



Carrying Capacity in PARKS & BENEFITS partner protected areas

The main challenge for the sustainable development of tourism in protected areas is to balance the flow and behavior of visitors with the protection goals set up for the area at different political levels. This is based on the need to combine the protection of nature and cultural resources with the fulfillment of visitor expectations to ensure visitor satisfaction on the other hand.

This balancing act is strongly connected to the carrying capacity of a protected area. How many tourists can visit a place without threatening the nature resources? There is no simple answer to this question but the solution is closely linked to the nature system concerned, the related social system and the mediating management system that has to ensure the sustainable functionality of the protected area.

Carrying capacities are limits or standards not to be exceeded if the landscape is to be protected. They are not scientifically determined sizes but a result of political decision processes among stakeholders, balancing use and protection preferably based on scientific and/or experiential cognition. The concept itself has been around for a long time. It was a central concept in the regulation of the most agricultural systems all over Europe in Medieval time.

It is important to keep in mind that carrying capacity for tourism in protected areas is a matter of visitor flow, not a question of establishing maximal carrying capacities for different types of wildlife in the protected area. Such conditions can certainly form decisive parts of the conservation strategy of the protected area. There is seldom any direct relationship between the overall visitor pressure on a protected area and their impact on the related nature resources. The varied geographical structure of the protected area mostly offers strong instruments for a management strategy that finds a balance between visitor flow and resource protection.

The analysis on carrying capacity that was carried out in the protected areas involved in the PARKS & BENEFITS project revealed a mixed picture in terms of the capacity of each park. The protected areas involved in the PARKS & BENEFITS project generally have a low population density. This is partly due to the historically extensive use of the land and the low and dispersed settlements. The main exception here is the South East Rügen Biosphere Reserve, which shows a high population density that is considerably higher than the average in the Federal state of Mecklenburg-Vorpommern where the park is situated. This reflects the cultural landscape of the Biosphere Reserve, in contrast to the National Parks which were historically more nature conservation oriented.





The regional population attached to the parks is more diverse. The population within a distance of 50 km from the park starts from 106.000 inhabitants (Matsalu National Park (EE)) to 1.142.000 (Kemerri National Park (LV)). The economic activities certainly strain the park and its related nature resources, especially through pollution from agriculture, forestry, industry, transport etc., however only to a limited degree because most of these activities are located at a certain distance from the park.

With regards to connection between the regional population and area of land in the protected areas, an interesting pattern shows up: With the exception of Matsalu National Park and Dovrefjell-Sunndalsfjella National Park there is a high potential for more than 2000 regional visitors per square km for all the parks. To assess the total potential number of recreational visitors to the park a number of data needs to be added to this figure: the number of tourists coming from outside the region, the yearly number of visitors, the tourist capacity in form of overnight stays ('beds') in and around the protected area.

The estimated number of yearly visitors range from 15 000 in Maribo Lakes Nature Park to 900 000 in Biosphere Reserve South East Rügen. In half of the parks the number of day tourists are estimated to be two to three times the number of the overnight tourists. In Müritz National Park the vast majority of visitors in are overnight tourists. A surprisingly large part of the overnight accommodation spaces are located within the parks. For some however accommodation facilities in the vicinity of the park are of main importance.

To compare the general pressure of the tourism on the land of the protected areas the data was transformed to comparable densities. Here, enormous differences in visitor and potential visitor density can be seen. These range from 15 yearly visitors/km² land in Dovrefjell-Sunndalsfjella National Park to almost 8000 yearly visitors/km² land in Biosphere Reserve South East Rügen.

From these results it seems clear that a carrying capacity for tourists in protected areas cannot be estimated based on the overall visitor density. Carrying capacity obviously needs to be specified in much more detail. It is a concrete relationship between specific protection goals set up for the single local hot spots of parks, consideration of other relevant stakeholder interests and the management opportunities and capacities concerning regulation of the visitor flow.

A regularly standardized visitor monitoring system that can be linked to indicators and standards for local hot spots and their connection routes to major visitor entrances is the main condition for the efficient use of visitor carrying capacity as an instrument for the management of tourism in protected areas. Such integrated monitoring systems are not systematically included in the management of European protected areas today.

The PARKS & BENEFITS project collected descriptions of examples of the management of the main conflict areas of the participating parks. This showed clearly that the parks are dealing with a lot of visitor-oriented problems, both concerning conflicts between visitors and the nature resources to be protected. They are also experiencing conflicts related to the growing number of visitors and between different types of users.

In Müritz National Park (DE) the establishment of a visitor limitation in 2003 to protect the annual crane gathering at the Lake Rederang is a successful example of a management





measure. In 2003 the so called "crane-ticket" was introduced to the park area restricting the number of visitors to the resting spots to 160 guests per evening accompanied by local guides. The organisation of this tourism offer with up to 3.000 tickets sold per season is implemented by a private company, contracted through the National Park authority. Today, the crane watching has become an exclusive event in the late autumn season - the majority of visitors are highly satisfied being part of an outstanding nature experience.

The Dovrefjell National Park (NO) introduced monitoring as a visitor management tool in 2006 to get a more accurate picture of the usage patterns within the Dovrefjell Sunndalsfjella National Park and surrounding protected areas which seem to be most affected by tourist traffic. The results show that the total number of visitors to the area is approx 20.000 and that ¼ of all visitors entered the park at the gateway Kongsvold. A guest survey also provides valuable additional information about the length of stay in the area. According to this 75 % of all visitors are day visitors.

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