



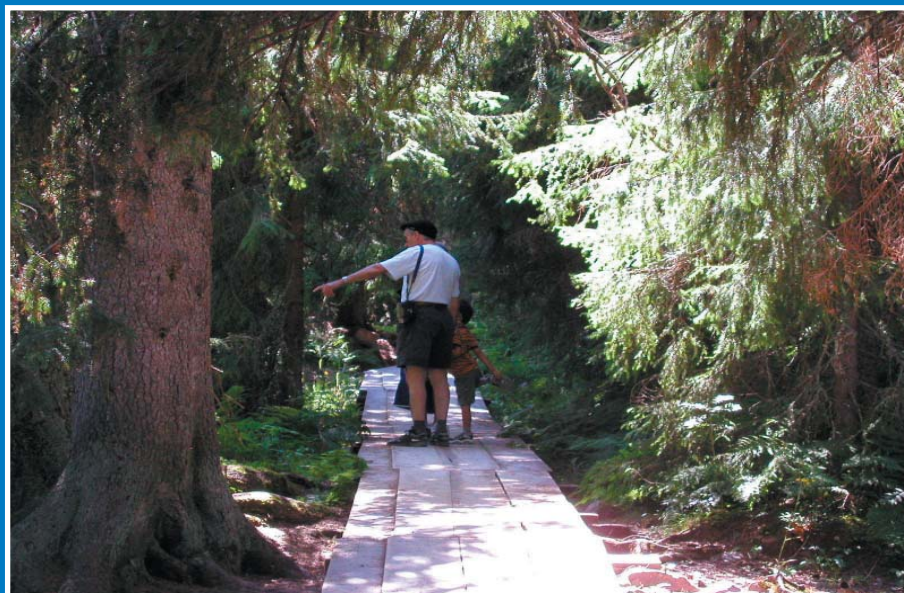
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Visitor Surveys at Fulufjället

- Before and After National Park Establishment

Peter Fredman, Lisa Hörnsten Friberg, Lars Emmelin



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Sammanfattning

Denna rapport ger en introduktion till förvaltning för besökare i naturskyddade områden, som även omfattar modeller för besöksplanering och besökarstudier. Det är en reviderad engelsk översättning av delar av rapporten: Fredman, P., Hörnsten Friberg, L. & Emmelin, L. 2005. Friluftsliv och turism i Fulufjället. Före - efter nationalparksbildningen. Naturvårdsverket, rapport 5467. Dokumentation av de svenska nationalparkerna, nr 18.

Tonvikten ligger på metoder, men rapporten omfattar även en sammanfattning av resultaten från besökarstudierna i Fulufjällets Nationalpark före och efter nationalparksetableringen.



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Visitor Surveys at Fulufjället – Before and After National Park Establishment

Methodology and a summary of results¹

June, 2006

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¹ This paper is an edited and English translation of parts of the report: Fredman, P., Hörnsten Friberg, L. & Emmelin, L. 2005. *Friluftsliv och turism i Fulufjället. Före - efter nationalparksbildningen*. Naturvårdsverket, rapport 5467. Dokumentation av de svenska nationalparkerna, nr 18.

Summary

This report gives an introduction to visitor management in protected areas, including visitor planning models and monitoring methodology. It is an edited and English translation of parts of the report: *Fredman, P., Hörnsten Friberg, L. & Emmelin, L. 2005. Friluftsliv och turism i Fulufjället. Före - efter nationalparksbildningen. Naturvårdsverket, rapport 5467. Dokumentation av de svenska nationalparkerna, nr 18.* Emphasis is on methodology, but the report also includes a summary of the results from the pre- and post National Park designation visitor surveys at Fulufjället.

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Introduction

Sweden is a land rich in natural resources, and it has a long history of utilizing them for industrial purposes. But there is much to indicate that we are living in a time when a new and partially altered economy is becoming important – an experience economy² in which people's recreational activities are increasingly becoming important. This development opens up new possibilities, not least for outdoor recreation and nature based tourism. Sweden has a long tradition of outdoor recreation, which has played an important role in the development of the nation. Among the main components of that tradition are national identity (characterized by the slogan, "Know your country"), the right of public access to the countryside, a steadily improving transportation network, and an increasing length of paid vacation.³ More recently, the Swedish government has noted the importance of nature and cultural heritage for the development of tourism⁴: *"Nature tourism and nature conservation should be developed for their mutual benefit. Swedish nature in general, and protected natural areas in particular, comprise an asset with great potential for development."* In the same document, the government emphasizes that outdoor recreation is a cornerstone of nature conservation which contributes to public health and greater environmental awareness. Whether the aim is to preserve valuable nature, establish recreation facilities or develop nature tourism, there is a need to acquire knowledge about visitors to nature. It is within that context that this report should be understood.

Tourism in protected natural areas

There are a number of sources which point to a worldwide expansion of tourism and outdoor recreation in protected natural areas.⁵ Reliable data on the number of visitors are lacking for most such areas, but international statistics show that there are 52 million visitor-days in Canada's protected natural areas, 287 visitors in areas

² Pine & Gilmore, 1999

³ Sörlin & Sandell, 1999

⁴ Regeringens skrivelse 2001/02:173; Regeringens proposition 2004/05:56

⁵ Driml & Common, 1995; Eagles & McCool, 2002; Wells, 1997

supervised by the U.S. National Park Service, and over 70 million visits to the United Kingdom's national parks every year.⁶ Such facts must, however, be interpreted against the background of growing populations in regions where there are shortages of accessible or attractive natural areas. In contrast to Sweden, which has relatively low population density and an accessible nature, residents of many other countries who seek recreational opportunities in nature are often restricted to protected areas. Thus, the function of protected natural areas in such countries differs in some respects from the situation in Sweden. Any comparison must therefore take social, cultural and legal differences into account.

Tourism and outdoor recreation in protected areas have much in common with visits to nature, generally; but there are also clear differences. Since national governments via their various agencies exercise influence over regulations and management of protected areas, the conditions that apply in such areas may differ from those for other public and private land. For example, opportunities to stop overnight, make fires, move freely about or conduct commercial activities may be restricted. Such restrictions naturally affect the possibilities for conducting various types of commercial tourism, as they tend to deprive operators of complete control over the resources, some of which may even be completely inaccessible. Attractions – in this case, various kinds of experiences in protected areas – are partly or entirely beyond the tourist operator's control. As a consequence, that part of the tourism "product" which has great value in terms of personal experience yields little direct economic value for the businesses involved. Tourists pay for food, lodging and transportation, but not for the experience, itself. This circumstance characterizes much of the nature tourism branch, and is sometimes referred to as the "tourism paradox".⁷ It can sometimes lead to a conflict of interest between what is best from a purely business standpoint (i.e. to take payment for experiences of nature) and what is best from the standpoint of society as a whole (to protect sensitive nature, provide citizens with outdoor recreation opportunities, etc.). It is therefore important for representatives of

⁶ Eagles & McCool, 2002

⁷ Kamfors, 1999

private and public interests to co-operate and act in partnership in order to achieve the sustainable development of infrastructure and tourism in and around protected natural areas.

Sweden has 28 national parks and over 2500 nature reserves, and the total area of protected natural areas has increased substantially in recent decades (Figure 1). Today, roughly eleven per cent of the country's entire surface area is protected. Sweden also participates in the Natura 2000 programme, which is a network of protected areas within the European Union; several of those sites coincide with existing national parks and nature reserves. Other types of area protection in Sweden are represented by the Lake Torne Biosphere Reserve, the Stockholm National Urban Park, nature protection areas, the ecoparks of the Sveaskog forest company, and municipal green zones with local regulations on uses of natural resources that affect opportunities for outdoor recreation and nature tourism.

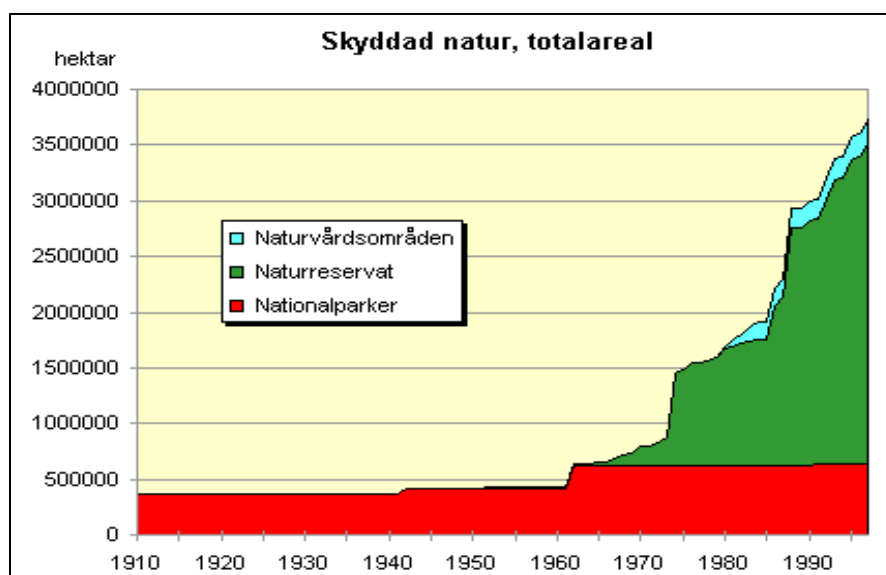


Figure 1. Total area of protected nature in Sweden during 20th century, distributed among three types of protection. Source: www.naturvardsverket.se

The motives for protecting nature may vary, but they often arise from a desire to preserve special natural settings for future generations. Many natural areas comprise sensitive ecological systems which are believed to be in need of protection against various kinds of human impacts and exploitation. Another motive may be to make areas and specific sites accessible for humans to experience. Swedish law requires, for example, that national parks shall consist of representative landscape types that are preserved in their natural states, along with magnificent scenery that can provide visitors with rewarding experiences of nature. In short, an expressed purpose of national parks is to provide people with opportunities to enjoy unspoiled nature.⁸

Recently, commercial uses of national parks have been the subject of increased attention,⁹ especially within an international perspective with regard to various forms of tourism. In Sweden, commercial activities in national parks have been limited, due not least to existing regulations and restrictions. But there are strong indications that interest in regional development around protected natural areas will increase in the future— something that is likely to open new opportunities for the tourist branch. The establishment of Fulufjället National Park and the development of tourism in the surrounding area have been described as a successful initiative in this regard.¹⁰ Thus, describing and understanding the characteristics, motives and expectations of visitors are essential to the design of suitable and effective management plans for protected natural areas. Also, outdoor recreation and tourism in such areas must be conducted in such a manner that valuable natural features are not harmed. Such activities place especially high demands on planning and management.

The possibilities for guiding and directly influencing outdoor recreation activities are greater in protected areas than on other types of land. The concept of sustainable development can be expressed concretely in various ways within protected areas.

⁸ Naturvårdsverket, 1989

⁹ Eagles & McCool, 2002; Aas et al., 2003

¹⁰ Regeringens skrivelse 2001/02:173

This applies not only to any impacts of visitors on the natural environment, but at least as much to an area's recreation carrying capacity – i.e. how many visitors the area can tolerate without unacceptable consequences. That capacity depends on, among other things, visitors' behaviour, types of activity, time of year, natural conditions, and management measures. Instead of focusing on an area's intrinsic carrying capacity, desirable or acceptable physical and social conditions should be identified.

Protected natural areas should not be regarded as isolated phenomena, but rather as parts of a larger complex. The economic, social and cultural aspects of tourism are often connected with the communities located in a protected area's surroundings. They include so-called "gateway communities" that have grown up close to some of the internationally more well-known national parks.¹¹ Another positive effect that tourism in protected areas may have on regional development occurs when people at a later stage of life – upon retirement for example – "discover" protected areas and their surroundings, and choose to reside there permanently in order to improve their quality of life. Such a pattern has been observed in North America¹² and elsewhere.

A common strategy for the development of tourism is to focus on demand in order to attract as many visitors as possible. But since the natural environments of many protected areas are sensitive, that strategy can lead to negative effects such as erosion and disturbances to animal life, which may in turn reduce the area's attractiveness. A better strategy for improving the economic conditions of tourism in and around protected natural areas may be to focus on consumption patterns and willingness to pay among existing visitors, and to minimize "leakage" from the local economy. This can be achieved by concentrating on the development of locally produced products and services, for example by encouraging the local population to become involved in tourist activities¹³. This has been done in connection with the establishment of Fulufjället National Park, through the tourist development project, "Fulufjället's

¹¹ Machlis & Field, 2000

¹² Power, 1996

¹³ Eagles & McCool, 2002

Surroundings". Although the focus of this report is on visitors' experiences and behaviour within the boundaries of the national park, the survey on which it is based also included questions relating to expenditures in the region and local surroundings of the park.

Planning for visitors

Large protected areas are typically located in sparsely populated regions where social and economic conditions are strained, while tourists consist of individuals and groups from distant places, usually from urban regions and often from abroad. Consequently, the establishment of a protected area involves an encounter between different conceptions and preferred uses of the landscape, i.e. those of the local versus the tourist population. If the activities intended for tourists differ markedly from those traditionally pursued by local residents, conflicts tend to arise. On the one side are those who advocate the establishment of a protected area and the development of tourism, on the other those who oppose such establishment and are sceptical about tourism. Such potential conflicts need to be addressed in the planning of national parks and other protected natural areas.

Planning for nature conservation, in particular for national parks, differs in important respects from the normal planning process in Sweden. While the latter is concerned with legally binding plans at the municipal level, nature conservation planning is based on decisions made at the regional and national levels. Another difference is related to the fact that planning often involves encroachments on previous and existing land uses, altered land-use priorities (especially in relation to the balance between preservation and exploitation), and shifts in responsibility for planning. Nature conservation planning must consider issues of preservation and management of valuable nature, responsible use and long-term development of the protected natural area and its surroundings, and the new situation which thus arises. These are not the usual concerns of municipal planning.

There are two components of nature conservation planning – the physical plan and the management plan. The main function of physical planning is to prepare changes in land use for both the short and long term. The management plan is primarily concerned with the conservation measures to be taken, but it also considers the activities of other interests than the planning authority. The management plan lays the foundation for an undertaking that is far more complicated to manage than the internal affairs of a typical organization, and therefore requires different tools and procedures. The physical and management plans are interwoven and mutually dependent. This is especially evident in connection with “flexible planning”, which may have two distinctly different purposes – to help maintain established goals in a changing world, and to facilitate the reconsideration of those goals.

In many respects, the planning for Fulufjället National Park represented a further development of national park planning in Sweden.¹⁴ Two aspects of that development are of particular interest. One is that a zoning system based on the international ROS model was systematically applied for the first time at Fulufjället (see below). The other is that the planning process included provision for the development of tourism in the park’s surrounding area in order to combine the transition to a new type of land use with new opportunities and restrictions. The zoning system is an important component of the planning process which provides a basis for management. Studies of the extent to which visitors get what they want from their visits to the park will be conducted in order to determine the effectiveness of the zoning system.

The ROS model

The model that was applied to the zoning of Fulufjället National Park is known as ROS, which stands for “Recreation Opportunity Spectrum”. The basic approach of ROS is to zone an area in order to provide a range of opportunities for activities and experiences. The zoning is also intended to resolve conflicts by separating conflicting

¹⁴ Naturvårdsverket, 2002; Wallsten, 2003

activities in time and space. This applies especially to the potential conflicts between utilization and preservation, and those between outdoor recreation and some types of natural resource exploitation such as forestry, high-density tourism, etc. The ROS model was developed in North America during the 1970s¹⁵ and is now widely used in the management of national parks in North America and elsewhere.¹⁶

The purpose of ROS is to facilitate solutions to a number of practical management problems. One of these is to meet the demand for a variety of settings for outdoor recreation, ranging from specially prepared and frequently used areas to those that are wild and unspoiled. The ROS system also facilitates the evaluation of the effects and consequences of outdoor recreation and resource exploitation on each other. Of particular importance is that ROS encourages an approach to management which is based on behavioural science, rather than a narrow focus on activities; with such an approach, the interests and evaluations of visitors weigh more heavily. The fundamental aspects of the ROS model are those relating to physical/ecological, social and management issues. Since planning for national parks in Sweden includes the specific goal of preservation, there may be a need for zones in which nature conservation has higher priority than outdoor recreation, as a complement to zones that are intended to provide opportunities for various kinds of nature experience.

Prior to the establishment of Fulufjället National Park, the ROS model for planning had not been systematically applied in Sweden. It was introduced to a limited extent in the planning of the Femundsmarka-Rogen-Långfjället nature reserve¹⁷ and has provided the basis of several studies, but had not previously been used for a complete planning process¹⁸. However, the model must be adapted to Swedish conditions, and must also be adjusted when it is used for planning the establishment of a national park.

¹⁵ Clark & Stankey, 1979

¹⁶ Newman, 2003

¹⁷ Wallsten, 1988

¹⁸ Emmelin, 1986

Applying a planning model like ROS requires some forms of direct and/or indirect methods for managing visitors as a complement to managing the protected area ("site management"). In the management of outdoor recreation in North America, extensive efforts have been made to reduce both the impact on nature and conflicts between different types of recreation activities, while at the same time increasing the enjoyment of visitors through visitor management. There is an extensive literature on this subject in handbooks, research reports and teaching materials.¹⁹

Inasmuch as special conditions apply in Sweden, it is not possible to transfer international experience directly to Swedish contexts. Among other things:

- The international models presume a high degree of control over managed areas. That is not always the case in Sweden.
- Another assumption is that visitors perceive the management measures as legitimate. Perhaps the single most important factor in this regard is the right of public access, which does not exist in most other countries. Swedish visitors to natural areas do not expect to be subjected to the sort of direct management which is often part of the ROS model.
- A situation that involves a lower degree of regulation and larger responsibility on the part of tourist operators/arrangers requires more co-operation than what is generally assumed by the international models.
- There is a risk that the ROS model will be inflexible if it is not based on data gathered at or near the time of planning, and if subsequent developments are not monitored and taken into account when the plan is revised. There is a great need to develop simple, realistic models for flexible planning and management.
- There is also a great need to develop and apply simple measures and methods for environmental monitoring and registering visits, as well as for continuous surveys of visitors' interests, experiences, satisfaction levels, attitudes toward restrictions and management measures, perceived conflicts, etc.

These are important issues to keep in mind when researching visitors experiences, attitudes and levels of satisfaction. Regular visitor surveys comprise an important component of efforts to realize the intentions of the new working procedures at Fulufjället. In several respects, those procedures are in line with the new approach to nature conservation proposed by the Swedish government.

¹⁹ Manning, 1999; Emmelin, Fredman & Sandell, 2005

Recreation carrying capacity

A concept which is associated with the ROS model and is used in connection with international research is recreation carrying capacity and limits of acceptable change, (LAC). The concept of carrying capacity, which is derived from ecology, has strong intuitive power. The question of which uses are “too much”, i.e. exceed carrying capacity, can be broadened to include social and management concerns such as: At what level does the number of visitors to a natural area become excessive, in terms of the consequences not only for erosion and disturbances to wildlife, but also for declining satisfaction with the outcome of visits and related activities. In order to manage an area to maximize visitor experiences, limits of some sort need to be established. But it has proven difficult to find a useful measure of recreation carrying capacity, which has sometimes led to attempts to determine which conditions are desirable or undesirable to various categories of visitors.

The LAC model is based on the following premises:

- Variations in natural resource conditions are unavoidable.
- Outdoor recreation has effects which exceed those of natural variation, but which nevertheless can be more or less acceptable.
- Several different management strategies and measures are feasible; the choice of alternatives must be guided by the goals that have been specified.
- The limits of recreation carrying capacity are based on human values.

The purpose of LAC is to develop indicators that can be used to define the various ROS zones. It must be possible to measure and follow those indicators so that an area can be developed to acquire the desired characteristics. The basic idea is that some variation of the area's characteristics is acceptable, but there are limits that cannot be exceeded without altering the area's character so much that it is no longer possible to maintain the desired qualities.

Since many landscape features display natural variation, one problem is to distinguish between that and the effects of the human activities to be managed. If the objective of the ROS planning model is to provide a diversity of conditions for outdoor recreation, the purpose of the LAC model is to deal with impacts and changes to the recreational environment. This may apply to land-use conflicts, and to conflicts of interest between or within various forms of outdoor recreation.

How many are too many?

The type of conflict in this context which, by far, has been the most frequent subject of international research is that associated with crowding. When the number of visitors exceeds a certain threshold, the result can be a sense of crowding which is experienced as negative by many of those involved. The concept has been used in various ways in connection with the management of natural areas where visitor pressure is great in relation to recreation capacity.

Even though actual visitor density naturally plays a major role in the experience of crowding, psychological factors are also important, just as they are in other types of conflict. Crowding may be regarded as a negative subjective experience of sharing space with other people, with a threshold level that varies among individuals and situations.²⁰ Factors that affect the degree of perceived crowding are the area's physical characteristics (geographical location, topography, etc.), visitors' expectations and attitudes, the type and extent of infrastructure (trails, information displays, etc.), and type of activity.

²⁰ Manning, 1999

In order to measure the degree of perceived crowding, a nine-point scale has been developed, and has been used widely enough to enable comparative studies between countries, areas and activities.²¹

At Fulufjället National Park, crowding has been studied in the Njupesjär waterfall area, where the number and density of visitors are such that it is probably one of the more frequently visited places in the Swedish mountains during the summer months. The area around the waterfall and the trails leading to it are within Zone 4 of the national park, which is characterized by a relatively high concentration of services, buildings and other facilities. This section of the park is intended to be easily accessible, and is designed to receive many visitors. It is also intended that each visitor may encounter many others within this zone. But there is of course an upper limit on the acceptable number of visitors. The question is: What is that upper limit? Part of the answer has been provided by the research reviewed in this report. But the findings indicate, above all, how to solve problems of crowding by means of properly designed management measures.

Monitoring visitors to natural areas

Knowledge about visitors to natural areas is needed for a number of purposes. Perhaps the most obvious item of information to acquire is the number of visitors; it is fundamental to planning and the allocation of resources for management, conservation and infrastructure. But it does not require a great deal of thought to grasp that additional information is needed for the effective development of a natural area for the benefits of visitors. Among the questions that ought to be asked are: What are the characteristics of those who visit the area, and what are their motives? Do they encounter any difficulties, and what are their attitudes toward management of the area? Are there conflicts between or within various categories of visitors? What experiences do they derive from their visits, and what is their general level of satisfaction? And how can the value of their visits be maximized, while at the

²¹ Shelby & Heberlein, 1986

same time their costs are minimized? Among other things, the answers to these and similar questions can help to:

- minimize conflicts
- improve the experiences and increase the satisfaction of visitors
- balance the supply and demand of recreation opportunities
- follow up and increase the efficiency of management measures
- develop infrastructure
- optimize ecological, social and economic impacts
- increase economic efficiency
- make prognoses of future development.²²

There are essentially two ways to study visitors to natural areas – either directly on site (area studies, visitor surveys), or indirectly and outside the area by means of interviews with a selected sample of the population subgroups that are of interest (general population studies). Both approaches have advantages and disadvantages that are related to factors such as representativeness, feasibility and cost.

One important difference is that area studies include all categories of visitors (based on ethnicity, interests, etc.), while general population studies are limited to specific subgroups (of place or origin). Another difference is that those from whom data is gathered within the area have actively chosen to visit it, while included among those interviewed outside the area are individuals who do not visit it. Yet another important issue is whether the study considers visits that take place only at a single point in time, or follows the development of visiting patterns over time (longitudinal study). The latter type of study is useful in a number of contexts, including the planning and follow-up of various management measures, monitoring environmental conditions and compiling visitor statistics. There is, however, often a lack of longitudinal studies relating to recreational pursuits.

Counting visits and interviewing visitors to a natural area are often more complicated than one might think. Among the complicating factors are variations in visitation patterns (time, location, activities, etc.), and differences between areas

²² Loomis & Walsh, 1997; Manning, 1999; Eagles & McCool, 2002

which are related to geography and other natural conditions. To deal with such data-gathering problems, a number of alternative methods have been developed, including the use of:

- mechanical and electronic counting devices
- visual observations
- self-registration of visitors
- personal interviews
- questionnaire surveys (on-site, by telephone or via post)
- camera or video monitoring
- indirect measures (e.g. environmental impact, number of cars, water consumption, etc.)
- focus groups and expert panels.²³

That variety of methods is also because of the broad range and dynamics of outdoor recreation activities. Since it involves both a psychological experience and participation in a specific activity in a specific area, researching outdoor recreation usually requires more than simply counting the number of visits; it is also necessary to gather information about the perceived outcomes of visits, the prior expectations of visitors, the journey to and from the area, and the memories that visitors take with them from the area.²⁴

Among other things, the choice of method depends on the questions to be asked, the type of area, the extent of various activities, the number and types of visitors, etc. An important initial step is to decide which questions to ask. For questions relating to attitudes toward management measures in a certain area, on-site data collection is preferred. But for a study of reasons for and constraints to visits to a certain area, interviews with a population sample (national, regional and/or local) would likely be more appropriate.²⁵

Additional considerations are the geographical and natural characteristics of the area, and the behaviour patterns of the visitors who make various uses of it. Those

²³ Watson et al., 2000; Emmelin, Fredman & Sandell, 2005

²⁴ Manning, 1999

²⁵ Fredman & Heberlein, 2005

uses can be concentrated or widely distributed, different activities may involve different movement patterns, and there can be many or only a few natural points of entry. Many studies are based on data gathered from a representative sample of visitors; but statistical representativeness may be difficult to achieve, since the size of the total research population is seldom known exactly. This is due to the fact that, in order to count or interview all visitors, the entire boundary of the area must be monitored, which is costly and often not feasible. However, most visitors keep to the trails and paths; and especially at more remote areas, the majority of visitors enter via a main entrance. Given knowledge of which paths are usually followed, general patterns of movement, and the locations of natural entry points, it is usually possible to select a number of strategic data-gathering locations which together provide an acceptable level of representativeness.

It is also important to conduct studies of possible sampling errors, and to take account of external factors such as weather, special events, holidays, etc., which may affect visitors and their behaviour. If the purpose of the study is to document uses or to measure the outcomes and effects of visits to the area, a combination of methods is often required. A frequently used strategy is to combine a method for counting visitors with an attitude survey.

Questions of visitor satisfaction and experiences are of central importance in attitude surveys. Too often research deals with participation in various outdoor recreation activities, not visitors' interests or activities' significance for the participant. One disadvantage with focusing too heavily on an activity is that it is easy to forget or ignore the fact that various activities are interchangeable and thus able to fulfil the same need or interest of participants. The attitudes of visitors are also believed to influence their reactions to various management measures.²⁶ Categorizing visitors on the basis of their attitudes can be helpful in planning the spatial differentiation of activities, and in satisfying various types of visitors.²⁷

²⁶ Kaltenborn & Vorkinn, 1993

²⁷ Fredman & Emmelin, 2001

Fulufjället National Park

On the first of August 2002, Fulufjället became Sweden's 28th national park. The reasons for establishing a park at this location are noted in the management plan:

*"Fulufjället contains natural features of great value which are primarily associated with its special geology, morphology and vegetation. There is no parallel anywhere else in Sweden to the park's alpine heaths and thick carpets of lichen. The landscape is open and largely unspoiled. The waterfall at Njupesjär is a great attraction, and there are good opportunities for enjoyable tours and outings in the easily accessible mountain terrain. Fulufjället is well-suited to be the most southerly national park in the Swedish mountains."*²⁸.

The main purpose of Fulufjället National Park is to preserve an area of the southern Swedish mountains in an essentially unspoiled condition, with its distinctive vegetation and other natural features of great value. Related purposes are to preserve the area's valuable cultural heritage, and to provide conditions which make it possible for visitors to experience stillness, solitude and unspoiled nature with appropriate ease of access.

Fulufjället National Park is worth seeing for its natural splendours in general, but it also has self-evident tourist attractions – the Njupesjär waterfall which is the highest in Sweden, and the dramatic effects of "the great storm" which in late summer of 1997 caused massive erosion along the Göljån River. The main visitors' entrance is located on the northeast boundary of the park, and from there a walking trail leads to Njupesjär. Among the facilities near the entrance are a parking area, a café and a nature centre.

The management plan for the national park states that Fulufjället provides excellent opportunities for outdoor recreation during both summer and winter. Dominated by a level plateau, the area is relatively easy to move in. Visitors can take short walks, long hikes on marked trails, or more challenging treks through large trackless areas. The park includes 140 kilometres of national trails, five overnighting cabins and ten

²⁸ Naturvårdsverket, 2002

rest cabins. The national park contains 38,000 hectares (ca. 93,900 acres), two-thirds of which consist of mountain heath and barrens. The remaining third includes mountain-birch and evergreen forest, and wetlands comprising five per cent of the park's area (Figure 2). Fulufjället is the only larger undisturbed mountain area in the southern part of the Swedish mountains. Information about Fulufjället National Park is available on the websites of the Swedish Environmental Protection Agency (www.internat.naturvardsverket.se) and of Dalarna County (www.dalarna.se/fulufjallet). In connection with the park's inauguration, a book on its natural history and cultural heritage was published.²⁹

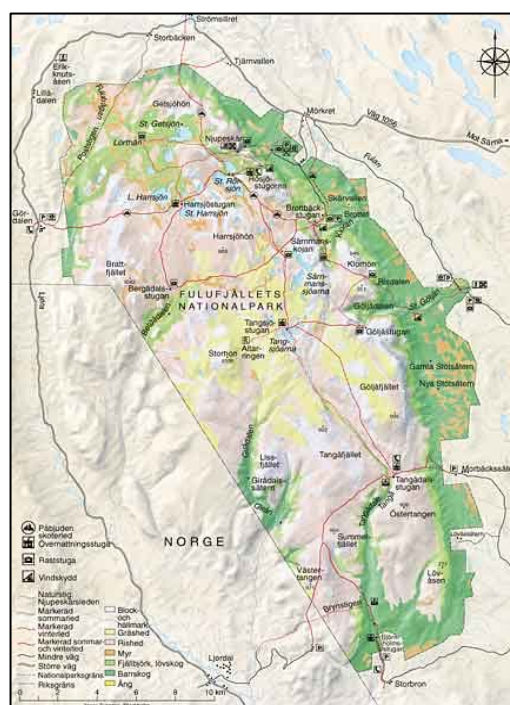


Figure 2. Fulufjället National Park. Map: Hans Sjögren

According to the management plan, the purpose of Fulufjället National Park is to be fulfilled by prohibiting exploitative activities, preventing disturbances to outdoor recreation or to protection-worthy animal life, prohibiting reindeer grazing, developing information materials about the regulations and valuable features of the park, and zoning the area in order to satisfy both the need for protection and public interest in certain types of activity – all of which factors help to gain local support for

²⁹ Lundqvist, 2005

the park. Regulations and measures are related to the various zones into which the national park is divided. It is the first time that the Swedish Environmental Protection Agency (SEPA) has instituted a strict zoning system of this sort. Similar methods have been applied in other countries, including Canada, Norway and the United States.

Each zone has its own set of guidelines concerning: i) which activities are permitted; ii) the physical environment; and iii) the kinds of experience it is likely to provide visitors. The overall purpose of Fulufjället National Park applies to all zones, but they differ with regard to how that purpose is to be achieved and the manner in which the regulations are applied. The four zones are situated on a scale from wilderness to developed (Figure 3): Unspoiled (Zone I), Low Activity (II), High Activity (III) and Developed (IV). They are distinguished by criteria relating to human influences, physical environment, probable visitor experiences, and appropriate activities. This corresponds to the international planning framework, *Recreation Opportunity Spectrum* (ROS).

The zoning system makes it possible for some sections of the national park to be used more intensively for such activities as hunting, fishing and other forms of outdoor recreation, while the major portion is left largely undisturbed. In this way, attributes that are important for scientific research and for the possibility of experiencing stillness and solitude are preserved. Meanwhile, visitors less familiar with the mountains can enjoy the park and restrictions on traditional uses by the local population are minimized.

In this way, a broad range of recreation opportunities is provided. By satisfying the individual needs of visitors in varying degree within different zones – so that a certain category of visitors is of great importance in one zone, but of little or no relevance to another – an optimal solution for the entire park is made possible. The net outcome is better for each category, and for all categories together, than if the same rules applied everywhere in the park, and it is the judgement of SEPA that the

zoning structure provides Fulufjället National Park with a capacity for an even greater number of visitors than at present.



Figure 3. Zones of Fulufjället National Park: Wilderness (I), Low Activity (II), High Activity (III) and Developed Zone (IV).

The zoning of Fulufjället National Park was part of a larger process related to the park's establishment. The more traditional "outside -in" approach was at Fulufjället replaced by an "inside-out" approach. The idea was to explain the advantages of the park, not least to the local population. The focus was on the opportunities offered by a national park, rather than on the necessary restrictions involved. Concerns about the latter resulted in local resistance in the early stages of the establishment process.

Together with the Dalarna County Administrative Board, SEPA in 1997 launched a project entitled, "Fulufjället's Surroundings". In the first phase, the project leader visited residents in the Fulufjället area to discuss the proposed national park within a broad societal perspective, including the fact of the ongoing decline in the local population. The second phase of the project emphasized the advantages that a

national park would provide in the form of investment and job opportunities. Discussions on this theme helped to shift local opinion in a more positive direction. The project also led to the formation of the "Ring of Fulufjället", a network of tourist entrepreneurs in the area surrounding the proposed park.

In addition to the zoning system and the Fulufjället's Surroundings project, the establishment process included investments in facilities and infrastructure for visitors. Most of the improvements were made within Zone 4, the area developed for the purpose of serving many visitors. Two years before the park's inauguration, a new trail was built between the main parking area and the Njupesjär waterfall; this connected with the old trail to form a loop around Njupesjär. At the site of the waterfall, the existing boardwalks and stairways were improved, and a ramp of around 100 metres' length was built upward toward the falls to provide visitors with a better view and easier access to the rocky terrain.

In preparation of the park's inauguration, improvements were made to the parking area near the start of the trail to the Njupesjär waterfall, and the existing café was renovated and expanded. At this location it was also built a nature centre with exhibits, a cinema room, and office space for the staff. The entire area was improved with signs and trail markers. Large information displays were put up at several natural entry points around the park and, at Njupesjär, special displays with information about the area's natural history and cultural heritage were placed beside the trail. Fulufjället is also the first national park in Sweden whose planning and establishment were based on information gathered about visitors in the area.

Tourism in Fulufjället and the surrounding area

As indicated above, Fulufjället National Park cannot be regarded as a geographically isolated entity. Its surroundings will be important for the park's future development, the local inhabitants and for visitors from outside the area. It is therefore essential to adopt a perspective that extends beyond the boundaries of the park. The national

park is in itself a sight worth seeing which attracts visitors, but it is associated with a larger complex that includes transportation, lodging, food service, activity opportunities and other attractions. Although no one resides inside the park, there are a number of villages in the immediate vicinity. While the national park is the primary travel destination, a great deal of related economic activity takes place outside its boundaries. Therefore, in addition to the national park, the principal geographic focus of this report is also concerned with visitors to the surrounding area and to the part of northern Dalarna in which the park is located (Figure 4).

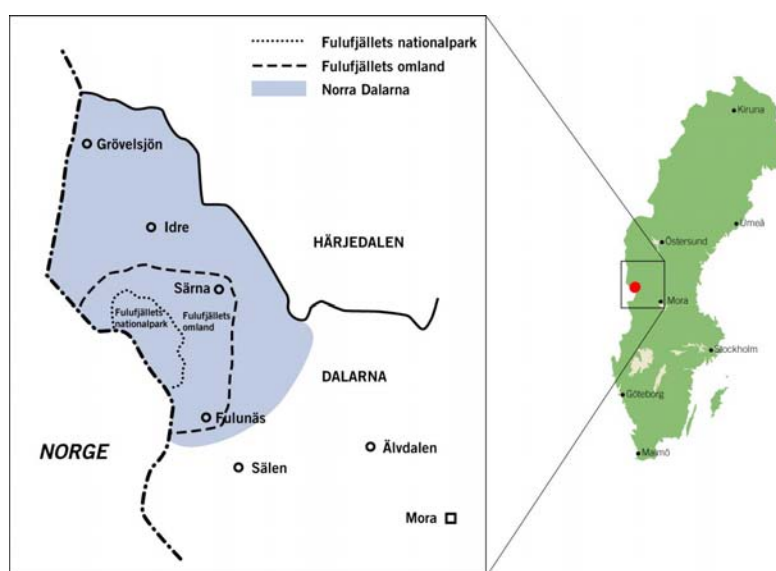


Figure 4. Fulufjället National Park, its surroundings, and northern Dalarna.

Within a regional perspective, Fulufjället National Park in many respects complements the existing range of tourist attractions in the area. A few dozen miles to the north is the mountain resort at Idre, which offers winter and summer activities that are more closely linked to tourist facilities built especially for those purposes; and south of Fulufjället is the winter resort at Sälen, the largest downhill skiing facility in Sweden. Tourism has developed rapidly in both places since the early 1970s³⁰. In addition, there are several facilities around Lake Grövelsjön that are

³⁰ Bodén & Rosenberg, 2004

devoted primarily to hiking, fishing and Nordic skiing. Since the mid-1980s, the area that includes Särna, Idre and Grövelsjön has been developed and marketed in a number of ways as a combined tourist attraction. A foundation serving the interests of all three, known as SIG-stiftelsen, was established in 1986. The name was changed to Idre Turism AB on 1 July 2001 (website: www.idreturism.se).

The “Ring of Fulufjället” association has about forty member-businesses in such branches as lodging, handcrafts, recreational activities, outdoor adventure, etc. The purpose of the association is to promote the members’ economic interests with sustainable development of the tourism industry within Fulufjället National Park and its surroundings. The latter includes the municipalities of Malung and Älvdalen, which also co-operate with the Municipality of Trysil in Norway. Sustainable development includes economic, social, ecological and cultural aspects, on which the association members freely co-operate (www.fulufjallsringen.com). Among other things, the association works with concept development, package tours, education and marketing.

Another key factor in the development of tourism at Fulufjället is its certification as an official PAN Park and the related establishment of a cabin facility in the village of Mörkret, close to the eastern boundary of the national park. Fulufjället was one of the first to be included in the PAN Parks network, and contributed to the development of the selection criteria. Its purpose is to promote the development of sustainable tourism by establishing a European network of protected natural areas (website: www.panparks.org). The basic idea of PAN Parks is to increase the economic value of unspoiled nature by means of tourism that is dependent on the preservation of natural values.

The anticipated result is more effective protection of nature, while at the same time local economies are stimulated and the general public’s knowledge of protected areas increases. This is to be achieved through co-operation between environmental organizations, custodians of natural areas, tourism entrepreneurs, local communities

and other interested parties. At present, there are five certified PAN parks – one each in Sweden, Finland, Poland, Bulgarian and Romania – and applications for certification have been submitted for five other parks in Europe. The cabin facility at Fulufjället, which has a total of 136 beds, was inaugurated in the autumn of 2004 and is the first of its kind. It was financed by PAN Parks Accommodation, an affiliate of PAN Parks (www.panparksaccommodation.com) and a co-operative effort of the World Wildlife Fund and a Dutch travel company. It is likely that Fulufjället's inclusion in the PAN Parks network will gradually attract new types of visitor to the area.

Purpose of the studies

This report presents the methods and summarizes findings of research on visitors to Fulufjället National Park which was conducted on assignment from the Swedish Environmental Protection Agency (SEPA). The research consisted of two related studies, one conducted during the summer of 2001 – the year *before* the park opened – and the second during the summer of 2003, the year *after* the park's inauguration.

The study conducted in 2001 is reported by the European Tourism Research Institute (ETOUR) at Mid-Sweden University³¹. The focus of the report presented here is on the results of the research conducted during 2003, and on any changes that may have taken place since 2001. The main purpose was to determine the short-term effects of the national park's establishment. Among other things, that involved:

- describing park visitors (numbers, characteristics, movement patterns, etc.), their opinions of the national park and the way in which it was managed, their willingness to pay for various services, and their actual expenditures.
- studying the area's carrying capacity for recreational activities

³¹ Hörnsten & Fredman, 2002

- studying the effects of the national park's establishment on the factors referred to in the preceding two points
- gathering data and developing methods for monitoring the results of the park's planning and management
- generating knowledge which can contribute to sustainable environmental, economic, and social development of Fulufjället National Park and the surrounding area
- gathering data for detailed analyses of tourism in protected natural areas.

In addition to Fulufjället's significance for the forms of tourism that involve travel over relatively long distances, the area is of course also important to local residents as a recreation resource. This report is concerned with visitors to the park and its surroundings (i.e. consumers); this includes visitors of all types, regardless of their places of residence. The SEPA and the Jämtland County Administrative Board are jointly responsible for the planning, regulation and management of the national park. In that context, the most interesting subject of research consists of visitors in general; it is not limited to organized tourism or to those who travel more than 100 kilometres from home and stay overnight in the area.

Of particular interest are the behaviour patterns and attitudes of visitors, likewise the relationships between management of the park and its ecological and social milieus. But much of the related knowledge is also valuable for the development of commercial tourism in the area. It is, for example, as much in the interest of the local tourist branch as of the park management to maximize visitors' positive experiences of nature, while minimizing conflicts, wear and littering. And as previously noted, the park management has expressed an interest in contributing to successful development of tourism in the Fulufjället area. Accordingly, some of the questions included related to tourism development, and to the demand for various products and services. It is important to note in this regard that the studies were limited to individuals who had actively chosen to visit the area. That differs from the standard approach of traditional market surveys, which usually concentrate on a certain population segment or interest group, and include both current and potential visitors.

The kind of study reported here, no matter how detailed and comprehensive it may be, has a number of limitations with regard to both method and presentation. There are three aspects that are especially worth noting: the studies' representativeness; comparisons to detect changes over time; and the selection of visitor categories for special analysis. More specifically:

- Since it is impossible to interview all visitors to a natural area like Fulufjället, the validity of the studies largely depends on the extent to which the *sample* of visitors included in the survey is representative of all visitors. As explained in the following sections of the report, there are several possible sources of deviation from exact concurrence. Gathering data like those of the Fulufjället study is a much more complicated process than many realize. However, the methods used complement each other well, having been developed in previous surveys of visitors to mountain areas. Consequently, the data and analyses presented here are regarded as highly valid.
- The report includes a great many comparisons of the studies conducted in 2001 and 2003. In most cases, the findings are expressed in terms of *percentages*; the corresponding *numbers* of visitors are only presented where necessary for a special reason. Since the total number of visitors differed between 2001 and 2003, a *decrease in the percentage* of visitors may coincide with an *increase in the number* of visitors who participated in a certain activity, visited a certain place, etc. Such cases are specifically noted in the text.
- In addition to all visitors to Fulufjället, the analysis pays special attention to several categories which are distinguished on the basis of (1) visitors' nationality and place of residence, (2) their patterns of movement within the national park and (3) their opinions on the management and facilities in the Fulufjället area. Of course, it would have been possible to devise additional categories; but these three were chosen after discussions with SEPA and in light of previous experience from similar studies. The purpose was to enable more nuanced findings, and thus contribute to more satisfactory fulfilment of the research goal.

Data collection at Fulufjället

Data for the study were gathered at Fulufjället National Park by three different methods: i) counting people and vehicular traffic at the most important entrances to the park; ii) self-registration by visitors; and iii) a questionnaire sent via post to a

sample of Swedish and German visitors. One purpose of the data-gathering was to improve the basis of information for planning and managing the national park. Another was to study the short-term effects of the park's establishment from the visitor's point of view. The methodology employed is well-established, having been used in studies of visitors to the Rogen area³² and the mountains of southern Jämtland³³, among other places.

The methods used for gathering data at Fulufjället are described below. Except for minor adjustments, including changes in the locations of self-registration boxes, the methods used in 2001 and 2003 were identical. For a more detailed description of the data-gathering process in 2001, see Hörnsten & Fredman (2002). The data were gathered during the period from June to September in both 2001 and 2003, with some variations that are noted below.

People counters

To count the number of visitors to Fulufjället National Park, four automatic people counters of type Chambers Radio Beam 2000 were set up at four different locations near the self-registration boxes (Table 1; Figure 5 and 6). The counters are based on radio waves that can pass through thin layers of materials such as plastic, plywood and solid wood. A casing made of polycarbonate is used to protect and conceal the counters. A radio wave of about one decimetre (ca. four inches) in width passes between a transmitter and a receiver facing each other on opposite sides of a path or trail.

When the radio signal is interrupted by a passing object, the receiver is activated to register the event. The maximum distance between the transmitter and receiver is twenty metres. The receiver is calibrated to exclude birds, leaves, branches and other extraneous objects that may pass through the radio wave. The receiver can not interpret the direction of travel of those passing by. The data are collected in a

³² Hultman & Wallsten, 1988; Emmelin & Olsson, 1999

³³ Vuorio, 2003

computerized logger in the receiver, which is programmed for the starting and stopping times (and thus the length) of the counting period. Since each counting period is limited to a maximum of 255 registrations, its length of time must be adjusted in relation to the anticipated rate of traffic at each counting site. The data can be transferred on site to a portable computer, or the logger can be removed for data transfer to a stationary computer. Table 1 provides basic information about the counting sites, and Figure 6 shows their locations in the national park.



Figure 5. Radio Beam 2000 people counter. Photo: Peter Fredman

The data from the people counter include details on date, length of counting period, and numbers of passers-by during each counting period. Implausibly high figures are sometimes recorded, e.g. individual registrations or counting periods with totals of 255. Such results can be the result of visitors pausing directly in the path of the radio signal, or of some other lengthy and/or repeated interruption of the signal. Long continuous periods with 255 registrations have been coded as errors. Individual anomalous figures have been changed to the mean value for the corresponding time period during the week immediately before and after.

Table 1. Sites for self-registration and for counting visitors and vehicular traffic

Location	No. of self-registration boxes	People counter	Traffic counter	Comments
A) Njupesjär loop trail – old trail <i>to</i> waterfall	2	X		People counter placed beside boardwalk ca. 100 metres from self-registration box at start of trail.
B) Trail to Lake Rösjön	1			Self-registration box moved to this location 10 July 2001.
C) Brottäckstugan	1	X	X	In 2001, self-registration box placed ca. 500 metres closer to Brottäckstugan than in 2003.
D) Morbäckssättern	1			Trail to Tangådalstugan.
E) Björnholmssättern	1		X	Vehicular traffic counter placed beside road to Björnholmssättern. Self-registration box placed beside trail, north of Björnholmssättern.
F) Västertangen	1			Self-registration box placed ca. 100 meter from the border with Norway.
G) Gördalen Valley	1	X		Trail to Harrsjöstugan.
H) Njupesjär loop trail – new trail <i>from</i> waterfall	--	X		Placed at various points on section of trail between rest place and trail crossing to Rösjöstugan.
I) Njupesjär entrance (access road)	--		X	

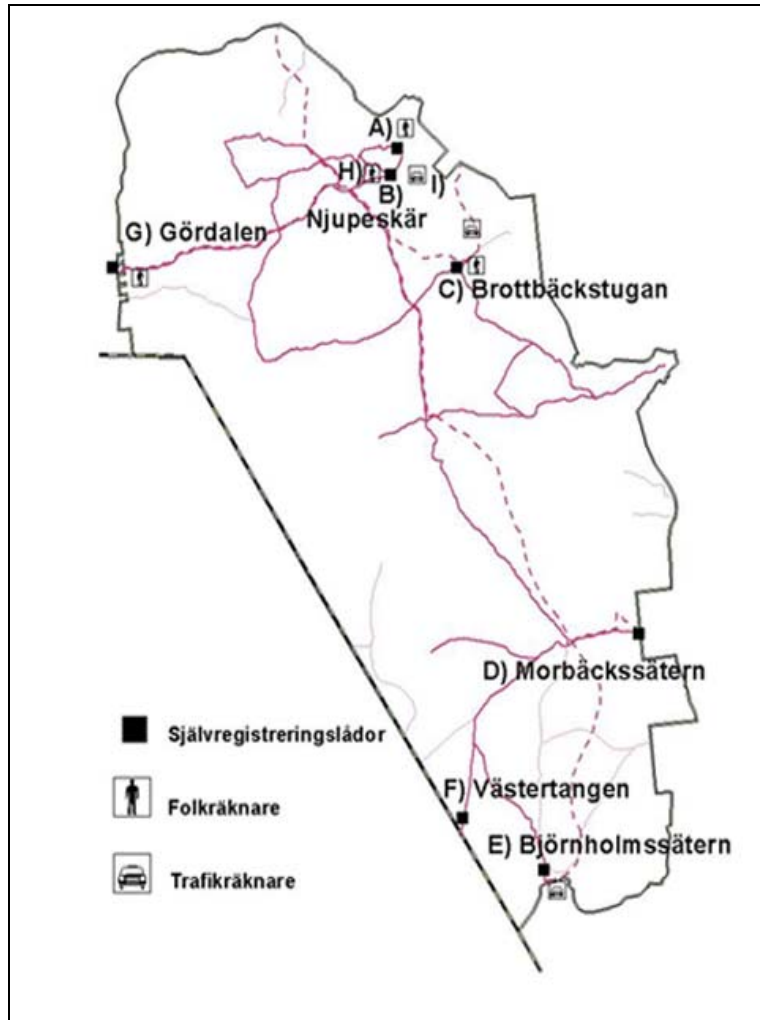


Figure 6. Sites for self-registration boxes (självregistreringslådor), people counters (folkräknare) and traffic counters (trafikräknare).
Map: Stefan Göransson

Traffic counters

Vehicles travelling on the roads to the parking areas near the entrances to Fulufjället National Park are counted with three TDP cumulative traffic counters, each with a pressure-sensitive hose that responds to the weight of passing vehicles (see Table 1 and Figure 6). When compressed, the hose activates a counting mechanism which can be set at four different time periods ranging from 12 to 72 hours.

The pressure-sensitive hose registers the number of axles that pass over it, but the counter interprets every “double compression” as one vehicle. As there is only one

hose, the counter is not able to interpret the type of vehicle or its direction of travel. The pressure sensitivity is adjusted to prevent bicycles, lightweight motorcycles, etc. from being counted.

Traffic counters should be used primarily as a supplement to people counters. The latter record the number of people who actually enter the national park, but it is not certain that vehicular traffic counters do so. Also, the number of passengers per vehicle varies with the time of day, day of the week, season and vehicle type.

Self-registration

Data on individual visits to Fulufjället National Park were gathered with the help of eight self-registration boxes at seven different locations (see Table 1 and Figure 6), and also with a follow-up questionnaire distributed via post. The collection boxes were placed along trails at locations where there is sufficient space for several people to linger. A sign with the word “VIKTIGT” (IMPORTANT) on the outside of the box urged visitors to open the box and fill out a registration card. Each box contained a supply of registration cards and pens, along with a map of the Fulufjället National Park area. The front of the box could be folded down to form a writing surface.

The registration cards included five questions relating to the individual's visit: the current date and time, home address, activities conducted during the visit, previous visits to the area, and how the visitor had learned about Fulufjället. The completed card was then inserted in a slot on the inside of the box and dropped to a locked lower compartment.

The boxes were set out during 7-8 June in 2001, and 26-27 May in 2003. The cards were collected on the 1st of October both years. Half of the loop trail to the Njupesjär waterfall was closed during 1-10 July 2001 for construction work. During that period, the boxes at location A were sealed and unusable. The same section of trail was closed for the same purpose during 25 August – 12 September 2003; the boxes at

location A were sealed during that period as well. Since many visitors passed those boxes on the way to Njupesvär during the peak season, they were in operation only every third day from late June to the beginning of August in both 2001 and 2003.

Table 2 shows the number of completed and usable registration cards for 2001 and 2003. A total of 4448 cards were collected from the self-registration boxes during the summer of 2001, and 6151 during summer of 2003 (an increase of 38 per cent). The number of visitors who passed by the boxes varied widely, and most of the self-registrations were completed at location A, on the old trail to the Njupesvär waterfall.

Table 2. Number of completed registration cards, 2001 and 2003

Location	Number of completed cards		Per cent change
	2001	2003	
A) Njupesvär loop trail (old trail to waterfall)	2 356	4 093	+74%
B) Trail to Lake Rösjön	1463	1350	-8%
C) Brottbäckstugan	221	236	+7%
D) Morbäckssäteren	128	123	-4%
E) Björnholmssäteren	129	150	+16%
F) Västertangen (Norwegian border)	63	98	+56%
G) Gördalen Valley	88	101	+15%
TOTAL	4 448	6 151	+38%

The large increase in the number of completed registration cards at location A, and the decrease at location B, can probably be explained by two factors: The box at location B was moved from the loop trail at Njupesvär to the trail to Lake Rösjön in the summer of 2001³⁴; and the boxes at location A were sealed for ten days during

³⁴ See Hörnsten & Fredman, 2002

early July of 2001, i.e. during the busiest season, whereas in 2003 they were sealed later in the summer when there were fewer visitors.



Figure 7. Self-registration box. Photo: Peter Fredman

Postal questionnaires

In November of both 2001 and 2003, postal questionnaires were sent to a sample of Swedish and German visitors, the two most frequently represented nationalities among visitors to Fulufjället National Park³⁵. The German questionnaire was a direct translation of the Swedish original, with the exception of question G2 which was omitted from the German version in 2003. Questions relating to expenditures referred to kronor in the Swedish version, and to deutschmarks (2001) and euros (2003) in the German version.

The sample for the postal questionnaire was systematically selected from the registration cards after they were sorted by completion date. Certain cards were excluded from the selection process, i.e. double registrations (individuals for whom

³⁵ The postal questionnaires are available in Fredman, Hörnsten Friberg & Emmelin (2005)

there were two or more registration cards), cards with an unusable address, and persons under age 15. Since the number of registrations at the different locations varied widely, the following procedure was used: Questionnaires were sent to all Swedes and Germans who registered at locations C, D, E, F and G during both years (see Figure 6). In addition, questionnaires were sent to every other Swede and every third German who left a completed registration card at location A and/or B during 2001. In 2003, questionnaires were sent to every sixth Swede and every other German who left a completed card at location A, and also to every fourth Swede and every other German who left a card at location B.

Two to three weeks after the initial mailing, a reminder was sent to all those in the sample who had not yet responded, urging them to complete and return the questionnaire. After an additional three weeks or so, a fresh copy of the questionnaire with cover letter was sent to those who had still not responded. Table 3 shows the sizes and response frequencies of the mailings.

Table 3. Number and frequency of responses to the postal questionnaires.

	Swedish version		German version	
	2001	2003	2001	2003
Number of responses	1 014	804	483	441
Response frequency	80%	82%	74%	85%

The questionnaire for 2003 was organized into ten sections based on the following categories:

- A. General questions relating to the journey to and visit in Fulufjället National Park
- B. Perceived availability of trails, cabins, signs, etc.
- C. Personal experiences of the visit
- D. Crowding on the trail to Njupesjär
- E. Development of tourism
- F. Opinions regarding the national park
- G. Expenditures
- H. General questions about management of the Swedish mountains
- I. Socio-economic characteristics of visitors
- J. Suggestions for improvements to the national park.

To make comparisons over time possible, 44 questions of the questionnaire in year 2001 were also included among the 62 questions of the 2003 questionnaire.

Non-response studies

The main purpose of the registration system was to enable the selection of a representative sample of visitors to Fulufjället National Park who self-registered and left their names and addresses for the subsequent postal questionnaires. Since it was not possible to provide registration boxes on all trails in the park, it is likely that some visitors never had an opportunity to register and thus not be included in the study. Further, there are always some who enter an area by routes that do not follow existing paths and trails.

Consequently, a selection of those who left completed registration cards is probably not representative of all visitors to the area. That problem is believed to be relatively small for the study reviewed here, since visitors tend to be heavily concentrated along the trail to and from Njupesjär, and the placement of the other registration boxes was done in consultation with park managers and others with good knowledge of visiting patterns in the park. Fulufjället National Park is also an integral and clearly delineated mountain area with relatively few and distinct points of entry – all of which make the methods described above more suitable at Fulufjället than at other areas with more complex visiting patterns.

Another problem is that there is a risk of queuing at registration boxes at locations where many visitors pass by, so that some do not see them or do not care to wait their turns to fill out a card, continuing without registering. This happened at times at location A on the trail to the Njupesjär waterfall. As long as such “non-responses” do not follow any particular pattern and are evenly distributed among all visitors, they do not affect the representativeness of the sample. In order to determine if that applied in this case, studies of non-responses were conducted at all registration

locations in the summer of 2001, and at location A in the summer of 2003. The purpose of these studies was to estimate the number of visitors who did not register and, by means of interviews, determine whether those individuals differed from the visitors who did register.

For the non-response studies at Fulufjället, the registration boxes in question were monitored by an observer from a position so as not to influence the decision to fill out a card or not. Those who chose not to register were noted and, when they came to the observation point, were interviewed about their reasons for not doing so. The non-respondents were asked to complete a registration card of the same type provided at the boxes.

A total of 31 non-respondents were interviewed in 2001 and an analysis of the information they provided indicated that factors such as nationality or previous visits to the park did not differ significantly from those who did register. Since the number of non-respondents interviewed in 2001 was relatively small, a more extensive study was conducted at location A in 2003. The choice of location was based on experience gained from the 2001 study, and on the large number of passers-by which probably resulted in a smaller portion stopping to complete a registration card.

Estimations based on thirteen different observation periods between 13 June – 7 July 2003 indicated that some 50 – 80 per cent of those who passed location A did not complete a registration card. Of the individuals who passed location A without self-registering, 236 agreed to complete a card at the urging of the research personnel. All of them subsequently received the same postal questionnaire as the others included in the study.

Completed questionnaires were returned by 206 of the non-respondents (165 Swedish and 41 German), and these were compared with the questionnaires returned by visitors who had self-registered. The answers to about 15 per cent of the questions

differed between the two subgroups, which indicates that the non-responses can have affected the representativeness of the sample selected for the main study. The sample could have been regarded as representative if the two subgroups had differed in their answers to no more than five per cent of the questions, assuming the questions asked of both groups were independent.

The results indicate that (a) whether or not someone passing by a registration box chooses to complete a card is related to how many other visitors are present at the time, and (b) those who do not self-register are more likely to live in Dalarna County, are more positively disposed to the development of tourism in the Fulufjället area, and feel that the national park needlessly restricts human uses of the area within its boundaries. That the presence of many visitors results in a higher proportion of non-responses probably does not have any great significance for the sample representativeness, but it should be kept in mind that those who self-registered differ somewhat from those who did not with respect to the parameters mentioned above.

Results

This chapter presents a summary of the results from the visitor surveys at Fulufjället National Park. The results presented are based mainly on analysis of the data from 2003. Comparisons are made between the studies from 2001 and 2003, and between groups of visitors in 2003 on the basis of "nationality and place of residence", "which zones within Fulufjället one visited" and "degree of wilderness purism" (purists, neutralists and urbanists). The original report³⁶ also contains a section with commentary on Fulufjället's management plan, on the basis of presented results. This section indicates that the intentions of Fulufjället's management, in many respects, can be fulfilled but at the same time points to the continued need for follow-up and evaluation.

³⁶ Fredman, Hörnsten Friberg & Emmelin (2005)

Number of visitors

An estimated 53,000 people visited Fulufjället in the summer of 2003, which is an increase of 39% compared with 2001. Almost the entire increase occurred in the more developed sections of the park, around Njupesjär's waterfall. The length of each visit has on average decreased from 1.6 to 1.2 days. This means that the total visitation time, where the time for every visit is added up, is almost unchanged from 2001 and 2003.

Type of travel and reason for visit

Almost everyone comes to Fulufjället in order to see Njupesjär's waterfall. Most people travel to Fulufjället by private means, only three percent made the visit as an organized tour. For two out of three, the main motive is to visit Njupesjär's waterfall, for 16% it is to hike, while one in ten come mainly because the area is a national park.

Visitors' nationality and background

Compared to other regions in the Swedish mountains, Fulufjället's nearly one-third foreign visitors is a high proportion. Germans are the largest foreign group, followed by Danes and Dutch. Nearly all of the Swedish visitors come from southern and mid Sweden, particularly Dalarna and Mälardalen. Visitors to Fulufjället have a high average age (49 years) and there are relatively few young visitors compared with other Swedish mountain regions.

Visit patterns, activities and accommodation

Most people visit Fulufjället for a day of hiking. Three of four stay a whole day at the longest, and nearly half stay less than six hours. Above all, it is the area around Njupesjär that is visited most frequently, but even Göljådalen and Rörsjöstugan attract a large number of people. It is also the Njupesjär area and Göljådalen that have received more visitors in 2003 compared with 2001. Only a few percent of the visitors make it the interior of Fulufjället National Park, and this number has also

decreased. Two-thirds visit Fulufjället's surroundings. Just over 22% of the visitors stay in Fulufjället overnight, or close by the national park.

Why visit Fulufjället?

The most important factors for visiting Fulufjället are to experience beautiful nature, that the area is not littered, to experience something that is unaffected by man, to experience peace and quiet, and to experience wilderness. However, what one experiences as beautiful, unaffected, wilderness, etc., varies from person to person.

Visitors' experiences and relations to the nature in Fulufjället

For most people the visit to Fulufjället represents experiences of magnificence, relaxation and pure and untouched nature. From 2001 to 2003 the proportion of those who experience isolation from other people and tranquility has decreased. It probably is dependant on the increased number of visitors, but could also be a result of a change in the expectations of the number of other visitors or that the area has become a national park. The changes are in a direction that is in agreement with the management plan and the intentions for zone 4, but contrary to those for zones 1-3.

Recreational capacity

The many visitors to Njupskär's waterfall mean that most of them meet others during their hike. If the meetings become too many, it gives a feeling of crowding and the experience of the visit is negatively affected. Of those that see more than 50 other people, many experience crowding. Fulufjället's managers have therefore made the hiking trail to and back from the waterfall follow different routes, which has decreased the negative effect of crowding. The results indicate that the recreational capacity is not exceeded.

Attitudes towards Fulufjället's management

A clear majority of the visitors consider that both the quantity and quality of different facilities, such as cabins, wind shelters, trails, garbage cans, and signposts are good. The information that is given via folders, signs, and the visitor center is

also considered good on the whole, but best in the visitor center. The greatest proportion of visitors get information given on signs by the entrance to the national park and along the hike to the waterfall. The investments that were made in conjunction with establishment of the national park (the visitor center, signs, information boards, etc), which were mainly in zone 4, have thus had an effect on the visitors. The management should, nevertheless, be attentive to the variations in the preferences between different groups of visitors.

Tourism development

Most visitors regard tourism development as positive in the area around the national park, while close to 40% have negative attitudes toward development within the national park. Foremost are the different types of experiences (wildlife, nature, culture, food, and local population) accompanied by increased environmental adaptation, which the visitors consider should be developed. They consider it less important to develop tourism's basic services (travel and accommodation).

Visitors and the national park

10-15% of Fulufjället's visitors in 2003 came because it is a national park.

Considerably more visitors are positive towards the national park without it alone constituting a reason for visiting. A clear majority considers that a national park increases Fulufjället's worth for visitors, for the surrounding district and that it contributes to preserving the biological diversity. Whereas, almost a quarter think that a national park limits a persons usage unnecessarily.

Visitors' expenses

Just under half of the visitors have expenses in the national park and only a third have them in Fulufjället's surroundings. The total visitors' expenses in summer 2003 amount to 5 million Swedish Kronor (SEK) in the national park and 12 million SEK in the surrounding area. However, compared with 2001, the proportion that was spent in relation to the visit has increased. The sum of all visitors' expenses has also increased, even if the amount of the average expense has decreased.

Results from analyses of different groups

Nationality and place of residence

The increase in the number of visits to Fulufjället between 2001 and 2003 consists mainly of Swedes. Fulufjället is visited as an outing from home for those that live in Dalarna, while the majority of visitors from other countries make their visit from a holiday resort. The Germans make their visit as part of a roundtrip. Njupeskar's waterfall does not have the same attraction for the German visitors as it does for the Swedes. Instead, it is the forest environments itself that draws them, and also hiking on the trails within Fulufjället. The German visitors experience Fulufjället as being very magnificent. Germans and residents of Dalarna have similar and strong experiences of tranquility, wilderness and pure and untouched nature. Visitors living in Dalarna are the most positive towards the development of tourism, both within the national park as well as in its surrounding areas. Germans regard the importance of environmental adaptation on accommodation and activities more highly than the Swedes, and also want to have more contact with the local population. Germans are the group that spends the most money both in the national park and in the surrounding areas.

Visitors in different zones

The reasons for visiting Fulufjället differ for the visitors in the different sections of the national park. More or less everyone that only visited Njupeskar or lower Göljån (zone 4) came to see Njupeskar's waterfall, while those that also visited other parts of Fulufjället (zones 1-3), to a greater extent, came to hike and to study the nature. Those that only visited zone 4 are more pleased with the quantity and quality of different facilities, such as cabins, wind shelters, trails and garbage cans. The incidence of a national park has great significance for those that visited zones 1-3 compared to those that only visited zone 4. A higher proportion in zones 1-3 knew that the area was a national park before they arrived, and the trip would have been different had the national park not existed. The attitude towards tourism

development within the national park and its surrounding areas is, however, more positive among those that visited zone 4.

Purists, neutralists and urbanists (PNU)

Visits made by purists, neutralists and urbanists differ in regard to type and length of trip, reason for the visit and participation in activities. Purists place greater importance in that the area is not littered, in avoidance of others, in experiencing peace and quiet, and in experiencing wilderness. However, for urbanists it is important that, for example, the area is family friendly, that one meets many interesting people and that there are good restaurants, accommodation and marked trails. The results show that the purists experience more crowding than the neutralists and urbanists, despite seeing fewer people during their walk to Njupeskar. This emphasizes the importance of information about the national park and what the visitors can expect to experience in the various zones. The attitudes to the national park establishment are most positive among the purists. However, they are more negative towards development of tourism within the park or in its surrounding areas. Fulufjället's visitors are more urban-oriented in comparison with studies in other mountain regions.

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APPENDIX

Östersund, november 2003

Ditt besök i Fulufjällets nationalpark !

Isomras/höstas när du besökte Dalarna och Fulufjällets nationalpark (där Njupeskärs vattenfall ligger), svarade du på några frågor vid en av de registreringsboxar som fanns i området. Du ingår nu i den grupp som får en uppföljande postenkät med ytterligare frågor om ditt besök.

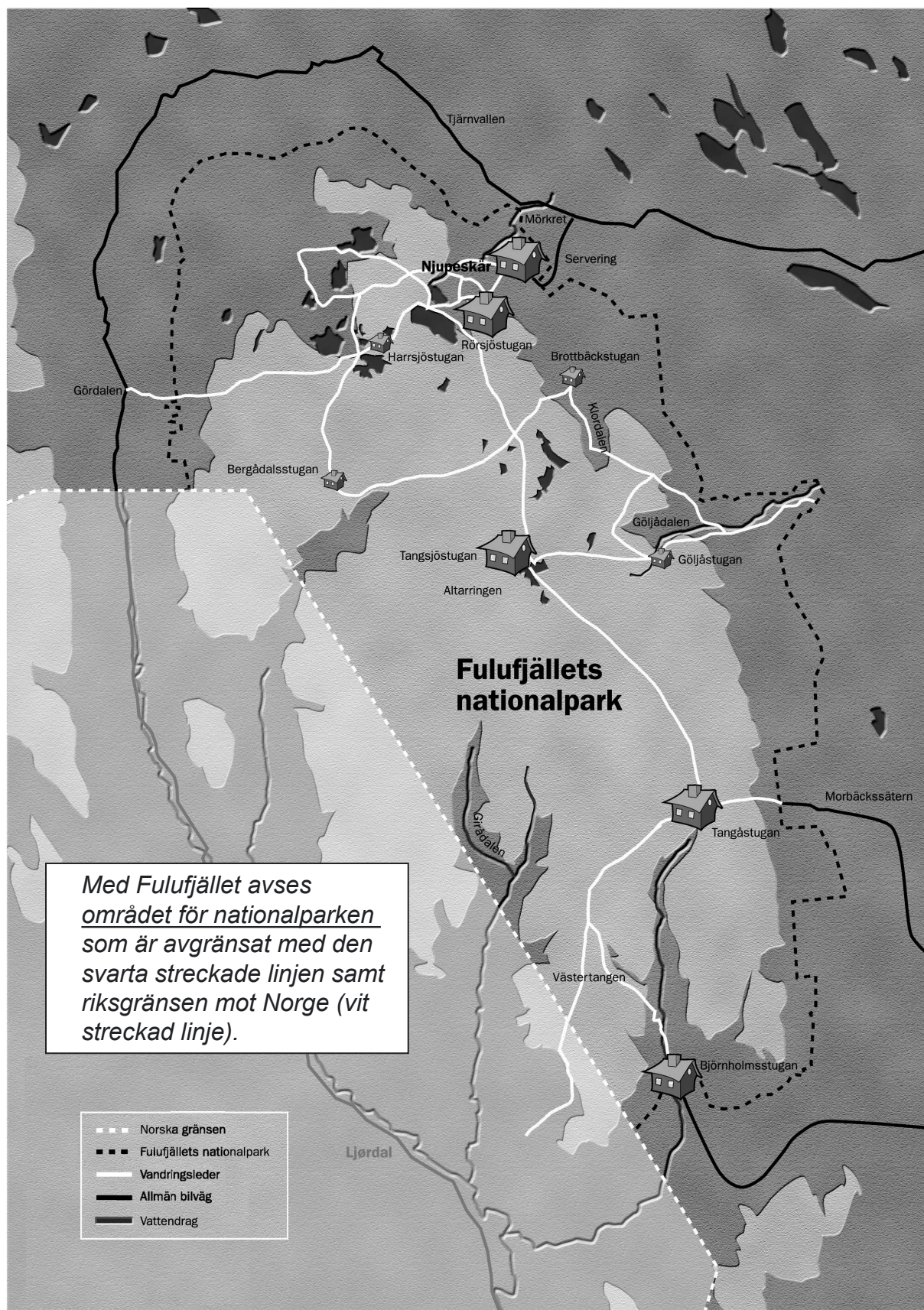
För att svaren ska vara tillförlitliga är det viktigt att så många som möjligt svarar. Alla svar behandlas anonymt. Löpnumret är enbart till för att inte sända ut påminnelser till dig som redan svarat. Det är viktigt att enkäten besvaras av personen den är adresserad till.

Denna studie är en uppföljning av en liknande undersökning som gjordes sommaren 2001. Det är därför angeläget att alla besvarar denna enkät, även om du svarade förra gången. Syftet med projektet är att öka kunskapen om besökare i och omkring Fulufjällets nationalpark. Vill du läsa mer om forskningen kan du besöka hemsidan www.etour.se Projektet heter *Turism i nationalpark*.

Till sist vill jag rikta ett stort tack för din medverkan. Det är viktigt att få veta vad just du tycker för att få ett ännu bättre Fulufjäll i framtiden! Vänligen returnera den ifyllda enkäten så snart som möjligt i det portofria svarskuvertet. Är det något du undrar över är du naturligtvis välkommen att höra av dig.

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Karta över Fulufjällets nationalpark



A. Inledningsvis några frågor som gäller resan under vilken du besökte Fulufjället. Med Fulufjället avses området för nationalparken som är markerat på kartan på föregående sida.

A1. Hur många dagar varade din resa? (Räkna det totala antalet dagar från det att du lämnade bostaden tills du kom tillbaka)

Svar: _____ dagar.

A2. Hur färdades du under resan? (Kryssa ett eller flera alternativ)

- ☐ Bil → Ange antal personer som färdades i bilen då Fulufjället besöktes: _____ personer
☐ Buss
☐ Tåg
☐ Flyg
☐ Annat sätt, nämligen: _____

A3. Under vilken sorts resa besökte du Fulufjället?

(Kryssa ett alternativ)

- | | |
|--|---|
| <input type="checkbox"/> Privat resa → → → → → → | Ange typ av privat resa: |
| <input type="checkbox"/> Organiserad resa eller utflykt från hemorten | <input type="checkbox"/> Utflykt från hemmet |
| <input type="checkbox"/> Organiserad resa eller utflykt från turistort | <input type="checkbox"/> Utflykt från semesterort eller annan plats (ej hemmet) |
| <input type="checkbox"/> Annan typ av resa | <input type="checkbox"/> Del i rundresa eller genomfartsresa |

A4a. Vilka motiv hade du för att besöka Fulufjället?

(Kryssa ett eller flera alternativ)

- | | |
|--|---|
| <input type="checkbox"/> Att besöka Njupeskärs vattenfall | <input type="checkbox"/> Att jaga |
| <input type="checkbox"/> Att besöka Fulufjället för att det är en nationalpark | <input type="checkbox"/> Att vandra |
| <input type="checkbox"/> Att studera naturen i Fulufjället | <input type="checkbox"/> Att plocka bär |
| <input type="checkbox"/> Att fiska | <input type="checkbox"/> Annat, ange: _____ |

A4b. I föregående fråga, stryk under det huvudsakliga motivet till att du besökte Fulufjället.

A5. Vilka av följande aktiviteter ägnade du dig åt under besöket i Fulufjället?

(Kryssa ett eller flera alternativ)

- ☐ Kortare vandring (1-3 timmar)
- ☐ Vandring endagstur
- ☐ Vandring flerdagstur (inklusive övernattnig)
- ☐ Fiske
- ☐ Jakt
- ☐ Bär- eller svampplockning
- ☐ Naturfotografering
- ☐ Fågelskådning / naturstudier
- ☐ Annat, ange vad: _____

A6. I föregående fråga, stryk under den aktivitet du själv tycker var viktigast som du ägnade dig åt under besöket i Fulufjället.

A7. Under ditt besök i Fulufjället, besökte du någon av följande platser?

(Till din hjälp finns en karta på sidan 2 i frågeformuläret)

(Kryssa ett eller flera alternativ)

- | | |
|--|---|
| <input type="checkbox"/> Göljådalen (rasområdet efter skyfallet hösten 1997) | <input type="checkbox"/> Tangsjöstugan |
| <input type="checkbox"/> Klordalen | <input type="checkbox"/> Tangåstugan |
| <input type="checkbox"/> Rörsjöstugan | <input type="checkbox"/> Altarringen (väster om Tangsjöstugan) |
| <input type="checkbox"/> Girådalen | <input type="checkbox"/> Göljåstugan |
| <input type="checkbox"/> Harrsjöstugan | <input type="checkbox"/> Björnholmsstugan |
| <input type="checkbox"/> Bergådalssstugan | <input type="checkbox"/> Serveringen vid leden till Njupeškärs vattenfall |
| | <input type="checkbox"/> Njupeškärs vattenfall |

A8. Vandrade du någon av följande leder?

(Till din hjälp finns en karta på sidan 2 i frågeformuläret)

(Kryssa ett eller flera alternativ oberoende av vilken riktning du vandrade lederna)

- ☐ Leden från bilparkeringen till Njupeškärs vattenfall
- ☐ Leden över fjället runt Njupeškärs vattenfall
- ☐ Parkeringen - Rörsjöstugorna
- ☐ Rörsjöstugan - Harrsjöstugan
- ☐ Gördalen - Harrsjöstugan
- ☐ Rörsjöstugan - Tangsjöstugan
- ☐ Tangsjöstugan - Göljåstugan
- ☐ Leden genom Göljådalen
- ☐ Tangsjöstugan - Tangåstugan
- ☐ Björnholmsäter - Tangåstugan
- ☐ Morbäckssäter - Tangåstugan
- ☐ Leden över Västertangen (som passerar riksgränsen)

A9. Ungefär hur långt vandrade du totalt under ditt besök i Fulufjället?

Totalt cirka _____ km

A10. Vandrade du någon gång utanför markerade leder?

- ☐ Ja, totalt cirka _____ km
☐ Nej

A11. I samband med ditt besök i Fulufjället, övernattade du då i området eller i nära anslutning till området (inom 5 kilometer)?

- ☐ Ja → ange var du övernattade och antal nätter:
- | | |
|----------------------------|--------------|
| Egen / privat stuga | _____ nätter |
| Tjärnvallen | _____ nätter |
| Fulufjällsgården | _____ nätter |
| Husvagn / husbil vid väg | _____ nätter |
| Tält vid väg | _____ nätter |
| Tält i skogen (ej vid väg) | _____ nätter |
| Tält på kalvfjället | _____ nätter |
| Stuga på kalvfjället | _____ nätter |
| Annat, ange: _____ | _____ nätter |

- ☐ Nej, jag övernattade inte i samband med mitt besök i Fulufjället

A12. Ange nedan var du övernattade natten innan samt natten efter du besökte Fulufjället.

Natten innan jag besökte Fulufjället övernattade jag:

- ☐ Hemma
☐ På annan plats / ort, ange vilken: _____

Natten efter jag besökte Fulufjället övernattade jag:

- ☐ Hemma
☐ På annan plats / ort, ange vilken: _____

A13. Ungefär hur stora utgifter hade du i samband med besöket i Fulufjället (boende, mat, souvenirer etc.)?

(Om ni var flera personer i sällskap, räkna då ut din del av utgifterna)

Jag hade utgifter motsvarande cirka _____ kr

A14. Nedan följer ett antal påståenden som beskriver olika känslor man kan ha för Fulufjället. Markera de alternativ som stämmer bäst in på dig.

(Ringa in en siffra för varje påstående)

	Helt oenig	Delvis oenig	Neutral	Delvis enig	Helt enig
Att besöka Fulufjället är något jag ofta tänker på	1	2	3	4	5
Jag får en stor tillfredsställelse av att besöka Fulufjället	1	2	3	4	5
Att besöka Fulufjället är viktigt för min identitet.....	1	2	3	4	5

A15. Totalt sett, vilket omdöme ger du besöket i Fulufjället?

- ☐ Mycket dåligt
☐ Dåligt, det mesta kunde ha varit bättre
☐ Ganska bra, men mycket kunde ha varit bättre
☐ Bra, men en del saker kunde ha varit bättre
☐ Mycket bra, endast några få saker kunde ha varit bättre
☐ Helt perfekt

B. Nu följer några frågor som handlar om förvaltningen av Fulufjället och förekomst av stugor, leder skyltar etc.

B1. Vad anser du om mängden stugor, leder, spänger etc. som finns i Fulufjället? Visa vad du tycker genom att markera det alternativ som passar dig bäst.

(Ringa in en siffra för varje påstående)

	Alldeles för lite	För lite	Lagom	För mycket	Alldeles för mycket	Vet ej
Övernattningsstugor	1	2	3	4	5	0
Vindskydd / raststugor	1	2	3	4	5	0
Markerade leder	1	2	3	4	5	0
Spänger	1	2	3	4	5	0
Broar	1	2	3	4	5	0
Soptunnor	1	2	3	4	5	0
Skyltar / vägvisare längs leder.....	1	2	3	4	5	0
Informationstavlor om Fulufjället.....	1	2	3	4	5	0

B2. Vad anser du om kvaliteten på stugor, leder, spänger etc. som finns i Fulufjället. Visa vad du tycker genom att markera det alternativ som passar dig bäst.

(Ringa in en siffra för varje påstående)

	Mycket dåligt	Dålig	Acceptabel	Bra	Mycket bra	Vet ej
Övernattningsstugor.....	1	2	3	4	5	0
Vindskydd / raststugor	1	2	3	4	5	0
Markerade leder	1	2	3	4	5	0
Spänger	1	2	3	4	5	0
Broar	1	2	3	4	5	0
Soptunnor	1	2	3	4	5	0
Skyltar / vägvisare längs leder.....	1	2	3	4	5	0
Informationstavlor om Fulufjället.....	1	2	3	4	5	0

B3. Anser du att slitage, nedskräpning och buller är ett problem i Fulufjället?

(Ringa in ett alternativ för varje attribut)

	Nej, inte alls	Nej, inte mycket	Ja, något	Ja, mycket
Slitage (längs stigar, på rastplatser etc.)	1	2	3	4
Nedskräpning	1	2	3	4
Buller	1	2	3	4

B4. Under din vistelse i Fulufjället, läste du någon av de stora skyltarna (med karta, bilder, beskrivning mm) som står vid "entréerna" till nationalparken?

☐ Nej

☐ Ja

→ Hur mycket anser du att skyltarna berikade din vistelse i Fulufjället?

☐ Inte alls

☐ Något

☐ Ganska mycket

☐ Mycket

B5. Under din vistelse i Fulufjället, besökte du naturum (utställningen) beläget vid serveringen och starten av leden till Njupeskärs vattenfall?

☐ Nej

☐ Ja

→ Hur mycket anser du att besöket i naturum berikade din vistelse i Fulufjället?

☐ Inte alls

☐ Något

☐ Ganska mycket

☐ Mycket

B6. Under din vistelse i Fulufjället, läste du någon av informationstavlorna längs vandringsleden till Njupeskräsen?

☐ Nej

☐ Ja

→

Hur mycket anser du att informationstavlorna berikade din vistelse i Fulufjället?

☐ Inte alls

☐ Något

☐ Ganska mycket

☐ Mycket

B7. Före eller under din vistelse i Fulufjället, läste du Naturvårdsverkets informationsfolder om Fulufjället?

☐ Nej

☐ Ja

→

Hur mycket anser du att informationsfoldern berikade din vistelse i Fulufjället?

☐ Inte alls

☐ Något

☐ Ganska mycket

☐ Mycket

B8. Besökte du utsiktsplatsen längs vägen från Särna till Fulufjället? (Från platsen har man utsikt över Fulufjället och det finns information om nationalparken)

☐ Nej

☐ Ja

→

Hur mycket anser du att utsiktsplatsen berikade din vistelse i Fulufjället?

☐ Inte alls

☐ Något

☐ Ganska mycket

☐ Mycket

C. Nu följer några frågor om dina upplevelser under besöket i Fulufjället

C1. Anser du att besöket i Fulufjället gav dig upplevelser av följande?

(Ringa in ett alternativ för varje attribut)

	Nej, inte alls	Nej, inte mycket	Ja, något	Ja, mycket
Stillhet.....	1	2	3	4
Orörd och ren natur	1	2	3	4
Avskildhet från främmande människor	1	2	3	4
Storslagenhet.....	1	2	3	4
Vildmark.....	1	2	3	4
Utmaning.....	1	2	3	4
Risktagande	1	2	3	4
Avkoppling	1	2	3	4

C2. Kunde du hämta kraft genom att vistas i Fulufjället?

☐ Nej, inte alls ☐ Nej, knappast ☐ Ja, något ☐ Ja, ganska mycket ☐ Ja, mycket

C3. Kunde du uppleva vördnad för naturen när du vistades i Fulufjället?

☐ Nej, inte alls ☐ Nej, knappast ☐ Ja, något ☐ Ja, ganska mycket ☐ Ja, mycket

C4. Kunde du uppleva människans litenhet och naturens mäktighet när du vistades i Fulufjället?

☐ Nej, inte alls ☐ Nej, knappast ☐ Ja, något ☐ Ja, ganska mycket ☐ Ja, mycket

C5. Hur viktigt är det att naturen i Fulufjället så långt som möjligt bevaras opåverkad av människan?

☐ Inte alls viktigt ☐ Något viktigt ☐ Ganska viktigt ☐ Viktigt ☐ Mycket viktigt

D. Nu några frågor om dina upplevelser i samband med eventuellt besök vid Njupeskärs vattenfall.

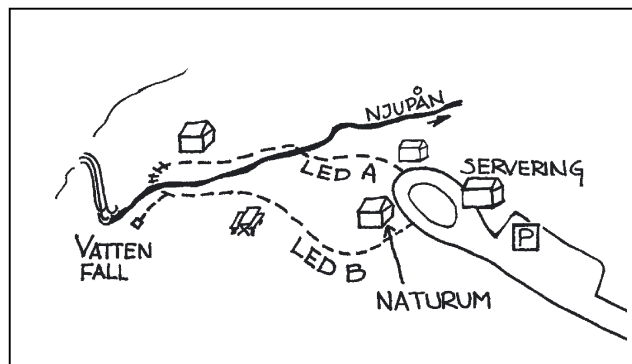
D1. Under ditt besök i Fulufjället, besökte du Njupeskärs vattenfall?

☐ Ja
☐ Nej → Gå till fråga E1

D2. Här bredvid ser du en skiss över stigarna som leder fram till Njupeskärs vattenfall från bilparkeringen. Hur vandrade du till och från fallet?

(Markera med ett kryss)

- ☐ Jag vandrade led A fram och åter
- ☐ Jag vandrade led B fram och åter
- ☐ Jag vandrade led A till fallet och led B åter till parkeringen
- ☐ Jag vandrade led B till fallet och led A åter till parkeringen
- ☐ Jag vandrade på annat sätt



D3. Totalt sett, vilket omdöme ger du vandringen till och från Njupeskärs vattenfall och vistelsen vid själva fallet?

- ☐ Mycket dåligt
- ☐ Dåligt, det mesta kunde ha varit bättre
- ☐ Ganska bra, men mycket kunde ha varit bättre
- ☐ Bra, men en del saker kunde ha varit bättre
- ☐ Mycket bra, endast några få saker kunde ha varit bättre
- ☐ Helt perfekt

D4. Ungefär, hur många andra personer såg du sammantaget under vandringen till och från Njupeskärs vattenfall och vistelsen vid själva fallet?

(Räkna inte in eventuella personer i ditt sällskap)

- ☐ Inga
- ☐ 1 - 10
- ☐ 11 - 50
- ☐ 51 - 100
- ☐ 101 - 150
- ☐ Mer än 150

D5. Såg du fler eller färre andra personer än du väntat dig under vandringen till och från Njupeskärs vattenfall och vistelsen vid själva fallet?

(Markera med ett kryss)

- ☐ Många fler
- ☐ Något fler
- ☐ Ungefär så många som jag väntat mig
- ☐ Något färre
- ☐ Mycket färre

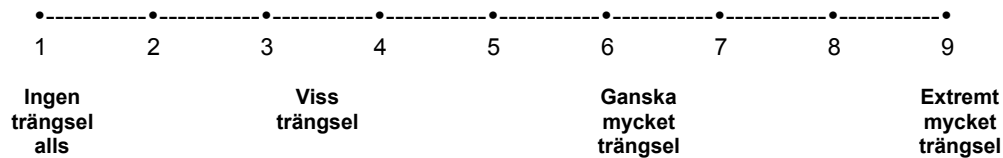
D6. Ungefär, hur många andra personer skulle du föredra att se under vandringen till och från Njupeskärs vattenfall och vistelsen vid själva fallet? (Räkna inte in eventuella personer i ditt sällskap)

(Markera med ett kryss)

- ☐ Inga
- ☐ 1 - 10
- ☐ 11 - 50
- ☐ 51 - 100
- ☐ 101 - 150
- ☐ Mer än 150

D7a. Upplevde du någon "trängsel" i samband med vandringen till och från Njupeskärs vattenfall och vistelsen vid själva fallet?

(Markera med ett kryss på skalan)



D7b. Om du upplevde "trängsel", var någonstans var det?

(Kryssa ett eller flera alternativ)

- ☐ Under vandringen till och från fallet
- ☐ På trärampen upp mot vattenfallet
- ☐ Vid området framme vid vattenfallet (utanför trärampen)
- ☐ Vid bilparkeringen

E. Nu några frågor kring ditt intresse för Fulufjället mer generellt och turismen i området.

E1. Hur många gånger har du besökt Fulufjället de senaste fem åren?

Sommar (juni – augusti): _____ gånger

Höst (september – november): _____ gånger

Vinter (december – mars): _____ gånger

Vår (april – maj): _____ gånger

E2. Skulle besöket i Fulufjället ha varit mer intressant för dig om du hade fått möjlighet att uppleva rovdjur (t.ex. björn och lodjur) på olika sätt?

	Ja, mycket	Ja, något	Nej, inte alls
Bildvisning om rovdjur:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Se spår rovdjur:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Uppleva rovdjur i verkligheten:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

E3. Hur viktiga var nedanstående faktorer för dig när du valde att besöka Fulufjället?

(Ringa in en siffra för varje påstående)

	Inte alls viktigt		Viktigt		Mycket viktigt	Ingen åsikt
Att uppleva vacker natur.....	1	2	3	4	5	0
Att området ligger i närheten av min bostadsort.....	1	2	3	4	5	0
Att det är bra kommunikationer till området	1	2	3	4	5	0
Att jag har vänner som bor i närheten av Fulufjället	1	2	3	4	5	0
Att man möter många intressanta människor.....	1	2	3	4	5	0
Att området är unikt och saknar motstycke	1	2	3	4	5	0
Att vädret är bra	1	2	3	4	5	0
Att området inte är nedskräpat.....	1	2	3	4	5	0
Att området är familjevänligt.....	1	2	3	4	5	0
Att man slipper trängas med andra.....	1	2	3	4	5	0
Att man upplever lugn och ro	1	2	3	4	5	0
Att det finns bra restauranger.....	1	2	3	4	5	0
Att det finns sjöar och vattendrag.....	1	2	3	4	5	0
Att det finns möjlighet till fiske	1	2	3	4	5	0
Att det finns bra boende	1	2	3	4	5	0
Att det finns markerade leder	1	2	3	4	5	0
Att det finns fjällstugor	1	2	3	4	5	0
Att området är en nationalpark.....	1	2	3	4	5	0
Att uppleva något som är opåverkat av människan.....	1	2	3	4	5	0
Att uppleva vildmark	1	2	3	4	5	0

E4. Vad anser du om att utveckla turismen inom och i området runt Fulufjället?

(Ringa in en siffra för varje alternativ)

	Mycket negativt	Negativt	Neutral	Positivt	Mycket Positivt
<u>Inom</u> området för nationalparken	-2	-1	0	1	2
I området <u>runt</u> nationalparken	-2	-1	0	1	2

E5. Vad anser du bör göras för att utveckla turismen inom och i området runt Fulufjället?

(Ringa in en siffra för varje påstående)

	Inte alls viktigt		Viktigt		Mycket viktigt
Större utbud av aktiviteter.....	1	2	3	4	5
Ökat utbud av boende	1	2	3	4	5
Högre standard på boende.....	1	2	3	4	5
Mer barnanpassade aktiviteter	1	2	3	4	5
Miljöanpassning av boende och aktiviteter	1	2	3	4	5
Erbjuda guidning till djur och natur- attraktioner	1	2	3	4	5
Erbjuda guidning till kulturattraktioner.....	1	2	3	4	5
Mer kontakter med lokalbefolkningen	1	2	3	4	5
Ökat utbud av lokala maträtter	1	2	3	4	5
Bättre vägar.....	1	2	3	4	5
Fler campingplatser	1	2	3	4	5

Annat, ange: _____

E6. Man skulle kunna införa en parkeringsavgift för bilar på parkeringen till Njupekärs vattenfall. Intäkterna från parkeringen skulle då kunna användas för underhåll av parkeringen, leder och spänger i området. Hur mycket skulle du (personligen) maximalt vara villig att betala i parkeringsavgift (kr/besök) innan du beslutar att inte alls besöka Njupekär?

Jag skulle vara beredd att betala maximalt _____ kr/besök

Om ditt svar är "0" kr, motivera varför: _____

F. Fulufjällets nationalpark inrättades hösten 2002 efter förslag från Naturvårdsverket. Ett viktigt motiv var att bevara Fulufjället i så opåverkat skick som möjligt. Nu följer några frågor om din syn på nationalparken och hur den eventuellt påverkat ditt resande.

F1. Kände du till att Fulufjället är nationalpark innan du besökte området?

- ☐ Nej
☐ Ja

F2. Påverkade förekomsten av en nationalpark ditt beslut att besöka Fulufjället?

- ☐ Nej
☐ Ja

→ **På vilket sätt påverkades ditt beslut?**

(Kryssa ett eller flera alternativ)

- ☐ Området blev mer attraktivt att besöka
☐ Området blev mindre attraktivt att besöka
☐ Nationalparken innebar att jag fick kännedom om Fulufjället
☐ Annat sätt, ange: _____

F3. Vad anser du om Fulufjällets nationalpark? Ta ställning till nedanstående påståenden.

(Ringa in en siffra för varje påstående)

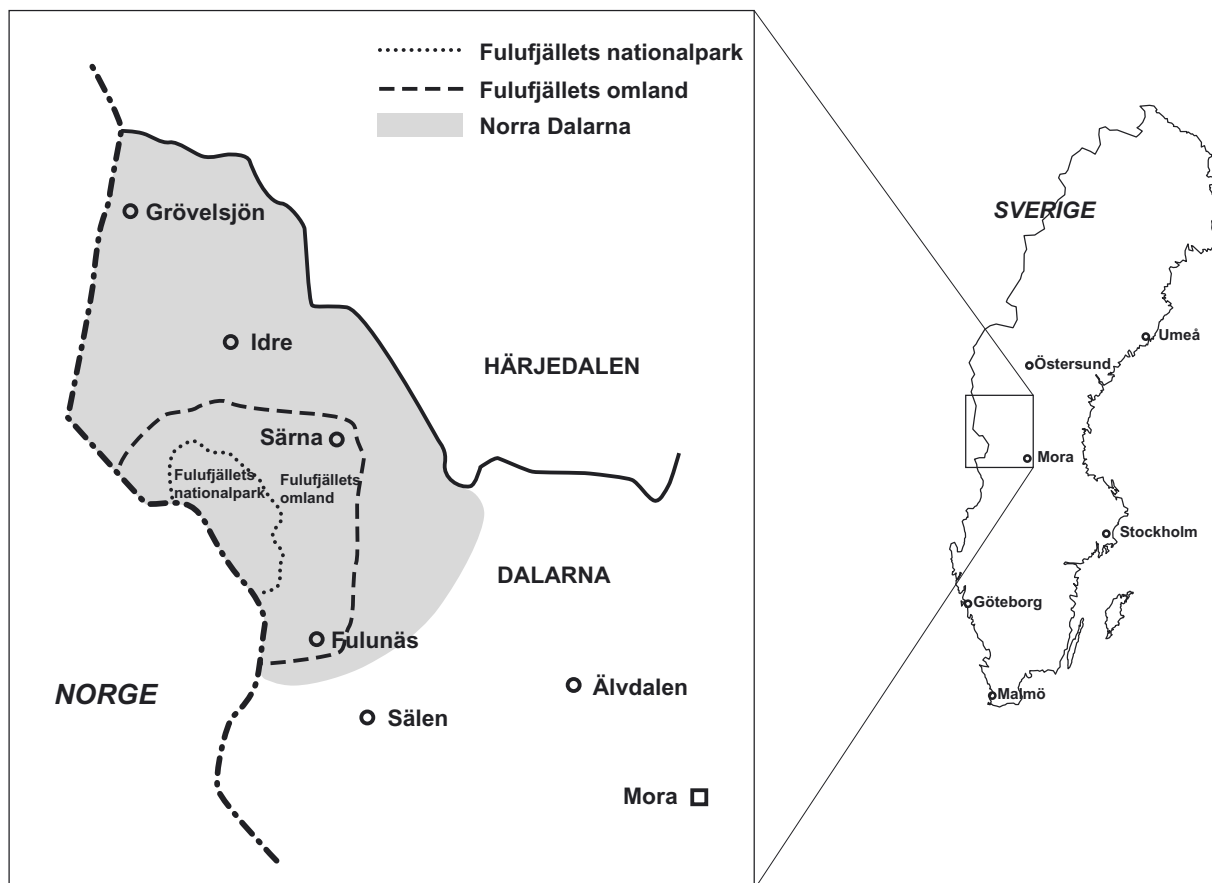
	Stämmer inte alls	Stämmer ganska dåligt	Varken stämmer eller inte stämmer	Stämmer ganska bra	Stämmer mycket bra
En nationalpark ökar Fulufjällets värde för besökarna..	1	2	3	4	5
En nationalpark ökar Fulufjällets värde för omgivande bygd.	1	2	3	4	5
En nationalpark i Fulufjället inskränker människans användning i onödan.. ..	1	2	3	4	5
En nationalpark bidrar till att bevara den biologiska mångfalden i Fulufjället.....	1	2	3	4	5

F4a. Här nedan finns en karta över norra Dalarna, det landskap i Sverige där Fulufjället är beläget. Följande områden är speciellt markerade på kartan:

Fulufjällets nationalpark – prickad linje

Fulufjällets omland (området närmast nationalparken) – streckad linje

Norra Dalarna (området runt Särna-Idre-Grövelsjön) – skuggat område



Tänk nu på hela din resa under vilken du besökte Fulufjället, d.v.s. resan från det att du lämnade bostaden tills du kom tillbaka hem igen. Ange nedan hur lång tid du vistades i respektive område:

(Om resan eller vistelsen du gjorde var kortare än en hel dag, ange då istället antal timmar)

Fulufjällets nationalpark: _____ dagar (_____ timmar)

Fulufjällets omland (utanför nationalparken): _____ dagar (_____ timmar)

Norra Dalarna (utanför Fulufjällets omland och nationalpark): _____ dagar (_____ timmar)

Övriga Sverige (utanför norra Dalarna): _____ dagar (_____ timmar)

F4b. Antag nu att Fulufjället inte hade varit nationalpark sommaren 2003. Hade det påverkat din resa eller den tid du vistades i norra Dalarna, Fulufjällets omland eller nationalpark?

☐ Nej

☐ Ja, resan hade aldrig genomförts

☐ Ja, resan hade blivit annorlunda →

Ange nedan hur länge du skulle ha vistats i respektive område om Fulufjället inte hade varit nationalpark. (Om din vistelse skulle bli kortare än en dag, ange då istället antal timmar)



Området för nuvarande Fulufjällets nationalpark: _____ dagar (_____ timmar)

Fulufjällets omland (utanför nuvarande nationalpark): _____ dagar (_____ timmar)

Norra Dalarna (utanför Fulufjällets omland och nuvarande nationalpark): _____ dagar (_____ timmar)

Övriga Sverige (utanför norra Dalarna): _____ dagar (_____ timmar)

G. Nu några frågor om olika utgifter i samband med ditt besök i Fulufjället. Frågorna gäller hela din resa, från det du lämnade bostaden tills du kom hem igen.

G1. Tänk nu på de olika utgifter du hade under resan samt under besöket i Fulufjället. Ange beloppen i tabellen på nästa sida för respektive område.

När du svarar på frågan, tänk på följande:

- Om ni var flera personer i sällskap, räkna då ut din del av utgifterna
- Inkludera även utgifter som någon annan (släkting, arbetsgivare etc.) haft för din räkning
- Ange utgifterna för det område där de betalades
- Inkludera eventuella utgifter som uppkom innan resan påbörjades eller efter resan avslutades (t.ex. biljetter, livsmedel)
- Om du reste med en organiserad paketresa, ange då det sammanlagda beloppet längst ner i tabellen utöver andra utgifter du haft
- Lämna "blankt" på de rader där du inte haft några utgifter

	Fulufjällets nationalpark	Fulufjällets omland (utanför nationalparken)	Norra Dalarna (utanför Fulufjällets omland)	Övriga Sverige (utanför norra Dalarna)
Boende	_____ kr	_____ kr	_____ kr	_____ kr
Mat (livsmedel, kiosk etc.)	_____ kr	_____ kr	_____ kr	_____ kr
Restauranger, gatukök etc.	_____ kr	_____ kr	_____ kr	_____ kr
Shopping (utöver mat)	_____ kr	_____ kr	_____ kr	_____ kr
Aktiviteter	_____ kr	_____ kr	_____ kr	_____ kr
Transporter: → <i>Bilhyra</i>	_____ kr	_____ kr	_____ kr	_____ kr
Transporter: → <i>Drivmedel för bil</i>	_____ kr	_____ kr	_____ kr	_____ kr
Transporter: → <i>Bussbiljetter</i>	_____ kr	_____ kr	_____ kr	_____ kr
Transporter: → <i>Tågbiljetter</i>	_____ kr	_____ kr	_____ kr	_____ kr
Transporter: → <i>Flygbiljetter</i>	_____ kr	_____ kr	_____ kr	_____ kr
Transporter: → <i>Annan transport</i>	_____ kr	_____ kr	_____ kr	_____ kr
Övrigt	_____ kr	_____ kr	_____ kr	_____ kr
Organiserad paketresa	Sammanlagt _____ kr			

G2. Inom vilket område är du permanent bosatt?

(Kryssa ett alternativ)

- ☐ Fulufjällets omland
- ☐ Norra Dalarna (utanför Fulufjällets omland)
- ☐ Sverige (utanför norra Dalarna)
- ☐ Utanför Sverige

H. Nu några allmänna frågor om svenska fjällen – hur du anser att de bäst ska förvaltas, dina känslor för fjällen och dess miljö.

H1. Vilken är din uppfattning om förvaltning och skötsel av fjällen? Visa vad du tycker genom att markera det alternativ som passar dig bäst.

(Ringa in en siffra för varje påstående)

	Mycket negativt	Negativt	Neutral	Positivt	Mycket Positivt
Att det finns iordninggjorda lägerplatser med toalett, soptunnor, eldstad m.m.	-2	-1	0	1	2
Att det finns fjällstationer	-2	-1	0	1	2
Att det finns markerade leder	-2	-1	0	1	2
Att kunna köra in med bil i ett attraktivt område för att göra dagsturer.....	-2	-1	0	1	2
Att kunna förflytta sig flera dygn utan att se hus, vägar m.m.	-2	-1	0	1	2
Att bara se ett fåtal andra besökare (förutom eventuella turkamrater).....	-2	-1	0	1	2
Att området hyser sällsynta djur och växter.....	-2	-1	0	1	2
Att området har en vildmarkskärna med mer än 5 kilometer till närmaste hus, väg, kalhygge, damm, telemast etc.	-2	-1	0	1	2
Att området är lite påverkat av människan	-2	-1	0	1	2

H2. Nedan följer ett antal påståenden som beskriver olika känslor man kan ha för svenska fjällen. Markera de alternativ som stämmer bäst in på dig.

(Ringa in en siffra för varje påstående)

	Helt oenig	Delvis oenig	Neutral	Delvis enig	Helt enig
Att besöka svenska fjällen är något jag ofta tänker på	1	2	3	4	5
Jag får en stor tillfredsställelse av att besöka svenska fjällen	1	2	3	4	5
Att besöka svenska fjällen är viktigt för min identitet.....	1	2	3	4	5

H3. Tag ställning till nedanstående påståenden.

(Ringa in ett alternativ för varje påstående)

	Instämmer helt	Instämmer delvis	Instämmer inte alls
Naturen har ett värde genom att vara nyttig för människan	1	2	3
Naturen har ett eget värde oavsett om den är nyttig för människan eller ej	1	2	3

I. Till sist några frågor om din bakgrund. I redovisningen av undersökningen framgår aldrig vad enskilda personer har svarat.

I1. Vilket år är du född? _____

I2. Jag är: ☐ Man ☐ Kvinna

I3. Hur många personer bor i ditt hushåll?

_____ barn 0 – 12 år
_____ ungdomar 13-18 år
_____ vuxna

I4. Bor du i...

- ☐ Storstad med fler än 200 000 invånare (inklusive förorter)
- ☐ Stad med 20 001 – 200 000 invånare
- ☐ Stad / samhälle med 2 001 – 20 000 invånare
- ☐ Tätort / by med 2 000 invånare eller färre
- ☐ På landsbygden

I5. Vilket är din högsta utbildning?

(Markera med ett kryss)

- ☐ Grundskola
- ☐ Gymnasium
- ☐ Folkhögskola
- ☐ Universitet / högskola upp till 120 poäng
- ☐ Universitet / högskola över 120 poäng
- ☐ Annan utbildning, ange: _____

I6. Vilken är din nuvarande sysselsättning?

(Kryssa det huvudsakliga alternativet)

- | | |
|---|---|
| <input type="checkbox"/> Yrkesarbetande | <input type="checkbox"/> Föräldraledig |
| <input type="checkbox"/> Studerande | <input type="checkbox"/> Sjukskriven |
| <input type="checkbox"/> Pensionär | <input type="checkbox"/> Annat, ange: _____ |
| <input type="checkbox"/> Arbetslös | |

I7. Ungefär hur stor var den sammanlagda inkomsten i Ditt hushåll under år 2000 efter skatt?

- ☐ Upp till 100 000 kr
☐ Mellan 100 000 och 200 000 kr
☐ Mellan 200 000 och 300 000 kr
☐ Mellan 300 000 och 400 000 kr
☐ Mellan 400 000 och 500 000 kr
☐ Över 500 000 kr

J. Avslutningsvis undrar vi om det finns något i Fulufjällets nationalpark och dess omgivningar som du anser kan förbättras.

J1. Finns det något i Fulufjällets nationalpark som du tycker skulle behöva förbättras?

- ☐ Nej
☐ Ja, nämligen _____

J2. Finns det något i Fulufjällets omgivningar som du tycker skulle behöva förbättras?

- ☐ Nej
☐ Ja, nämligen _____

***Ett stort tack för din hjälp!
Posta enkäten i det portofria svarskuvertet.***