

## DEVELOPING A SPATIAL EXPLICIT MODEL OF NEARBY OUTDOOR RECREATION USE AS A TOOL FOR FOREST PLANNING AND RECREATION MONITORING

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### Abstract

In modern societies, demand for nearby outdoor recreation is increasing, in particular due to the increase of leisure time and the change of work-loads (stress). In particular in peri-urban region, this tendency brings about an increased use-pressure on existing close-to-nature areas. Therefore it is important that the responsible managers endeavour to offer optimal recreation conditions in this limited area and establish a directed monitoring of potential limitations such as crowding or inappropriate infrastructure. To achieve these goals, two so far not available data are needed: a) significant factors relevant for selecting recreation areas, and based on that b) a model on expected spatial-explicit use-intensities within nearby outdoor recreation areas. With our project, financed in the framework of COST-E33, we aimed to provide this knowledge focussing on the case study of the Swiss city of Frauenfeld (22'000 inhabitants) and its nearby recreation area (within 15 km from city centre). The project included three main research phases: 1) an inductive phase in which the main factors for selecting nearby recreation areas were identified through qualitative interviews, 2) a deductive phase in which the significance and interrelations of these factors were measured through a representative survey including a local map to indicate preferred recreation zones (N=656), and 3) a modelling phase in which the factor-combination best predicting recreation use intensities is identified and implemented as a GIS-application. The results show that the selection of nearby recreation areas is mainly shaped by the distance to the place of residence, but also by other environmental and personal factors such as the length of river banks, the availability of paths, the presence of hill-tops, and the kind of personal work loads. The results as well as the GIS-based maps will be presented and their implications for forest planning and recreation monitoring will be discussed.

### Key Words

nearby outdoor recreation areas, use-intensities, social science research, GIS-modelling