INDICATORS TO MONITOR VISITORS’ STRATEGY IN FULUFJÄLLET NATIONAL PARKS

INDIKATORER FÖR BESÖKSSTRATEGI FULUFJÄLLETS NATIONALPARKER

Report

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1. Introduction

Indicators are used in everyday life, in science and in policy making organisations to monitor phenomena, policies, or the state of a system and alert on changes in it. In essence, indicators are variables expressed either in a numerical, quantitative form, or in a textual, qualitative one and these variables carry information and meaning beyond its pure value (Ceron and Dubois 2003). Thus, they are more than simple statistics, they are an interpreted version of that value to allow humans understand and simplify the phenomenon under examination (UNCSD, 2007).

Indicators have been used extensively in various domains including tourism. Most often they are used to monitor the state of the environment, economy or societal factors and thus they describe a situation; on weaknesses and thus alert on shortcomings and problems; on performance of policies and strategies; and thus serve as performance assessment tools (UNCSD, 2007).

There is a noticeable tradition within national parks management to develop and use indicators, for various purposes. Most often, indicators in national parks and protected areas are used to monitor visitors, their flows and their impacts on the natural environment, as well as their satisfaction. In other cases, they are used to measure the efficiency of management strategies, while a third direction aims at monitoring the implementation of strategies.

The present project “Indicators for Visitors’ Strategy in Fulufjället National Parks” (Indikatorer för besöksstrategi Fulufjällets nationalparker) came as a complement to Interreg project “Gemensam besöksförvaltning av Fulufjällets Nationalparker” to cover the need for monitoring the efficiency of Fulufjället National Parks’ (FNP) Visitors’ Strategy (VS). Rather than monitoring the implementation of the strategy (and thus develop indicators as measurements of the different activities implementation) this work aims to develop indicators that could be used in the long-term to monitor the fulfilment of the goals set by the strategy.

Following, the method used to develop the indicators for FNP is described to clarify the delimitations of the approach and set the context for indicators definition. That is followed by the definition of indicators. The report closes with some suggestions on how to work with the proposed indicators in FNP.
2. Method

For the definition of indicators for FNP, the documents developed during the strategy project “Gemensam besöksförvaltning av Fulufjällets Nationalparker”, were meticulously reviewed. These included Visitors’ Strategy (VS) (Fulufjellets nasjonalpark, 2018a), Communication Strategy (CS) (Fulufjellets nasjonalpark, 2018b), and Gemensamma budskap för Fulufjällets nationalparker (2018). Furthermore, several cases for the development of indicators in nature protection areas from both Nordic countries and internationally were reviewed to set a framework for the development of the indicators. Among them, the Environmental Directorates' directions for visiting strategies (Miljödirektoratet, 2015), the Swedish Environmental Protection Agency's recommendations for protected areas (Kajala et al., 2007) as well as international experiences, such as, Cessford and Burns (2008), Eagles and McCool, (2002), Eagles et al. (2002), Fredman et al. (2012), Hockings et al. (2006), KITOMM (2017 a&b), Miller and Twining-Ward (2005), Rova, J. and von Sydow, A. (2011), Wardel and Moore (2004), were included.

The process was systematic following international recommendations for the definition of sustainability indicators as described following. There are several considerations one needs to address when developing indicators for tourism in protected areas and national parks. These include:

2.1 The indicators framework

Choosing and working with a consistent indicator framework is necessary in order to identify and organize the key elements coherently and link them to park management (Lockie et al. 2002; Hockings 1998, as cited in Tonge et al., 2005). Developing indicators based on coherent conceptual frameworks maximizes comprehensibility and usability of the results.

Domain-based, goals-based, sectoral based, issue-based, sectoral-based, causal frameworks or a combination of them have been identified by Waldron and Williams (2002). Here, a goal-based framework was deemed as most appropriate. This follows the definition of goals in the Visitor’s Strategy (VS) of FNP and thus indicators were defined based the definition and interpretation of these goals. This framework was supplemented with a domain-based framework to address the need for more emphasis on the environmental component of the park. This came as a suggestion during a meeting with key stakeholders in the area.
Indicators’ definition was based on the description of the goals as they stand in the VS document and the CS document for FNPs. VS and CM are self-refereed documents with emphasis placed on internal management and implementation actions. Rather than following this managerial approach, a broader interpretation of the goals was attempted, still within the context of the VS, to allow the definition of a comprehensive set of indicators to guide the monitoring and management of visitors in FNP. As subjective as this interpretation may be, it was necessary to calibrate it with the views of key stakeholders in the area. The preliminary list of indicators was sent to stakeholders and during an online meeting, they were able to discuss it, together with the approach followed, and express their thoughts. During that meeting a few more indicators were communicated, together with the need to link them to the recent project “Sårbarhetsvurdering av vegetasjon langs utvalgte stier i Fulufjellet nasjonalpark” regarding ecological vulnerability of fauna in FNPs and thus, maximise the connection between the two projects and safeguard that environmental pressures are included in a monitoring effort in FNP.

2.2. The functions of indicators (the type of indicators)

There are several types of indicators according to UNWTO (2004). For example, early warning indicators (such as number of visitors); pressures or stresses indicators which comprise measures on parameters which could result in the system’s stress (such as vulnerability issues); current state indicators provide information on the state of visitation and the national park (e.g. % of visitors who experienced nature undisturbed of crowds). Measures of visitors’ impacts on social and natural environment consist of indicators measuring the impact on the natural and sociocultural resources (e.g. % of residents who believe that visitors to FNP have a positive impact on the community as a whole). Finally, measures of management effect evaluate the effectiveness of the efforts made and measure their results rather than only their existence. The emphasis here was on measures of management effect integrated with some early warning, current state and impacts which are also related to the goals set in VS in FNPs.

2.3. The number of indicators

The number of indicators is always an important consideration. Nevertheless, there is no absolute number of indicators to monitor visitor strategies in national parks and protected areas. Finding a balance between the need for a comprehensive list that captures all important issues, and the need for a manageable list for easiness of reference and use, is the key. More particularly, in goal-based frameworks there should be
enough indicators to capture the dimensions and important parameters to measure. This was the effort here and the list includes a total of around thirty indicators.

2.4. Data availability

Data availability is an important consideration in any indicator system to ensure its usability and contribution. This was central in this project. Information sources were considered in the definition of all indicators appearing in the list. Based on the VS and CS for FNP s, together with consultation with key stakeholders, two main groups of interest were identified: the visitors and the local actors (i.e. local community, including schools, and local business). Thus, indicators measurement would involve data collected from all the above groups. Data collection would involve visitors’ surveys, local community’s surveys as well as data and information collected in smaller more informal surveys with other actors.

2.5. Limitations

In any project, it is important to identify limitations. These clarify the endeavour and point to future needs. Limitations here derive from the limited character of the scope and of the resources of the project itself: this was a short-term (3 weeks) project with one involved researcher. The project was based on desk research with limited participatory opportunities from stakeholders. Several dimensions of a comprehensive monitoring tool were not able to be included here. For example, consultation with stakeholders, integration of data collection, interpretation of the indicators results, pilot studies etc. That would require a long-term comprehensive project, with multiple researchers with diverse expertise, on developing a monitoring system for FNP.

One major pitfall in projects like that is subjectivity entering the selection of indicators. According to Bossel (1999), subjectivity may be compensated by making the process as systematic, scientific and participatory as possible. The process followed here was systematic and scientific in clearly following mandates from international scientific literature and a coherent framework. However, extensive participatory methods were not possible within the scope of this project. Instead, a limited consultancy with few key stakeholders was included.
Additionally, the researcher was familiar from with FNP and has been involved in another research project in the area while has participated in a workshop during the formulation stage of VS for the park earlier in this project. This facilitated the indicator’s definition and their grounding on a realistic basis.

3. Indicators definition for FNPs

Following, the indicators for FNPs are presented. First, each goal, as defined on VS and CS for FNP, is introduced and explained, and then, indicators are identified for the respective goal.

Goal 1

**Värna skyddsavrda miljöer:** Öka medvetenheten om skydd av utsatta områden i Fulufjället, både hos besökare och hos aktörer som har verksamhet i området.

*Safeguard nature conservation: Raise awareness of the protection of vulnerable areas in Fulufjället, for both visitors and stakeholders in the area.*

This goal aims at highlighting the importance of nature conservation in FNPs and reconcile it with visitation in the park. Raising environmental awareness on the role of NFPs in nature protection, is seen as a major goal in the strategy. Directing visitors’ flows to areas, which are not protection areas of vulnerable species, is seen as important in this direction. This should be a part of designing experiences and tracks in the park as well as in the communication strategy.

Creating ambassadors for FNP is another strategic direction identified in the VS. Schools, local businesses and local residents are important actors to disseminate FNPs’ natural and cultural values so it becomes essential to develop partnerships with them, involve them in the development of information programmes and activities. Also develop an annual conference to communicate new knowledge about FNPs.

Additionally, issues related to ecological pressures as revealed by an earlier vulnerability assessment performed in the FNPs, was integrated after consultation with stakeholders to ensure that the importance of nature protection is included in indicators’ list.
Nature protection indicators

1.1. % of visitors who visited the designated focus areas
   - Furthermore, numbers (and %) can be measured for each focus area to have a good overview of visitors’ flow in the park

1.2. % of visitors who visited other than the designated focus areas

1.3. % of visitors who have been informed about FNP role in nature conservation before or during their visit
   - here there is possibility to differentiate between before/during/after

1.4. Sources of awareness among visitors (e.g. FNP website, other internet sources, naturum, tour guides)
   - this indicator relates to Goal 2 as well

1.5. % of school pupils of the area having visited FNP

1.6. % of school pupils being involved in projects in FNP

1.7. % of local business active in projects/partnerships with FNP

1.8. Vulnerability of parks’ fauna on hiking trails based on the assessment by NINA project

Goal 2

**Skapa värde:** Öka antal besökare som stannar längre och bidra till tillväxt och en positiv utveckling för det lokala näringslivet.

**Create value:** Increase the number of visitors staying longer and contribute to growth and positive development for the local business.

This goal emphasises the importance of FNP as an agent of development and economic growth for the local community. Key in this is the increase in visitors’ length of staying rather than an increase in the number of visitors.
The more specific objectives communicated in the VS place a lot of emphasis on the communication and marketing plan of the Park. Issues of effectiveness of marketing, collaborative character of the communication plan, certification of companies operating in the park as well as the need for a common message conveyed by both sides (Norwegian and Swedish) of the park are mentioned.

It is considered though essential, in a monitoring tool comprising of indicators, that more emphasis is placed on the economic contribution of visitors in the Park to the local community rather than the administration issues and the activities towards the implementation of the strategy.

Furthermore, issues of communication of environmental and cultural values of FNP as well as of collaboration with local actors are covered in Goal 1 (see indicators above).

**Contribution to local economy indicators**

2.1. Annual average number of nights stayed in the area

2.2. Annual number of visitors in the Park

2.3. % of visitors who used some kind of local service (e.g. restaurant, café, accommodation, guided tours) inside or outside the park

2.4. Average annual total expenditure per tourist

2.5. % of companies operating in the park which are certified

2.6. This relates also to Goal 1 (although certification was communicated in Goal 2 it relates to the awareness about natural and cultural values). Could serve as an indicator for both

2.7. % of residents who believe that visitors to FNP have a positive impact on the local economy

2.8. % of residents who believe that visitors to FNP have a positive impact on the community as a whole
Goal 3

Besökare: Ge besökarna en bra upplevelse, både i själva vistelsen, men även i kommunikation, känsla, etc.

Visitors: Offer visitors a good experience, both in their stay, but also in communication, feeling, etc.

This Goal, places emphasis on visitors ‘experience in the park. Experience is explained in the strategy in relation to branding strategy, information provision to visitors and the common message of FNPs. As already discussed, instead of emphasising implementation issues of the strategy, the focus is on visitors’ experience in relation to facilities, infrastructure and services, but also in terms of sound communication and branding which creates the right expectations to visitors.

Experiential indicators

(a) Responsible marketing and information dissemination to create the right expectations

3.1 % of visitors who believe that their experience matches the expectations created by the marketing/branding material and information

3.2 % of visitors who were satisfied/very satisfied with the opportunities offered to learn more about FNP’s natural environment
   ▪ Contributes also to Goal 1 about raising awareness

3.3 % of visitors who were satisfied/very satisfied with the opportunities offered to learn more about FNP’s cultural environment
   ▪ Contributes also to Goal 1 about raising awareness

(b) Quality of the experience (including services and infrastructure)

3.4 % of visitors who experienced nature undisturbed of crowds

3.5 % of visitors who believe they had an authentic experience in FNP
3.6 % of visitors who were satisfied/very satisfied with the opportunities offered to see wildlife in the park

3.7 % of visitors who were satisfied/very satisfied with the range of activities offered in FNPs

3.8 % of visitors who were satisfied/very satisfied with the services offered in the park

3.9 % of visitors who were satisfied/very satisfied with the services offered in the surrounding area outside the park

3.10 % of visitors who were satisfied/very satisfied with the quality of the infrastructure available in the park (signage, trails, toilets, parking)

3.11 % of visitors who were satisfied/very satisfied with the quality of the infrastructure outside the park (transportation, road network, road signs etc)

3.12 % of visitors who would recommend to friends and relatives to visit FNP as a result of their experience

**Other issues to monitor**

Visitors profiles

- Origin (country/city for domestic)
- Age
- Repeat visitation
- Travel group (alone, couple family etc)
- Accommodation area and type

3. Working with indicators in FNP

3.1. Data collection and measurement of indicators

Data sources and data availability was an important consideration during the definition stage of the indicators. At a next stage, when working with indicators, data collection is equally important. As illustrated earlier, some preliminary data sources were identified, that being a visitor survey, a residents
and local stakeholders’ survey, vulnerability assessment of fauna as evident in NINA project report by Hagen and Wold (2017), as well as other data from management authorities of FNPs or other actors and partners in the area. It is also important that a coordinator is appointed for the monitoring. Management authorities of FNPs should act as a hub for the data collection and a coordinator for the measurement of indicators and the dissemination of the results.

Measurement of indicators is recommended on an annual basis. However, that depends on the resources available. A main data source is that of visitors’ survey. It is suggested that this is annual and that it is complementary to the big visitors’ survey contacted every a few years in the area. An annual survey would allow for the smooth monitoring of the FNPs and the early detection and alert on possible problems. The survey could be easily constructed following the indicators and the survey examples illustrated by Kajala et al, (2007) in the manual for monitoring visitors in protected areas in Nordic countries. This manual offers could examples of visitor surveys and could be used as a base for a more customized questionnaire for FNPs.

3.2. Interpretation of indicators

Interpreting the results of indicators’ measurement should be an indispensable part of any monitoring system. Once indicators are measured, a meaning should be attached to these measurements. What does, for example, the “x % of visitors who used some kind of local service (e.g. restaurant, café, accommodation, guided tours) inside or outside the park” means? Is it acceptable or not this x%? Indicators measurement are of limited help unless indicators are compared against a scoring system illustrative of acceptable level of progress and thus evaluate performance (Hemphill et al. 2004a: 735). That is very often in close relation to policy goals and strategies.

According to Hatry (1972 after Hemphill et al. 2004a) two are the most relevant ways to interpret results: comparisons over time to provide information on trends and progress made; and comparisons across similar areas. Comparisons over time can prove very useful: one way to evaluate results is to compare them to those of the previous year (or the previous monitoring period). This comparison would reveal trends and give an indication whether situation has worsened or improved. Regular annual measurement of indicators offers a good ground and allows for comparisons in time and thus the tracking of changes. Nevertheless, when a decrease or an increase regarding an indicator is noticed, one should be confident
to determine while this is an acceptable change or not. Therefore, besides comparisons across time or parks, a more comprehensible interpretation of the results would be of great value.

There are several methods to proceed with indicators’ results interpretation. Benchmarking, targets, and thresholds, or carrying capacity measures, are among them (Twining-Ward, 2002). More recently, the limits of acceptable change (LAC) framework is another alternative which has shifted interest from an objective, numerical value, to the need for more flexible, adaptive approaches for specific contexts and judgements made. Instead for a single, numerical value, which is often difficult to determine in scientific manner, standards for LAC are defined with participatory methods based on value judgements by stakeholders. Although not part of this project, it would worth investigating in the future and integrate a scoring system for indicators’ interpretation based on adaptive approaches such as LAC.

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