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Landscape management and landscape changes towards more naturalness and wilderness: Effects on scenic qualities—The case of the Müritz National Park in Germany

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ABSTRACT

This paper analyses the consequences and effects of management towards more naturalness and wilderness, using the case of the Müritz National Park as an example. Planned management actions for enhancing naturalness and providing space for wilderness are examined. The scenic qualities of the national park landscape are analysed in terms of the management objectives and with the appropriate tools. For open landscapes, we applied the Delphi survey method to forecast their appearances in 2020 and 2035. A forest growth simulator was used to describe the change in forest tree species composition over the coming decades, and well into the 22nd century. These forecasts are compared with the goals set in the National Park Plan.

Introduction

Maintaining biodiversity is one of the core challenges at the international, national and regional levels. It is central to the German National Strategy on Biological Diversity (BMU 2007) adopted by the Federal Cabinet in November 2007. All national parks are required to comply with the IUCN Category II standards. In order to meet the internationally accepted IUCN Category II standards, national parks have to allow natural processes which will lead to the establishment of a state of natural wilderness. However, many of these designated areas also include valuable cultural landscapes, which are also worthy of protection. Thus, IUCN Category II parks can also host valuable traditionally used cultural landscapes to some extent. These are supposed to serve as a buffer zone between intensively used areas outside the parks and the strictly protected core zone (Dudley 2008). The IUCN category II also reflects the restoration of native biodiversity. In most regions in Central Europe, the land has been intensively cultivated for many centuries, and the landscapes and its habitats have been strongly affected by human intervention. Restoration efforts therefore play an important role for Central European national parks. Nevertheless, questions such as the following ones can still arise: What are the consequences in scenic terms of strategies to develop more naturalness and wilderness over the short and long term? Will management practices produce the intended effects and halt the loss of biodiversity, and can such goals be achieved quickly within a few years? Can prescribed management measures be implemented as intended? Will the change in scenic quality resulting from management strategies be accepted by visitors? According to general ideas of preferred landscapes, as established in landscape planning theories, the most attractive landscapes are small scale and traditionally maintained cultural landscapes (e.g. Nohl 2001). But they do not necessarily reflect the individual character of the landscapes and the real aesthetic demands expressed by local inhabitants (Hunziker et al. 2008; Schwahn 1990; Vorkinn & Riese 2001). Therefore, the work refers to the expressed landscape preferences and perceptions of both residents and tourists, as key interest groups assessed in the Müritz National Park in the German state of Mecklenburg-Hither Pomerania by Lupp and Konold (2008), and reflects landscape changes in this context. This paper describes the possible impacts of management plans on the scenic quality as a consequence of striving for more naturalness and "wilderness".

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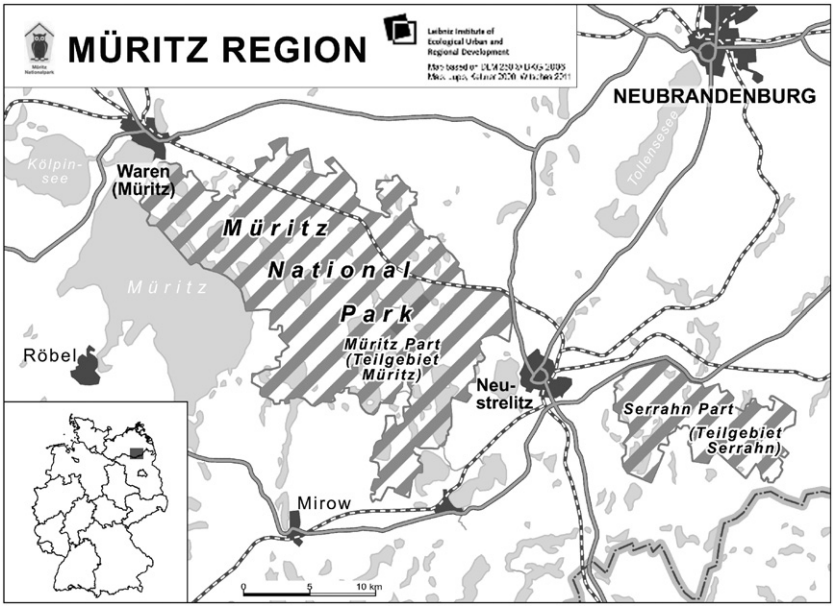

Fig. 1. Map of Müritz National Park.

Study area: The Müritz National Park, Mecklenburg-Hither Pomerania, Germany

The Müritz National Park is located some 100 km north of Berlin, in the north-eastern-most German state, Mecklenburg-Hither Pomerania (Fig. 1). With its 322 km^2, it is the largest land-based park in Germany. Over 70% of its area is covered by forests, while the eastern shores of Lake Müritz and a large number of smaller lakes add up to 13% of the park area. The National Park also contains bogs, meadows, fields and a few small villages. The Park consists of two parts, a larger "Müritz part" and a smaller "Serrahn part", separated by the town of Neustrelitz, with some 25,000 inhabitants. Currently, 30% of the Park is already in the core zone. It protects ancient forests dominated by beech (*Fagus sylvatica*), bogs, wetlands and natural lakes. Two nearly completely devastated and barely vegetated military firing ranges used by the Soviet Army between 1945 and 1993 have been set aside to enable undisturbed natural forest regeneration. In the existing management zone (currently 2% of the area), traditionally structured, high natural value meadows and reed beds on the shoreline of Lake Müritz are managed by domestic animal grazing, to secure resting areas for migrating cranes (*Grus grus*). The major part of the park is still a development zone. Currently, the landscape is dominated by vast pine (*Pinus sylvestris*) forests managed by intensive forestry. Arable land is still being intensively farmed. The park authorities are therefore planning a variety of measures that will affect the landscape. Intense agriculture activities and forestry will be phased out, drainage measures and water pumps that were installed during the socialist era to increase and industrialise agricultural production will be shut down, and bogs will be restored. In young, artificially established pine stands, forest management actions are being implemented to increase the speed of change towards beech (*Fagus sylvatica*) and oak (*Quercus robur*, *Quercus petraea*) stands more native to the area.

In the surrounding areas, socio-economic changes are underway. The transformation process towards a market-based economy in eastern Germany after re-unification has fundamentally affected the surrounding towns and villages. Employment in the traditional agriculture and production sectors has diminished drastically. The region faces one of the highest unemployment rates in Germany. As a result, particularly well-educated young people have moved away, and the region lost 17% of its inhabitants between 1990 and 2008 (Regionaler Planungsverband Mecklenburgische Seenplatte 2010). On the other hand, tourism is increasing, and is already one of the main economic factors in the area. In the Müritz region, nature-based tourism drawing on the attractive natural features of the National Park is seen as one of the key elements of this development (Regionaler Planungsverband Mecklenburgische Seenplatte 2010). Changing the appearance of landscapes has already led to intense conflicts, e.g. in the Bavarian Forest National Park in Germany (Müller & Job 2009), and Müritz National Park authorities therefore strive to avoid conflicts by identifying change effects beforehand, and developing adequate communications through visitor information and management strategies.

Management goals for the Müritz National Park

In both the state and the regional spatial development plans (Ministerium für Arbeit, Bau und Landesentwicklung M-V 2005; Regionaler Planungsverband Mecklenburgische Seenplatte 2010), the natural features of the National Park are among the most important factors for scenic attractiveness and economic development. Natural features, forests and the traditional cultural landscape are especially relevant for protecting biodiversity, but also for tourism and as a site factor for businesses contributing to economic development. Typical landscape elements of the regions, such as tree-lined avenues, pollarded willows and hedgerows, have to be preserved, maintained and, when necessary, replanted. Bogs and wetlands also have to be protected and revitalised.

A number of management goals and resulting actions have been expressed in detailed management plans for the National Park region. Their goal is both conservation and restoration of traditional cultural landscapes in some areas of the Park (Nationalparkamt Müritz 2003a, 2003b, 2003c). Due to the high value of the natural features, the National Park is seen as a core area for nature-based tourism and regional development to promote tourism. Hence, there is a need to balance increased recreational activity and nature-protection issues. For this reason, the demands for recreation and preferred scenic qualities have to be analysed to develop adequate working measures for visitor management. It is also helpful for the park management to know in advance how changing scenic qualities could impact on the attractiveness of the Park, and