

Social Carrying Capacity of Canoeists in Austria's Danube Floodplains National Park

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Increasing recreational activities in National Parks affect natural resources as well as the recreational quality. According to the International Union for Conservation of Nature and Natural Resources, a National Park has to satisfy the demands for nature protection as well as the needs for recreation. In Austria, use levels in National Parks increase consistently, and therefore research concerning the social effects is necessary in heavily used parks.

The Danube Floodplains National Park is located near Vienna, the capital city of Austria and is easily accessible from the surrounding areas. In this National Park, stagnant waters, as the Stophenreuter Arm and Spittelauer Arm, are a crucial component for ecological integrity, and at the same time constitute a main visitor attraction. The network of old arms has high scenic attractiveness and boating with non-motorised boats is permitted.

In the summers 2002 and 2003 a visitor survey investigated whether canoeists feel crowded and whether social carrying capacity is reached. A multivariate survey was developed, containing visual stimuli representing different levels of crowding, presence of wildlife, and direction of travel. The advantage of image based surveys is that these types of influences are more conducive to visual presentation as compared to verbal descriptions; also, interviewees and managers are truly confronted with the same conditions, as opposed to inferring from mere verbal descriptions. Canoeists were intercepted for the study at the conclusion of their trips upon disembarkation.

Canoeists were asked to choose two pictures out of a set of four, by identifying the most pleasant situation, and the too crowded situation. This data was analysed using a logistic regression analysis. Additionally visitors were asked about their perceived crowding (ranging from “very few visitors” to “many visitors”) during the actual trip, the numbers of encounters and if they had experienced crowded times or places. Supplementary, a permanent video monitoring was carried out in order to gain counting data on the canoeists.

The analysis of the picture-based survey lead to the identification of standards of quality, based on use levels within a certain area: two encounters per kilometre were deemed acceptable by the canoeists. Another result of the image-based survey was that the variables canoeists' use level, group size and animals can significantly influence the choice of a picture.

About 30 % of the interviewees state that this area of the National Park is crowded. Up to six encounters with other boaters per trip are evaluated as “neither too few, nor too many visitors”. Another 60 % of the interviewed canoeists react to high use levels with coping behaviour, i.e. temporal or spatial relocation.

Social carrying capacity of this area has obviously been reached at certain times and management measures seem necessary. As the Danube Floodplains National Park is

predominantly used as a local recreation area, management, therefore, needs to decide whether the National Park should provide local recreation opportunities at all, or should focus only on providing a quality recreation for those, who want to visit the National Park and desire to experience nature.

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