

Crowding in European forests: Status quo and implications for forest management and research

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Abstract — Providing forests on a sustainable basis include knowledge about recreation quality of forest visitors and perceived impacts. While ecological impacts have been a central topic for forest recreation research, social impacts such as use-conflict and crowding were rarely investigated. This paper analyses research attempts in European forests dealing with visitors' crowding perceptions at a first time. For data collection, the Cost Action E33 "Forest for recreation and nature tourism" network, as well as a focused literature research was used. Compared to recreation research in the United States, where crowding is a prominent topic, only 16 European crowding studies were identified since the 1980s, predominantly carried out in Central and Northern Europe. Reported crowding-perceptions ranged from 1064%. Among these, correlations between use-levels and crowding perceptions were yielded, as well as manifold significant influences of setting attributes and visitor characteristics. Most studies used a theoretical foundation oriented towards the US recreation crowding literature, but differ in their methods of measuring crowding. As a result, the use of different scales and data collection methods, restrict a nation-and European-wide comparisons. In most Southern, Eastern and several Central European countries, crowding is not recognized as an issue for forest recreation research and management. Besides less political willingness and financial constraints, general access rights to forests, and the lack of legal requirements are considered among the main obstacles of putting more emphasis on recreation crowding research. Due to the ongoing societal demands for outdoor recreation together with trends to concentrate uses on fewer paths and areas for ecological reasons crowding may be of higher importance in the future. A need for standardized crowding research is stated to gain more insights of cultural differences and commonalities. Changes of the recreation systems, its uses and users can be better recognized for a sustainable, future-oriented forest recreation management.

Index Terms — Crowding; Europe; forest recreation; methods, scales, social impacts.



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