

## Summary

**This is an English summary of the Swedish report: *Digital technique for nature information and nature interpretation – overview and recommendations*<sup>1</sup>. The report is written by the Swedish Centre for Nature Interpretation.**

The Swedish Centre for Nature Interpretation (SCNI) has been commissioned by the Swedish Environmental Protection Agency to contribute supporting data for municipalities and county administrative boards, for their overview and as a basis for decision-making, on how new technology can provide access to nature – particularly protected nature areas – through nature interpretation. The result of the assignment is presented in this report. It provides an overview of new technology used for non-personal nature interpretation, with examples of some larger pre-existing measures, and presents examples of good practice. It includes the needs and wishes of individual visitors in nature, companies and other actors within nature tourism for information on transport to the area, activities, food and accommodation – before, during and after visits.

Studies show that currently there is a great interest in outdoor activities. Swedes appreciate outdoor life and the opportunity to experience nature, relax, being surrounded by silence and participating in physical activity. The increasingly urbanised Swedish visitors in nature generally requires information that saves time and energy in the planning stages, and provides a sense of increased security and comfort. To summarise, information is required for the following stages of a visit: familiarisation, navigation, on-site orientation and in-depth information, and extending the visit. For people whose functional abilities vary, the information available prior to the visit may determine whether the visit takes place or not. Future visitors will place greater demands on ease of access, quality and unique experiences. Those who arrange nature tourism need information about where they can conduct their activities, and how to satisfy their customers.

To a certain extent, digital nature interpretation and information can do the same things as its analogue equivalent. It can also contribute with new solutions to increase accessibility and expand the way nature is experienced. The content is easily updated, and the technology can contribute to increased interaction. Potential negative aspects accompanying digital nature interpretation include theft, technical difficulties, the risk that the solutions will become rapidly outdated, and the exclusion of visitor groups without access to, interest in or experience with the technology. Today, most visitors in nature look for information online. Social media will no doubt have an increasing role in information searches. However, it is worth noting that certain visitors would rather disconnect from the digital world entirely during their visit.

The report presents examples of digital solutions that meet user needs. Some facilitate and attract visitors at national, local and regional level. Others show how digital technology can increase interest in discovering nature through observations in the field, referred to as ‘citizen science’. We also explain how providing the opportunities for games and activities such as *geocaching* can attract visitors from the borderland of digital and location-based challenges. We conclude by highlighting some examples of augmented reality – how to use screens to implement completely new elements or settings linked to a site.

The digital application *Naturkartan* – which includes trail maps for Sweden – has been evaluated and the results are presented in this report. Generally, the municipalities and county administrative boards who have chosen to use the digital platform as a source of nature information appreciate *Naturkartan*.

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<sup>1</sup> The Swedish title of the report is *Digital teknik för naturinformation och naturvägledning – översikt och rekommendationer*. The report can be found at <https://www.naturvardsverket.se/upload/miljoarbete-i-samhallet/miljoarbete-i-sverige/regeringsuppdrag/2017/ru-utv-fl-dig-info-bil1-rapp-dig-teknik.pdf.pdf>

Questionnaire results have also shown that on the whole, the visitors in nature who obtain information from the platform are satisfied. There have been requests for several new functions, and a number will be implemented according to the company behind Naturkartan. Naturkartan has been compared with other platform solutions. *Basetool*, used in the visitor industry in southern and western Sweden, is one. The Basetool platform offers a closer link to local food and accommodation services, however its links to outdoor activities and areas of nature are not as clear as Naturkartan.

In parallel with that companies have created platform solutions for communication about areas of nature as above, actors within public sector nature conservation have worked to coordinate and develop tools to digitally provide nature information. One such example is the *Skyddad natur*, which is map tool developed by the Swedish Environmental Protection Agency. Another example is *Din natur*, which is a proposal for a basic online information channel for protected nature aimed at the public, and created by the county administrative boards' IT unit. A further example includes the website for Sweden's national parks.

The discussion about and the ambitions to create a national online nature portal have been ongoing for several years. There have also been attempts to implement ideas. A summary of the work with a follow-up of current demands is presented in the report. There is strong support from county administrative boards for a national platform for protected nature. Visitors in nature have also expressed an interest in such a platform, ideally for all areas of nature worth visiting. The possibilities and challenges of a national portal are being discussed in the report.

Data are needed to create and update digital platforms, such data about trail routes, boundaries for protected nature, the location of facilities and information about nature. Currently, municipalities and county administrative boards hold the largest amounts of data. The Swedish Environmental Protection Agency is working to publish this as *open data*, which is open to the public and can be used by individuals or by other actors used to develop and update digital nature platforms for the public, for either non-profit or commercial purposes. Meanwhile, increasing amounts of data are being collected by the public. Thus, there is a demand for coordinating data from several actors in one combined database.

Examples of how actors behind digital platforms assure the quality of their data are presented. It is important that owners of platforms that provide information about accommodation, guides and catering can assess which actors to promote. In the highlighted examples of solutions, agreements with local actors are important, however assessing the quality and engagement of local actors also plays an important role.

By monitoring and evaluating the digital platforms, it is possible to guarantee that the needs of visitors and nature tourism actors are met. Much of the information and nature interpretation that exists today, is never evaluated. Digital solutions provide a possibility to interact with users and receive direct feedback.

Development of digital nature interpretation and information efforts commonly take place in project form. Securing funding for continual maintenance and operation is more difficult.

The final chapter presents conclusions and uses them to provide advice and recommendations. They are aimed at the following groups:

1. All those who order or develop digital information about nature areas. A central advice to this group suggests spending time on making inventories and plans prior to choosing media and products. To this group it is also provided recommendations on how to create digital information, and the choice of map data.
2. The Swedish Environmental Protection Agency as a guiding and coordinating agency. Recommendations are given for the implementation of a national digital nature information

platform, and a group for national and regional coordination between tourism and outdoor activities, geodata coordination, support for nature interpretation in municipalities and counties, and geocaches in national parks.

3. Municipalities and county administrative boards. It includes recommendations for the basis of selecting collaboration partners and nature platforms in a municipality or county.