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The Economic Value of Outdoor Life

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Content

Summary	3
Introduction	4
Added values of outdoor recreation	5
Economic values of outdoor recreation	7
Previous studies in Sweden	7
Methods	8
Data collection	8
Analyses	8
Results	11
Conclusions	15
References	17
Appendix A: The questionnaire	

Summary

Outdoor life and outdoor sports create many values for individuals, local communities and society alike. Some of these arise through the consumption generated by participation in various outdoor activities. Outdoor life, recreation and being in nature also represent several perceived values. In 2009, a national survey was conducted among Swedes about their financial expenses for outdoor recreation and the valuation of participation in outdoor leisure activities. It was the first time economic values were documented in a Swedish context. The aim was to capture the scope in economic terms by having participants estimate the magnitude of expenses and select their expenses from 43 different outdoor activities during one year.

This report from 2023 follows up on the 2009 study using identical methodology to estimate the direct economic effects, indirect effects and Swedes' valuation of outdoor recreation (friluftsliv). The survey was done through three rounds of mailings to cover one year's activities. A total of 6 100 participants completed the nationally representative survey.

The results showed that 60% of all adult Swedes had expenses for outdoor life, for their own part and/or on behalf of others during the year. The total expenditure amounted to above SEK 191 000 million, corresponding to approximately 22 300 SEK per person 16 years of age or older, of which 82 % was spent in Sweden. In addition, there was a consumer surplus corresponding to nearly SEK 75,000 million, generating a total value of SEK 231 000 million per year. Compared to 2009 this means a 60% increase in expenditure and a 40 % reduction in consumer surplus (adjusted for inflation at the 2009 price level). In terms of jobs, outdoor recreation-related and nature tourism-related expenditure contributes to approximately 167,300 jobs annually in Sweden.

The report contains detailed findings on different categories of expenditure for outdoor recreation, expenses for different activities, seasons, geographical distribution and comparisons between different groups. The findings indicate that the economic value of outdoor recreation in Sweden is substantial, representing a meaningful share of the national GNP and is also important for employment. The findings are most likely very relevant for other European countries as well. The report provides important evidence that politicians, local communities and other stakeholders have a lot to gain by investing in outdoor recreation, providing access and high accessibility to nature for people and groups and supporting the outdoor movement.

Introduction

Spending time in nature is an important aspect of human well-being with several positive effects for individuals and society (Emmelin et al., 2010; Fredman et al., 2014; Faskunger, 2023). The natural environment offers a variety of opportunities for leisure, physical activity, relaxation and personal development for the individual. Participating in activities such as hiking, cycling and skiing contributes lifestyle, and for many, spending time in nature has a calming effect that improves mental well-being. Challenging yourself and mastering new skills can increase self-confidence and provide opportunities for reflection, factors that contribute to a sense of meaning and identity. But spending time in nature also has positive effects on businesses and society in the larger perspective. The tourism industry in Sweden is heavily dependent on various kinds of natural attractions. They attract visitors who spend money which generates revenue for local businesses, residents, restaurants, and transport services, which in turn stimulates economic growth. In addition, the preservation and maintenance of natural and recreational areas employment opportunities for conservationists, guides and outdoor educators. There is much to suggest that individuals who get a close connection with nature develop a deeper feeling, which in turn can lead to a stronger commitment to protecting ecosystems, reducing pollution and climate impact.

Nature has also good conditions to be an inclusive environment for outdoor activities and can promote a sense of community and provide a setting where people from different backgrounds can meet. The concept of outdoor recreation has a close connection to nature and the environment. The official definition reads »spending time outdoors in the natural or cultural landscape for well-being and nature experience without competition« (SFS 2003:133) and signals that both the stay and activities in nature and experiences of the same is central.

The relationship between the natural environment and outdoor life is significant and often includes an existential dimension. Even though outdoor recreation and visits to nature can be stressful and cause harm on the environment, the notion of its positive effects dominates. This has also been central to political interest and public support through the years. In 2010, the Swedish Parliament adopted ten overarching objectives for outdoor recreation policy that aim to support people's opportunities to spend time outdoors nature and practice outdoor recreation where the right of public access is a basis for outdoor recreation (Skr. 2012/13:51). It states that all people should have the opportunity to have nature experiences for their well-being, for social community and to increase knowledge about nature and the environment.

Several surveys have been conducted in Sweden to map participation in various outdoor activities at the national level, and Statistics Sweden has since the 1970s collected statistics on a limited number of activities (where strolling/spending in the woods and fields is the most recurring). A challenge with this approach is that modern outdoor life is represented by an increasing number of different activities, which means that surveys are becoming extensive. An alternative may be to ask about stays in nature more generally. However, such questions risk becoming very diffuse.

The research programme Outdoor Life in Change, which was active from 2006 to 2012 (www.friluftsforskning.se) conducted a national survey in 2007 based on participation in almost 40 different activities – a study that laid the foundation for subsequent surveys carried out by the Swedish Environmental Protection Agency within the framework of the follow-up of the national outdoor policy (Swedish Environmental Protection Agency, 2015 and 2019). Results from the latest survey show that virtually all Swedes engage in outdoor life in some form, but the practice varies greatly depending on the context (day of the week, season), outdoor activity and demography. Women are out in nature more often than men. Swedes who have grown up in Europe (including Sweden) are more often out in nature than those who themselves (or whose parents) grew up outside Europe. People with disabilities are less often visiting nature compared to those who do not have a disability.

The most common outdoor activities, in terms of the proportion of practitioners among the population, are walks, stays in the woods and fields, outdoor swimming, gardening and cycling. Just over half of all Swedes state that it is any activity or activities they are unable to carry out to the desired extent – lack of time, family situation or missing someone to be out with are among the most common reasons.

About half of all Swedes believe that outdoor recreation has influenced their choice of place of residence, two thirds believe that spending time outdoors makes everyday life more meaningful, and as many as 90 percent are fully or partially agree with the statement that outdoor recreation is positive for health. It is worth noting that during the COVID-19 pandemic, participation in outdoor activities increased significantly. The increase was greatest in the youngest and oldest age groups, where the proportions who have been out in the woods and fields every week doubled in 2021 compared to 2018–2019 (www.scb.se).

Added values of outdoor recreation

It follows from the great breadth of outdoor life and activities that the effects of participation are diverse. Outdoor recreation generates many values for the individual, but also for the private sector and society as a whole. The following points provide a brief overview:

Private consumption

Participation in outdoor activities generates economic value through the consumption of equipment, clothes, travel, accommodation, etc. Whether it's buying camping equipment, bicycles, hiking clothes or travel expenses to national parks, stimulate expenditure on the demand for goods and services, thereby supporting businesses in various industries. The hospitality industry and the "outdoor" industry, but also non-profit outdoor organizations, benefit from the financial transactions arising from participants in the outdoor activities

Destination development

Outdoor activities attract travelers seeking nature's beauty, adventure, and uniqueness in experiences. Tourists often visit specific destinations or regions to participate in outdoor activities such as hiking, skiing and water sports. An influx of tourists stimulates local economies through demand for housing, food services, transports and experiences.

Communities that use their natural resources strategically can diversify their economies through nature tourism of various kinds.

Employment

Participation in outdoor activities creates jobs in various sectors. Particularly valuable are jobs in industries with a local connection, in the hospitality industry and in related industries. These jobs contribute to stable sources of income for individuals and improve the socio-economic structure of societies.

Property values

Opportunities for outdoor recreation near the home increase the attractiveness and can increase property values. Areas with access to parks, trails, lakes and natural landscapes are often more attractive to potential home buyers and the property values in such locations tend to be higher than for similar properties in less attractive areas. This gives positive effects on the housing market and promotes tax revenues for municipalities.

Health and productivity

Outdoor recreation contributes to cost savings for healthcare by promoting physical activity and healthier lifestyles. Engaging in everyday physical activities such as forest walks, cycling or jogging helps reduce the incidence of chronic diseases such as obesity, cardiovascular diseases and diabetes. Lower healthcare costs associated with active lifestyles lead to economic savings for society and increase productivity.

Innovation and entrepreneurship

Outdoor activities drive innovation and entrepreneurship. Demand for functional equipment, clothing and environmentally friendly products stimulate research and development. The "outdoor" industry (clothing and equipment) has grown rapidly in recent decades as outdoor life has increasingly become a lifestyle for many. An increased interest in Nature Experiences also drives the development of nature tourism, guide activities and nature interpretation.

Natural and cultural heritage

Many outdoor activities are intertwined with the natural and cultural heritage. Contact with protected nature, the right of public access and traditional customs creates associations with conservation and identity. Knowledge about ecosystems, rural and cultural landscapes, and traditional use also contributes to our intangible inheritance.

Investments in infrastructure

To promote opportunities for outdoor recreation, society invests in various types of infrastructure. It can entail to build trails, shelters and parking lots at recreational areas, but also to ensure accessibility to natural areas, safety and nature information. Such investments create jobs in construction, maintenance and operation. They also enable more people to experience nature.

Learning

Outdoor recreation can be associated with learning, e.g., through outdoor education in school, nature interpretation (naturum) or guided tours by tourism entrepreneurs. Increased knowledge about nature, its function and importance for people may increase the conditions for commitment to sustainable development.

Cohesion and social capital

Participation in outdoor activities promotes community cohesion and contributes to social capital. This is especially true for organised outdoor life and outdoor organisations. Outdoor activities practiced in groups with the aim of increasing knowledge and skills promote a sense of belonging and improve the resilience of society.

Economic values of outdoor recreation

From an economic perspective, outdoor life can be seen as a process in which experiences are created of visitors to nature through a combination of the visitor's own time, knowledge, equipment, natural resources, facilities, services, etc. (Loomis & Walsh, 1997). Initiatives in the form of nature and cultural landscapes, facilities, services, etc. generate a range of recreational opportunities, but demand arises from the visitor's participation in the form of commitment, time and actions of various kinds.

Since the experience of nature is central to people, this means that participation in outdoor life in most cases covers the consumption of both market-priced and non-market-priced goods, and services. For most outdoor activities, some equipment is required and often require transports, meals and overnight stay (all of which have a price set of the "market"). The free access to nature (cf. the right of public access) and infrastructure that society stands for is one of the non-market-priced services that outdoor enthusiasts "consume".

The value of market-priced goods and services can be observed by studying people's actual behaviour, through surveys or available statistics. Non-market-priced goods and services, on the other hand, are not subject to any economic transactions, then you are referred to other methods such as willingness-to-pay studies or analysis of travel expenses (Brännlund & Kriström, 1998).

Financial expenses are the money an individual actually pays to practice outdoor recreation. It can be in the form of clothing, equipment, travel, food, ski-pass or participation in a guided tour. The willingness to pay, on the other hand, is what people are willing to pay for a product or service regardless of the actual price. The difference between willingness to pay and real expenses is the so-called consumer surplus – a "surplus value" in addition to the expenses that the individual receives from consuming the good. This can significantly generate values for non-market-priced goods and services, as the cost because using them is non-existent for the individual. It follows from the above reasoning that the actual expenditure is a measure of the direct economic importance of outdoor recreation, while the consumer surplus represents the individual's perceived economic value of participation in outdoor recreation.

Calculations of the economic values and effects of outdoor recreation have been made in several countries and regions, but there is a lack of good compilations and a universal methodology. Differences in scope, approach, available statistics, response rates, etc. make it difficult to compare different studies. Which organization is behind it; universities, authorities or interest groups can also have an impact on design and transparency.

In Sweden, several studies have been carried out on the economic values of outdoor life, and one of them have analysed consumption at the national level (Fredman et al., 2010). That study reports Swedes' financial expenses, valuation of participation in outdoor activities and economic impacts and jobs generated by outdoor recreation in the the Swedish economy and forms a starting point for the study presented in this report.

The purpose of the current study is to get an updated picture of the economic values (financial expenditure, indirect effects and perceived values) by repeating the study from 2009 and compare the results between the two studies.

Methods

The study is funded by the Swedish Association of Outdoor Organisation (Svenskt Friluftsliv) an umbrella organisation for 28 non-profit outdoor organisations in Sweden that work to preserve and develop the conditions for outdoor life and recreation in a broad sense. Svenskt Friluftsliv also has a government assignment regarding the distribution of government grants to outdoor recreation organisations in accordance with the laws and regulations of the Parliament and the Government. The study was conducted by Peter Fredman with colleagues at Mid-Sweden University.

Data collection

The data collection was carried out with the help of a national online survey to a representative sample of the adult population in Sweden. The method, both data collection and analysis, thus follows the structure of the previous study, with the exception of a few questions that have been replaced to reflect current themes and trends. Among other things, in the survey for 2022/23, we have added the expense category repairs to get a better idea of the scope of the circular economy.

The questions concern consumption linked to 43 different outdoor activities that are grouped in 25 themes (see Appendix A, question 1a). The study is a cross-sectional study and the data collection was carried out in three different measurement rounds to better capture activities carried out in different seasons.

The survey was sent out to individuals over the age of 16 registered in Sweden who are part of Norstat's Respondent panel. The panel consists of about 100,000 members, which are largely randomly recruited. Each period the goal was to interview 2000 respondents, a total of 6000 for the entire period. Each round slightly exceeded the target, so the dataset consisted of a total of 6189 observations.

Analyses

Non-response varied slightly between the response rounds and the response rate was between 25% and 32%. In addition, there is a 3% partial non-response of respondents who did not complete the entire survey. Unlike the 2009 survey, these have been allowed to remain in the sample since it was considered that the information that answered questions can provide is nevertheless valuable, in particular as the overall non-response rate was also lower compared to 2009 (37% response rate). For individual questions respondents are removed from the statistical calculation if they have not answered the current question.

The mailing was weighted each round of the survey to be representative of the Swedish population in terms of gender, age (six age groups) and geography (eight NUTS2 areas).

The gender distribution in the sample differs slightly if we compare with how Sweden's population in 2022 looked like (Statistics Sweden, 2023). There is a larger proportion of women than men who have responded to the survey compared to the population. In terms of age, the distribution of respondents is fairly representative except for the two oldest age groups; There is a certain under-representation among older people over 60 years.

The study is aimed at individuals over the age of 16 and applies to their monetary expenses for their own practice and for the practice of others in order to capture all consumption linked to outdoor life. In the 2009 survey, it emerged that most of the expenses were private use, but that a meaningful share of expenses was for others (e.g., a partner, children, friends).

Since the purpose of the study is to measure consumption linked to outdoor recreation, the questions in the survey are set so that they focus on the time of purchase, not on the practice. Certain expenses will be for goods or services that are consumed at the same time, while others may be used for a long time.

We report the results nationally and break down for different groups based on different characteristics. Since each of the three survey collection periods is seen as an independent sample of Sweden's population, we have summed up each season's estimated expenses to get an annual average, divided into different expense categories/cost types. In this way, we can make an estimate of the total consumption generated by outdoor recreation during a year. The results are also discussed based on seasons and different activities in the report.

In all comparisons between the studies in 2009 and 2022-23, the amounts for the latter study have been adjusted to the 2009 prices to be able to fairly compare the results between the two reports. The nominal monetary values from 2022/23 have been converted into the 2009 monetary value by means of a deflator. We assume that the level of expenditure in 2022/23 is the level of expenditure in 2009 in line with the general price level in society.

The effects of outdoor recreation on the economy and employment have been calculated with the help of multiplier values that link each expense (that respondents have indicated they have) to the knock-on effects of expenditure on the rest of the economy, in the form of employment, tax revenues and subcontracting. Value added is calculated by multiplying the expenditure of a certain type of expenditure (e.g. food) by a multiplier value within the

expenditure category retrieved from Statistics Sweden. The multiplier values reflect how large each category is in the economy as a whole as well as how large spill-over effects each SEK is within a given category. The multiplier values are the same as for the 2009 survey because the values are not updated regularly. We expect that there have not been any major changes categories in terms of relative importance in the economy and the magnitude of the spillover effects since 2009.

The respondents' indirect valuation expressed as maximum willingness to pay, in addition to actual expenses for outdoor recreation have been calculated using a so-called conditional valuation. Respondents with expenses have been asked how much more they would have been willing to pay for outdoor recreation in addition to their declared expenses for the period.

The maximum average willingness to pay for the group that stated that they had expenses has then been calculated with linear regression analysis (OLS) so that willingness to pay is estimated as a function of different characteristics of the respondents. The calculated values, i.e. the strength of the degree of explanation, of the explanatory variables has been used to estimate the average willingness to pay also of the respondents who have not had expenses (and thus have not answered the question of how much more they should have been prepared to pay) during the survey period.

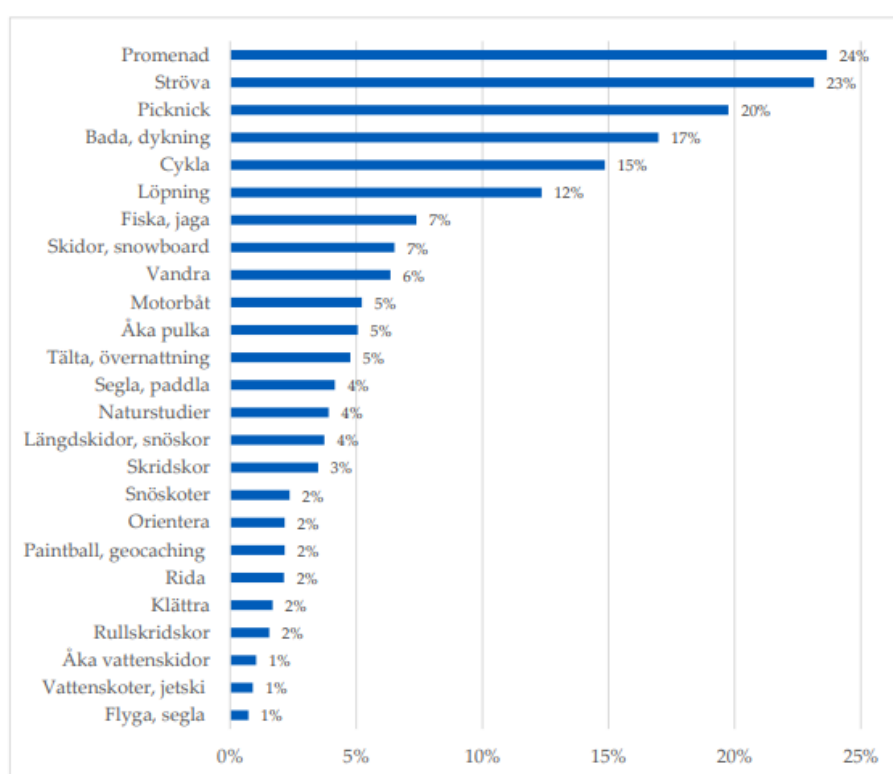
There are different types of shortcomings and errors that cannot be avoided when it comes to national sample surveys that allow the respondent to answer the survey on their own. The sample is weighted to reflect the national distribution of age, gender and geography, but there is a certain bias, especially in terms of gender and to some extent an underrepresentation of the elderly. Despite the fact that we divided the collection into three four-month periods to make it easier for respondents to remember their expenses, it can be difficult to remember all expenses. There is thus a risk that the answers and results underestimate the actual expenditure. Furthermore, it is not possible to be sure that it is the person you have recruited for the interview who actually responded to the survey, or that the right person answers truthfully. Web surveys enable surveys in a cost-effective and smooth way. It is a well-known problem that questionnaires increase the risk of general examination fatigue (Field, 2020).

We have reviewed the answers for detecting outliers. One such outlier was excluded. However, we cannot know for sure whether the remaining answers are abnormal because they are misreported or represent real values. Nor can we know whether those who answered closer to the mean (and thus not detected as outliers) have been more truthful. We have therefore chosen to keep the other observations and trust that the large sample of the survey (over 6000 interviews) means good reliability.

Results

57% of respondents stated that they had expenses for themselves and 28% had expenses for others during the year. Some of these, a total of 25% of the respondents, have had individual expenses and for others, while 40% of respondents answered that they did not have any outdoor related expenses, neither for themselves nor for others during the last year. Among the respondents who had expenses, we start by reporting the type of activities for which they have had expenses and how the expenses are distributed between seasons. Please note that respondents may have had expenses for more than one activity, so the proportion refers to the share of the total sample that had expenses per activity.

Incurred expenses for one year are presented in the figure below. Shares have been rounded to the nearest integer.



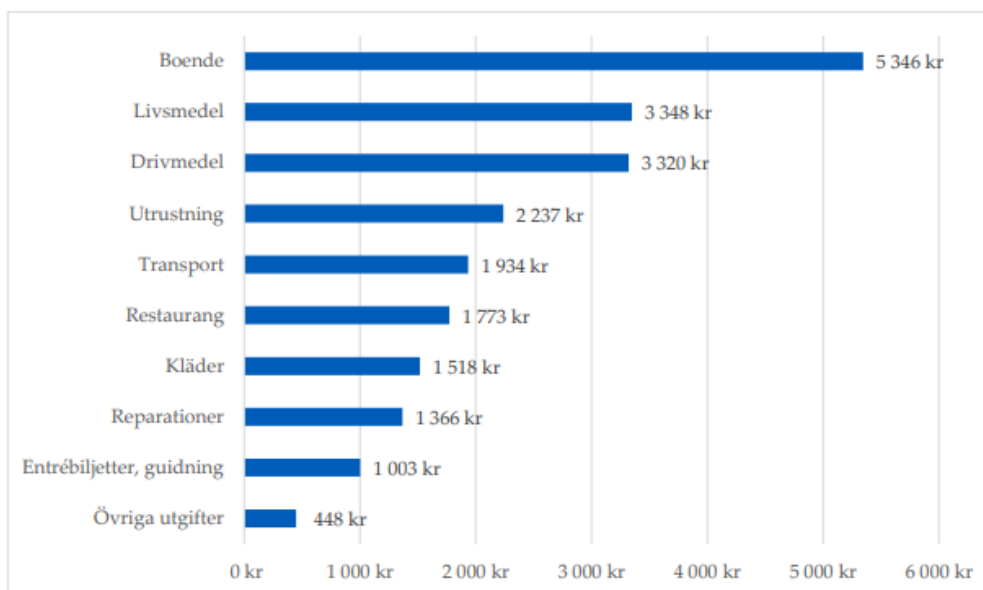
The largest proportion of the respondents have had expenses for leisure and exercise walks, walking in the forest and land (including recreation, berry and mushroom picking), picnics/barbecues in nature, swimming, cycling and running. Only up to about 1% (0.7–1.03%) have had expenses for water skiing; jet skis; gliding, kite/kite sailing, hang gliding or skydiving. 40 % have stated that they have not had any expenses for themselves in the last year.

The table below compares the expenses for own participation in 2022-23 with the distribution in 2009. The proportion of people who have had expenses for themselves has been maintained or increased for all categories, except for fishing and motorboating (which have decreased marginally).

Aktivitet	2022-23	2009	Förändring*
Promenad	24%	18%	6%
Ströva	23%	17%	6%
Picknick	20%	14%	6%
Bada, dykning	17%	13%	4%
sCykla	15%	13%	2%
Löpning	12%	8%	4%
Fiska, jaga	7%	8%	-1%
Skidor, snowboard	7%	7%	0%
Vandra	6%	4%	2%
Motorbåt	5%	6%	-1%
Åka pulka	5%	3%	2%
Tälta, övernattning	5%	4%	1%
Segla, paddla	4%	3%	1%
Naturstudier	4%	3%	1%
Längdskidor, snöskor	4%	4%	0%
Skridskor	3%	3%	0%
Snöskoter	2%	2%	0%
Orientera	2%	1%	1%
Paintball, geocaching	2%	1%	1%
Rida	2%	2%	0%
Klättra	2%	1%	1%
Rullskridskor	2%	1%	1%
Åka vattenskidor	1%	1%	0%
Vattenskoter, jetski	1%	0%	1%
Flyga, segla	1%	0%	1%
Har ej haft utgifter för något av ovanstående	40%	41%	-1%

* Procentenheter

To follow up on activities the respondents had expenses for, they were asked about how much expenditure and how it has been distributed between different categories of expenditure. The 2009 survey included eight named expenditure categories: transport, fuel, housing, food, restaurant, equipment, clothing and entrance tickets/guiding/ membership and participation fees. In addition, respondents could choose "other". For the 2022-2023 survey mailings, we also included a category for repairs to get a better idea of the circular economy's extent. The results are shown in the figure below (SEK per year).



In total, the expenses amounted to SEK 22,292 per person (in Sweden and abroad). The type of cost that generated the highest expenses is accommodation (24% of expenditure), followed by food (15%), fuel (15%) and equipment (10%). Transport and fuel together account for 24% of expenditure, while equipment together with clothing accounts for 17% of expenses. Expenses for entrance tickets, guided tours and membership are the smallest category of expenditure (4% of expenditure), which again shows that expenditure linked directly to nature experiences is a relatively small proportion of the total outdoor economy. Repairs may only account for a small proportion of the total expenditure (6%), but this still indicates that it is a meaningful contributor to the circular economy.

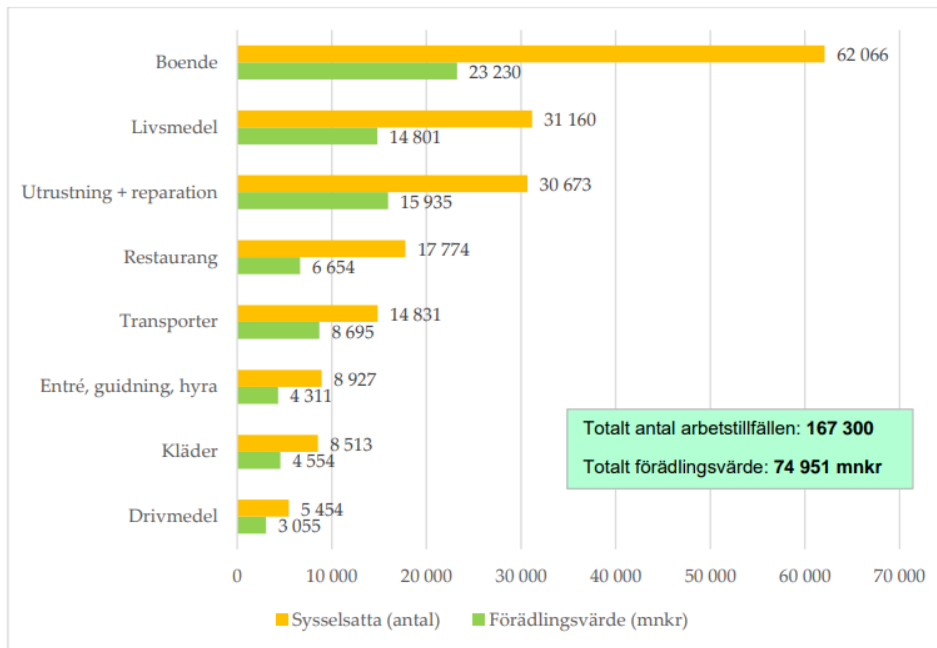
The table below shows that half of the expenses in 2022-2023 were in the region where respondents live. A further 30% was spent in other parts of Sweden. A total of 82% of the expenditure has been spent within the country (SEK 18 213). 18% of the expenditure were spent abroad ("utomlands"; SEK 4 080).

	Medelvärde per person (kr)	Totalt (miljoner kr)	Andel
I regionen där du bor	11 180	95 799 mkr	50 %
I övriga Sverige	7 033	60 263 mkr	32 %
<i>Sverige totalt</i>	18 213	156 062 mkr	82 %
Utomlands	4 080	34 957 mkr	18 %
Totalt	22 292	191 019 mkr	100 %

In line with the study from 2009, we have made an estimate of the importance of outdoor life for the Swedish economy. We have calculated multiplier effects to get an idea of the indirect economic values that expenses linked to outdoor recreation give rise to. Every direct financial expenditure linked to an outdoor activity that we have asked about in the survey (e.g. a pair of new skis or a hotel night) can lead to indirect expenses through the companies that are recipient of the expense. This can include purchases of goods, salaries for employees and subcontracting services (which in turn may have indirect expenses). Tax revenues from companies that sell outdoor recreation-related goods and services generate indirect effects on the economy. By following the value added chain, it is possible to estimate both total economic impact (direct + indirect) such as the number of jobs created as a expenses for outdoor recreation.

Based on the categories of expenditure we have asked about and the SEK 156,062 million that Swedes have spent directly on outdoor recreation in Sweden, the contribution of outdoor recreation to the economy has been calculated. Value added is calculated by multiplying the expenditure of a given cost types (e.g. food) with a multiplier value within that category of expenditure. The same applies to multiplier values for employment and the number of hours worked.

The table presents value added (yellow; SEK million) and jobs (green) in 2022-23 according to different categories.



Arbetstillfällen/sysselsatta = jobs. Förädlingsvärde = Value added

The value added of outdoor recreation in Sweden has been summed up to SEK 74,951 million per year. Housing expenditure contributes most to the economy with a value added of SEK 23,230 million, followed by equipment + repairs and food (15,935 million and SEK 14,801 million respectively).

A total of 167,300 jobs in Sweden can be linked to the consumption of outdoor recreation. Consumption of housing/accomodation has the greatest effect on employment with 62,066 jobs. Also food and equipment plus repair contributes more than 30,000 jobs each per year.

Conclusions

This report has followed up on a survey from 2009 on the economic values of outdoor recreation in Sweden. Below are the most important conclusions from the follow-up survey in 2022-23. Some values have been rounded for increased clarity.

- During the period May 2022 to April 2023, the activities that Swedes had had expenses for were mostly everyday activities, just as the 2009 survey showed. Exercise walks, strolling in the woods and fields, picnics and barbecues as well as swimming/diving are activities for which expenses are most common.
- Spending patterns are remarkably similar in 2022-23 compared to 2009. Expenditure on walking, running, nature studies, orienteering, paintball/geocaching, horseback riding, climbing and roller skating are relatively evenly distributed throughout the year, other activities follow seasonal variations.
- Swedes spent an average of about SEK 22,300 on outdoor activities. This was almost twice as much as in 2009 in nominal terms, but adjusted for inflation corresponds to about SEK 5,000 higher than in 2009.
- About SEK 18,200 of the expenses for outdoor recreation were spent in Sweden and about SEK 4,100 abroad per person. Compared with 2009, the share spent abroad has decreased slightly, which could be a lingering pandemic effect.
- Total expenditure in Sweden amounted to approximately SEK 191,000 million, i.e. almost double the amount compared to 2009 in nominal terms. Approximately 80% of this, SEK 156,000 million, was spent in Sweden and just under 20% abroad, SEK 35,000 million.
- Housing accounts for the largest share of expenditure, 24%, followed by food and fuel, 15% each. Services linked to outdoor recreation such as guiding and entrance account for 4% and repairs account for 6%.
- Swedes spent the most on average during the Summer (May-August) in line with the results from 2009 and the least during the early Winter (January-April), which differs from 2009 when the Autumn was the period with the lowest expenses. There is little seasonal variation in transport expenditure and entrance/guiding, while in fuel and food have the highest expenses during summer, and housing expenditure was highest in January to April.
- Men reported higher expenses than women related to outdoor recreation on average.

- Older people have the lowest expenses for outdoor activities. The highest expenses were reported by the two youngest age categories.
- People living in households with children have higher expenses on average compared to people without children.

References

- Andersson, K., Fabri, A., Fredman, P., Hedenborg, S., Jansson, A., Karlén, S., Radmann, J. & D. Wolf-Watz 2021. Idrotten och friluftslivet under coronapandemin. Resultat från två undersökningar om coronapandemins effekter på idrott, fysisk aktivitet och friluftsliv. Mistra Sport & Outdoors, rapport 2021:2. www.mistrasportandoutdoors.se
- Boman, M., Fredman, P., Lundmark, L. & Ericsson, G. 2013. Outdoor recreation – a necessity or a luxury? Estimation of Engel curves for Sweden. *Journal of Outdoor Recreation and Tourism*, 3–4:49–56.
- Brännlund, R. & Kriström, B. 1998. Miljöekonomi. Studentlitteratur, Lund.
- Emmelin, L., Fredman, P., Sandell, K. & Lisberg Jensen, E. 2010. Planera för friluftsliv – Natur, samhälle, upplevelser. Carlsson bokförlag.
- English, D.B.K. m.fl. 2014. Outdoor recreation: jobs and income. Federal Interagency Council on Outdoor Recreation. <http://www.fs.fed.us/research/docs/outdoor-recreation/recreation-economy.pdf>.
- Field, A. 2020. Survey fatigue and the tragedy of the commons: Are we undermining our evaluation practice? *Evaluation Matters—He Take Tō Te Aromatawai* 6: 2020.
- Fredman, P., Boman, M., Lundmark, L. & Mattsson, L. 2008a. Friluftslivets ekonomiska värden – en översikt. Forskningsprogrammet Friluftsliv i förändring, rapport nr. 5, september 2008. www.friluftsforskning.se
- Fredman, P., Karlsson, S-E., Romild, U. & Sandell, K. (Red.) 2008b. Vilka är ute i naturen? Delresultat från en nationell enkät om friluftsliv och naturturism i Sverige. Forskningsprogrammet Friluftsliv i förändring, rapport nr. 1, juni 2008. www.friluftsforskning.se
- Fredman, P., Svensson, B., Lindberg, K. & Holmstedt, A. 2010. Ekonomiska värden i svenskt friluftsliv – en enkätundersökning. Forskningsprogrammet Friluftsliv i förändring Rapport nr 14.
- Fredman, P., Boman, M., Lundmark, L. & Mattsson, L. 2012. Economic Values in the Swedish Nature-based Recreation Sector. A synthesis. *Tourism Economics*, 18 (4), 903–910. DOI: 10.5367/te.2012.0149
- Fredman, P., Stenseke, M. & Sandell, K. (Red.) 2014. Friluftsliv i förändring. Studier från svenska upplevelselandskap. Carlssons bokförlag, Stockholm. 277 s.
- Fredman, P., & Margaryan, L. (2014). The supply of nature-based tourism in Sweden. A national inventory of service providers. ETOUR, Report 2014:1. Mittuniversitetet, Östersund.
- Highfill, T & Franks, C. 2019. Measuring the U.S. outdoor recreation economy, 2012–2016. *Journal of Outdoor Recreation and Tourism*, 27. <https://doi.org/10.1016/j.jort.2019.100233>
- Jacobsen, L-B., Søndergaard Jensen, F., Bakhtiari, F., & Jellesmark Thorsen, B 2014. Friluftslivets nationaløkonomiske fodaftryk. IFRO Rapport 229, Institut for Fødevarer- og Ressourceøkonomi

Københavns Universitet

Lloyd-Smith, P. 2021. The economic benefits of recreation in Canada. Canadian Journal of Economics, 54(4):1684-1715. <https://doi.org/10.1111/caje.12560>

Loomis, J.B. & Walsh, R.G. 1997. Recreation Economic Decisions: Comparing Benefits and Costs. Venture Publishing, State College, Pennsylvania.

Naturvårdsverket, 2015. Friluftsliv 2014. Nationell undersökning om svenska folkets friluftsvanor. Naturvårdsverket, rapport 6691

Naturvårdsverket, 2019. Friluftsliv 2018. Nationell undersökning av svenska folkets friluftsvanor. Rapport 6887, Naturvårdsverket, april 2019.

Outdoor Industry Association, 2017. The Outdoor Recreation Economy.
<https://outdoorindustry.org> 43

Sandell, K. & Sörlin, S. 2010. Friluftshistoria: från "hårdande friluftslif" till ekoturism och miljöpedagogik: teman i det svenska friluftslivets historia. Carlssons Förlag.

SCB (2023). Konsumentprisindex (1980=100), fastställda tal. [Tillgänglig på <https://www.scb.se/hittastatistik/statistik-efter-amne/priser-och-konsumtion/konsumentprisindex/konsumentprisindexkpi/pong/tabell-och-diagram/konsumentprisindex-kpi/kpi-faststallda-tal-1980100/>]. Hämtat 8 oktober 2023.

SFS (2003), Förordning om statsbidrag till friluftsförbund, SFS nr 2003:133, Utfärdat 2003-04-10.Skr. (2012/13:51) Mål för friluftslivspolitik. Regeringens skrivelse 2012/13:51.

Svenskt Friluftsliv (2023) Friluftslivets och naturens mervärden och samhällsnytta – En kunskapssammanställning om friluftslivets betydelse för folkhälsa och ett hållbart samhälle. Rapport Svenskt Friluftsliv, redaktör Johan. Faskunger.

Appendix A: The survey

Blue text was not visible to the respondent but indicates how the survey was programmed and which questions the respondent was asked depending on how they answered. Red text marks the relevant months and year of the relevant survey round to which the mailing related, and partly an automatic summation of specified answers from previous questions.

Missive

Initial contact (e-mail) from Norstat

Hello!

As a member of panel.se, you will receive this request to participate in a survey. The questions take about 5-10 minutes to answer and if you choose to complete the entire survey, you will receive 10 points that are deposited into your value account after the survey ends.

Click on the link below and you will be taken directly to the survey: <slink>

If the link does not work, please copy the link text and paste it into your browser. You are of course completely anonymous in the survey and your participation cannot be replaced by someone else. You will always receive compensation when you participate in one of our surveys.

How did we get your email address?

Some time ago, you took part in a telephone interview where we asked at the end if we could come back with surveys on the internet. On that occasion, we received your email address. The company that sends the survey is called Norstat and in this survey we collaborate with researcher at Mid Sweden University. More information about us can be found on our website, <http://www.norstat.se>. If you have any questions, please feel free to email support@panel.se.

Best regards

Panel Support

In this survey, we ask questions about financial expenses you have had for various leisure activities during the **period September, October, November, and December 2022**.

Keep the following in mind:

- * The activities represent the most common outdoor activities included in the research literature.
- * If you are missing an activity and want to indicate your expenses, start with what is most similar (e.g. requires preparation of nature, is motorized, in untouched nature...).
- * The questions relate to the expenses you have had, even if the actual exercise takes place at another time.

- * The same expense should never be reported twice.
- * Include expenses for all equipment, clothing, shoes, etc. that are useful for each activity.
- * Some questions are difficult to answer exactly. Then try to give a rough answer – all answers are equally important!

Questionnaire survey

Question 1 a.

Below we list a number of activities you can engage in outdoor recreation in your spare time. Have you had expenses during the period **September, October, November and December 2022**, related to any of these ? In the list below, select the one or the activities you have had expenses for.

- Walking in nature and forests (e.g., mushroom picking, berries)
- Walking for exercise, powerwalking (including walking the dog)
- Hiking in mountains or similar environments
- Running, Nordic walking
- Cycling on trails and paths
- Fishing, hunting
- Sun bathing, sun tanning, diving
- Picnics, barbeques in nature
- Studying birds, insects and fauna
- Camping, staying in a tent overnight in nature
- Sailing, surfing, kayaking
- Water skiing, wakeboarding
- Horse riding, dog sledging in nature
- Cross-country skiing, walking on snow with snow shoes
- Alpine skiing, snowboarding
- Toboggan, sledging
- Excursions with motor boat
- Excursions with snow mobile
- Jet skiing, water scootering
- Orienteering
- Mountaineering

- Roller-skating or similar activities
- Paintball, living, geocaching
- Gliding (aeroplane), kite surfing, fly kite
- No expenses related to the above

Question 1 b:

If you had no expenses in 1 a, please go directly to question 2 a.

Now think about the expenses you had during the period **September, October, November, and December 2022** for your practice in these activities. Indicate below approximately how much your expenses have been divided into the following categories:

- Transport: _____
- Fuel: _____
- Accommodation: _____
- Groceries: _____
- Restaurant: _____
- Equipment: _____
- Clothes: _____
- Entrance tickets, guiding, membership and participation fees: _____
- Repairs: _____
- Other expenses: _____

Question 1 c.

The answers to the previous questions show that you during the period **September, October, November, and December 2022** had expenses corresponding to approximately SEK XXXXXXXX for equipment for your practice in these activities. Please indicate below approximately how your expenses have been divided into the following categories:

Please note that the sum should be 100%.

- New equipment: _____%
- Used equipment: _____%
- Equipment rental: _____%

Question 1d.

The answers to the previous questions show that during the period **September, October, November, and December 2022** had expenses corresponding to approximately SEK XXXXXXXX for clothing for your practice in these activities. Please indicate below approximately how your expenses have been divided into the following categories:

Please note that the sum should be 100%.

- New clothes: _____%
- Used clothes: _____%
- Rental of clothes: _____%

Question 1 e.

The answers to the previous questions show that during the period **September, October, November, and December 2022** you had expenses corresponding to approximately SEK XXXXXXXX for repairs for your in these activities. Please state below approximately how your expenses have been distributed as follows

Categories:

Please note that the sum should be 100%

- Equipment repair: _____%
- Repair of clothes: _____%

Question 2 a.

Below we list the same activities as before. Now we ask you to think about any expenses you incurred for the performance of these activities by other people. It can be expenses that you have had for children, spouses, cohabitants, relatives or friends. As before, expenditure has been incurred during the **period September, October, November, and December 2022**. In the list below, select the one or activities you have had expenses for.

-Walking in nature and forests (e.g., mushroom picking, berries)

-Walking for exercise, powerwalking (including walking the dog)

-Hiking in mountains or similar environments

-Running, Nordic walking

-Cycling on trails and paths

-Fishing, hunting

-Sun bathing, sun tanning, diving

-Picnics, barbeques in nature

-Studying birds, insects and fauna

-Camping, staying in a tent overnight in nature

-Sailing, surfing, kayaking

-Water skiing, wakeboarding

-Horse riding, dog sledging in nature

-Cross-country skiing, walking on snow with snow shoes

- Alpine skiing, snowboarding
- Toboggan, sledging
- Excursions with motor boat
- Excursions with snow mobile
- Jet skiing, water scootering
- Orienteering
- Mountaineering
- Roller-skating or similar activities
- Paintball, living, geocaching
- Gliding (aeroplane), kite surfing, fly kite
- No expenses for others related to the above

Question 2 b.

You have incurred expenses on behalf of other people for one or more of the following activities; [The activities that the respondent ticks off in question 2a are shown here](#)

Now think about the expenses you had during the **period September, October, November, and December 2022** for other people's pursuit of these activities. Please indicate below approximately how much your expenses divided into the following categories:

- Transport: _____
- Fuel: _____
- Accommodation: _____
- Groceries: _____
- Restaurant: _____
- Equipment: _____
- Clothes: _____
- Entrance tickets, guiding, membership and participation fees: _____
- Repairs: _____
- Other expenses: _____

Question 3.

The answers to the previous questions show that during the **period September, October, November, and December 2022** had expenses corresponding to approximately SEK XXXXXXXX for your own and other people's the activities we have asked about. Enter approximately the percentage of these expenses that you

have spent in the following geographical areas (if you shopped online, please consider where payee is located)

Please note that the sum should be 100%.

- In the region where you live (within about 100 km of your home) _____%
- In the rest of Sweden (more than about 100 km from your home) _____%
- Abroad _____%

Question 4.

Now think again about the XXXXXXXX SEK you spent in the **period September, October, November, and December 2022** for your own and other people's practice of the activities we have asked about. Estimate approximately how much higher expenses you would have been prepared to accept during this period to pursue these activities for yourself and others. (At the same time, imagine that the prices for other types of goods and services remain unchanged). Tick the option closest to your estimate.

SEK:

- 0
- 100
- 150
- 500
- 1000
- 2000
- 3000
- 5000
- 8000
- 10 000
- 20 000
- 30 000
- 40 000
- 60 000
- 80 000
- More than 80 000. Please state sum: _____

Now here are some questions about your background. The answers are needed to compare different groups in society. We never report individual answers.

Question 5.

The postcode of my residential address is _____

Question 6.

Which alternative best describes you?

- Single/living alone
- Married/living with partner
- In relation with someone, but living alone

Question 7.

Are there children/young people in your household?

- No
- Yes

Question 8.

How many children/young people of different ages are there in the household?

- Number of 0-5 years: ____
- Number of 6-12 years: ____
- Number of 13-18 years: ____

Question 9.

What education do you have? Tick the highest education you have. If you have not yet completed your education, then tick the course you are currently participating in.

- Compulsory school
- Upper secondary education (including secondary education, folk high school, vocational school, vocational school, etc.)
- University or similar higher education

Question 10.

Approximately how large is your household's total income (after tax but including any contributions, etc.) per month? Rounded to the nearest thousand. SEK per month.

- Less than 10 000
- 10 001-20 000
- 20 001-30 000
- 30 001-40 000
- 40 001-50 000
- 50 001-60 000
- 60 001-70 000
- More than 70 000
- I don't want to answer this question

Question 11.

Gender / gender identity

- Female
- Male
- Other

Question 12.

Date of birth?

Question 13 a.

Approximately, how often did you visit nature as a child (up to 12 years of age)?

Question 13 b.

Approximately, how often did you visit nature as a teenager (13-18)?

(alternatives for both a + b)

- Never
- Seldom
- Relatively often
- Very often

Many thanks for your participation in the survey!