## Recreation or tourism: local recreation opportunities and holiday behaviour

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Since 2009 more than half the world population is living in cities. This urbanisation process, with more and more people living and working in higher densities, is still going on world-wide (McCann & Acs, 2009). In the already highly urbanised Netherlands, spatial planning accommodates this agglomerative tendency but attempts to balance it with the demand for outdoor recreation and contact with nature. However, is planning providing enough green areas for the urban inhabitants? This paper will explore this issue quantitatively.

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 recreation 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. The tools include several normative choices: the number of people that can recreate on one hectare of land (with a specific type of use) without disturbing each other; the distance within which enough recreation opportunities should be available; and the day on which local supply should still be able to accommodate local demand (how busy). The outcome of the analysis strongly depends on these normative choices. This makes it important to evaluate the resulting shortages. Are the shortages as calculated by the tool meaningful, i.e. can they be associated with real (negative) effects?

In this paper we will focus on one type of effect, namely compensation behaviour in the form of going away on holiday more often and/or for longer periods of time. Other types of effects, e.g. on experiencing peace and quiet, have been studied earlier by De Vries (2005) and Van der Aa & Berkers (2008). The dependent variable is the number of nights one spends away from home for holiday purposes per year. The independent variable is the percentage of the required supply of opportunities for recreational walks in a green environment that is actually available locally. The main dataset that is used is the 2003 edition of the Continuous Holiday Survey (CVO), containing the holiday behaviour of more than 6500 Dutch people. By means of the individual's postcode this dataset is enriched with the percentage of the locally required supply for walking in a green environment that is actually available. This percentage is calculated by the AVANAR tool (De Vries et al, 2004), that is also used by the Netherlands Environmental Assessment Agency (PBL) for monitoring purposes. The data was analysed at an individual level. The available supply percentage was categorised into five classes and used as a factor in the analysis, because its relationship with the number of nights might not be linear. Several background characteristics, such as income, were used as covariates.

The analysis of covariance shows that the category with the lowest level of available supply spends over four nights more on holidays than the category with the highest level of available supply. Given a national average of about 20 holiday nights a year, this is a considerable difference. Therefore the preliminary conclusion is that people with too few green recreation opportunities nearby compensate for this by spending more nights elsewhere. Further research will have to show whether they spend these extra nights in relatively natural surroundings, something that it to be expected if contact with nature is the driving force behind these extra nights. In the meantime the shortages as calculated by the AVANAR tool appear to become increasingly meaningful, suggesting that planning should considering greener and less dense forms of urbanisation.

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However, it remains to be seen whether also in the bigger picture the overall benefits of providing extra green space outweigh the overall social costs (Sijtsma, 2006).

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