Mountain bikers in forests and wildlife habitats

Christiane Brandenburg[1], Hemma Tomek[1], Wolfgang Lexer[2], Friedrich Reimoser[3], Felix Heckl[2], Andreas Muhar[1]

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Forests are subject to different land use demands by various user groups. In particular recreational activities cause manifold impacts on wildlife, forests and their management. Balancing the production, protection, welfare and recreation functions of forests with their habitat function for wildlife and hunting interests poses enormous challenges to multiple-purpose and sustainable forestry. An integrated approach to the management of resulting land use conflicts requires balancing the interests of foresters with those of other land user groups and with public interests, based on a comprehensive view of the different user demands, conflict potentials and existing conflicts on a regional scale.

In the Biosphere Reserve Wienerwald - a multiple-use forest landscape in a peri-urban area - mountain bikers are perceived as one of the most problematic user groups both by land owners and most other land user groups. Within the participatory research project "Integrated Sustainable Wildlife Management in the Biosphere Reserve Wienerwald" - funded by the Academy of Sciences Austria within the MAB Program - cross-sectoral and integrated approaches to the management of conflicts between mountain bikers, forest and wildlife management have been developed. The project was embedded in a stakeholder participation process that was based on a multidisciplinary stakeholder panel (regional experts, NGOs, land owners, forest managers, active citizens, reserve managers, local authorities, hunters etc.). The applied methods of participatory research involved all major stages of participation: information, consultation, collaborative research, and participation in decision-making. A range of socio-empirical methods such as in-depth interviews, internet, mail and on-site visitor surveys were applied to identify both general conflict and synergy potentials and to evaluate their significance and consequences for sustainable land use in the Biosphere Reserve. Therefore location or trail related investigations towards specific locations had not been done.

From 14 in-depth interviews, evaluated by a content analysis, four main groups of problems have been identified: game damage and vulnerability of forests and agricultural crops to game damage, communication, behaviour patterns of land users in the forest and wildlife habitat leading, e.g., to spatio-temporal (seasonal, daily) overlapping of recreational activities with the life cycle of wildlife species; impacts on quality and usability of habitats for wildlife (e.g., due to tourist infrastructure, areas of high use intensity) (Reimoser et al. 2008). Among recreationists, mountain bikers were identified as the user group with a high conflict potential towards wildlife and sustainable forestry with the same conflict potentials Ingold mentioned (2005). The reasons, why mountain biking has such a negative impact on wildlife are for instance off trail biking, high speed and high surprising moment cause of low moving noises (Ingold 2005).

In addition to the in-depth interviews, 1134 on-site interviews have been done. Age distribution as well as types of occupation are similar to several other studies dealing with mountain biking. Mountain bikers are mainly between 20 and 40 years old, high educated and therefore have challenging positions (Cessford 1995).

The survey results indicate that the identified conflicts are mainly related to poor acceptance of existing temporal and trail-related restrictions for recreation activities, as well as to a lack of awareness about the impacts of recreational activities on wildlife and forests. About 80% of the interviewed mountain bikers know that temporal restrictions exist in the Biosphere Reserve, but only around 20% of the sample accept them. Mountain biking is forbidden during the winter and in the early morning or late evening. Still, 94% of the

[1] University of Natural Resources and Applied Life Sciences – BOKU, Department of Spatial Landscape-, and Infrastructure-Sciences, Institute for Landscape Development, Recreation and Environmental Planning, Peter Jordan Str. 82, 1190 Vienna, Austria, christiane.brandenburg@boku.ac.at

[2] Umweltbundesamt GmbH Wien, Department of Sustainable Development, Spittelauer Lände 5, 1090 Vienna, Austria

[3] Research Institute of Wildlife Ecology , University of Veterinary Medicine Vienna, Savoyenstraße 1, 1160 Vienna, Austria

interviewees practise their activity during the winter season, and a rate of about 40% (in spring and autumn) to 53% (in summer) cycle in the late evening. Regarding spatial regulations, 96% of the mountain bikers know that special trails have to be used. However, 67% of the cyclists state that they nevertheless leave the designated trails regularly; 64% out of that group cycle off-trail although they think that it strongly disturbs wildlife; 79% of all interviewed mountain bikers agree that disturbance of wild animals causes stress to them; 53% state that they know that disturbance hinders hunting, but only 16% are aware of any causal relationship between disturbance and game damage (Reimoser et al. 2008).

Based on the findings gained from the visitor surveys, tools and recommendations for conflict management have been developed that strongly take into account attitudes, knowledge, information, and behavioural aspects of recreationists. Results include sets of cross-sectoral sustainability criteria and indicators that aim towards an integrated conflict management strategy by explicitly considering interactions between visitor management and wildlife management.

References

Cessford, G. (1995). Off-road mountain biking: a profile of participants and their recreation setting and experience preferences, New Zeeland.

Ingold, P. (2005). Freizeitaktivitäten im Lebensraum der Alpentiere. Bern: Haupt Verlag.

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