the tourism industry is also a driving force for local craftsmen and suppliers (see table 3).

Intermediate inputs from Industry	Community (business location)	Counties of REG and FRG	Outside the counties of REG and FRG
Manufacturing enterprises, trades, other services	15.0 %	15.7 %	71.3 %
Culture, sport, leisure	40.7 %	19.7 %	48.7 %
Tourism enterprises (accommodation)	39.5 %	32.3 %	28.3 %
Tourism enterprises (catering)	32.9 %	33.5 %	33.6 %

Source: Own research 2007

8. Perceptions of dead wood areas and the bark beetle

Just over a third of all tourism entrepreneurs in our survey believe that the national park should maintain a “healthy”, “green” forest and that its role as a nature conservation institution should consist in controlling the bark beetle. Among others, they argue that the tourism in the region would suffer from the unaesthetic and unattractive dead wood areas of the park. There is, however, a clear discrepancy between how entrepreneurs and tourists perceive the problem in the national park.

Entrepreneurs assess the effects of the bark beetle situation as follows (see figure 11): 32.5% of the respondents agree totally with the hypothesis “the bark beetle infestations in the national park have a negative impact on tourism” and 23% do not agree at all. Only about 15% are indifferent. In contrast, only 3.3% of the responding visitors agree with a strong negative impact. Only 46.0% of the entrepreneurs reject a negative impact to varying extents (levels 4 to 6 on the scale) whereas a much higher number of visitors (66.3%) does so.

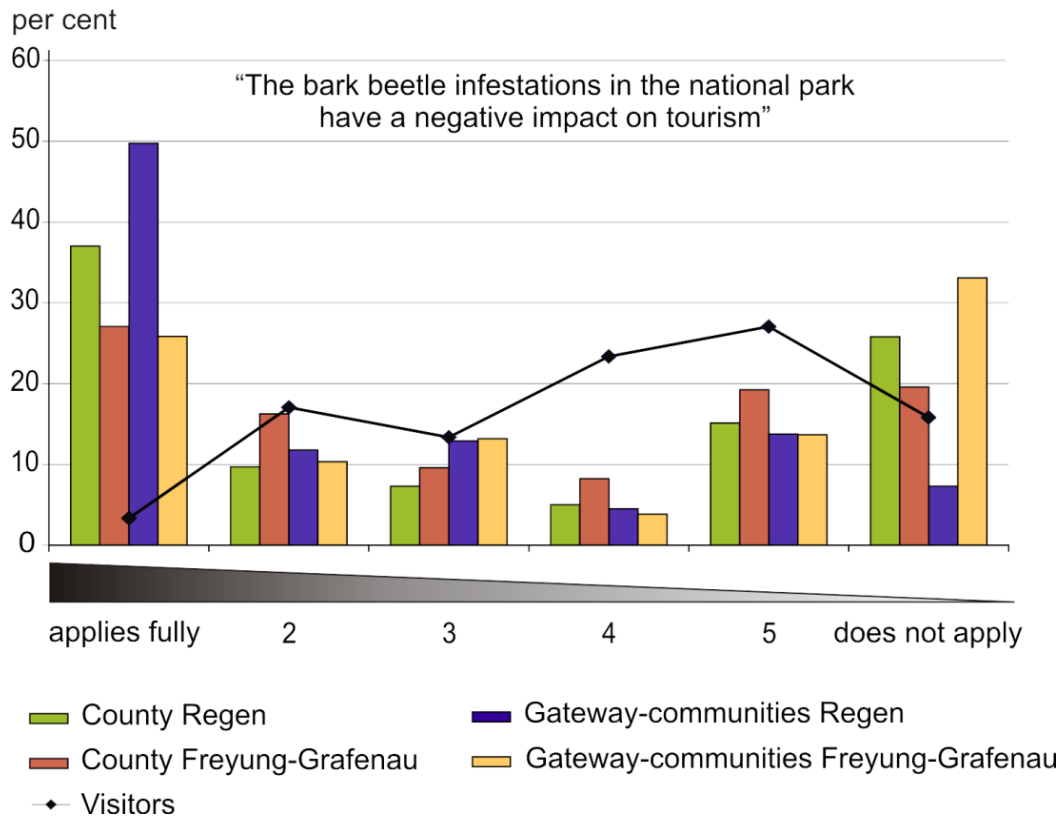


Figure 11: Comparison of the attitude of visitors and tourism businesses towards the bark beetle infestations
Source: Own research 2007

Significant differences can be seen between the gateway communities in the original area of the national park (County Freyung-Grafenau) and those in the extension area (County Regen) (see figure 11): nearly 50% of the respondents in the extension area agree with the hypothesis that “the bark beetle infestations in the National Park have a negative impact on tourism”, whereas only 25.9% of those interviewed in the original area agree. Looking at it from another perspective, only 7.3% of the respondents in the extension area disagree with the hypothesis compared to a third of those interviewed further south (33.1%). This leads to the conclusion that tourism enterprises in the original area of the national park have a more relaxed attitude towards the bark beetle situation and its influence on the attractiveness for tourism. Despite visible changes in the forest aesthetics in this area these people prefer other explanations for the decrease in tourism in the region.

There is a connection between the attitudes of the enterprises towards the national park and their perception of the dead wood areas: The more negative their opinion of the national park, the more likely they are to believe that the bark beetle infestations scare tourists away, and vice versa. In contrast to entrepreneurs, tourists tend to be more open to the unusual forest landscape than is commonly believed in the region (see figure 12). Their perception of the dead wood areas depends on various factors. Visitors are more inclined to agree with not controlling the bark beetle if they are informed about the mission of the national park to protect ecological integrity and the role that the bark beetle plays in the forest ecosystem. This emphasizes the need for adequate and comprehensive visitor information. If visitors pass judgement on the dead wood areas without having visited them, they have a significantly more negative opinion than when they have had direct contact to these ar-

eas. In addition, a visitor with a higher affinity to the national park will be more positive about the bark beetle situation. This connection supports the need to use the national

park and its wilderness character more actively in tourism marketing.

Visitors' perception of the bark beetle according to the national park affinity

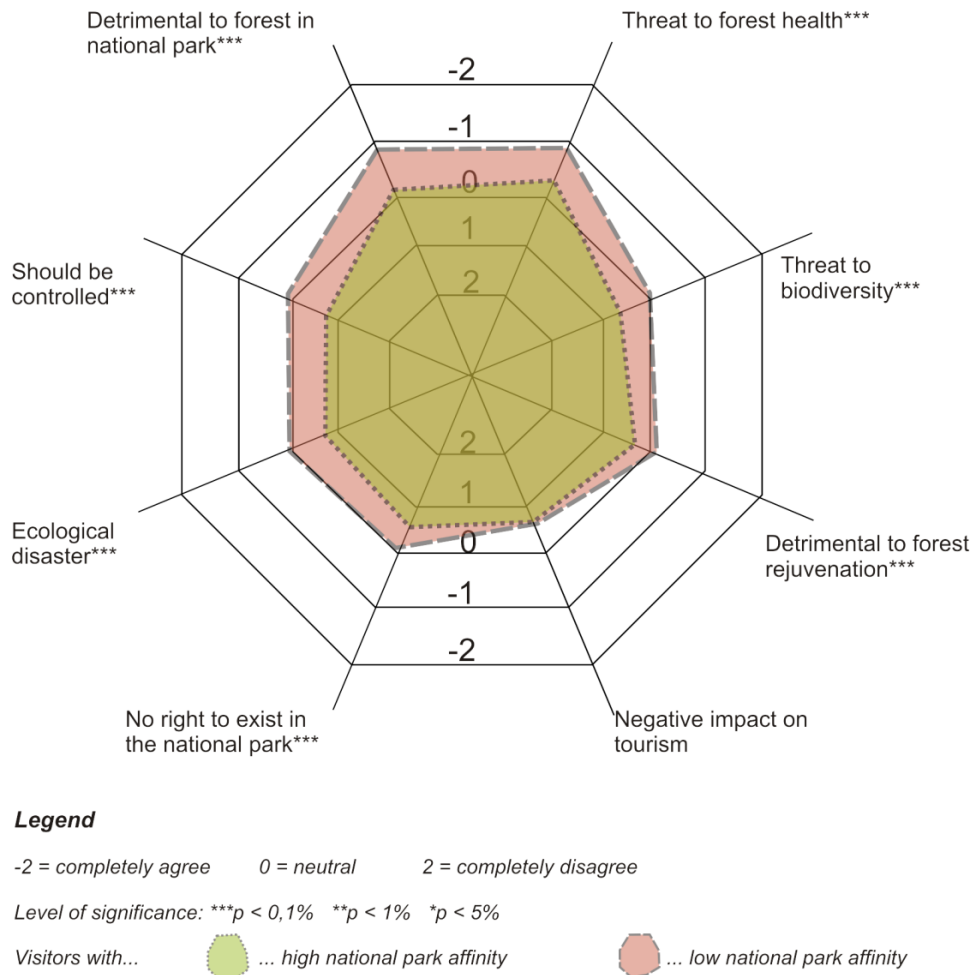


Figure 12: Differences in visitors' perception of the bark beetle by national park affinity
 Source: Own research 2007

9. Cost-benefit analysis

A comparison of the costs and benefits of the National Park shows that the benefits compensate for the costs related to the designation. The Bavarian federal state government spends EUR 12 million per year on the National Park. This sum is contrasted by 200 persons directly employed in the National Park administration as well as an indirect income equivalent of 939 persons induced by the national park tourism - a total of 1139 jobs. Every Euro that the government invests in the Bavarian Forest National Park is more than doubled by the amount spent in the park by its visitors: The expenditures by these visitors

exceeds the amount invested by the government by a factor of 1.13. If the salaries and wages of those working in the tourism industry are added to the equation this factor increases to 1.31.

Investments made into the facilities of the national park, for example, the "Haus zur Wildnis" which was opened in 2006, add to this figure. Recently a number of projects in and around the national park were realised. The governmental inputs are therefore an important factor concerning the support of the regional economy.

10. Transboundary destination Šumava National Park and Bavarian Forest National Park? ⁴

There is still a long way to go before a common transboundary tourism destination will 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 (see Třebický/Čihař 2006: 228). 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.

11. Conclusion

The Bavarian Forest National Park is a significant tourism destination. With around 760,000 visitors in 2007, the national park is the most visited attraction in the region. Almost half of the visitors come to the region because of the presence of the national park. The national park induced tourism (visitors with a high national park affinity) generates an income equivalent of 456 persons. All national park visitors finance the income equivalent of 939 persons and, in addition, the National Park administration supports around 200 full time positions.

Empirical evidence from the tourism entrepreneurs survey shows, however, that the national park brand is not supported as intensively, for example, as in the Müritzer National Park region. Despite the fact that it has existed in the area since 1970 and the high level of tourist interest in the park, the park itself only plays a minor role (similar to that of Berchtesgaden National Park) in the marketing activities of tourism enterprises. There is also a clear chasm between the original national park region and the extension area. In the original region the national park is considered a very important advertising medium, exceeding the levels of national park orientation in the Müritzer region. In the extension area the national park is used less often for marketing purposes and the interest of the tourism entrepreneurs is much lower than in Berchtesgaden. The general attitude towards the national park is also more positive in the original area of the park than in the extension area.

Where internal marketing of the region is concerned, accommodation and catering providers (especially in the extension area) do not strongly promote the national park vis-à-vis their guests. Also in external marketing much more could be done. The national park oriented tourism products, for example, should be adapted more to market demands.

Tourism is an important industry for the national park re-

gion, though it is not the only important sector. A well diversified economic structure creates conditions that ensure that a large proportion of the income from tourism remains in the region. It is not just the tourism industry that profits from tourism in the area: indirect (tourism enterprises using regional intermediate inputs) and induced effects (salaries and wages of tourism employees) increase the regional added value of tourism to a factor between 1.38 at the minimum (indirect effects) and 1.79 at the maximum (indirect and induced effects).

More than half of the tourism enterprises believe the national park to be the top seller in tourism and the main attraction of the region. More than a third shares the opinion that the park's role as a nature conservation institution is to combat the bark beetle infestations. They believe that tourism in the region suffers because the dead wood areas make the landscape unattractive. Here a definite discrepancy can be seen in the perception of the problem: in contrast to the responding entrepreneurs the visitors tend to be more open towards the unusual forest landscape than many business owners and local residents would assume. In this respect the connivance of the bark beetle in the nature zone of the national park does not seem to be a stumbling block for regional development. On the contrary, it could possibly be seen even as an opportunity: From a social psychological point of view tourism works because tourists look for new, unknown and unusual experiences. Consequently the distinctive forest landscape of the National Park singular in Germany can be seen as a unique selling proposition. Where else in Europe can one see a forest regeneration process progressing naturally in these dimensions? To be able to capitalise on this unique feature awareness is required – an awareness amongst both the visitors and within the region. Visitors can and have to be systematically approached and in-

¹ The following chapter refers to the current study from CenTouris only and has been taken from the corresponding final report (CenTouris 2008: 17ff.).

formed. The national park as a tourism attraction will, however, only be successful if the region and its many stakeholders support it. Ultimately, a future decline in the region must be avoided and competitive structures in nature tourism must be developed using the quality label “national park”.

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