

## Demand-driven recreation planning in progress

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Within the outdoor recreation domain several visitor management frameworks exist to aid managers and planners, such as: Recreation Opportunity Spectrum (ROS), Limits of Acceptable Change (LAC), Visitor Experience and Resource Protection (VERP) (McCool et al. 2007). Applying such a framework frequently starts with making an inventory of the recreation opportunities offered by and within a set of destination areas. Quite often the set of areas is limited to the public lands managed by the agency that performs or ordered the inventory. This is understandable from a managerial perspective, given that the ability of the agency to act upon the outcomes of the inventory is limited to these same areas. However, from the perspective of the recreationist such a limitation may be less relevant. Making an inventory of all the opportunities within a certain distance from home seems to make more sense. This better represents the choice set: the set of opportunities from which recreationists select a destination to go and visit. Moreover, it would be helpful if demand and supply were inventoried in comparable units (Garber-Yonts 2005); This enables assessing the local match of demand and supply.

In the Netherlands, planning tools for basic recreational activities such as walking and cycling in a natural environment, have been developed (see e.g. De Vries & Goossen 2002). These tools assess whether the local supply of such green recreational opportunities is large enough to accommodate the local demand for these activities, and if not, how much additional supply is needed to correct the situation. Although the tools include several normative choices that have a large influence on the outcomes, the calculated shortages have been empirically linked to likely negative consequences of real shortages. For example, lower levels of participation, less satisfaction with the local supply of opportunities (Van der Aa & Berkers 2008), especially less peace and quiet to be experienced during visits (De Vries 2005), and compensatory behaviour in the form of more overnight stays per year for holiday purposes (De Vries & Sijtsma, in preparation).

So the tools perform a regional analysis, with demand and supply measured in comparable units. Moreover, the outcomes have been validated, at least to some extent. However, since the tools were originally aimed at formulating and substantiating spatial claims for recreational purposes, they focus on quantities of land (hectares), with accompanying carrying capacities. In other words: they ignore the qualitative differences between recreation opportunities. From a demand perspective it is known that people like a full spectrum of opportunities. Furthermore policy makers would like to know whether it is better to invest in more opportunities (allocating new recreation areas), or in improving the quality of existing opportunities (redesigning present areas) and it is at this point that both approaches may benefit from each other. The aforementioned visitor management frameworks pay considerable attention to the experiences offered by the different categories of opportunities, and how to determine them. However, a practical problem might be that the suggested assessment procedures often require labour intensively activities and/or detailed knowledge of the area to be inventoried (Joyce & Sutton 2009); A method that is less costly is more likely to be used. If it is also more objective and robust, and its outcomes are validated, these outcomes are also more likely to be accepted, or at least harder to ignore, by different stakeholders. This is quite important in a European urban context, where ownership tends to be rather fragmented (Haider 2006) and the pressure on space is high. Research to develop an improved tool that is demand-driven in a qualitative as well as in a spatial sense was commissioned by the Dutch ministry of housing, spatial planning and the environment.

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The study takes the AVANAR model as its point of departure (De Vries et al. 2004). AVANAR is a tool that is presently used by the Netherlands Environmental Assessment Agency (PBL) for monitoring purposes. It has been modified to take composition of the available supply of opportunities into account. In a first attempt, the existing supply of opportunities is classified according to three criteria that are generally considered important: scenic beauty, peace & quiet, variation. Scenic beauty is based on another model, GLAM (version 2), with naturalness as an important defining characteristic (De Vries et al, 2007). Peace & quiet is assessed at a choice set level by means of the original AVANAR-outcomes. Finally, variation, is also determined at the choice set level, and for the moment based on the type of land use. Preliminary outcomes will be presented for several cities. Issues regarding the (ongoing) further development of the improved tool will be discussed, among other things taking the differentiation at the demand side into account too.

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