

# Monitoring outdoor recreation trends in Denmark

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## Introduction

The importance of forests for outdoor recreation is being increasingly emphasized in Danish policy and administration, inclusive of a recent policy report on the future for the Danish forestry sector, and the National Forest Programme which takes up the need of monitoring.

Three national forest recreation surveys have been completed in Denmark. Data are gathered by postal questionnaires in 1976/77, 1993/94 and 2007/08 using the exact same methodology which makes establishing of trends possible. For representative purposes (and minimizing recall errors) the mailing of the questionnaires was distributed over a period of one year. A systematic gross random sample consisting of respectively 3,087, 2,916 and 2,000 persons was drawn from the Civil Registration System, representing the adult Danish population, 15–78 years. Up to three reminders was mailed, and the response percentage was 91.4%, 83.7% and 65.6% respectively.

## Selected trends and discussion

### *Number of visits*

An increase in the number of forest visits by 15% from the 1970s to the 1990s has been detected, followed by a slight decrease of 5–10% from the 1990s to 2008. A disadvantage of collecting information via questionnaires is the risk of exaggeration by respondents. On the basis of actual measurements made in several hundred forested areas it has been possible to estimate an exaggeration factor. This factor has conservatively been set to 2 for answering questions about the annual number of forest visits. Thus, the total number of annual forest visits made in 2008 by the adult Danish public was estimated at approximately 70 million.

### *Duration of forest visits*

Over the period 1977–1994–2008 there was a significant shift towards shorter forest visits. In 1977 just under 50% of forest visitors spent an hour or less in the forest on their visits; in 1994 the figure was almost 60% and in 2008 it was slightly over. The average duration of a visit was 1.9 hour, with a median value of 1.6 hour in 1977; these figures dropped to 1.6 and 1.2 hour, respectively, by 2008. – Is this an indication of a faster lifestyle? Is it conceivable that while the struggle to retain leisure time may well be intensifying, people are not willing to do without their trips to the forest, and so the duration of their visits becomes shorter?

### *Group size on forest visits*

The most frequent size for groups of forest visitors was two people in all three study years. All three surveys reveal that approx. 80% of forest visitors were in groups of four or fewer, but with a striking displacement towards groups of one: The number of single forest visits has almost doubled from 1977 to 2008 – 13% to 24% (Fig. 1). The tendency

towards more small groups rather than medium-sized (family) groups of three to six people might accord well with the general development of the Danish society towards more “individual” lifestyles, families having fewer children, children live at home for fewer years, and in general, more and more people are living alone. According to Statistics Denmark, 39% of the households now consist of a single person – an increase by more than 33 percentage points over the last 20 years.

### *Activities during the forest visits*

There have been no striking changes in forest recreation activities over the past 30 years or so – the most significant change from 1994 to 2008 is the increase in the use of the forest for physical exercise from 14 to 22% – “the forest as fitness centre”. As regards comparability between the studies, it should be noted that the response options for activities had been extended successively since the earliest questionnaire. These additional activity-categories presumably influence the frequency of responses for a number of the original activities. For example, the ascertained drop of 5–6 percentage points in the activity “Other” between each study (20/14/9%) illustrates this possible bias.

### *Travelling to the forest*

After a significant decrease in travelling time and distance from 1977 to 1994, these figures have now stabilized at 29 minutes and 8 km on average in 2008. In the period the means of transportation to the forest also has changed in the direction of more visitors walking or cycling to the forest compared with the use of cars – in 2008 almost as many was walking/running to the forest as using the car (40/42%). There is a clear connection between the results for travelling time, travelling distance and means of transportation to the forest – results that indicates growing pressure on urban forests. The fact that the car is now used less than previously could indicate that motoring is perhaps less of an attraction in itself than it used to be in the early 1970s.

## Conclusions

Over a period of three decades where leisure options have constantly increased, forests have been able to strengthen/hold their position as a very significant recreation venue – 88% of the adult Danish population visit the forest a year.

For the future planning and management, it is important to be aware of the demonstrated trends. Is it e.g. relevant to continue establishing relatively large parking lots – is there a need for more exercise structures and possibilities for shorter round trips in the forest – should there be (further) focus on local afforestation projects where outdoor recreation is in focus?

To be able to keep track of changes it is highly relevant to utilize new possibilities of data collection which might

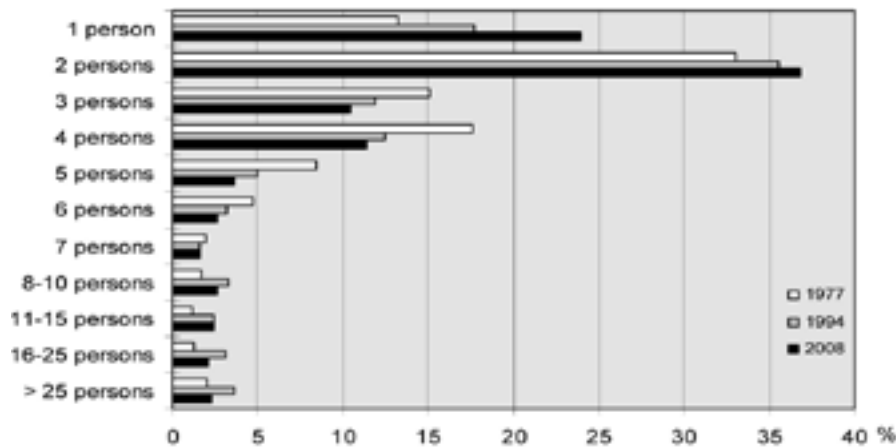


Figure 1. Distribution of group size during forest visits in Denmark 1977, 1994 and 2008 ( $p < 0.0001$ ).

give new and different input. In Denmark a relatively new attempt is to utilize the data collection taking place in connection with the mandatory Danish National Forest Inventory (NFI). This kind of data cannot handle visitor numbers and the like, but based on a 2006 trial inventory eleven social indicators have been included in the inventory from 2007 onward. The indicators include e.g. tracks, hunting facilities, vandalism and litter, which are seen as a valuable addition to keeping track of the trends.