



## Estimating economic benefits of protected areas in Finland – making a case for continued public investment

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**Short title:** Local economic impacts of protected areas

**Key Message:** The Finnish Forest Research Institute (Metla) and Metsähallitus - Natural Heritage Services have in co-operation assessed the local economic benefits of national parks and other protected areas in Finland. According to the assessment 1 EUR investment in national parks and other key protected areas results in 10 EUR return to local economies. The assessment was one of the key factors that convinced decision-makers that the public investment in protected areas pays back manifold. In the end, planned budget cuts to park management were not implemented and a monitoring of the local impact of visitor's spending was integrated into the visitor information database (ASTA) following nationally standardised methods.

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### What is the problem?

Protected areas provide multiple socio-economic benefits. However, these benefits are often not assessed and remain unappreciated by decision-makers and the wider public alike. Therefore using public funding to maintain protected areas is often of low priority. Consequently, information about the socio-economic benefits of protected areas, such as streams of revenue to local economies from recreation and tourism, can provide valuable support to maintaining and managing these areas.

In Finland, Metsähallitus - Natural Heritage Services is responsible for managing all national parks and other state owned protected areas with funds from the state budget. The demand for information on the socio-economic benefits of protected areas is obvious: in addition to monitoring the effectiveness of management for conserving biodiversity many politicians, local decision-makers and funders are also requesting information on the economic impacts of protection. While all socio-economic values related to protected areas cannot be assessed in monetary terms (eg cultural values), a certain fraction of the use-related values can be captured by estimating the economic impacts of people's visits to the parks, ie how the money spent by visitors is 'streamed into' and accumulates in the local economy.

In addition to highlighting the benefits of public investment, understanding the economic impacts of visitor spending can also be used to increase general acceptance of national parks among

stakeholders. It also forms a useful basis for planning area's socio-economic development, eg establishing new businesses in the area. Comparing economic benefits between different parks may also provide useful insights into certain success factors that can be replicated elsewhere.

### **Which ecosystem services were examined and how?**

In order to estimate the socio-economic benefits of national parks and other key state-owned protected areas in Finland, Metsähallitus and the Finnish Forest Research Institute (Metla) developed a standardised, easy-to-use method for assessing the local, accumulative economic impacts of visits to parks (Huhtala et al. 2010). In terms of ecosystem services this method focuses on quantifying the economic benefits associated with nature-based recreation and tourism in Finnish national parks, including activities such as hiking, skiing, fishing and camping.

The method builds on the U.S. Money Generation Model 2 (MGM2, Stynes et al. 2000) and it bases the calculations on three key variables: number of visits, visitors' spending, and a set of multipliers that reflect how visitor spending circulates and multiplies in the local economy. In 2010 the method was integrated into the national visitor information database (ASTA) of Metsähallitus, originally developed to estimate the recreational demand in national parks and other protected / recreational areas. This integrated application now allows estimating visitor spending related benefits for each key protected area on an annual basis.

The basic requirement for estimating economic impacts is a comprehensive, standardised visitor monitoring system, including both visitor logs and surveys. Metsähallitus has such a system already in place (Kajala et al. 2007). Even though establishing and maintaining such a comprehensive visitor monitoring system requires significant investment in both time and resources this investment can generate high and diverse returns.

### **Results**

According to the statistics, in 2011 the Finnish national parks and other key protected areas were visited around three million times. The estimated benefits of these visits to local economies ranged between 0.1 – 30.6 million EUR / year / park, generating an estimated 1 - 400 man-years of employment. When summing up the benefits at national level, the support of national parks (altogether 37 areas) to local economies amounts to 108,3 million EUR (1 394 man-years) / year (Metsähallitus 2012). According to the assessment 1 EUR investment in national parks and other key protected areas results in 10 EUR return to local economies.

### **Did the examination of ecosystem services generate impacts on decision-making or policies and, if so, how?**

In autumn 2010, Metsähallitus - Natural Heritage Services was facing severe budget cuts, including cuts to funding available for managing national parks and other protected areas. The assessment of economic benefits to local economies played a significant role in the discussions, being one of the key factors to convince the decision-makers that the public investment in protected areas pays back manifold. In the end, the budget cuts were not implemented.

On a more practical level, differences between the local economic impacts across national parks have also alerted the regional and nature tourism enterprises, developers and administrators on the

potential business opportunities related to protected areas. It has also become clear that investment in both management activities (eg facilities for visitors) and private sector development is necessary in order to create significant incomes to the regions.

## **Lessons learned**

One of the key lessons learned in the context of the study has been the importance of cooperation between research and practice, ie between organisations like the Finnish Forest Research Institute Metla and Metsähallitus - Natural Heritage Services. Combining theoretical and practical knowledge has provided useful insights into the method and significantly increased the level of confidence in the results.

The methods previously available to assess benefits of protected areas to local economies vary a lot, making it impossible to compare results between different areas, regions and countries. A number of case study –based examples exist, however they are often laborious and resource intensive which hampers long-term follow-up. Therefore, one of the main goals of Metla and Metsähallitus - Natural Heritage Services was to ensure comparability of results between the areas and across time while also the reliability and usability of the method in the long run. In the Finnish assessment, the comparability is now achieved by a nationally standardised data collection (via the ASTA database) and methodology. The results were also compared to previous studies to cross-check their reliability. The developed method is user friendly and free to use for everyone with an access to the ASTA visitor information database.

The process strengthened the assumption that an on-going and standardised visitor monitoring system is a prerequisite for continuous economic impact estimation of protected areas. This is relatively easy in Finland because all the national parks are managed by one government agency that has worked actively with visitor monitoring. Metsähallitus established a group of experts called SMART (Experts on Sustainability and Management of Recreation and Tourism) whose task is to advice and guide national parks and other key protected areas on issues related to visitor monitoring and to further develop the monitoring methods. This guidance is necessary in order to maintain high quality visitor monitoring, crucial to reach reliable economic impact results. On the other hand, it seems that using visitor monitoring data for economic impact estimation has increased the motivation to carry out visitor monitoring: in many national parks the importance of investments into a visitor monitoring system is now understood better than before. The investments into the visitor monitoring system pay themselves back manifold through the diversity of information obtained.

Finally, it is important to keep in mind that while the local economic impacts of recreation originating from park visitors' spending is important information that can have an impact on policy making, this method only describes and takes into consideration certain value types. A more complete picture of the socio-economic importance and value of national parks and other key protected areas would require the inclusion and measurement of many other ecosystem services and socio-economic effects, such as impacts on well-being and health and broader cultural services.

## References:

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