

# Landscape preferences and perception in Mueritz National Park (Germany)

Gerd Lupp, Werner Konold

**Abstract** — In Mueritz National Park, Germany, landscape changes are ongoing due to wetland restoration, reduction of agricultural activities and abandonment of timber oriented forest management. This study assesses the perception of the landscape and landscape preferences of both local visitors and tourists. Passers-by were interviewed at five different places inside the park. Preferences and perception of landscapes were identified in three steps: general preferences, perception of the scenery at the interview site and by using pictures. The results were differentiated and compared according to residents, first time visitors and regular visitors as well as lifestyle groups. Lakes, traditionally maintained farmland and ancient lately unmanaged beech forests (*Fagus sylvatica*), containing deadwood, are preferred most. The results show that background knowledge about natural processes is essential for a positive perception of these landscape features.

**Index Terms** — Landscape preferences and perception, lifestyle groups, national park, user survey

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1 INTRODUCTION

National Parks in Central Europe are often set aside to provide space for natural developments and to create “new wilderness”. Mueritz National Park is one example for this type of national park in Central Europe. It is situated in the north east of Germany, half way between the cities of Berlin and Rostock and was established in 1990.

Like with many other national parks in Central Europe, only small parts of it represent natural forests. Large areas are still dominated by vast softwood forests shaped by intensive silviculture, agriculture and drained wetlands. The aims of the park authorities are to restore wetlands, to accelerate the change of tree species in artificially planted pine-forests (*Pinus sylvestris*) towards more natural broadleaf trees, to protect old forests in order to provide space for natural processes and developments, and to reduce farming. Changes in forests and of agricultural land, that both might happen in the next decades were analysed. Given these management plans, changes of the landscape are unavoidable in the upcoming years. However, the impact of these scenic changes on residents and visitors of the Mueritz National Park has not yet been analyzed in detail. Potential preferences concerning certain types of landscape also still need more research. Changes of scenic qualities might be perceived critically and lead to conflicts.

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## 2 METHOD

### 2.1 Interview Design

An adapted method had to be developed to cope with the special needs of information in Mueritz National Park. A user-based survey was established. A quantitative approach allowed gaining a broader perspective on different park users. However, a range of open-ended questions concerning perception were implemented, which are more typical for a qualitative approach. In order to cover all types of park users such as day visitors, long term guests, and locals, interviews with passers-by at sites inside the park were considered the most efficient way to gain information. This type of interviews allowed to include "real" on-site sceneries for analyzing scenic preferences. Five different, well frequented sites inside the park were chosen. Each of the five locations selected represented a different landscape, typical for the Mueritz National Park. Locations chosen were an unmanaged beech-forest, a pine plantation, a natural forest regeneration on devastated land at a canoe route, a restored moor and traditional maintained meadows in the management zone.

Persons were asked for their reasons to visit the park as well as for their activities planned. In order to obtain information on different aspects of the scenery and to minimize possible faults that may occur in each step, landscape preferences were assessed in three different steps.

First, general questions on preferences for certain types of sceneries in the park region were posed. Persons were asked to rate on a 1 to 5 Lickert scale. However, for answering this question every interviewee always has her or his own "mental landscape" in mind when being asked.

Therefore, in a second step, the quality of the surrounding scenery was asked. Again, the scenic quality had to be ranked on the 1 to 5 Lickert scale. This way more information about the perception of these typical sites inside the park could be obtained. However,

some aspects, which might be more dominant in the future, like forests with huge portions of deadwood, are not visible yet or existing places are not well frequented.

In a final step, scenic impressions were given in a picture set. Pictures had to be sorted according to a Q-Sort test method as described by [10]. From 16 pictures shown, the interviewee was asked to select 4 pictures with landscapes liked better than average and 4 pictures with landscapes liked less than average. From these pre-selections the interviewees selected one picture each with the type of landscape liked best, respectively the type of landscape liked least. The interviewees were then asked to explain their choice of best and least preferred type of landscape. Using this method a ranking of landscape preferences was achieved.

The interviews have been conducted between the beginning of May and the end of August 2005, since the park is mainly visited in summertime. Three interview-sessions were carried out at each place, one session in early, one in mid and one in late summer. In order to get a good random selection of passers-by, a weekday, Saturday and Sunday were selected. Questioning started at 9:00 am and ended at 5:00 pm. Passers-by were asked to participate in the survey by telling the purpose and the overall time of duration (approximately 20 – 30 minutes). After the interview was finished, the next person approaching was contacted.

### 2.2 Forming Different User Groups

To detect possible discrepancies between different users of the park, three sub-groups are classified: *First Time Visitors*, *Regular Visitors* and *Residents*. *First Time Visitors* are both 'first time visitors' and persons who had been in the park before but only for a few times. *Regular Visitors* are defined as persons visiting the park frequently at least over the last ten years. *Residents* or *Locals* are defined as persons living in national park villages and towns at the park entrances.

Additionally, all interviewees were sorted

into lifestyle groups, according to the concept of the German sociologist SCHULZE [9]. This lifestyle group concept assigns persons to general orientations and values, every day leisure-time activities and communication channels used.

For this query, it was of interest how many individuals of each of these groups visit Mueritz National Park. Also there might be different activities and landscape preferences for each of these groups. The concept defines five different groups, two groups younger than the age of 40, one correlated with a lower and one with a higher education level. Persons above 40 are sorted in three lifestyles. One group is correlated with a low, one with a middle and one with a high education background. Significance to differences in answers between lifestyle groups on one side and Locals, Regular and First Time Visitors on the other side was proved by ANOVA and by Chi-Square tests, using SPSS.

### 3 RESULTS

605 passers-by were interviewed. A look at the lifestyle distribution indicated a dominance of older persons and a higher educational background (around 36%). However, young people below 40 with a higher educational background appeared to be the second largest lifestyle group (22%). This suggested that the majority of park users lead lifestyles, which indicate a higher educational level. The young, better educated were extremely over-represented at the interview site at the canoe route. Also persons assigned to this group preferred canoeing significantly, even compared to the same age-group with a lower education background.

In open-ended questions, main motives for visiting were: "Area is very natural", "Beautiful scenery", "Possibilities to go biking", "Quietness" and "Canoeing". 3.6% of the visitors explicitly named "Visiting a National Park". "Unspoiled/clean nature", "Quietness", "Loneliness" and "No noise" were the most frequent positive impressions for Mueritz Na-

tional Park, followed by "Lakes" and "Forest". Regular Visitors especially mentioned "Quietness".

Lakes, traditional maintained farmland and old beech (*Fagus sylvatica*) forests containing deadwood were preferred most by all groups. However, lifestyles with lower educational background slightly tended to prefer more cultivated places.

Especially the young, better educated lifestyle group members frequently mentioned with overviews, avenues and fields "I do not know", because the canoe-route has none of these features.

The appreciation for the restored moor was often based on information about it, which was vital for its positive perception. An interesting aspect of the survey is, that every fourth person quoted moors as "I do not know" or "I have not seen them yet", although this type of landscape is a frequent impression inside the park and it was also the most frequented interview-site in the study.

Abandoned fields and fallow land were seen negative, when general impression was asked for. Especially Locals related it with the diminishing of agriculture and had a negative picture in mind. However, when blooming, it was often considered interesting and attractive, even by Locals. Most frequently pine stands and initial forest regeneration were voted the worst impression in comparison with other scenic impressions or in the picture set. However, at the real interview site, it got quite good grades, since other qualities than visible ones, especially "quietness", were important.

### 4 DISCUSSION

This study shows that it is necessary to analyze landscape perception in more than one step. Each way of interviewing or only using a picture set is not adequate to cope with the complexity of landscape and its perception.

In Mueritz National Park, a majority of visitors are identified as members of lifestyle groups with a higher educational background.

This fits quite well with other studies, e.g., [8] or [3]. Lifestyle groups with lower education tended to prefer more cultivated places.

The old beech forests were considered very attractive, which supports the general impression that this kind of forest was liked by the visitors. Deadwood in these forests, at least to some extent, was seen as a positive feature. In other recent surveys deadwood in forests is also seen more positive [6]. However, background information was important. This was vital for judging whether a scenery is considered positive or negative, especially for not everyday impressions like the regenerating moor sceneries and its large portion of deadwood.

Some features of cultural landscape like avenues and viewpoints were liked as such. Meadows and open cultural landscape are important for aesthetics when providing views towards lakes, which were liked most. This fits to more general theories of landscape perception and preferences [1,5]. The impression of abandoned fields and fallow land was perceived negatively. Especially Locals related fallow land with diminishing agriculture and had a negative perception when being asked. However, blooming open land is often considered interesting and attractive, although the picture of an abandoned field had no other landscape structures in it. The ambivalent quality of fallow land was also reported from studies in alpine areas [4]. This result also demonstrates the negative connotation related to a term, which not is not necessarily related with a scenic impression in reality.

## 5 CONCLUSIONS

Judging of landscapes that might be more dominant in the future like deadwood, fallow land, but also pine forests dominating the park for the next decades, is based on background knowledge, values and positive experiences. According to a more general perception model [2], they are "personal" or "individual strategies". Understanding the

landscape perception of different groups and lifestyles, adequate communication and information concepts can be developed by the park authorities to raise acceptance for these features.

According to the lifestyle concept by [9], people with lower education tend to watch nature films on television frequently. However, these groups are often under-represented when participating in outdoor activities (e.g. [3, 7, 8]). Important reasons for this might be the lack of mobility or little money that can be spent for experiencing nature; but certainly they are not the only ones. Further research on this issue is necessary and fundamental, since these lifestyle groups represent a large group of society.

Using the lifestyle concept by [9], important communication and information channels with visitors can be for example high quality magazines, newspapers, radio and TV programs. National Park experiences may be combined with arts exhibitions, cultural events and theatre performances in the region. A large majority of park visitors is generally interested in this kind of offers.

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