

TOURISM INFRASTRUCTURE IN NATIONAL PARKS IN GERMANY – CASE OF BAVARIAN FOREST NATIONAL PARK

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Abstract:

The fourteen national parks, which cover about 0.55% area of the country, have been established in Germany so far. Bavarian Forest National Park is the first one established in Germany (1970). In order to limit negative consequences of tourist traffic, planning of the location of tourist infrastructure should be governed by parallel introduction of protection zones, concentration / dissipating of tourist traffic and restricted access.

The main goal of this work is the analysis of tourist infrastructure of the Bavarian Forest National Park in terms of three concepts of its management within the protected areas. This work is based on literature, maps and regulations for the Bavarian Forest National Park.

Significant concentration of tourists in the Bavarian Forest National Park is observed in the Recreation Zone, which covers only 1.68% of the Park area; here most tourist infrastructure and transport facilities for visitors are located. In this zone there are Visitor Centers: Lusen, Falkenstein and the Forest History Museum in St. Oswald.

Analysis of the way in which the Bavarian Forest National Park is governed shows that imaginative and diversified policy, meeting the wide needs and expectations of tourists, including the disabled ones, can make a park very attractive, ensuring at the same time satisfactory protection of nature resources.

INTRODUCTION

The fifteen national parks (Fig.1.), which cover about 0.57% area of the country, have been established in Germany so far [10]. Each year they are visited by about 51 million people [1]. The oldest is Bavarian Forest National Park (Bayerischer Wald), established in 1970 as the first national park in Germany. It covers an area of 24,217 hectares [10]. It is located in the Bohemian Massif and borders Šumava National Park (Czech Republic).

In Germany, nature protection is regulated by law *Gesetz über Naturschutz und Landschaftspflege (Bundesnaturschutzgesetz)* of Jun. 29, 2009. Clause 24 of this law defines national parks, in particular their main goal which is to guarantee to maintain, as far as it is possible, unperturbed run and dynamics of natural processes. If it does not interfere with nature protection, national parks should enhance research, natural education and recreation.. In the case of Bavaria, where Bayerische National Park lies, there is a local law concerning nature protection: *Gesetz über den Schutz der Natur, die Pflege der Landschaft und die Erholung in der freien Natur (Bayerisches Naturschutzgesetz)* of Feb. 23, 2011. It supplements *Bundesnaturschutzgesetz* with the condition set to the minimal area of a national park in Bavaria equal to 10,000 ha [7].



Fig. 1. National parks in Germany (on 1.1.2014)
Source: on the basis of: [10], [13]

Tourist infrastructure is introduced into national parks in order to make them accessible and interesting to the tourists and at the same time to moderate tourist traffic.

In order to limit negative consequences of tourist traffic, planning of the location of tourist infrastructure should be governed by parallel introduction of protection zones, concentration / dissipating of tourist traffic and restricted access [2].

The concept of zoning foresees the introduction of a strict protection zone and a few other zones where protection regimes are not as stringent [3]. Protection zones strategy leads to dividing national park into zones of gradually more and more severe regime of protection. The main goal in that case is nature protection, on one hand, and development of tourism and recreation on the other [6].

According to concentration/dissipating of tourist traffic policy there are two possible solutions: concentration of tourists in chosen places or spreading them over the park area, thus limiting the perturbation of nature equilibrium. Both these solutions can be applied in parallel [3].

Restricted access concept is based on the local law which limits the number of tourists (cars) who can visit the park at a time. Introduction of tickets can also effect the tourist number [3].

The main goal of this work is the analysis of tourism infrastructure of the Bavarian Forest National Park in terms of the above mentioned three concepts of tourist infrastructure management inside protected areas.

This work is based on literature, maps and regulations for the Bavarian Forest National Park.

RESULTS

ZONING IN BAVARIAN FOREST NATIONAL PARK (ON 1.12.2013)

According to the classification, developed by the International Union for the Conservation of Nature (IUCN), Bavarian Forest National Park (24,217 hectares) has category II. Four zones were designated within its are, they are [9] [12] (Fig.2.):

1. Natural zone (Naturzone) with a surface of 13,887.9 hectares (57.33% of the total area), in which natural processes have priority and a human intervention is not foreseen.

2. Development zone (Entwicklungszone) with a surface of 4,581.9 hectares (18.92% of the total area). It is sub-divided into three sub-areas (2a, 2b, 2c), in which forests should be left to develop naturally.

3. Marginal / buffer areas (Randbereich) with a surface of 5,346 ha hectares (22.07% of the total area), in which long term forest protection measures, for the protection of neighbouring forests, are used.

4. Recreation zone (Erholungszone) with a surface of 405.9 hectares (1.68% of the total area), which secures the function of visitor facilities and transport.

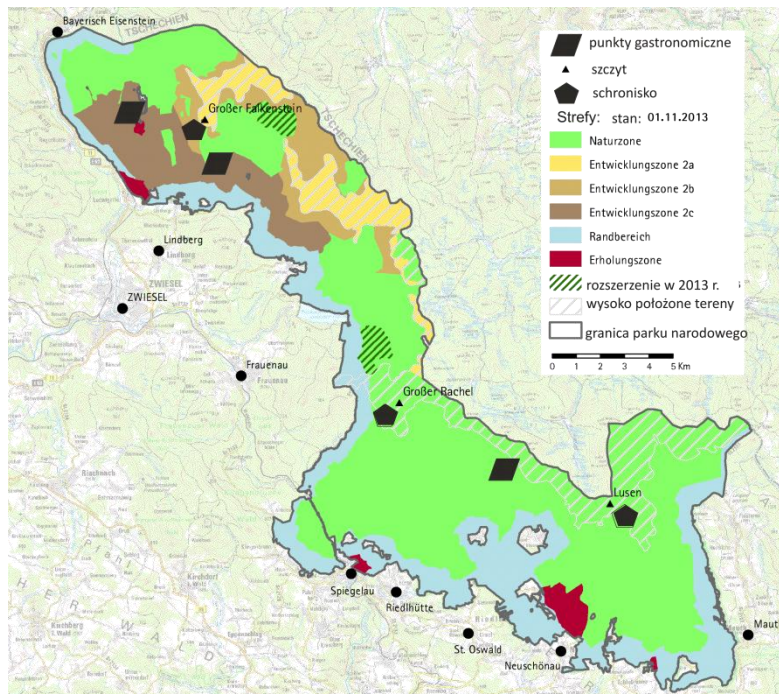


Fig.2. Zoning and selected elements of tourism infrastructure in the Bavarian Forest National Park
Source: on the basis of [9]

In the Bavarian Forest National Park there are three mountain hostels. Fig.2. shows their location within zones: two of them are located in the Naturzone and one in the Entwicklungszone. Fig.3. shows the height (in m above sea level) at which the mountain hostels are located. They are situated at the height of 1315 – 1360 m a.s.l., in the immediate vicinity of peaks, while the range of height on which the Bavarian Forest National Park spread is 853 m, between 600 and 1453 m a.s.l., as shown versus distance in a straight line by the blue colour in Fig.3. Table 1 gives basic information about each of the shelters: name, height (m), location, number of beds and details on seasonal functioning.

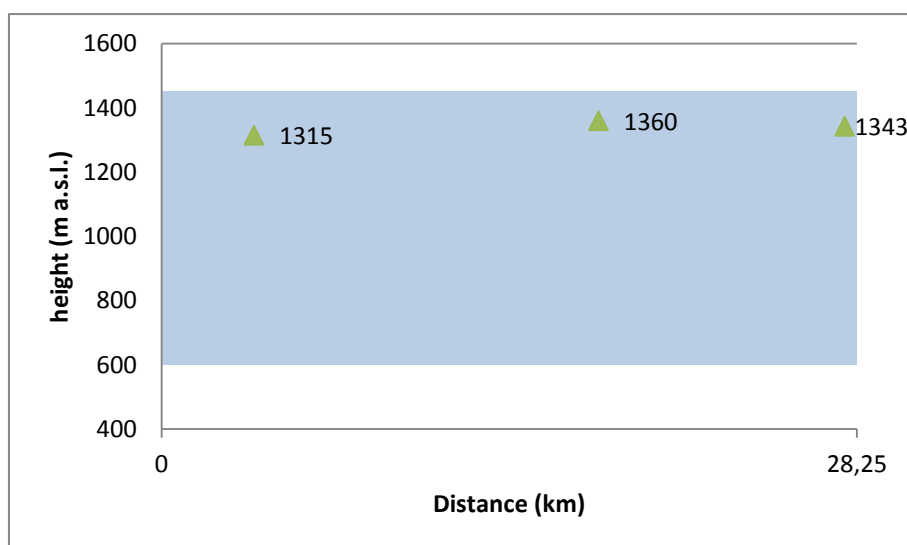


Fig.3. The height (m a.s.l.) at which the mountain hostels in the Bavarian Forest National Park are located.

Table 1. The mountain hostels in the Bavarian Forest National Park (on 1.01.2014)

Name of the mountain hostel and height (m a.s.l.)	Localization	Number of beds
<u>Lusen Schutzhaus</u> 1343 m	area of the Lusen pick (1373 m)	21 beds for 7 months during a year; seasonally in winter
Rachel-Schutzhaus (Waldschmidthaus) 1.360 m	area of the Große Rachel pick (1453 m)	presently no logging facilities for the lack of the save fire-control
Falkenstein Schutzhaus 1315 m	pick the Große Falkenstein (1315 m)	60 beds

Source: on the basis of: [11]

Gastronomical facilities in the park include: Visitor Centers, shelters and restaurants such as Rachel Diensthütte (May-October; 876 m), Waldgasthaus Scheuereck. Fig.2. shows also their location, except for that of Visitor Centers, which are in the Erholungzone (marked in red).

THE CONCEPT OF CONCENTRATION / DISPERSION OF TOURISM FOR THE BAVARIAN FOREST NATIONAL PARK

Concentration of tourism takes place in the Recreation Zone, which covers only 1.68 % of the Park area; here most tourist infrastructure and transport facilities for visitors are located [9] [12]. In this zone there are Visitor Centers: Lusen, Falkenstein and the Forest History Museum in St. Oswald.

NATIONAL PARK CENTER - LUSEN

It includes the following tourist attractions: Hans-Eisenmann-Haus, geological and botanical exhibition in the open air; wild life reserve "Tier-Freigelande", walk in tree-tops.

Modern exhibition at the Hans-Eisenmann-Haus was opened on 7th October 2010, when the celebration of the 40th anniversary of establishing of this National Park took place. In the immediate vicinity of Hans - Eisenmann - Haus there is a geological and botanical outdoor exhibition with numerous species of flora typical for this area. Wild life reserve, "Tier-Freigelande", is, unprecedented in Poland, attraction for tourists in the mountain national

parks. It covers the area of 200 hectares in which 45 local animal species live, each in a separate enclosure. There are walking paths for visitors and ample facilities of tourist infrastructure. Tourists can watch animals walking freely from close up, and only the fact that it takes place on the grounds of National Park can rise some controversies. "Keeping wild animals in enclosures is not a direct nature conservation task of the national park. However as part of the decision to establish the first German national park it was agreed that large enclosures enabling the presentation of important animal species in mountain forests should be established as a visitor attraction"[9]. There is a net of walking trails. You can walk for up to 4 hours in a 7 km long loop, or chose some shorter routs. All paths are accessible for disabled people, also those on prams. The entrance to the wildlife enclosers is free of charge, and so are car parks other than the one which is next to the main entrance.

Another attraction for visitors, unknown in Polish mountain national parks, is the walk in top-trees , opened in 2009 and recommended as the largest in the world. The walking path has the form of a platform, 1.300 meters long, mounting at a height of 8 to 25 meters, and ending with a viewing tower, 44 meters high, from which one can observe the wide panorama. The construction of the path and the tower enables the visitors to touch the trees enclosed by the tower and those outside it, close to their tops, allowing thus to admire the richnes of fir trees vegetation. This contact with nature is reinforced by educational elements along the path. Its slope does not exceed 6%, thus making it available even for disabled visitors [9].

NATIONAL PARK CENTER FALKENSTEIN

The National Park Centre Falkenstein, close to Ludwigsthal, includes a Visitor Center "Haus zur Wildnis", wildlife reserve and the Stone Age cave. In the Haus zur Wildnis, opened in 2006, there is an exhibition which provides information about two national parks: Bavarian Forest and the Šumava. Among the wild animals kept in enclosures in the Wildlife Reserve (admission free) are, for example: aurochs, wolves and lynxes [9].

According to concentration/dissipating of tourist traffic policy there are two possible solutions: concentration of tourists in chosen places or spreading them over the park area, thus limiting the perturbation of nature equilibrium [3]. Both these solutions are applied in parallel.

Tourist Information Points have wide offer of free folders, discribing the numerous trails, including the top-tree track and the routs leading to 3 most attractive peaks, in the vicinity of which there are the only three mountain hostels. The size of the car parks situated at the beginning of each trail/route, ensures the even distribution of visitors within the Park.

The total length of the hiking trails is about 300 km, and according to [5] and [8] up to 760 000 tourists per year visit the Park, which is the most frequented attraction in the region. Bavarian Forest National Park and the neighbouring National Park Šumava (Czech Republic) are among those couples of mountainous border national parks, which are connected by numerous, although not often frequented, cross-border routes (6 cross-border trails) [4]. This is frequently met in the mountain national parks in the Middle Europe, but not in the Alps.

Interesting is the comparison of certain figures relevant to a few border mountain national parks. It is illustrated in Fig.4. and Fig.5.

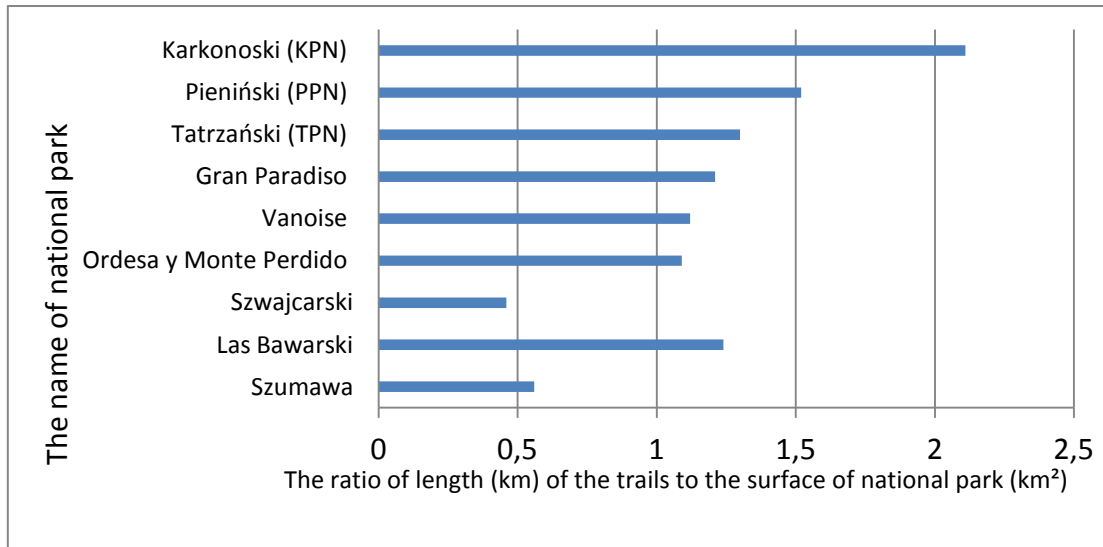


Fig. 4. Density of touristic trails in chosen mountain national parks
Source: [4]

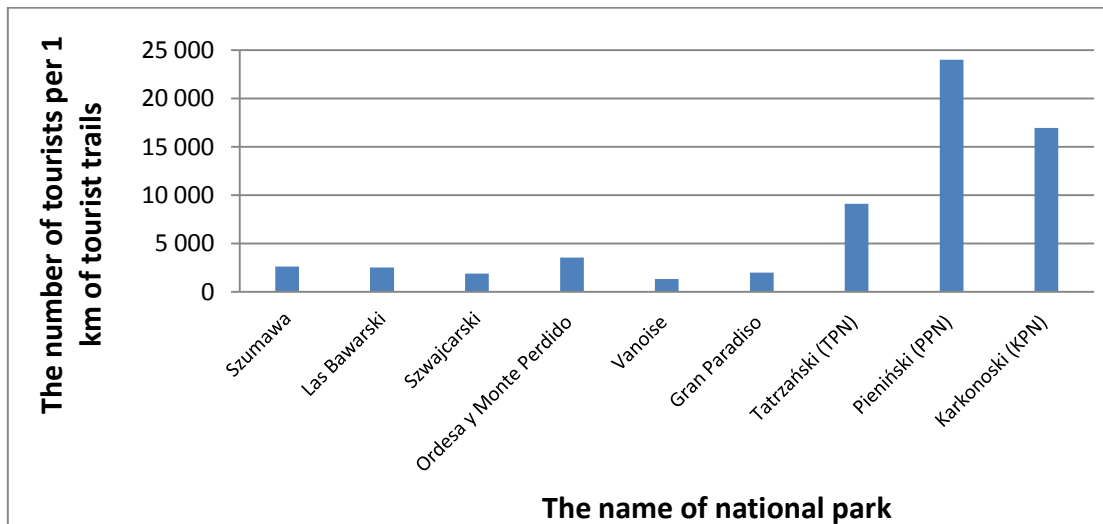


Fig. 5. The number of tourist per 1 km of trail per year for chosen border national parks in Europe
Source: [4]

RESTRICTED ACCESS

In the area of the Bavarian Forest National Park there is no limit to the number of tourists present within the park. There are also no tickets at the entrance and parking places are usually free of charge. However, the number of car places in the parking space puts some limit to the number of tourist. The majority of parking places are located in Erholungszone oraz Randbereich. Those lying high up are opened only for a few hours.

CONCLUSION

Analysis, given above, of the way in which the Bavarian Forest National Park is governed shows that imaginative and diversified policy, meeting the wide needs and expectations of tourists, including the disabled ones, can make a park very attractive, ensuring at the same time satisfactory protection of nature resources. This protection is carried out by many safety measures, even though the effect of overcrowding of the Park is not observed so far.

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