

SAIMAA GEOPARK DEVELOPMENT: PROTECTION AND USE PLAN FOR GEOSITES

2019

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Protection and use plan for Geosites

54 pages + 21 pages of appendices

2019

The author of the plan Sami Lehtinen



Image: Puumala municipality / Juha Markkanen

SUMMARY

Saimaa Geopark is located in the eastern part of Southern Finland. It comprises 65 geological sites and 53 cultural attractions. The total area of the Saimaa Geopark is just over 6,000 square kilometres. The park has a wide range of geological, natural and cultural sites. The area is dominated by the Suur-Saimaa lake area.

Geoparks are sustainably operated nature tourism destinations that provide possibilities for promoting vitality through an innovative tourism concept. Saimaa Geopark has applied for membership in the international UNESCO Global Geoparks Network. One of the prerequisites for membership is the existence of a management plan for geological sites. The four main objectives of the plan were to clarify the following: what services are in the area and how they can be developed; how to control the number of visitors so as to prevent harm to nature, flora, fauna, and geological phenomena; how geological, cultural and natural heritage can be linked; and how climate change is taken into account in the development of the area. The plan describes the objectives for the management and use of the area and proposes measures and development suggestions for reaching these objectives.

An important part of the plan is a survey of the current state of the sites, which was conducted by visiting all geological sites during summer 2019. The site surveys were conducted

taking into account users, maintenance, administration and management, and development. The information gained through this survey provided us with an understanding of the current state of the sites as well as their development requirements. The visitor numbers in the area are likely to increase in the future, and therefore measures are needed to ensure the preservation of natural values and the cultivation of the sites as tourist attractions. Critical issues include reachability and signposting along routes. In the development of the sites, it is crucial to understand that the sites should be viewed as a whole where any one factor can impact several others. The development of the sites and ensuring the preservation of environmental values can, for the most part, be achieved through the efforts of local operators. The management plan has been drawn up based on the resources and needs of Saimaa Geopark. The hope is that the plan will also bring out further development needs in the surrounding areas, for example in terms of public transport or services provided by local businesses.



Image: Puumala municipality

1 INTRODUCTION

Tourism is a globally growing industry that has an extensive impact on the economy. In 2017, 15 billion euros were spent on tourism in Finland. This figure includes the expenses accrued in Finland by both domestic and international travellers. The value added through tourism in 2017 was 4.6 billion euros, which is 2.6 per cent of the GDP of Finland. As an industry, tourism is similar in size to forestry.

Tourism also has a great impact on employment, as in 2017, there were a total of 140,200 people employed in tourism. There are nearly 29,000 companies in the tourism business (www.businessfinland.fi). Tourism also has an important role in preserving the vitality of South Karelia and South Savo, and 6,450 people are employed in tourism in these regions (www.tem.fi). Tourism is thus crucial for the development of the region and for maintaining its vitality, and visitor numbers are expected to increase in the future. Nature tourism is a growing trend, one of the themes of which is geotourism and the supporting Geopark model. Geoparks provide a global operations model for the sustainable economic development of regions through geotourism. The Geopark concept is based on the prerequisites for sparsely populated areas to develop their own vitality through offering a new kind of opportunity to utilise the area's resources and strengths sustainably. Internationally, a parallel is drawn between Geoparks and UNESCO World Heritage Sites in terms of their value as tourist attractions. However, the primary difference between Geoparks and World Heritage Sites is that, even though Geoparks may contain protected areas, they are not considered protected areas in themselves.

The following concepts are described based on Anna Tiippana's (2018) thesis at the Karelia University of Applied Sciences, "Company owner's thoughts on responsible tourism in Saimaa Geopark area" (excerpts in italics, translated into English). Anna Tiippana wrote her thesis for Saimaa Geopark.

Sustainable development

"Tourism that is based on the principles of sustainable development and that takes into account the financial, social and environmental impact of operations can be classified as responsible tourism" (UNEP & UNWTO 2005, 11). Sustainable development as a concept means "development that satisfies present needs without preventing future generations from satisfying their needs" (Kalmari & Kelola 2009, 10). The purpose is to create new ways to operate in order to safeguard the future in such a way that we do not risk the living conditions of future generations or their right to utilise nature and natural resources (Borg, Kivi & Partti 2002, 34). In other words, we should strive to use the natural resources available to us in such a way that they will be available to future generations as well. However, as natural

resources are finite, nothing is perfectly sustainable. Sustainable development should therefore be seen as operation that endeavours for increased sustainability (Borg et al. 2002, 34).

The impact of tourism on the environment has been visible for a long time: tourism has accelerated climate change, increased carbon dioxide emissions, and caused serious harm to vulnerable ecosystems. Striving for sustainability should not be seen as merely one aspect of tourism, but it should be an integral part of all activities. For example, the principles of sustainable development should be taken into account in the planning and production of services (UNEP & UNWTO 2005, 2).

Responsible tourism

Responsible tourism seeks to combine the principles of sustainable development with financial operations (Borg et al. 2002, 8). Sustainability in tourism can be explored in terms of ecological, economic, and socio-cultural sustainability. When these different areas are in balance, long-term sustainability can be ensured in society (UNEP & UNWTO 2005, 11). According to Visit Finland, accessibility is also an important part of tourism, and it helps us treat all customers equally (Visit Finland 2018a). Responsible tourism should take into account the preservation of human values, justness and fairness, which affect tourism operators, tourists, workers, the environment, and the destination community (The Finnish Association of Fair Tourism 2018).

Ecological sustainability takes into account the environment and the prevention of harm to the environment. It includes favouring the use of renewable resources, the regulation of water and energy consumption, and recycling. The goal is also to reduce greenhouse gas emissions that accelerate climate change. Economically sustainable tourism aims to ensure profitable business in such a way that the profits will benefit the region. The local economy and community benefit from businesses who hire locally and use locally produced products and services. Socio-cultural sustainability aims to respect and sustain local culture. It is also important that employees are provided with good working conditions and that the local community is not exploited. Local residents should be engaged in the decision-making and planning processes of local tourism. (The Finnish Association of Fair Tourism 2018)

Geotourism and geoparks

National Geographic defines geotourism as “tourism that sustains or enhances the distinctive geographical character of a place: its environment, heritage, aesthetics, culture, and the well-being of its residents.” It is therefore a form of tourism which takes into account all the principles of responsible tourism and responds to the demands of modern tourism. (National Geographic & TIA 2003, 1) Geotourism as a concept is not yet very well-known. It refers to the type of nature tourism that takes into account local landscape, geology and the principles of sustainable development and that encourages the kind of tourism that consumes as little as possible (Rautanen 2018). The Geopark concept was born out of a concern for the protection of geological heritage. The idea was to highlight geological heritage and thus increase its appreciation. Geoparks are areas with clearly defined boundaries, containing significant geological heritage and highlighting this geological heritage through providing activities for local residents and tourists. The purpose of geoparks is also to promote the region’s vitality together with local entrepreneurs and to develop geotourism together with the local tourist industry (European Geoparks Network 2009).

A geopark’s operation must be consistent, and it should be managed in accordance with international law. It should also support sustainable development in the region. The area must contain a certain number of geologically, historically and culturally significant attractions (European Geoparks Network 2009). The purpose of geoparks is to promote the region’s economic growth through geotourism, support geological education in the region, and prevent harm to

1.1 SAIMAA GEOPARK

Saimaa Geopark was established through projects carried out in 2013–2016. The operation was moved under Saimaa Geopark ry on 1 January 2017. In South Karelia, the municipalities involved in Saimaa Geopark’s activities include Imatra, Lappeenranta, Ruokolahti, Savitaipale, and Taipalsaari. In South Savo, the municipalities involved are Mikkeli, Juva, Puumala, and Sulkava. The association’s budget consists of annual membership fees (€150,000) and project funding. Saimaa Geopark is located in the eastern part of Southern Finland. It comprises 65 geological sites and 53 natural and cultural attractions (Image 1). The total area of the geopark is just over 6,000 square kilometres.

Vekaransalmi forms the border of the park in the north. Through it pass all the waters from northern Saimaa, as they flow towards southern Saimaa and Vuoksi. South of Vekaransalmi, the border follows the outline of Saimaa’s local drainage basin. The western border runs from the First Salpausselkä to the north of Mikkeli along the

geological heritage. It is important to take into account all the principles of responsible tourism and to increase the appreciation of the region both locally and internationally (Saimaa Geopark 2018c).

UNESCO Global Geoparks

Geoparks are areas that contain geological sites that can be considered particularly significant in terms of their uniqueness, educational and scientific value, or aesthetic appeal. However, geoparks are not protected areas, which distinguishes them from national parks. The creation and operation of a geopark must therefore be based on the active participation of local operators from the outset. In addition to geological sites, a geopark may be based around ecological, historical or cultural characteristics. Each geopark is part of an international network of geoparks. Internationally valuable geological heritage is not enough in itself, but a geopark must also be operated with respect to cultural and environmental values and by engaging the local community. Membership applications are submitted to the UNESCO Global Geoparks (UGG) organisation. Geoparks that are part of the UNESCO Global Geoparks Network utilise the geological, natural and cultural heritage of the area to promote awareness of, for example, climate change and sustainable development among local operators and residents. The UNESCO Global Geoparks Network has 147 member parks in 41 countries. Only one of these, Rokua UNESCO Global Geopark, is located in Finland. Saimaa Geopark (SGP) has applied for membership in the UGG in November 2017, and SGP was given two years to meet the membership criteria.

watershed between the Kymijoki and Vuoksi waterways. Out of the erstwhile Saimaa outlet channels, the eastern border is formed by Lohilahti and the western border by Kärenlampi in Lappeenranta, Lavikanlahti in Savitaipale, and Matkuslampi in Ristiina. The current outlet, Vuoksi, is located in the southeastern part of the area. The area is dominated by Lake Saimaa. Suur-Saimaa and other basins with a similar surface elevation (approx. 76 m above msl) to the north of Suur-Saimaa together form the largest lake in Finland and the fourth largest in Europe. About 1/3 of the area is made up of waterways, and there are thousands of islands and about 8,000 kilometres of shoreline. Lake Saimaa has been an important waterway for local industry and thus a significant factor in the economic growth of the region. Lake Saimaa is home to three endangered species of animals: the Arctic char, the landlocked salmon, and the Saimaa ringed seal. The landlocked salmon and the Arctic char are classified as critically endangered, and the Saimaa ringed seal, along with the freshwater brown trout, is classified as endangered.

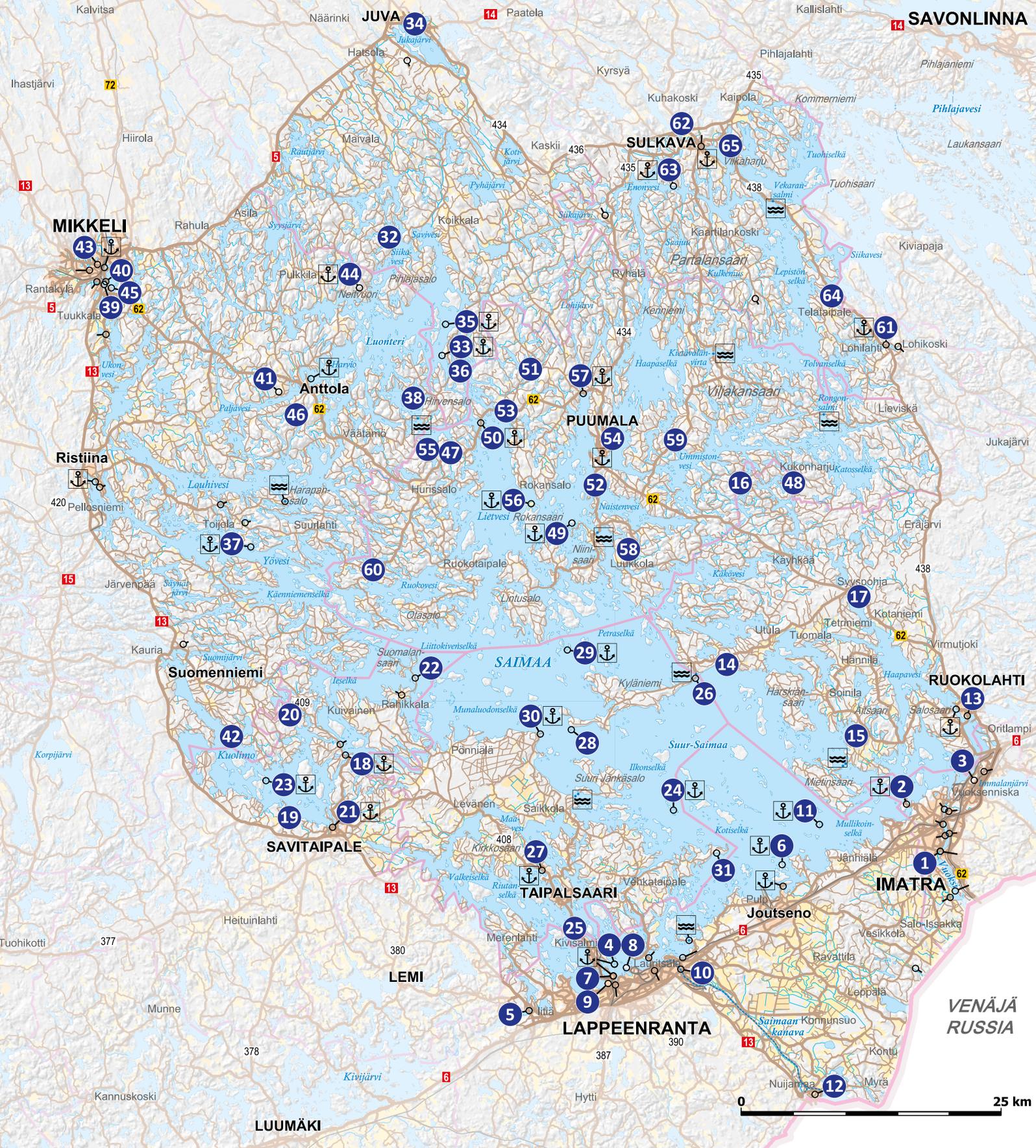


Image 1. The Saimaa Geopark area and geosites (www.saimaageopark.fi)

1.2 THE PURPOSE OF THE PLAN

The purpose of the management plan is to define the objectives for the management and use of the Saimaa Geopark area. The key points are to determine how the geological sites can withstand growing numbers of visitors; how the numbers of visitors can be controlled so as to prevent harm to nature, flora, fauna, and geological phenomena; what services are available in the area and how they can be developed; and how geological, cultural and natural heritage can be linked.

The plan describes the current state of the sites, their reachability, routes, facilities, and nearby services and businesses. The objective of the plan is to define required development measures and the organisation of site management, divide the responsibilities for facilities management, appoint responsible persons, as well as organise supervision and resources. One of the key themes of the plan is the impact of climate change, and it focuses heavily on sustainable development and climate change, which are an overarching theme in the plan. This can be seen, for example, in the plan's objective to evaluate the reachability of the sites in ways that place as little strain on the climate as possible. The purpose is to make suggestions based on the current state of the sites and carry out necessary development work. For example, well-designed routes improve durability and provide visitors with more information on the sites.

The objective of the management plan is to provide a concrete plan for ensuring the carrying capacity of the sites. In the plan, the carrying capacity of the sites is seen as a broad concept. In addition to the carrying capacity of the environment, it includes, for example,

the reachability of the sites, facilities, and services offered by businesses. In this way, the carrying capacity of the sites is seen in a comprehensive manner. The plan focuses on three different, albeit strongly linked, perspectives:

Customer perspective

→ visitors

Management perspective

→ site managers and responsible persons

Development perspective

→ Saimaa Geopark Board, responsible persons

Through these three different perspectives, we can gain a comprehensive picture of the current state of the sites as well as their development needs. This also means that the plan can be utilised in different ways by different user groups. Prospective visitors can gain information on the reachability of the sites and available services, and responsible persons are informed of the current state and development needs for the sites. From the perspective of management, the current state and possible need for maintenance work can be useful information. The plan also functions as a catalogue of all Saimaa Geopark sites. This enables us to gain a comprehensive view of the sites and their state. At the moment, the sites are managed by various managers and custodians, and the overall state of all sites is not necessarily clear to everyone.

1.3 ACTION PLAN FOR QUALITY IMPROVEMENT AND SUSTAINABLE TOURISM IN THE SAIMAA GEOPARK AREA

The principles of sustainable development are further highlighted in the utilisation of natural environments in tourism. Service providers must be aware of the environmental and socio-cultural impact of their activities and be able to manage valuable resources accordingly. From the point of view of tourists as users of tourist services, the most important ways of promoting sustainability include, for example, waste management, using local products and services, hiring locally, preserving cultural heritage, and acknowledging the local residents (businessfinland.fi). The principles of sustainable development and the objectives and practices of sustainable tourism correspond well with the objectives and development plans of Saimaa Geopark. Agenda 2030, a development programme launched by the UN in 2015, is also included in the development goals of UNESCO Global Geoparks. All members of the UNESCO Global Geoparks Network comply with the objectives of Agenda 2030. This is also true of Saimaa Geopark, which is in the process of applying for membership (<https://kestavakehitys.fi/en/agenda2030>).

The management plan is part of Saimaa Geopark's action plan for quality improvement and sustainable tourism. The action plan was drawn up by FCG Oy, and material for it was also collected through workshops and seminars in the Saimaa Geopark development project "Growth and development through knowledge in the Saimaa Geopark area". At its best, tourism can produce economic, social and environmental prosperity for the region. Tourists have also become more demanding and expect to receive good service and value for money. Geotourism is largely based on nature tourism, which usually takes place in vulnerable areas. Nature tourists therefore expect service providers to produce their services sustainably. The various operators in the area have a big part to play in this. They can, for their part, influence the region's quality improvement, sustainability, and safety. The goal of the action plan is to meet the requirements for UNESCO Global Geoparks status and to promote sustainable tourism, high quality and safety in Saimaa Geopark. The plan is based on two main themes: Saimaa Geopark's principles of sustainable tourism and quality promises.

Principles of sustainable tourism:

1. preserving the values of Saimaa Geopark sites and promoting their protection.
2. minimising load placed on vulnerable environment, minimising littering, and promoting geological heritage and natural and cultural diversity.
3. battling climate change and promoting adaptive measures through practical operation.
4. strengthening the vitality and well-being of the region through:
 - a) local products, services and skills as part of the products and services of Saimaa Geopark.
 - b) creating jobs and businesses.
 - c) understanding the importance of local values, identity, heritage, and culture.
5. producing and providing services sustainably and responsibly, genuinely and openly utilising local strengths, taking into account quality and safety.
6. communicating about Saimaa Geopark's sustainable values and services through multiple channels in ways that appeal to target audiences.
7. long-term, structured development.

Quality promises:

1. The Saimaa Geopark network develops its services and sites persistently and methodically.
2. Our operators value feedback from users and use it to develop their own practices.
3. The area offers unique geological, archaeological and cultural-historical attractions and landscapes, which are the basis for the appeal of the area as well as its services.

1.4 PREVIOUS SURVEYS

The background material for the plan consists mostly of background material collected for the Saimaa Geopark application process. Applying for UNESCO Global Geoparks membership has been a lengthy process. The application process was supported by a project for promoting Saimaa as a geotourism destination (2014–2016), which preceded the creation of the geopark and of Saimaa Geopark ry. During this project, a survey of the area's geological sites was conducted by Geological Survey of Finland. This survey included 111 geological sites that were considered potential destinations for geotourism. Reachability was one of the criteria considered. The participating municipalities were ascertained during the project, and membership fees were determined and the rules and other principles for the association were drawn up. The member municipalities used the survey conducted by Geological Survey of Finland to select the geological, natural and cultural sites within their area.

1.5 IMPLEMENTATION OF THE PLAN

The plan was implemented during summer and autumn 2019. The implementation of the plan is divided into two parts: survey and written plan. The survey of the current state of the sites was conducted by visiting each of Saimaa Geopark's geological sites. The survey was conducted between June and September. The written plan was drawn up between early September and mid-November. The survey of the current state of the sites was conducted

4. Information provided for visitors on Saimaa Geopark is up-to-date, comprehensive and interesting. This information is communicated through multiple channels, taking into account different target audiences.
5. Local expertise and raw materials are used in the production of services and products. For example, local companies offer delicious local food made from pure ingredients.
6. Many small family businesses in the area offer personalised services.

The action plan is divided into six sections containing the desired objectives and measures:

1. promoting the vitality and well-being of the local community and the surrounding environment
2. ensuring the sustainability of the natural environment
3. sustainable transport and mobility within the Saimaa Geopark area
4. developing and producing services
5. ensuring safety in the area
6. quality improvement.

The management plan focuses primarily on the theme of sustainable natural environment, but it also touches on other themes, especially sustainable transport services and general safety. Sustainable transport is viewed especially from the perspective of the reachability of the sites. Sustainable mobility within the sites themselves is also important in order to preserve their natural values. Safety in the area is also partly related to reachability, for example, through the safety of cyclists. Additionally, the comfort and safety of travelling on the routes within the park must be ensured, which means that the condition of the routes as well as any dangerous places along them must be taken into account.

The actual writing of the application for UGG membership was begun in 2015. The outputs of the various working groups were combined during summer 2017, and geologist Kaisa-Maria Remes and Executive Manager Heli Rautanen finalised the application during autumn 2017. The application materials were also utilised in the creation of the management plan. During Saimaa Geopark's development project, "Growth and development through knowledge in the Saimaa Geopark area", an action plan for quality improvement and sustainable tourism was drawn up. Parts of the action plan have been included in this management plan. The finalised plan will be given to our partners for review (member municipalities, recreation area organisations, Keep the Archipelago Tidy Association, and regional councils). After their approval, the SGP Board will discuss the plan, and it will be published on the Saimaa Geopark website.

by project planner Sami Lehtinen. The written plan was drawn up by Sami Lehtinen, Saimaa Geopark's Executive Manager Heli Rautanen, and Saimaa Geopark's geologist Kaisa-Maria Remes. Hanna Ollikainen from the South Karelian Foundation for Recreation Areas and Topiantti Äikäs, Director of Urban Development and Planning at the City of Imatra, also contributed in the writing process.



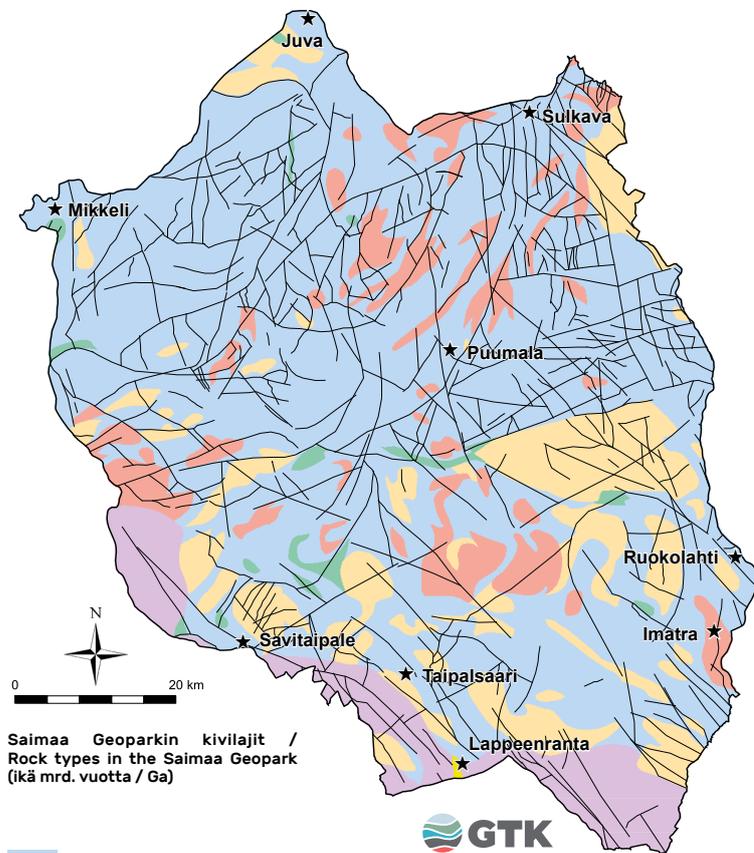
Image: Puumala municipality

2 BEDROCK AND QUATERNARY DEPOSITS IN THE AREA

The bedrock in the Saimaa Geopark area consists of types of rock that were formed approximately 1.9–1.6 billion years ago. This means that the bedrock was formed during the Paleoproterozoic Era. The bedrock is covered by loose Quaternary sediments deposited during the last 20,000 years (Image 2). The section describing the area's bedrock and Quaternary deposits has been compiled from the application materials submitted to UNESCO (UGG application material), and it includes an extensive bibliography of geological publications.

Image 2. Saimaa Geopark's bedrock and Quaternary deposits.

Yleistetty kallioperäkartta Saimaa Geopark alueesta
A simplified bedrock map of the Saimaa Geopark area



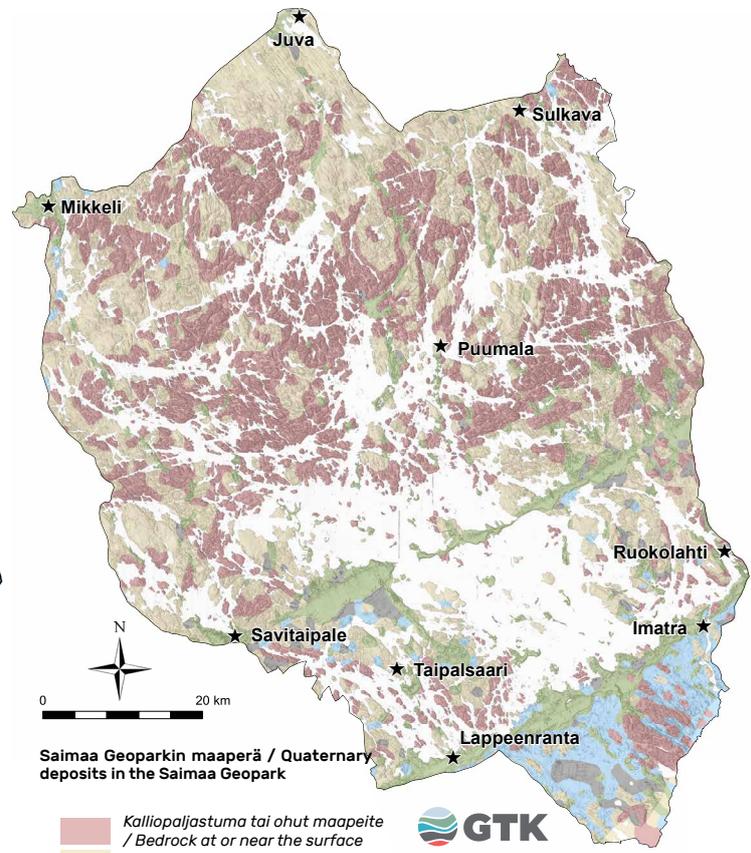
Saimaa Geoparkin kivilajit /
Rock types in the Saimaa Geopark
(ikä mrd. vuotta / Ga)

- Kiillegneissää / Mica gneiss (1.90–1.88)
- Vulkaanisia kivilajeja / Volcanic rocks (1.90–1.88)
- Karbonaattikiviä / Carbonate rocks (1.90–1.88)
- Granodioriittia, kvartsdioriittia ja gabbroa / Granodiorite, quartzdiorite, gabbro (1.89–1.87)
- Graniittia / Granite (1.84–1.81)
- Rapakivigraniittia / Rapakivi granite (1.65–1.62)
- Kallioperän rikkonaisuusvyöhykkeitä / Fragmented zones in the bedrock



Pohjakartat: © Maanmittauslaitos (Basemaps: © National Land Survey of Finland)
Rikkonaisuusvyöhykkeiden tulkinta / Interpretation of fragmented zones
Jouni Lerssi, GTK
Tulkinta perustuu pääosin prosessoituun Maanmittauslaitoksen (MML) laserkeilausaineistoon. / Interpretation is based primarily on processed laser scanning material from the National Land Survey of Finland (Maanmittauslaitos).

Yleistetty maaperäkartta Saimaa Geopark alueesta
A simplified map of quaternary deposits in the Saimaa Geopark area



Saimaa Geoparkin maaperä / Quaternary
deposits in the Saimaa Geopark

- Kalliopaljastuma tai ohut maapeite / Bedrock at or near the surface
- Moreenia / Till
- Hiekkaa ja soraa / Sand and gravel
- Siiltä ja savea / Silt and clay
- Turvetta / Peat
- Vettä / Water



Pohjakartat: © Maanmittauslaitos (Basemaps: © National Land Survey of Finland)

2.1 BEDROCK FORMATION

The bedrock in the basin of Lake Saimaa was primarily formed through the deposition of sand and clay on the ancient seabed around 1,900 million years ago. During the mountain folding process following the sea stage, the deposits were compressed deep into the Earth's crust. In the prevailing high temperatures and pressure, they metamorphosed into mica gneiss. Some of the rock material melted and crystallized into the mica gneiss as light granitic dikes and veins. They give the rock surfaces a stripey appearance. Mixed mica gneiss, or veined gneiss, formed in this way is the most common type of rock in the Geopark area (Image 3). Along with veined gneiss, volcanic rocks deposited in layers in the marine environment approximately 1,900 million years ago form narrow and dark stretches of rock. Limestone mud precipitated from sea water and accumulated on the seabed to form the current carbonate rock, or limestone.

Mountain folding was also associated with extensive melting deep in the Earth's crust. The slow crystallisation of this magma led to the formation of various plutonic rocks approximately 1,890–1,870 million years ago. The majority of these are light, granite-like rocks, such as granodiorite (Image 4). As a result of tectonic collisions 1,840–1,810 million years ago, the Earth's crust became thicker, and large quantities of magma formed once again. In the Saimaa area, this magma typically crystallised into pink and usually relatively small areas of granite, with coarse-grained pegmatite granites being the most common.

The youngest part of the bedrock in the general direction of Lappeenranta is formed from common and extensive rapakivi granites (Image 5). They crystallised approximately 1,650–1,620 million years ago from magma in the upper parts of the Earth's crust. The rapakivi rocks in the Lappeenranta region are part of the extensive Vyborg rapakivi massif, which extends from South Karelia into Russia, and is globally considered to be the type area for this type of rock. The rapakivi deposits in the Saimaa Geopark area hold significant international value.

The Saimaa area rock types, which formed 1.9 billion years ago at the base of the folded mountains deep in the Earth's crust, are visible today because the highest parts of the folded mountains have been worn away due to surface erosion. As the rapakivi granite crystallised approximately 1.6 billion years ago, the ancient mountain range had largely levelled out. The fractured nature of the bedrock in the Saimaa lake area is the result of tectonic shear zones of various ages which run through the area (Image 6). They are seen particularly in the mesh-like structure of the water areas in the northern area of the Geopark, and often as rugged scarps rising from the water's surface.



Image 3. The image depicts the shoreline rocks of Huuhanranta, which consist of veined gneiss, or dark mica gneiss, and lighter granite dikes and veins running through it. Image: K-M Remes / Saimaa Geopark

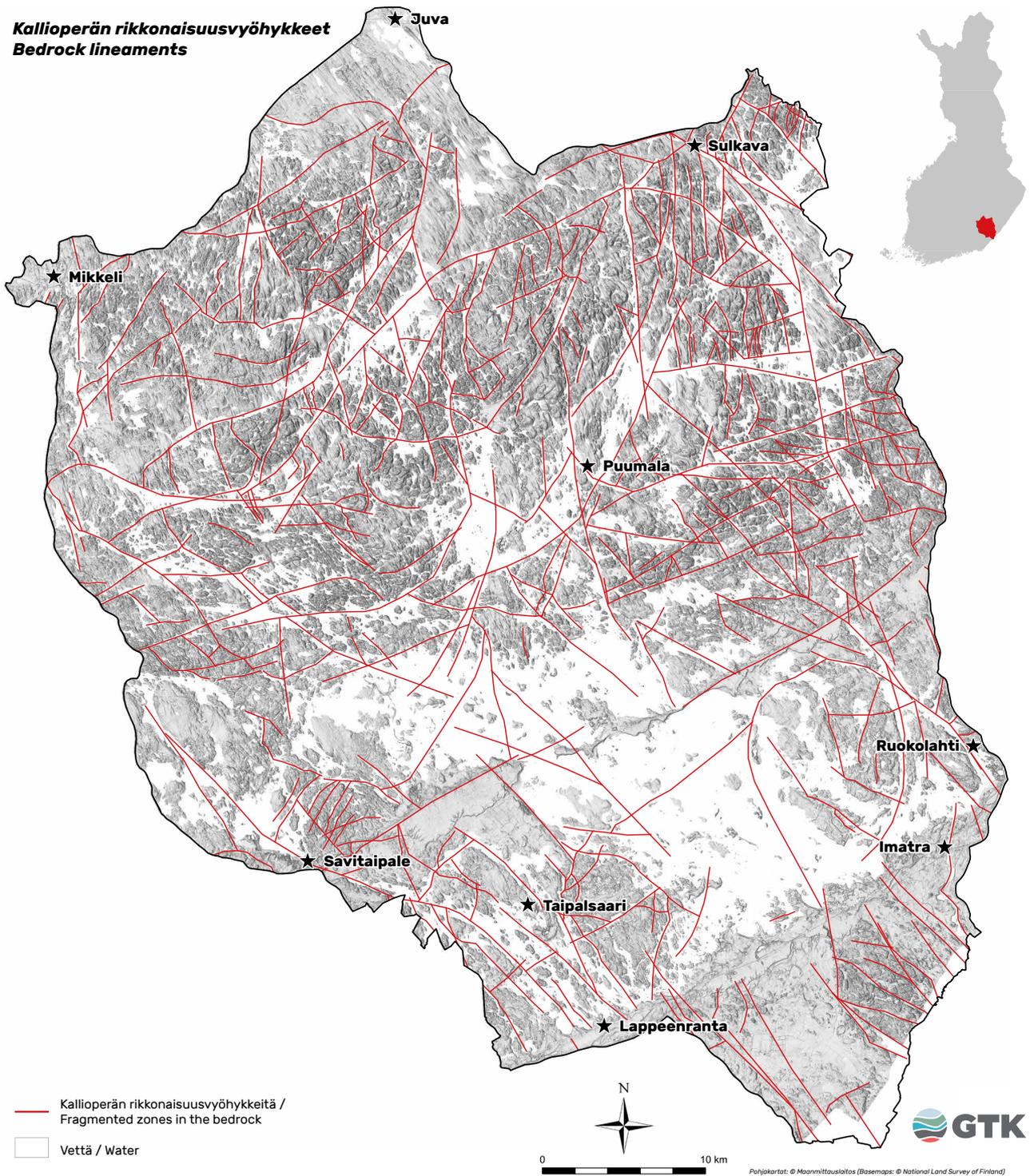


Image 4. The image depicts Luotolahdenvuori rock consisting of granodiorite. The granodiorite crystallised in the magma formed deep in the Earth's crust during the mountain folding process. Types of rock created deep in the Earth's crust are visible today because the highest parts of the folded mountains have been worn away due to surface erosion. This means that the rocks in Luotolahdenvuori and in nearby areas are part of the foot of an ancient mountain range. Image: K-M Remes / Saimaa Geopark



Image 5. The image depicts rapakivi at the Kuivaketvele hill fort. The type of rapakivi at the hill fort is porphyritic granite rapakivi, in which the pink K-feldspar is visible as dispersed granules. Image: K-M Remes / Saimaa Geopark

Image 6. The map shows the fracture zones of the bedrock in the Saimaa Geopark area as red lines.

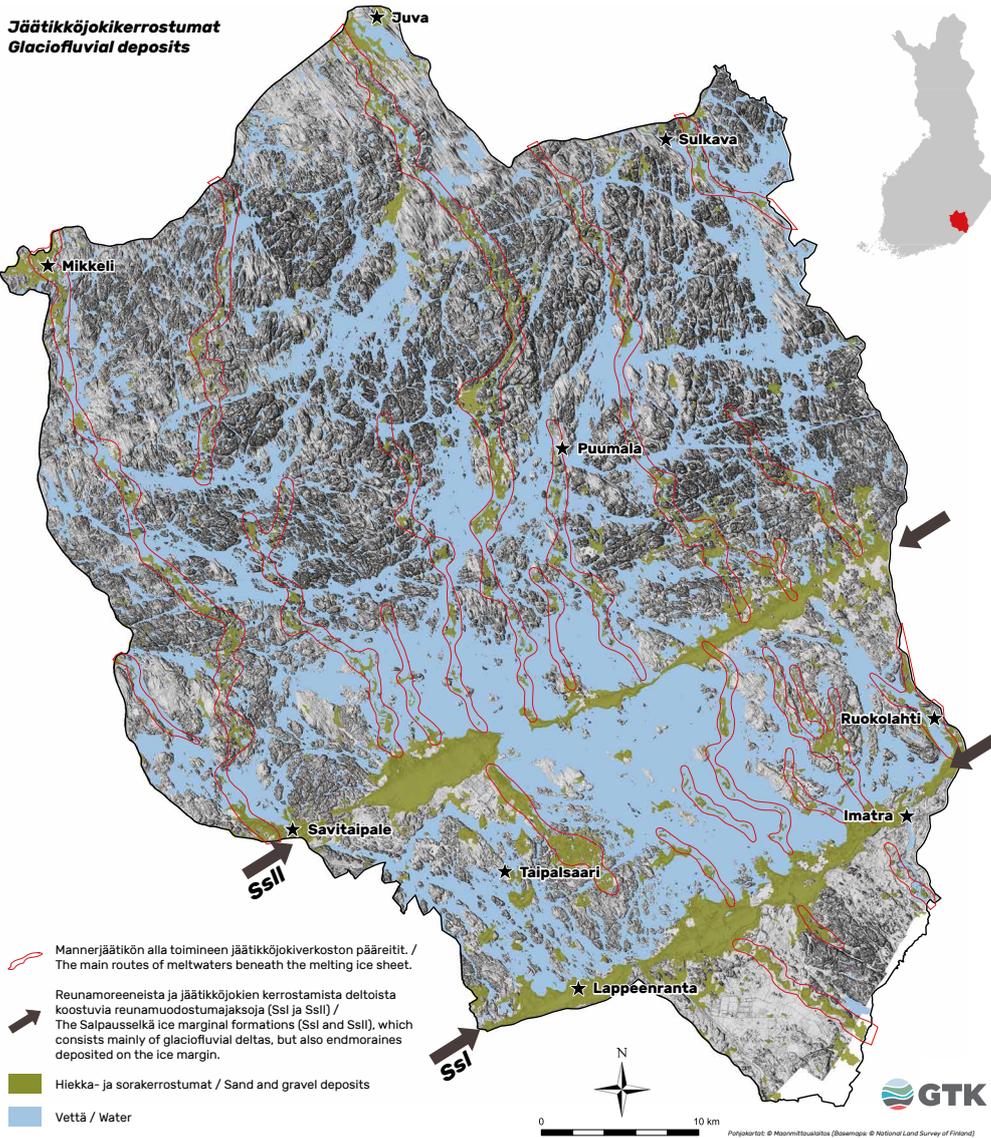


2.2 QUATERNARY DEPOSIT FORMATION

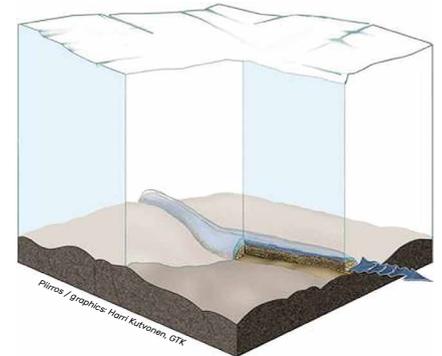
The Geopark area's fractured bedrock and its varied topography is covered by a layer of Quaternary deposits. The layer is of varying thickness and consists of different kinds of Quaternary deposits. The layer formed over the last 20,000 years as a result of ice sheet erosion and deposition processes, and shore displacement, river erosion and paludification following the melting of the ice sheet. The till that is common in the Saimaa Geopark area was created by glaciers. The

sand and gravel deposits in the Geopark area were primarily formed in glacial rivers, while silt and clay deposits were deposited in deep water at the edge of the ice sheet. The most significant glacial river deposits relate to the Salpausselkä ridge system and its feeder eskers, which transported material to the ice-marginal formations (Image 7). The Salpausselkä ridge system is of great scientific significance. It is globally unique.

Image 7. Saimaa Geopark map, where the First Salpausselkä (SS I) and the Second Salpausselkä (SS II), which formed at the edge of the ice sheet, are marked in green. Green areas with red borders are intermittent stretches of eskers that end in the ice-marginal formations. When the Salpausselkä ridge system formed, the edge of the ice sheet was at the level of the Baltic Ice Lake, the predecessor of the Baltic Sea.



Harjut ovat kerrostuneet muinaisen jäätikön virtaussuunnan mukaisesti / Eskers are deposited in the same direction as the glacial flow of the ice sheet



Hiekasta ja sorasta koostuva harju kerrostuu sulavan mannerjäätikön alla tunneliin tai raihoon.
An esker that consists of sand and gravel is deposited in a tunnel or crack underneath a melting glacier.

Hiekka- ja sorakerrostumiin työntynyt moreeni ja moreenivalleja
Till pushed into sand and gravel deposits and end moraine ridges

Reunadeltan hiekka- ja sorakerrostumia
Sand and gravel deposits in the ice-marginal delta

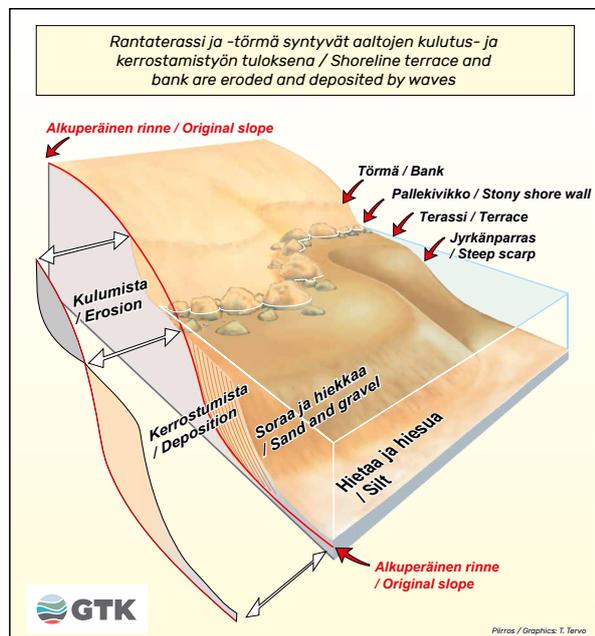
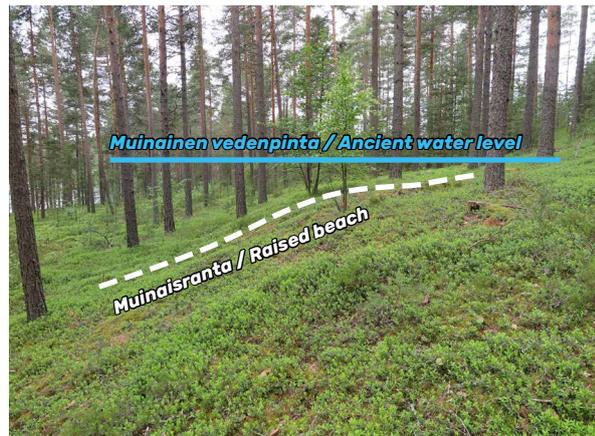
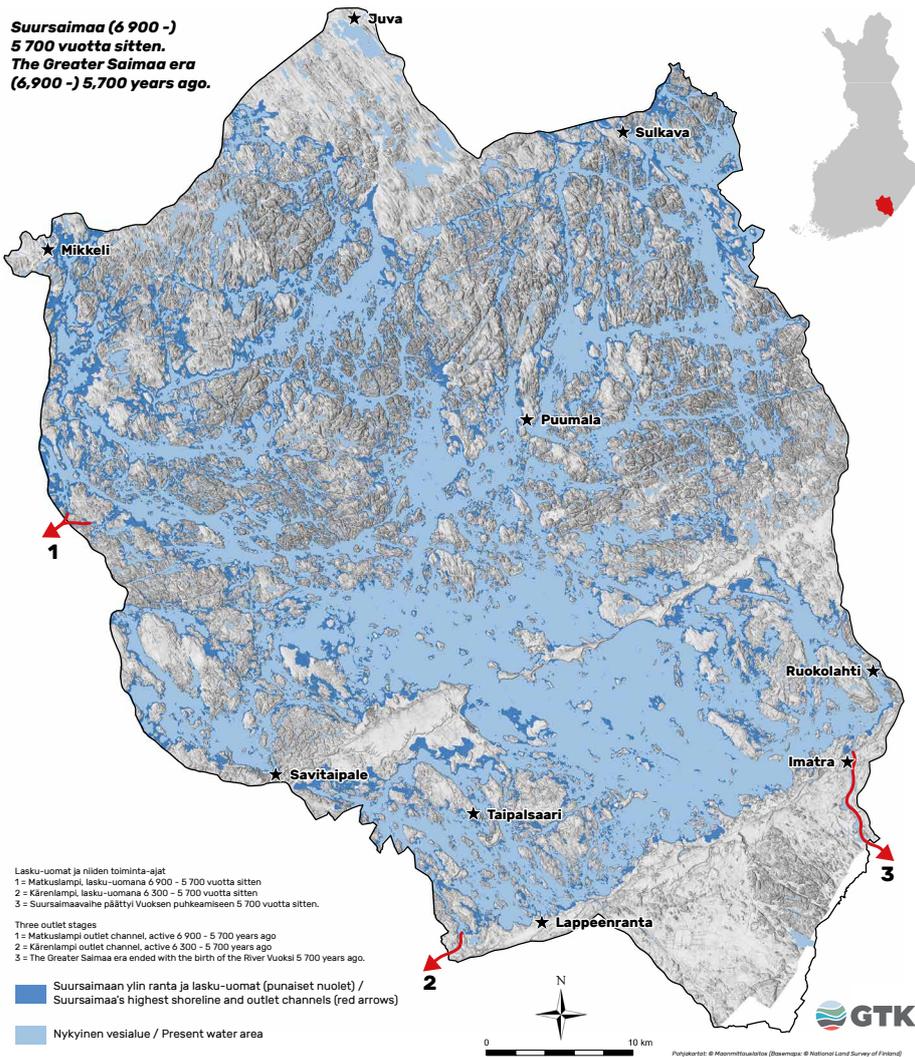


Reunamuodostumat ovat muinaisen jäätikön reunasuuntaisia / Marginal moraine formations are in the same direction as the edge of the ancient ice sheet

Fine material deposits are concentrated on the southeastern side of the Salpausselkä zone. After the ice had melted, water stages turned older Quaternary deposits into shore and river deposits. In

this way, Saimaa's rich history has been recorded in these ancient shores (Image 8). Peat is the youngest type of Quaternary deposit in the Geopark area.

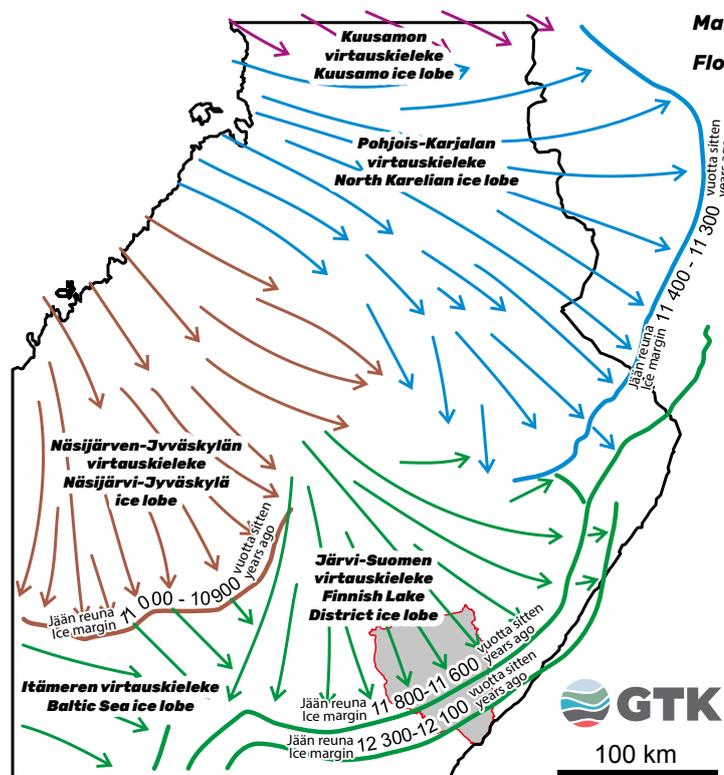
Image 8. Saimaa Geopark map where the surface level of the Greater Saimaa stage has been marked in dark blue and the current water areas in light blue. During the Greater Saimaa stage, the water surface began to rise slowly in the southern and southeastern parts of the Saimaa lake group, as the first outlet channel of the lake group in North Savo (not visible on map) was in an area where land uplift was occurring quickly. The Greater Saimaa stage ended when Vuoksi broke through approximately 5,700 years ago. Due to uneven land uplift, the ancient shores of the Greater Saimaa can be found at different elevations around the Geopark. At the First Salpausselkä, the Greater Saimaa level is around 80 m above sea level (m above msl), and at the northern part of the Geopark in Mikkeli, the elevation is around 90 m above msl. The current surface level of Lake Saimaa is around 76 m above msl.



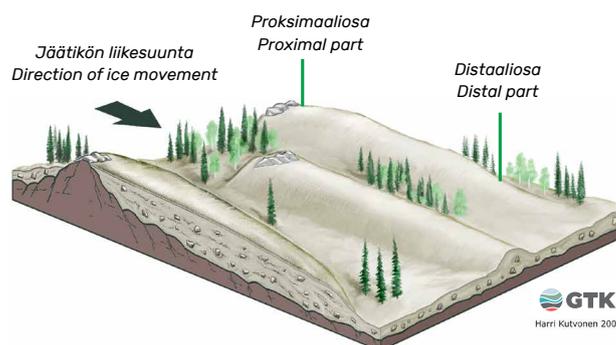
Suursaimaa-vaihe käynnistyi vähitellen, kun kaikki Saimaan järviryhmän altaat olivat kouroutuneet Itämerestä noin 9000 vuotta sitten / The Greater Saimaa phase was gradually started when all the basins of the Lake Saimaa group had isolated from the Baltic Sea about 9000 years ago.

In the Saimaa region, the Salpausselkä ice-marginal formations indicates the extreme positions of the Finnish Lake District ice lobe, at the edge of the ice sheet (Image 9). As ice-marginal formations formed on the outer parts of the lobe, actively flowing ice formed the scenery near the northern border of the Geopark. The thick, slow-flowing ice mass detached boulder and rock material from the bedrock underneath and crushed, ground, and layered it over the bedrock as basal till. Basal till also formed into fusiform ridges or

drumlins, indicating the direction of glacial movement. The northern border area of the Geopark contains a representative sample of the Pieksämäki drumlin field. The field, which contains tens of thousands of drumlins and other terrain formations of glacial origin, is Finland's largest and also holds international significance. The fan shape formed by the direction of the field's drumlins and other formations accurately depicts ice movement in the Finnish Lake District ice lobe at the time of the formation of the Salpausselkä ridge system.



**Mannerjäätikön virtaussuunnat ja jään reuna-asetat /
Flow directions and marginal stages of the continental ice sheet**



Drumliinit syntyivät Järvi-Suomen virtauskielekkeen sisemmissä osissa. Drumliinin proksimaaliosassa eli jäätikön puoleisella sivulla on usein kallioidin. Moreeni on kerrostunut kallioidin taakse muodostaen pitkän selänteen (distaaliosa).

The drumlins were formed in the innermost parts of the Finnish Lake District ice lobe. The proximal part of the drumlin, or the side facing the ice sheet, is usually a rock core. Till builds up behind this rocky part, forming a long ridge (the distal part).

Image 9. The map shows the fan-like ice lobes in Southern Finland at the end of the Ice Age. The Finnish Lake District ice lobe was active in the Saimaa Geopark area. The First and Second Salpausselkä accumulated at the edge of the Finnish Lake District ice lobe approximately 12,300–11,600 years ago. Around the same time, drumlins formed under the ice sheet at the middle of the ice lobe.

2.3 THE GEOLOGICAL VALUES OF SAIMAA GEOPARK

The geological values of the Saimaa Geopark area consist mainly of ancient and fractured bedrock and its most commonly known type of rock – rapakivi granite – and its massive ice-marginal formations known as the Salpausselkä ridge system, formed in front of the ice sheet at the end of the Ice Age. Additional geological value is provided by example sites in the north of the area, such as the formations and different drumlin variations in the Pieksämäki drumlin field. They supplement the glacial geological content to cover all key areas of the Finnish Lake District ice lobe. During the period following the Ice Age, the development of the Saimaa lake area, which was formed through the combined impact of the outlined geological factors, has been particularly affected by the southeastern tilting of the ground due to uneven uplift. This development and the story of Saimaa can be seen in the natural environment as ancient shorelines at various heights, rock paintings, and particularly Vuoksi and the Imatrankoski rapid potholes.

The geology is directly reflected in the shapes of the lakeland. In the deeply fractured bedrock areas in the north, Saimaa splinters into a labyrinthine network of watercourses. In southern Saimaa, where the Salpausselkä ridge system and related feeder eskers occur, the lakeland scenery is characterised by low sandy shores that span kilometres, and chains of esker islands which break the wide open waters. Saimaa offers the rare opportunity to learn about all of the key types of formations appearing on the ice lobe at the edge of the ice sheet, and the lake district's complex history. In addition, the geology has shaped intricate and interesting natural environments, which are linked to the significant number of natural and cultural values in the period following the melting of the ice sheet.



Image 10. Image depicts sand pinks growing on a sunny slope in Huuhanranta. Image: K-M Remes / Saimaa Geopark

2.4 SENSITIVITY OF QUATERNARY DEPOSITS AND BEDROCK TO EROSION

Ridge areas and sandy shores are sensitive to erosion, as the easily eroding sand is only covered by a thin layer of forest-floor shrubland. If the layer of shrubland is broken for example by off-road vehicles or bikes, the grooves may spread uncontrollably due to erosion. Heavy rainfall may also widen and deepen the grooves. Another combination that is sensitive to erosion is rocks covered with moss and lichen. In steep parts of rocky areas, paths easily become wider and new grooves form when the layer of moss and lichen protecting the rocks wears away.

The Saimaa Geopark bedrock is mostly durable, but in areas containing rapakivi, especially the easily weathering rapakivi granite,

erosion can begin or be strengthened if the number of visitors increases uncontrollably. Saimaa Geopark also contains areas where the vegetation needs monitoring. There are some protected plants, such as spring pasqueflowers and sand pinks, growing in sunny environments on ice-marginal formations and esker ridges, and these should be protected from trampling (Image 10). The Salpausselkä ridge area also contains some small areas of lush vegetation, or groves, that should be protected. For the preservation of the terrain and the environment, it would thus be of paramount importance that only marked paths and routes or structures are used for moving around in the Saimaa Geopark area.

2.5 GEOLOGICAL FORMATIONS, LANDSCAPES, AND ENVIRONMENTAL PROTECTION

Finnish legislation has several statutes governing land use planning, the utilisation of natural resources and other activities that may impact the natural environment or landscape. They are based on both national legislation and EU directives. A geologically significant piece of legislation is the Land Extraction Act (555/1981) and the accompanying Government Decree on land extraction. The general objective of these laws is to monitor the use of land material in such a way as to ensure the protection of nature, landscape and other environmental values in accordance with sustainable development. The regulation of land procurement is strongly linked with land use planning, earthwork and hydraulic construction, the protection of groundwater, and environmental and natural protection. Other key laws concern construction, transport, forests, and the use of surface water and groundwater.

Compliance with the Land Extraction Act has resulted in Finland having nationwide inventories of valuable rocky areas, moraine formations, and wind and shore deposits. Some of Saimaa Geopark's sites have been surveyed for this inventory, and they are listed in the UGG application materials. In connection to the national esker ridge protection programme, an inventory has also been made of valuable

Finnish ridge areas. In addition, nationally and regionally valuable geological formations (ridges, moraine and rock formations, etc.) are indicated in regional plans. Markings in regional plans indicate that the area contains values listed in the Land Extraction Act, and that land extraction permits should not be issued for these areas.

Land Extraction Act Section 3:

The resources referred to in this Act shall not be extracted in such a way that:

1. beautiful scenery is disfigured;
2. natural sites of significant scenic value or distinctive features are destroyed;
3. substantial or extensive detrimental changes are caused to natural conditions; or
4. the water quality or yield of a major groundwater area or a site otherwise suitable for water supply is endangered, unless an exempting permit is granted under the Water Act.



Image 11. There are many esker islands in the Suur-Saimaa area. Image: Sanna Poutamo

3 NATURE AND WILDLIFE IN THE AREA

The largest lake basins in the Saimaa Geopark area are Luonteri, Lietvesi, Yövesi, and Suur-Saimaa. The deepest part of Saimaa (82 m) is in the southeastern corner of Yövesi. The quality of the water is mostly excellent. The waters are low in nutrients and humus. The scenery of the waterways is dominated by rocky islands and cliffs in the north and sandy ridges and beaches in the south. The bedrock and Quaternary deposits are heavily directional due to the directions of the fault and fracture zones and the movement of the ice sheet during the Ice Age. The shores are mostly barren, and sheltered bays may have abundant reed fields. The clearness and barrenness of the water is indicated in the presence of benthic plants, such as quillwort (*Isoëtes*), water lobelia (*Lobelia dortmanna*), and shoreweed (*Littorella uniflora*).

3.1 FORESTS AND VEGETATION

The area's scenery is dominated by forests. Nearly 90 % of the area is commercial forest land. Some 40 % of the forests are pine-dominated, and about one third are spruce-dominated. The remaining fifth of the forests is dominated by deciduous trees. The area also includes some rare habitat types, such as the sunny environments on ridges, transitional mires and quaking bogs, springs and spring fens, boreal forests, deciduous forests, flood forests, and swamp forests. Saimaa is part of the southern Boreal zone. Its flora has mostly eastern and southern species. Eastern plant species thrive in the continental climate. Slash-and-burn agriculture was used in the area as recently as the 1930s, and because of this plants such as bristled

bellflower and clustered bellflower (*Campanula cervicaria* and *C. glomerata*), field scabious (*Knautia arvensis*) and burnet saxifrage (*Pimpinella saxifraga*) can be found in the area. In the islands, the history of slash-and-burn agriculture and grazing can be seen in the abundance of mixed deciduous forests. In the more lush areas, you can also find small-leaved linden (*Tilia cordata*). The vegetation of ridge islands is scarce, and the forests are mainly peaty pine forests. The flora includes both typical ridge plants and rare species, such as sand pink (*Dianthus arenarius*, or *D. borussicus*), mother of thyme (*Thymus serpyllum*), and spring pasqueflower (*Pulsatilla vernalis*).

3.2 WILDLIFE

Saimaa Geopark's waterways have a wide variety of water animals. Typical bird species include the black-throated loon (*Gavia arctica*) as well as mergansers (*Mergus*) and gulls (*Laridae*) (Image 12). In recent years, whooper swans (*Cygnus cygnus*) have become more common. Several ospreys (*Pandion haliaetus*) nest in the area. Hobbies (*Falco subbuteo*) nest in the sparse pine forests of the beaches and islands. On the rocky cliffs, you can spot the endangered eagle owl (*Bubo bubo*). One of the specialities in smaller bird species is the South Savo regional bird, golden oriole (*Oriolus oriolus*).

The area is the breeding ground for the endangered Saimaa ringed seal (*Pusa hispida saimensis*). The Saimaa ringed seal is a subspecies of ringed seals that is found only in Finland. It is a relict that became isolated in Lake Saimaa due to the land uplift after the Ice Age, approximately 8,000 years ago. The Saimaa ringed seal is the only endemic mammal in Finland. The population has been increased through successful conservation efforts, and the number of seals has been doubled during the past couple of decades. At the moment, the seal population is estimated to be approximately 400. Around 100 of these live within the Saimaa Geopark area. Other mammals in the waterways include the otter (*Lutra lutra*).

The elk (*Alces alces*) is the most commonly sighted game animal in the area. The elk population is thriving and productive. Elks are good swimmers and can swim several kilometres to get from one island to another. Elks have been an integral part of Finnish culture since the prehistoric times. 30 per cent of Finnish rock paintings depict elks (Image 13). The national epic, Kalevala, includes the elk of Hiisi, which was a fast and strong elk that was particularly difficult to catch.

Fish species found in the Saimaa Geopark area include the critically endangered Arctic char (*Salvelinus alpinus*). The species has been proven to reproduce in the wild only in Lake Kuolimo. Other endangered fish species include whitefish (*Coregonus lavaretus lavaretus*) and freshwater brown trout (*Salmo trutta*). Landlocked salmon (*Salmo salar* or *sebago*) has been classified as extinct in the wild, because the population is maintained through planting. Nature, and especially the Saimaa ringed seal, is protected in the Saimaa Geopark area by establishing protected areas. The waterways and islands are also part of the EU Natura 2000 network of protected areas (https://www.ymparisto.fi/en-US/Nature/Protected_areas/Natura_2000_areas_in_Finland).



Image 12. The red-breasted merganser (*Mergus serrator*) is a common sight in Saimaa. Image: Sanna Poutamo.



Image 13. The rock paintings in Astuvansalmi contain several elk figures. The heart of the elk has been marked with a circle.

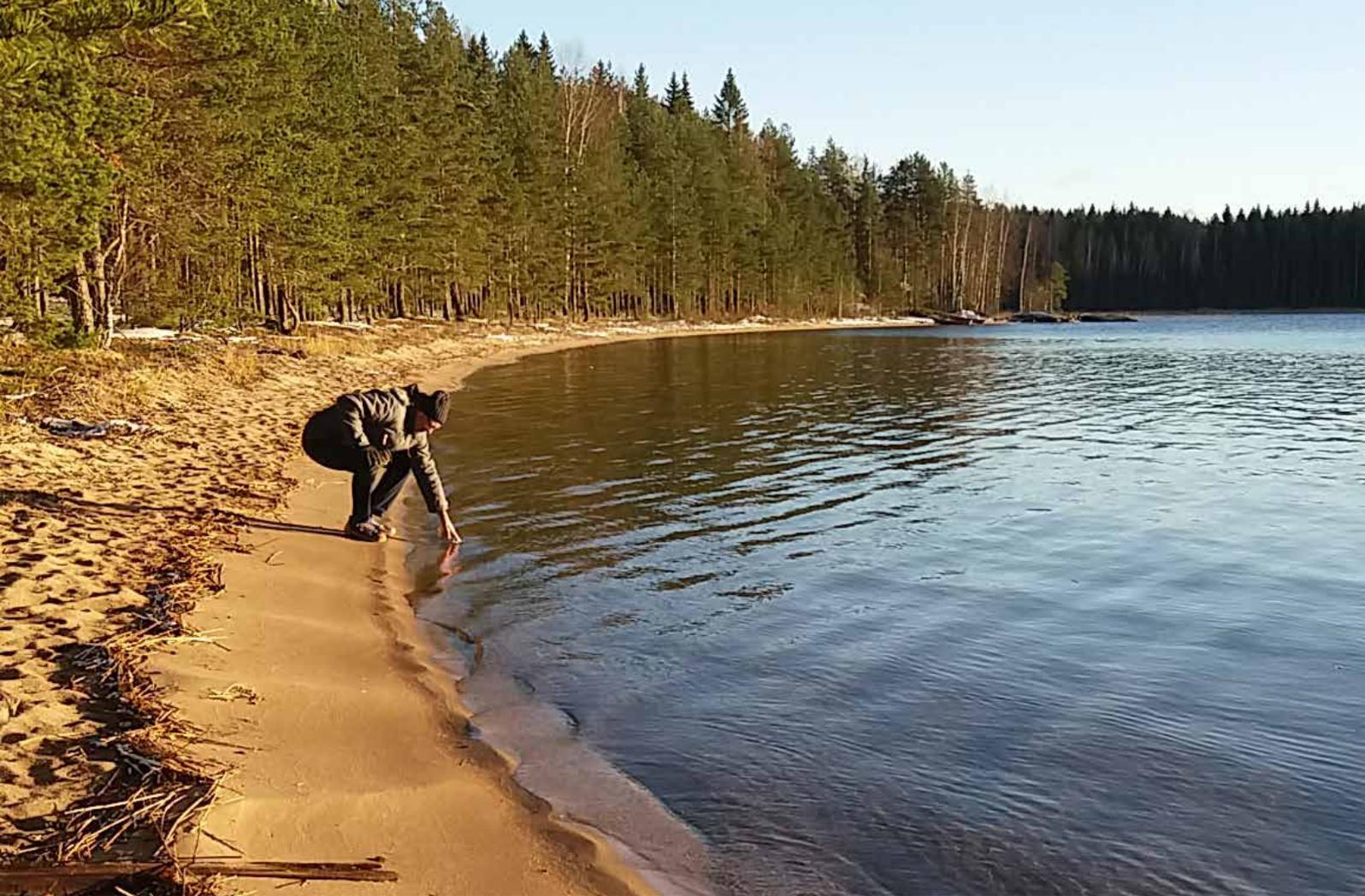


Image: Puumala municipality

4 PROTECTED AREAS AND MARKINGS

Finnish people have traditionally had a very close relationship with forests, lakes and other natural environments. This is also reflected in legislation that preserves our natural and cultural heritage. The objectives of the Nature Conservation Act are to

- maintain biological diversity
- conserve the beauty and scenic values of nature
- promote the sustainable use of natural resources and the natural environment
- promote awareness and general interest in nature
- promote scientific research.

Although Saimaa Geopark is not a protected area in its entirety, it does contain several areas with protected status. Finland's nature conservation programmes are state-run projects that aim to protect nature from human impact. The "Protected Area Management Principles" guide published by Metsähallitus defines a protected area as a special area established in accordance with the Nature Conservation Act in order to either preserve an original natural habitat as it is or maintain or restore specific natural characteristics, development processes, species, landscapes, or cultural environments. Protection

is permanent and geared towards the future. If the area is used for other purposes, it must be done in such a way as not to endanger the area's preservation (Metsähallitus 2014, 23).

Finland is home to a comprehensive network of nature conservation areas. The majority of conservation areas are also included in the Natura 2000 network. The use of nature conservation areas is stipulated by the Nature Conservation Act mentioned earlier in this section. A statutory management plan is drawn up for national parks. Such a plan can also be drawn up for other nature conservation areas as necessary. Metsähallitus has drawn up a management plan for the Suur-Saimaa – Lietvesi – Luonteri Natura area. Programmes which protect certain habitats include conservation programmes for mires, bird wetlands, eskers, herb-rich forests, beaches, and old forests. The most geologically significant programmes are those for national landscape conservation areas, beaches, ridges, rocky areas, and waterway management. Protected areas and sites are also taken into account in zoning, such as in provincial planning. Please note that the Saimaa Geopark area is not a national park, nor is it a nature park under strict conservation. The area contains the Saimaa nature conservation area, which was established with a decree but which falls slightly short of the 1,000 ha state-owned area requirement for national parks. In addition to state-owned land, the area also includes several privately owned nature conservation areas.

Habitats are protected in Finland with legislation and international agreements. Nine protected habitats are mentioned in the Nature Conservation Act. The habitats in the Nature Directive are protected with the Natura 2000 network. However, areas that partly serve the objectives defined for nature conservation areas are not considered nature conservation areas. These would include, for example, ridges protected by the Land Extraction Act and rapids protected by the Act on the protection of rapids. An area covered by the Natura 2000 network is also not automatically considered a nature conservation area as defined by the Nature Conservation Act, unless a separate decision has been made to establish it as one. Private nature conservation areas are established on privately owned land where the landowners can be, for example, private persons, associations, or parishes. The essential factors underlying the decision are the area's protection orders defining the characteristics based on which the area has been protected. The protection order defines what is prohibited and what is permitted in the area. Not all areas established under the Nature Conservation Act are considered nature conservation areas. This includes, for example, landscape conservation areas (Metsähallitus 2014, 23–24).

Some of the Saimaa Geopark's sites are part of the Natura 2000 programme (Special Area of Conservation). The area also contains some private nature reserves and other nature conservation areas, such as the Luonteri nature reserve, as well as some protected habitat types (sandy beaches). The other nature conservation areas are set up under a Government Decree and managed by Metsähallitus. Metsähallitus also has some protected sites that they have set up themselves. In addition, a majority of the islands in the area have been protected under a decree on nature conservation areas in Saimaa (441/2014). Sites in the Geopark area are included in national shoreline and esker conservation programmes. Natural monuments (such as Kummakivi, geosite 16) are protected by the Nature Conservation Act. Fixed monuments are protected by the Antiquities Act, such as Stone-Age dwelling sites, hill forts, 18th century fortresses, the Salpa Line, and some erratic boulders, such as Sormuskivi (geosite 12). Some of the Saimaa Geopark sites have been protected due to their geological value. These include, for example, the Rakokallio gorge in Anttola (geosite 46) and the Pursiala pothole in Mikkeli (geosite 45) (UGG application material).

4.1 LAND USE PLANS

The use of recreation areas and campsites is, in part, restricted by planning regulations that need to be taken into account in the planning and implementation of construction and forest management. Additional restrictions on tourist sites may be imposed by the Forest Act, Nature Conservation Act, Water Act, and site-specific protection orders. When planning for new construction, the municipality must be contacted to check the need for any building or planning permits or planning notices. Enquiries on restrictions imposed by planning regulations may be directed to the municipal building inspector. Planning regulations do not impose restrictions on everyman's rights for moving in unbuilt natural areas. Planning is used for controlling land use. In natural areas, the only plan available is often a general-purpose regional plan. The South Karelia and South Savo regional plans cover the whole area of the Geopark, and they include plans for protected areas, recreation areas, cultural environments, etc. They also indicate the locations of any geologically valuable sites. Master plans and town plans are only valid for population centres and beaches, and they control construction in these areas. Planning

Tourism based on different kinds of activities, such as hunting, fishing or trekking, always require the landowner's consent. Other types of tourism are generally permissible in accordance with everyman's rights or right of public access, if this has not been restricted or prohibited in the area's protection order. However, permanent operation cannot be established on the grounds of the everyman's rights. Organised events or tourism can endanger the conservation values of the area in ways that require the consent of the landowner. Using facilities (e.g. shelters and lean-tos) within a conservation area established by Metsähallitus for the purpose of conducting business operations requires the consent of Metsähallitus (Metsähallitus 2014, 69–70). In general, if a business is planning to conduct operations within a nature conservation area, they should contact the landowner and negotiate the possible use of the area. Any protection statuses and any restrictions imposed by them should always be checked when planning the development and management of sites. Municipalities can also make autonomous decisions to protect regionally significant landscape areas. In terms of practical management, this can affect, for example, thinning activities in which areas that have been designated as significant landscape areas must be taken into account. The development and protection of areas is taken into account in zoning, for example, when planning recreation areas and areas of development for nature tourism.

The various conservation programmes and statuses contribute, for their part, to the preservation of the natural and cultural heritage of the Saimaa Geopark area. They affect all aspects of the operation of the geopark, from visitors to regional management, responsible persons, and service providers. The plan is accompanied by a map indicating the protected areas and markings found in the Saimaa Geopark area (Appendix 1). Protected areas and markings are also listed by site in the accompanying table containing a summary of information on the sites. In terms of administration and maintenance, it is important to take into account these protected areas when planning site development, such as the building of new structures. Issues related to maintenance include, for example, the clearing of paths or changes in routes as well as any possible landscape clearing. Protected areas may also be restricted from the public in order to safeguard conservation efforts. However, everyman's rights may only be restricted for justifiable reasons (Metsähallitus 2014, 73–74). Some restrictions are imposed during the nesting season of Saimaa ringed seals.

for tourism and other business activities outside population centres is provided for in regional plans.

1. Master plan

Shoreline master plans may exist for areas around waterways, imposing restrictions or regulations on the use of the area. Excursion harbours and recreation areas on shores in Saimaa have been marked as general recreation areas in the plans. This means that construction for these purposes is allowed on them. Plans may impose restrictions on forest management for example by indicating valuable landscape areas. Municipalities may impose regulations on how close to a shore structures such as barbeque shelters can be built.

2. Town plan

Population centres and, for example, municipal harbours are governed by town plans, which have more specific regulations for construction and road zones, among others.

4.2 CLIMATE CHANGE

The municipalities of the Saimaa region, the regional councils and the local Centres for Economic Development, Transport and the Environment signed the charter for the Finnish Lakeland Forum on 5 June 2019 ([finnishlakelandforum.fi](https://www.finnishlakelandforum.fi)). The purpose of this charter is to protect the Saimaa area and to keep it clean. The charter undertakes to implement sustainable development in the Saimaa area, to strengthen the region's vitality, to promote responsible tourism and recreation, to support multidisciplinary research in Saimaa, and to improve water quality and water habitats in the area. The charter is intended as a long-term and continuous development tool for the Saimaa area. For example, Mikkeli is building a new water treatment facility based on MBR technology. It will be the most modern water treatment facility in Europe, even in the world. Industrial and municipal waste water is already treated efficiently in the Saimaa Geopark area. The area is also safeguarded against emissions from agriculture and forestry by means of protection zones.

Due to global warming, the ice cover on lakes is increasingly thinner and stays on for a shorter time. In the past century, the average ice thickness has decreased by 25 centimetres in Lauritsala in Lappeenranta. Additionally, the freezing over of Saimaa takes place later in the year, and the ice breaks up earlier. Climate change also affects flooding. As the amount of snow decreases, spring flooding is reduced. On the other hand, increase in rainfall is predicted, which in turn may increase flooding. The effects of climate change are dependent on where the waterway is located in Finland as well as on the characteristics of the waterway, e.g. its size. In general, spring flooding is expected to decrease and to occur earlier, and autumn and winter flooding is expected to increase.

Winter rainfall will wash away increasing amounts of nutrients from fields and forests with little snow cover, which can lead to weakened water quality due to eutrophication. Changes in water quality have already been observed throughout the northern hemisphere. Climate change can also affect the Saimaa ringed seal populations, as a female seal gives birth to one pup between February and March. The seals make their nests in snowbanks that provide shelter for the pups. Limited snow cover in recent years has meant that there has been a need to push snow to create snowbanks for the seals to make their nests in.

The Saimaa area is part of the Green Belt of Fennoscandia, which extends from the Arctic Ocean to the Baltic Sea along both sides of the Finnish-Russian border. The Green Belt of Fennoscandia is part of the larger European Green Belt (https://www.ym.fi/en-US/International_cooperation/Green_Belt_of_Fennoscandia). In Saimaa, the most visible aspects of the Green Belt of Fennoscandia are the waterways, or the "blue belt", and nature tourism. The Green Belt is one of the most significant green corridors in Europe. One of its goals is to help species adapt to climate change. The co-operation objectives for the Green Belt of Fennoscandia are in line with the objectives

of Saimaa Geopark: preserving natural diversity, developing local livelihoods with attention to the sustainability of unique natural environments, geological diversity, and promoting awareness of cultural heritage and environmental knowledge. Saimaa Geopark functions in co-operation with other operators in the Green Belt.

South Karelia is part of the Carbon-neutral Finland network coordinated by the Finnish Environment Institute. Carbon-neutral regions, together with participant municipalities, undertake to reduce greenhouse gas emissions in the region by 80 per cent from the level of 2007 by the year 2030. South Karelia has committed to battling climate change in its strategy (<https://www.carbonneutralfinland.fi>). Saimaa Geopark participates in the Carbon-neutral Finland project through the City of Imatra.

The City of Lappeenranta in South Karelia aims to develop as a European green city. The city has developed its operation into a greener direction and continues to put effort into this development. Their goal is to reduce greenhouse gas emissions in the city and to improve recycling in waste management. Waterways are being rehabilitated, and the special characteristics of natural environments are taken into account. Lappeenranta has applied for the European Green Leaf title for 2021. Mikkeli has also had success in the same competition and won a Green Leaf Award in 2016. Lappeenranta and Mikkeli are member cities in Saimaa Geopark and are thus indirectly involved in its operation.

The South Savo regional council has committed to sustainable development in accordance with the UN Agenda 2030 programme. The commitment has been made through the www.sitoumus2050.fi website managed by the Government. In addition to this commitment to improve its own operation, the regional council also co-operates with other operators in the region to promote the Saimaa area as a model for responsible tourism. Saimaa Geopark participates in battling climate change through the aforementioned partners. SGP participated in the Sitoumus2050 campaign by challenging its business partners and Rokua Global Geopark as well as other Finnish geopark projects.

Battling climate change in SGP is also based on the UNESCO Global Geoparks Sustainable Development Goals, which promote local travel, the vitality of rural areas, local food production, geological and natural heritage, and cultural heritage.

Saimaa Geopark's business partners have, for their part, committed to promoting sustainable development and responsible tourism. Climate change is also part of local environmental education, in which SGP co-operates with local schools. Saimaa Geopark ry also aims to reduce its own carbon footprint and to compensate for it by planting trees together with the schools. This part of the co-operation will begin in 2020.

4.3 AREA OWNERSHIP

Saimaa Geopark ry does not directly own or manage the geological, natural and cultural sites. Sites owned by member municipalities are managed indirectly. The owners of the sites or partners appointed by them are responsible for management and maintenance. Saimaa Geopark sites and surrounding areas are owned by various operators, such as Metsähallitus, local parishes, municipalities, companies, and private landowners. One important aspect to keep in mind is the interpretation of everyman's rights. In Finland, everyman's right as a concept is seen as the right to move, spend time and temporarily camp as well as utilise specific natural resources within land owned by someone else without the landowner's permission. In the wider sense, activities conducted under everyman's rights can be seen to include activities that do not require the consent of the landowner or a permit issued by the authorities or activities that have not been otherwise prohibited.

When dealing with private landowners, this usually involves consent or agreement on the use of specific land areas. Legally, even oral agreements are considered valid, but to avoid any disputes, written agreements are the recommended and safer option (Ministry of the Environment 2012). When clear agreements are drawn up, conflicts between landowners can also be avoided. Saimaa Geopark ry and The Central Union of Agricultural Producers and Forest Owners (MTK) together have drawn up a Land Use Agreement with private landowners (Appendix 2). The member municipalities can use this agreement, for example, when agreeing on the placement of signage or parking areas with private landowners. The agreement includes maps indicating the used area of land, and it specifies the rules and restrictions for the use of the land. The agreement also specifies the details for the operations for which the landowner has given permission within their land. This includes, for example, the clearing of land or the placement of signage. Clear signposting ensures that the visitors do not wander into the yards of nearby buildings or find themselves in private areas. The construction of larger structures, such as waste shelters or lean-tos, may also be specified in the agreement. Other licensing issues, such as possible building permits, must also be taken into account in the planning of larger structures. The agreement also defines the duration and possible termination of the contract and the compensation payable to the private landowner for the use of the site. The agreement dictates that the landowner is obligated to notify the municipality in advance of any forest management activities and logging operations as well as other similar operations carried out in the area, if they affect moving about in the area of the site. The landowner is also obligated to inform hunting clubs on the use of the area if the area of the site is used by a hunting club. The agreement has been used fairly little in the form it is written out, since the agreement is very detailed. However, the agreement has provided the member municipalities with insights on what agreement should contain.

Between 2017 and 2019, during the Saimaa signposting project, funded by the Rural Development Programme for Continental Finland, agreements on the placement of signage on privately owned lands were signed by the relevant member municipalities and the landowners. Under the agreement, the use of the target area is largely based on the exercising of everyman's rights.

What the rights granted by everyman's rights ultimately are and whether the landowner can restrict exercising the rights is largely subject to interpretation. The utilisation of privately owned lands

for business purposes has often been interpreted to lie outside the realm of everyman's rights. In addition, the leisure activities of private individuals can present problems for land use.

The land use agreement of SGP and MTK defines that if the Saimaa Geopark area is exploited by companies or used for paid service activities and/or business operations by a municipality or some other third party, "the landowner has the right to agree on the use of the area and on the compensation with the party in question".

Saimaa Geopark ry has applied for funding from the EAFRD for a two-year project, which involves agreeing on common rules on the commercial use of the sites between entrepreneurs, landowners and recreation area organisations. Metsähallitus has its own co-operation agreements with entrepreneurs who operate in national parks, and the same type of model has been in the planning with recreation area organisations for some time. Increasing visitor numbers affect the maintenance intervals and degradation at the sites and result in additional costs. Companies have also expressed a wish that landowners would sign a land use agreement that would apply to all entrepreneurs, so that companies would no longer need to draw up individual agreements. The common rules could pave the way for a type of booking calendar which would make at least adventure agencies aware of their largest visitor groups.

Adding signposting in nature always requires a permission, and possible road signs need to be negotiated with the Pirkanmaa Centre for Economic Development, Transport and the Environment (Pirkanmaa ELY Centre) which handles road sign permits nationwide. The Lauhavuori-Hämeen kangas Geopark project discussed road signs in the autumn of 2019. The Pirkanmaa ELY Centre and the Finnish Transport Infrastructure Agency (FTIA) gave the following information concerning road signs:

"The main purpose of signposting that directs to a service point is to ensure that the road user is able to find the destination. There can be no road signs that guide to a geopark due to the vastness of the geopark area. National park signs, for instance, guide to their respective parking areas or separate information centres. Signposting would be appropriate if a separate information point with a parking area would be built for the geopark. In that case, a road sign permit could be obtained.

A Geopark plate with some text could be added to other tourist signs (so-called brown signs) or other signposted destinations, such as national parks, as additional information. Neither current nor the new road traffic legislation includes the possibility to use the Geopark symbol in traffic signs. Allowing it would require changing the law, since traffic signs are defined in the approved Road Traffic Act.

Awareness of the Geopark areas and information on reaching them could be promoted with roadside advertisements which would notify travellers of arriving at such an area. They would not be traffic signs, but they would provide more visibility and could actually work really well for your needs. The authorisation process for these matters is handled centrally for the entire country in Tampere at the Pirkanmaa ELY Centre."

(T. Österman, FTIA, 2019)



Image: Puumala municipality

5 CURRENT STATE OF THE GEOPARK SITES

The plan is structured according to three perspectives – the visitor perspective, management and administration perspective and development perspective – which were also used as a basis for surveying the sites.

The purpose of the management plan is not only to chart the condition and facilities of the sites, but also to reflect on the overall experience of the visitor. The experience can be considered to start as the initial information about the sites and their reachability is discovered. This will lead the way to the experience that the visitor ultimately gets. The customer perspective could be included in the plan, because the person who conducted the survey was an “outsider” and knew nothing of the sites in advance. This provided a genuine visitor perspective. One of the key points of the plan is communicating it to different operators in a way that benefits them. Although the perspectives are divided into three categories, they are not separate but strongly interconnected and thus overlapping. The survey pays attention to altogether 11 different themes:

- provision of information
- reachability
- signposting and guidance
- routes
- accessibility
- degradation of the sites and need to monitor the degradation
- general impression and tidiness
- facilities
- services in the surrounding area
- businesses in neighbouring areas
- points of development

Visitor perspective

The visitor perspective approaches the destinations from the customer’s point of view and seeks to explain potential challenges encountered by the visitors. The starting point should be to ensure that the user experience is as easy and safe as possible. Special attention is paid to the availability and usability of the site. These involve themes such as finding information about the site, reaching the destination, guidance and the condition of the routes at the site as well as the general impression and tidiness. Important themes also include the site’s accessibility and facilities as well as services in the surrounding area. This user perspective cuts through the majority of the themes surveyed. Respectively, the user experience can therefore be improved or undermined by a number of different factors.

Administration and management perspective

The administration and management perspective shares many of the interests of the user perspective. The aim is to ensure that the visitors find the sites as attractive as possible so that the sites will provide memorable experiences for the users. The administration and management perspective focuses on the state and facilities of the destinations and on controlling how the visitors move about the sites thus reducing degradation. The aim is also to consider how the administration and management of the sites should be realised in the best way possible. The perspective emphasises continuity. Tending to the attractiveness of the sites guarantees a pleasant user experience and ensures that changes to the environment are minimal and that the natural values of the sites are preserved.

Development perspective

The development perspective is a combination of the previous two perspectives. The development perspective considers the potential challenges that the site presents to the visitor and thinks of ways to improve the visitor experience. At the same time, it seeks to reflect on development measures related to management and administration. The drawing up of the plan involved an email poll that was sent to those who were responsible for the administration and management of the sites. The questionnaire is appended to this plan. The purpose of the poll was to gather information on who are responsible for the management and administration of the sites and to identify their views on the current state of management and administration as well as future development needs. Due to challenges related to the schedule, local entrepreneurs and other operators were not polled for this plan, but the plan reveals issues related to services, such as reachability and accommodation, which could be addressed by local operators.

The next part of the plan will provide a general overview of the findings of the poll by theme. More detailed site descriptions can be found on a Blogger website at <https://samilehtinen.blogspot.com/>. Sign in to the page via Gmail: sgphoitokaytto@gmail.com (password Drumliini2). The link to the site is also included in the Appendices section of the plan. The site descriptions are provided on a separate website mainly in order to save space. The website includes the sites’ current state as well as development suggestions and images. In addition, each site has a separate table, which includes main features related to the 11 thematic areas. Due to the number of sites and the limited resources available, it was not possible to include an in-depth analysis of every site in the plan. However, the plan aims to provide as good an overview as possible, so that it may serve as a basis for future development plans.



Image: Puumala municipality / Timo Hämäläinen

6 SUMMARY OF THE CURRENT STATE OF THE SITES

There are altogether 65 geological sites at Saimaa Geopark, but two of the sites had to be left out of the plan due to reasons of logistics and scheduling. The number of sites is great, and the sites differ from one another in many ways. For example, urban destinations are easy to reach, while the sites that are more remote, particularly those located on the islands, are more challenging in terms of reachability.

In addition, the level of the facilities and the amount of signposting varies. For the reasons mentioned above, it is difficult to make clear generalisations on the current state of the sites. As mentioned earlier, the sites are described in more detail on a website, which can

be found using the link in the Appendices section of the plan, and in the table attached. However, some features that were repeated at many of the sites will be presented next. Summary of the sites will be given by focusing on the same themes that were used for the survey.

6.1. INFORMATION

Information needs to be considered in terms of what information is available and how the sites can be found. With comprehensive and easy-to-find information, it is possible to promote the sites and to increase their recognition and attractiveness. In addition to the information that is available in advance, on-site information also plays an important role. This way the information is also closely linked with signposting and guidance. Comprehensive information also allows the potential visitor to plan their visit to a site as accurately as possible in advance and to get information about the reachability of the destination and its nearby services, such as accommodation. The survey paid particular attention to how easily the information can be found and how comprehensive it is. The primary concern is to ensure that the most important information is found through the pages of the Saimaa Geopark Association and in the Saimaa Geopark signposting.

Current state

On the Saimaa Geopark Association's web pages, the sites are currently divided by municipality and each site has its own page, which focuses especially on the presentation of the geological features of the site. The page provides the coordinates of each site, which helps with finding them using electronic aids. Most of the sites are also described in more detail on the municipalities' own travel pages and the sites of the municipal travel agencies. The websites of the South Karelia and South Savo regions also include descriptions of the sites. In addition, municipal tourist information centres offer materials on Saimaa Geopark at their own info points to a varying degree. Saimaa Geopark also has partnership companies, which provide materials on Saimaa Geopark. The amount of information at the sites varies, and many different operators participate in the provision of information. During the "Saimaan opasteet" (Saimaa signposting) project, 95 signage frames and 327 signs were installed in the area. Some of the instalments will be done in the summer of 2020. Funding has been applied for from the EAFRD for a new project, which aims to add more signs to natural and cultural sites and to create signposted Saimaa Geopark trails that are based on existing routes. Decisions on the funding will be published by the end of 2019.

Strengths

- There is plenty of information available and it can be found in several places.
- The Saimaa Geopark web pages are clear and the sites can be found easily.
- The Saimaa Geopark pages are available both in Finnish and in English.
- Plenty of information about the area's geology and its features.
- A lot of English-language material available and part of the material also available in Russian.
- All geosites as well as natural and cultural sites can also be found on Google Maps under the name Saimaa Geopark.

Challenges

- Information is fragmented and found in several places.
- The Saimaa Geopark web pages could contain more detailed site descriptions (difficulty of the trails, accessibility, parking spaces).
- Better linking between the website of Saimaa Geopark and the data of Outdoor Active. This includes linking the trail information provided by the South Karelian Foundation for Recreation Areas and their Outdoor Active data with the information of Saimaa Geopark.
- Some sites are missing clear information on whether they can be reached more easily by land or by water.
- Several sites are missing clearly recognisable geological attractions, making it potentially difficult for the visitor to understand where they should go.
- The amount of information at the destination is unevenly distributed. There is plenty of information available at some of the locations, while other places need more.
- Some of the information signs are in bad condition and reading them is difficult (not the Saimaa Geopark signage).
- The sites feature signs from many different operators, and their content is often overlapping, in addition to which the sites can sometimes provide too much information.
- The Saimaa Geopark signs found at the sites are often fairly academic, and the visitor may find the geological texts difficult to understand.
- The history and stories related to the sites could be brought to the fore more. Linking the geological heritage to human history more strongly.
- At some of the sites, it is difficult to understand the value added by the Geopark, often due to the signs of many different operators.
- Could the information emphasise the ban on illegal campfire sites some more?

6.2. REACHABILITY

Reachability plays an important role in allowing visitors easy access to the destinations. Good reachability is a key factor for the visitors. In addition, the site should be reached in a way that puts a minimal burden on the environment and the climate. One of the important themes of the plan is climate change and how to fight it. In the Saimaa Geopark area, improving the reachability of the sites and lending support to reaching them in an environmentally friendly manner is the best way to address the issue. The Saimaa Geopark area is vast, and many of its sites are challenging to reach. Developing and improving reachability is therefore important for the future of the Saimaa Geopark area.

Current state

The sites of Saimaa Geopark vary significantly in terms of how reachable they are. Some of the sites can be reached in a wide variety of ways (urban destinations), while some of the sites cannot be accessed by any other means than a watercraft (island destinations). The sites can also be located in more remote areas, in which case they are probably best reached by car. At some destinations, public transport is sporadic or non-existent. Organised and guided excursions would improve the reachability of the more challenging sites.

Strengths

- Urban destinations can easily be reached with various means of transport.
- There are plenty of electronic map applications available.
- Ample parking space is often available at the sites or near them.

6.3. SIGNPOSTING AND GUIDANCE

A good and simple signposting and guidance system has a strong link with how the visitor experiences the site. It is also closely related to the reachability of the sites and the provision of information. When it comes to reachability, it is particularly related to the physical signposting along the trail and thus to finding the site. On the other hand, the signposting and guidance system plays a key role in the information provided at the destination and in the ease of moving around the site and its routes. A good signposting and guidance system also makes it possible to control the stream of visitors and thereby prevent the formation of informal routes and degradation of the site. Signposting and guidance also involves instructions on how to act at the site as well as rules and regulations.

Current state

From the viewpoint of reachability, there is no physical signposting that would guide the visitor to the majority of the sites. Therefore, different maps and map programs need to be used. It is still possible to find many of the sites using a traditional paper map, but in some cases the use of technological aids is almost a necessity. This fact is highlighted when it comes to foreign visitors, especially. The extent of signposting and guidance differs from site to site. Some of the destinations have marked routes and trails and include information about the destination as well as the facilities available in the area. At some of the sites the information provided is very limited or non-existent. The amount of signposting and guidance along the routes is different at each destination.

- Many destinations can also be reached by boat.
- Some island destinations are part of a cruise programme.
- Local entrepreneurs organise kayaking trips to some of the destinations.
- With good planning, the Saimaa Geopark area can also be enjoyed without a car.
- In addition to cars, many of the destinations can be reached by bicycles or electric bikes.

Challenges

- Many of the sites are challenging to reach, and especially for foreign visitors it can be difficult to find information about how to get a lift to the sites.
- On Saimaa Geopark's website, the information provided focuses mainly on the geological overview of the region and things such as reaching the site largely remain the responsibility of the visitor, as no information is provided on how to reach a particular site (boat rides, route suggestions, public transport).
- There is a lack of organised excursions.
- There are limited water transport opportunities.
- Public transport is sporadic or non-existent.
- Roads between destinations are in bad condition and narrow.
- Availability of rentable bicycles and electric bicycles is limited.

Strengths

- Some of the destinations have physical signposting that guides to the site.
- Saimaa Geopark's website as well as other websites provide additional information about the destinations.
- The on-site physical Saimaa Geopark signposts often include a map of the destination.
- Most of the sites have plenty of information on the site and its facilities.
- At some of the sites, visitors can download site-specific guidance using a QR code, and Outdoor Active allows a visitor to download an electronic map of some of the routes that they can use on their smart device.
- Guided tours are available at some destinations.

Challenges

- The scope and level of guidance varies.
- Lack of clear route guidance may increase the number of unofficial paths.
- Saimaa Geopark signposting will not be available at every destination.
- Route guidance downloaded using a QR code do not always work.

6.4. ROUTES

Routes play an important role because they provide safe access to the destinations. The safety aspect is reflected in keeping the routes in peak condition and constructing them in such a way that there is no risk of getting lost. The marked routes make it easier to guide the visitors towards interesting sites and to prevent uncontrolled trekking. Without clear routes, the formation of informal paths increases, adding to environmental degradation. Routes that are in poor condition present an increased risk of injury, and children and those who are less mobile will find moving about more challenging. The routes should include halfway signposting, and different information signs at various sites could be used to make the destinations more interesting.

Current state

As a rule, the routes are clearly signposted and their overall condition is good. However, there are differences between routes and their condition may vary also within the route. A part of the route can be very well maintained, while other parts may be in a worse condition due to wear, for example. As mentioned in the Signposting and guidance section, there are major differences in the quality and amount of signage between the sites. In the ideal situation, each Saimaa Geopark site would have visually and qualitatively consistent signposting and guidance.

6.5. DEGRADATION AND MONITORING DEGRADATION

One of the main questions addressed by the plan is how degradation is visible at the sites and how it can be prevented. Excessive degradation of the sites negatively affects the user experience and, in the worst case, causes irreversible damage to nature. Even in a less severe scenario, the restoration of the environment can take a long time. Moving about in nature is an integral part of nature tourism, but we should try to minimise the marks it leaves. However, in this type of operation it is necessary to accept a certain degree of environmental change. Visitor numbers in the Saimaa Geopark area and its sites will probably grow in the future due to the Geopark status of Saimaa. The plan aims to provide information on the current state and degradation of the sites, particularly through photographs.

Current state

Degradation varies by destination. In general, it can be said that most of the degradation can be found in places where the services of the site are located. This can be seen especially around campfire sites, which are often found in conjunction with other services. Degradation also occurs along the possible signposted routes of the site or the informal paths that have formed there. In more general terms, degradation can also be thought to apply to the site facilities, which are used a lot. If the site has been built around one main attraction, that is where most of the degradation takes place. The Astuvansalmi rock paintings, where the area around the paintings is heavily worn, serve as an example. Monitoring points were built along the Norppapolku path (The Saimaa Seal trail) at Puumala in May 2019. Degradation measurements can now be conducted at the site. At other sites, degradation is not being monitored at present. A presentation on measuring degradation given by MA Emma Ilkka at a workshop on responsible tourism organised in Puumala on 24 May 2019 has been appended to this plan (Appendix 3). The appendices also include a table that can be used in the measuring of degradation (Appendix 4).

Strengths

- The routes are mainly in good condition.
- As a rule, there is extensive signposting and guidance along the routes.
- Most routes are clearly marked for the visitors' convenience.
- With a little effort, many sites could have signposted routes.

Challenges

- Lack of marked routes at some destinations.
- Signposting along routes varies in terms of quality and quantity.
- Halfway signposting could be used more along the routes.
- Some of the routes are challenging, especially for those in poor shape and children.
- Apart from a small exception, the sites have not been combined by creating Saimaa Geopark routes.

Strengths

- Many sites have marked routes that guide the visitors to use certain paths, thus focusing the degradation in desired locations.
- Outside the immediate proximity of routes or facilities, the environment is often in its natural state.
- Clear walkways that people use can already be found at the sites, so degradation does not occur on a large scale outside of these areas.

Challenges

- In some places, degradation of the routes has made moving about difficult.
- Many informal routes have formed at some of the sites.
- Positive impressions are weakened by degradation.
- Degradation is not measured or actively monitored at present.
- Protection markings present their own challenges for the maintenance of paths (e.g. no motor vehicles permitted).
- Signs that would encourage staying on the paths that have already formed could be brought to the sites.

6.6. ACCESSIBILITY

One important theme in the plan is to look at the sites from the perspective of accessibility. Today, accessibility is taken into consideration quite differently than in the past. Nowadays, accessibility should be taken into account in all construction. Accessible sites promote equality and allow visitors in various physical conditions to have unique nature and cultural experiences. Easily accessible fairways and structures also improve the experience for those travelling with children, elderly people or prams.

Current state

The level of accessibility varies from one Saimaa Geopark site to another. Some of the destinations are designed to be accessible to those with reduced mobility and attention to accessibility is reflected especially in how the facilities are designed with the physically impaired in mind. There are also sites that could be suitable for those who are physically impaired, although they were not originally built with accessibility in mind. Accessibility could also be improved with reasonably small changes at several sites.

6.7. FACILITIES

Comprehensive facilities that are in good condition can attract visitors to the sites, in particular. Good facilities can also help lower the threshold of visiting a site and make the visits easier. Campfire sites make it possible for the visitors to enjoy their packed lunches and toilets allow for a longer stay at the site. Duckboards and various structures facilitate moving about the site and simultaneously prevent environmental degradation. Facilities are thus closely related to accessibility. Sites with a lean-to can lower the threshold of going on overnight nature trips. At their best, good facilities can serve as a stimulus to start camping for those who are not accustomed to moving around in nature. The condition of the facilities is also a safety factor. It is a good idea to pay close attention to the quality and condition of the facilities. Poorly managed facilities or lack of firewood can easily drive visitors away.

Current state

The facilities vary from one site to another. Some of the sites have comprehensive facilities, while others have practically no facilities at all. Generally, the facilities are in good condition and functional. The campfire sites have ample firewood apart from a couple of exceptions, the buildings are undamaged and clean, and the toilets have toilet paper and bedding and they are not too full. Waste management also works well at most of the sites.

Strengths

- Some of the sites have been built to be accessible.
- Parts of some of the sites could be suitable for the physically impaired, even though they were not originally designed to be accessible.
- Accessibility can be improved through small changes.

Challenges

- Most of the sites are not accessible for the physically impaired.
- Many of the sites are challenging from the viewpoint of reachability.
- At some sites, accessibility plans have been carried out only half-way or they are poorly executed. For example, accessible toilets may be missing wheelchair ramps.
- The information provided by Saimaa Geopark does not mention details about the site and its accessibility.

Strengths

- Many of the sites have comprehensive facilities.
- Condition of the facilities is mainly good.
- Maintenance generally works well.

Challenges

- Quantity and quality of the facilities vary.
- There could be more benches and tables along the routes.
- Some toilets do not have toilet paper.
- Some sites do not have toilets, which reduces the time spent in the area.
- It would be a good idea to develop an electronic feedback system that could easily inform people about changes or shortcomings at the sites.

6.8. NEARBY SERVICES AND BUSINESSES

Services and businesses near the sites are typically associated with various accommodation options and dining opportunities. Other important services include bicycle, canoe and car rentals as well as shops. Saimaa Geopark sites are located in a geographically extensive area and therefore various transport services that contribute to reachability gain significance. As travelling by bicycles and electric bikes has gained popularity, the need for transporting bikes on boats has also increased. Good and easy-to-find services are a strong attraction factor and contribute to lowering the threshold for visiting the sites. Companies also promote the Saimaa Geopark sites and organise excursions to them.

Current state

This theme also shows a lot of variation between the sites. Particularly at urban sites, various services and companies are well represented. By contrast, some of the more remote sites feature practically no services at all. A site lacking both comprehensive facilities

and nearby services can drive some potential visitors away. This tendency is particularly true when it comes to people travelling by non-motorised vehicles.

Strengths

- Many of the destinations are within a reasonable distance from services.
- Urban areas have comprehensive services.

Challenges

- No nearby services at more remote sites.
- Shortage of services may present an obstacle to exploring the destination.
- Saimaa Geopark website missing more detailed descriptions of services at the sites.

6.9. GENERAL IMPRESSION AND TIDINESS

The Saimaa Geopark concept is based on a theme of sustainable tourism, which makes keeping the sites tidy and litter-free crucially important. The general impression the visitor gets and the tidiness of the site are essential for a memorable user experience, as the visitor is unlikely to revisit a site they have found unappealing. In addition, littering and vandalism easily ruin the unique atmosphere of a site. At the same time, littering causes problems for the area's wildlife. Littering is also an economic issue, since the cleaning of the sites is not free and the time spent tidying the site uses resources that could be used for other activities.

Current state

The general impression and tidiness at the sites are at a good level throughout. Waste management works well and at those sites that have no waste management, visitors have adopted the idea of no-waste camping well. There was virtually no litter or other waste at the sites. The visitor is reminded of rubbish-free trekking at several places. The physical structures of the area, such as toilets, were clean and pleasant with a few minor exceptions.

Strengths

- Sites are nearly litter-free.
- People have clearly embraced the idea of no-waste camping.
- Waste management generally works well.
- There is plenty of information available on no-waste trekking and waste management.
- Vandalism not detected on a large scale.

Challenges

- Some of the facilities in poor condition, affecting overall attractiveness.
- There are many illegal campfire sites.

The above-mentioned themes are not separate from one another; instead, they often overlap and thus also affect each other. Information affects reachability, which in turn is part of signposting and guidance. Signposting and guidance is closely related to routes, routes to degradation and so on. Together, the themes form a whole, where the individual factors are important in themselves but at the same time strongly interconnected. The absence or poor condition of one of these factors may mean a reduction in the attraction of a site and, conversely, each of the factors may also add to the attraction of a site. At the same time, they either reinforce or weaken each other. The key is to think about the sites as a whole and understand the interdependencies between the different factors. It is also good to note that operators in the region can independently influence all of the above-mentioned themes. Thus, developing the attraction of the sites is firmly in the hands of the operators. The attraction of the sites is particularly affected by their management and administration, which includes the development of the sites.



Image: Puumala municipality

7 MANAGEMENT AND ADMINISTRATION

The sites require constant maintenance in order to stay attractive and safe. Thus, examining the success of these operations is not irrelevant. Failure to carry out maintenance work can at worst lead to dangerous situations. Care is therefore crucial for the attractiveness of the sites. It is important for the administration of the sites that those responsible for administering the sites have as accurate and clear an understanding of the situation as possible. This makes it possible to respond to potential deficiencies and development needs as quickly as possible. One of the objectives of the plan is to find out how management and administration are currently organised, and what strengths and challenges it entails.

A questionnaire was sent to the persons responsible for managing and administering the sites. The questionnaire is appended to this plan (Appendix 5). The following section will discuss some of the factors that emerged from the poll. Not all member municipalities provided answers to questions on the management and administration of the sites.

Administering the sites is predominantly carried out by the member municipalities of the Saimaa Geopark Association. The South Karelian Foundation for Recreation Areas is responsible for some of the sites, and the state-owned areas are the responsibility of Metsähallitus or the South Karelian Foundation for Recreation Areas. In some cases, the site is located in a state-owned area, but administratively it is the responsibility of the municipality. Management varies by municipality, but typically the management is outsourced to external operators. The operators may include various associations, administrative committees or private individuals operating under a company name. Keep the Archipelago Tidy Association manages several island destinations. At Sulkava, the management is handled by Järvi-Saimaan palvelut Oy, which is a joint company owned by Sulkava, Juva, Rantasalmi and the Federation of Municipalities of the South Savo Social and Health Care Authority. In addition to the wide range of management operators, practices regarding the persons responsible for managing the sites vary in the municipalities. In some municipalities, there is no clear person in charge. Instead, administration duties may be handled by a person who is able to do them at a given time.

According to the poll, management and administration are considered to function well for the most part, but points for development were also mentioned. The responses express a wish for centralised administration and management and also stress the significance of co-operation among the various operators and stakeholders in the region. Notifying the stakeholders is also seen as an important factor. At the moment, as the management and administration is divided between several operators, not everyone is necessarily aware of the overall picture. Not knowing who is the person responsible for the sites is also seen as a complicating factor in the co-operation between operators. The responses also reflect a wish for handling management on a more long-term basis and for having more resources. Co-operation between the administrators of the sites is currently carried out in the form of discussions with no concrete measures being taken at present. Often the discussions involve going through some feedback together. Co-operation is carried out in a positive atmosphere, but the need for increased co-operation emerges as an important point on the basis of the responses.

The creation of an electronic platform that could be used for leaving various service requests, such as requests for firewood or snowploughing, was also suggested. This was seen important for the purposes of forming a better overall picture. Metsähallitus is currently piloting an app called Retkikompassi, which could be used in the Saimaa Geopark area as well (www.metsa.fi). It is considered highly important that Saimaa Geopark have up-to-date data on the condition and state of the sites, as this

would improve notifying about problem situations, the storm damage of Rastinniemi in the summer of 2019 being a case in point. It would make sense to gather the information in one place in order to form a better overall picture of the sites. This would make it easier to monitor the quality of the sites and to react to deficiencies (e.g. repair needs) as needed. If the sites were inspected regularly, it would be easier to ensure that the sites stay in good condition. A report could be written about the inspections, or the findings and repair needs could be entered into a platform that could be accessed by all those who need the information. For example, Metsähallitus inspects its natural sites annually and prepares an observation report. This could also serve as a good basis for evaluating the maintenance and repair needs of the Saimaa Geopark sites.

The assessment of the maintenance and repair needs could also be facilitated by creating a common quality classification. It would be good to define the sought-after 'geopark quality' and then to develop the sites accordingly. The quality classification would take into account both the maintainers and the users. For the users, the classification would give information on how demanding the sites are, that is, whether the site is accessible or particularly demanding to move around, for example. However, the responses to the poll stress that the quality classification should not impede normal operations. In other words, it should be as clear and simple as possible. The emphasis could be on things such as the clarity of signposting, safety of the sites and a visually unified look. It could also define common maintenance instructions and maintenance level as well as resources allocated. One proposition suggested as an alternative to the shared quality classification mentions a liability agreement, which would ensure that no site is left untended.

On the basis of the responses, operators wish to receive clear and concrete recommendations on the management of the signposts and possible changes in land use as well as information on the general principles of the management of the Saimaa Geopark area. The land use agreement drawn up by The Central Union of Agricultural Producers and Forest Owners (MTK) and Saimaa Geopark requires that Saimaa Geopark be informed in advance of, for example, any forestry-related work. Broadening the scope of the agreement could clarify and improve the flow of information between landowners and those responsible for the sites. In addition, clear information is needed on the maintenance development needs. Paying attention to the particularities of the sites and providing clear suggestions and schedules for corrections are considered important in the responses as is the assessment of maintenance or lack thereof. General principles could be included in the possible creation of a common quality classification and management level. This would provide better understanding of the annual repair needs of various sites. The poll suggests that the financial implications of the roads, signposting and parking spaces associated with Saimaa Geopark should be stated clearly so that they could be taken into account when preparing the budgets of the municipalities. The impact of larger costs is emphasised.



Image 14. The Pisamalhti hill fort is a place of many stories and colourful history. Image: Sulkava municipality

8 COMBINING GEOLOGY AND NATURAL AND CULTURAL HERITAGE

Going around the Saimaa Geopark area and visiting the sites confirmed that the words attached to the Saimaa brand, tranquillity, silence, nature, cleanliness, and space, were well chosen. The themes highlighted sustainable development, military history, culture, scents, nature, water, lake, Vuoksi river, powerful atmosphere, stories, identity of the region, wilderness, curiosities, mysticism, fitness and wellbeing. The sites are geologically significant for the surrounding landscape, human habitation in the region, natural and cultural heritage, and industrial development. Saimaa, especially, has had an effect on the identity of the region and with this in mind, combining natural and cultural heritage can bring new tourism products and services to the region. The following presents some ideas about the tourism services that are in the pipeline.

The planning of new tourism services or products should rely on the strengths of the region. For example, the military history of the region can be thought to comprise the entire time that people have lived in the area, that is, approximately 10,000 years. Our ancestors must surely have had some border disputes with the neighbouring tribes within the Saimaa Geopark area. The reasons our ancestors set their dwellings in the area are related to geology. The same geological phenomena have enabled the inhabitants to flee from their oppressors and hide in caves and rocks as well as allowed them to keep a lookout for the arrival of enemy ships on the hill forts (Image 14). With some imagination and stories these themes can be combined with information on ancient lifestyles and eating habits and even enable the development of food products for various guided excursions.

The Salpa Line and its potential for attracting tourists offer countless opportunities for tourism. Linking the sites between Luumäki and Sulkava could bring in more tourists that are interested in military history. The visitors' book of the Salpa Line stone defences at Syyspohja in Ruokolahti shows that the site is visited by a lot of foreign travellers but the information is mainly available in Finnish. Geologically the area is interesting due to the stone obstacles and the way the Line follows the terrain.

Scents in the area are strongly associated with water and forests. Towards the autumn, decomposing leaves create their own scent, not to mention the rebirth of nature in the spring. Turning scents into a part of guided excursions is an added value that should be highlighted. Scents cannot be packaged and turned into a souvenir, but they can be stored in memory so that people can return to them any time they want. Scents can be a fine addition to excursions organised for visually impaired people, for example.

The area has plenty of different hiking trails that can be easily connected to geology. Hiking trails passing through geological sites need to be promoted through the marketing channels of the member municipalities and Saimaa Geopark. Similarly, linking natural and cultural sites to the routes also advances the recognition of Saimaa Geopark. Thematically, the possibility of exercise and nature/geo trekking is worth mentioning. On the other hand, many of the routes are so easy or short, that even those who are not in top shape have many opportunities for outdoor activities and enjoying nature. Providing information about the sites could inspire new tourist groups or people in the region to get acquainted with the area.

The Kummakivi erratic boulder in Ruokolahti has attracted many visitors in the past couple of years, ranging from locals to tourists.

The site is practically in the middle of nowhere, there are no services nearby, but visiting days still draw in a steady stream of visitors. Part of Kummakivi's (lit. 'odd stone') popularity can of course be attributed to its strangeness but could the case also teach us something about promoting other remote sites? A similar mystical atmosphere can be sensed at other Saimaa Geopark sites. Mystical sites are often rugged cliffs, slightly hidden places, which are usually linked with stories about sprites, trolls, robbers and boisterous fiends. Branding some of the more difficult to reach destinations of Saimaa Geopark with mysticism could bring more visitors to the sites. As the Kummakivi case shows, you do not always need services to add value to a site.

The lack of services at the Pistohiekka beach in Puumala has not made the place less attractive to visitors. The first impression could be described as sad, even, as the days of splendour were clearly a thing of the past and now the once magnificent tourist attraction provides only very modest services. However, upon closer inspection the area is revealed to be a true gem. In some ways, the desolate site resembles an abandoned Wild West village. However, the site features a number of motorhomes and caravans that have found their home in the area. The lack of services is compensated by the natural peace, striking views and the silence that is on offer in abundance. The site does not directly increase tourism revenue but guarantees that the visitors get a unique experience that will not be easily forgotten. The visitors do increase the demand for nearby services indirectly, however.

The buildings and constructed sites of the Saimaa Geopark area often have a strong or nature-bound identity, such as the wooden house area of Uitonrinne in Sulkava, the rapakivi church in Savitaipale and the Liehtalanniemi museum of detached housing in Puumala. Liehtalanniemi is located on a rocky peninsula, where it is possible to observe glacial lines and depressions formed by the waves. Geology and cultural heritage are intimately interconnected at the site. The rapakivi church in Savitaipale highlights the significance of Lutheranism to the entire Finnish society. The building process used local labour and the rapakivi was quarried from the nearby Lavikanlahti, so the construction of the church is also valuable in terms of how it has affected local identity and cultural heritage. Its connection with geological and cultural heritage should be highlighted more in the activities of Saimaa Geopark. Sarviniemi is a destination with a lot to offer. The South Karelian Foundation for Recreation Areas is doing pioneering work in bringing out the site's full potential. In Sarviniemi, signs at the site remind visitors of the proximity of the defence forces and it is forbidden to stay in the area overnight. Can the proximity of the defence forces make the site more thematically nuanced?



Image: Puumala municipality

9 PROPOSAL FOR MEASURES TO BE TAKEN

This section contains a number of measures and development proposals which are based on the survey of the current conditions. More detailed and site-specific development proposals can be found by accessing the previously mentioned Blogger platform. The proposals for the measures to be taken are again divided according to the tree perspectives of this plan: customer perspective, administration and management perspective, and development perspective.

Customer perspective

- The website of Saimaa Geopark should include all information that visitors of the sites should know (e.g. reachability, services etc.). At the moment the information is scattered. For example, the descriptions for Morruuvuori or the rock overhang of Kaarnavuori do not mention whether they can be reasonably reached by land or by water.
- It would make sense to combine the site descriptions of the South Karelia Foundation for Recreation Areas with Saimaa Geopark's web pages or at least to provide links to the Outdoor Active portals of both and share content data more efficiently.
- Route information could be complemented with suggestions for accommodation, dining, canoe/electric bike rentals, shops etc.
- Best possible information on each site, for instance, reachability of island sites (clear information on access so that the visitors would not need to look for various possibilities to reach the sites).
- Ensuring that the QR codes work and the signposts could include instructions on how to scan the QR codes in the first place.
- There are lean-tos and campfire sites near the destinations, which may be privately owned. These should have clear signs about whether visitors are allowed use them.
- The sites could be promoted more on Google Maps.

Perspective of administration and management

- Monitoring degradation needs to begin.
- The same level of maintenance and quality criteria for each site (in accordance with the Geopark brand).
- It would be a good idea to create a collaboration group that would have a comprehensive picture of the sites. The group could include members of municipal staff and a person, for example, from Saimaa Geopark who would coordinate the group.
- It would be good to have at least one visitor counter in each municipality. In the future visitor tracking will be important.
- Visitor tracking could later be combined with surveys of the regional economic effects of Saimaa Geopark.
- When it comes to the maintenance of the toilets, it is essential that the tank volume is large enough so that there is no need to empty the waste during the season. Emptying would take place once a year, for example, in the spring season before they start to fill up again. The Eko-Roope model has been considered a good solution. In it some of the mass can be transferred to a container during the summer.
- In some places, the lack of toilets can limit the time spent at the site.

- The condition and level of the facilities of the sites should be ensured as well as possible (e.g. the adequacy of toilet paper and bedding in toilets).
- To reduce degradation, people should be directed to existing paths using clear signposting.
- Signs could be brought to the sites (e.g. Rastinniemi already has them), so that visitors would stay on the existing paths.
- There should be larger sanctions for illegal campfire sites.

Development perspective

- Routes should be planned in such a way that they would connect other routes and sites (e.g. the Kaihu trail in Mikkeli). The routes could possibly also be built to combine geosites with natural and cultural attractions.
- The signposting and guidance should be improved at some sites.
- Investigate the possibility to plan a longer route, such as a route around Saimaa Geopark as one trail or several trails with several sites. This type of route has already been prepared for boaters in the boating guide "Eteläisen Saimaan geokohteet" (Geosites of Southern Saimaa).
- The presentation of the sites could involve more storytelling and the geological phenomena could be explained using as clear and understandable language as possible.
- Package tours and excursions should be planned and organised.
- Brochures about the Saimaa Geopark partnership should be made for entrepreneurs.
- More accessible sites should be added and existing accessible sites should be developed. Ensure the sites' accessibility (ramps, railings etc.)
- Electronic route guides could be created for the Saimaa Geopark destinations which could be downloaded by using a QR code.
- Paying better attention to cyclists and boaters, for example through a mobile shop service.
- Ensuring the safety of cyclists with, for example, signs that warn of cyclists and lowering the speed limits.
- Encouraging sustainable development and responsible tourism among the companies the region and delivering services that are in line with these principles.
- Addressing climate change by developing public transport and encouraging local tourism.
- Creating an electronic feedback system.



Image: Puumala municipality / Tiina Mäkinen

10 CONCLUSIONS

This Conclusions section summarises the main points of the plan by looking at the four main objectives of the plan.

1. How can the services in the region be developed?

Currently the Saimaa Geopark area has a comprehensive range of service providers that affect the attractiveness of the sites in an important way. Although there are various services available, information about them may be fragmented and they may be found in several locations. This makes finding them difficult. It would be important to try to gather the services and service providers in the Saimaa Geopark area in one place. There should be extensive information available about the sites so that a potential visitor can plan their visit as conveniently as possible. When it comes to the sites and their routes, it would make sense to prepare suggestions on reaching the sites, accommodation, dining, canoe or electric bike rental and shopping. This should be done in co-operation with the service providers in the region. Organised guided excursions and the development of boat transport would also be needed in the area. In terms of reachability, developing various transport services and vehicle rental plays an important role.

2. How can visitor numbers be controlled so that nature, plants, organisms and geological phenomena are not compromised?

Clearly marked routes and signposting and guidance are the key factors in controlling the visitor numbers. Clear and well-signposted routes enable the visitors to be guided to use the desired routes and, at the same time, directed to interesting sites. The routes should be built further away from the more vulnerable places in the area. At some sites, it was clear that for instance missing bridges or duckboards cause the widening of paths and increased degradation near streams and ditches. The same applies to the wettest areas where visitors look for drier ground near the edges of the paths, causing the trails to widen. The paths are also easily depressed in these areas where the weight of the visitors causes the soft soil to sink. The construction of stairs at the steepest climbs could also reduce the wear of the routes.

3. In what ways can geology and natural and cultural heritage be linked?

The geological phenomena of the region are still visible in the landscape and in how people move about and live, in addition to which they have also had an effect on the natural and cultural

heritage of the area. The identity of the region has been and still is strongly linked to Lake Saimaa. Utilising geology to create new services and tourism products is mainly a question of realisations and daring. Themes such as scents, stories, mysticism, cleanliness, water and nature can be turned into products in various tourist services. Routes could be built to link geological sites with cultural destinations, and the signposting of Saimaa Geopark could aim at connecting the area's geological heritage to its cultural heritage with the help of history and stories.

4. Addressing climate change

To account for climate change, special attention needs to be paid to the development of public transport in the Saimaa Geopark area. It is relatively challenging to travel from one site to another in the area, especially when the sites are not located along the main roads. The area also needs more service providers offering tourist services in the form of cruises and transport services, especially for group travel. The opportunities for local tourism should be promoted more actively, and the residents of the region should be encouraged to spend their holidays in the area and to use the services in the region. Boosting the local food products and the offerings of the local food industry also strengthens the area's service providers and lines of business. By and large, those travelling in the area should be encouraged to select muscle-powered activities, such as rowing, paddling or cycling. The promotion of these services in different portals and on various websites is crucially important.

Saimaa Geopark serves as an introduction to the manifold manifestation of geological, natural and cultural heritage of the Saimaa region. Developing the area in accordance with the principles of sustainable development and sustainable tourism provides Saimaa Geopark with various opportunities to make the area more dynamic. Good and functional recreational areas draw visitors to the region (attraction) and simultaneously help to keep, for example, boaters in the area (retention). One of the tasks of Saimaa Geopark is to raise local people's awareness of the geological significance of Saimaa. It is also intended to increase local knowledge and the locals' self-esteem and pride in their own region. It is important to link the marketing of the sites to the cultural identity of the region and to the use of destinations in a way that is beneficial to the sites. It is also important to achieve a common objective for the entire Lake Saimaa area, which is not based on internal competition but which defines Saimaa and the opportunities it presents as a mutually beneficial endeavour.

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BLOGGER SITE:

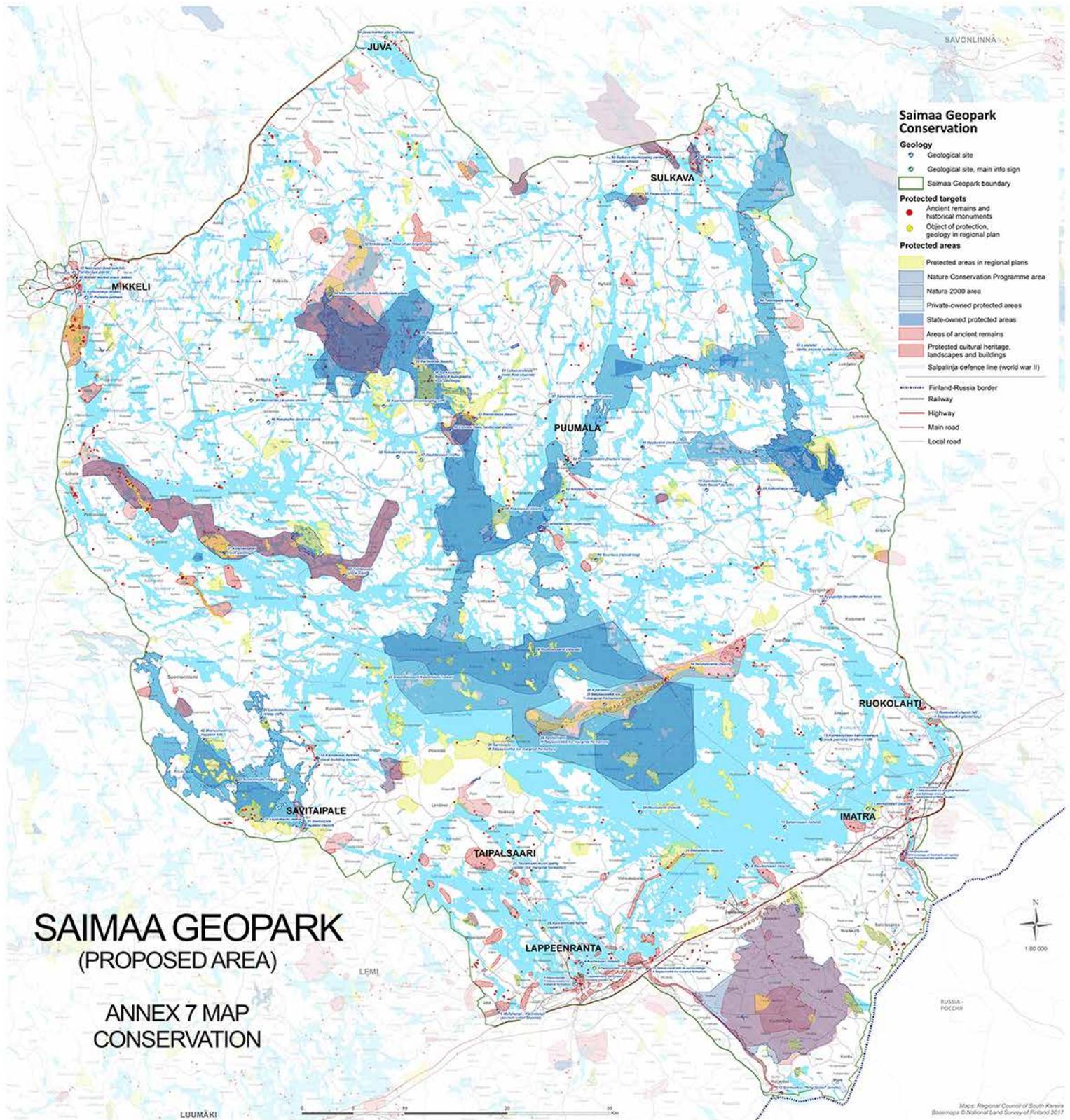
Sign in to Gmail: **sgphoitokaytto@gmail.com**
Password: **Drumliini2**

Blogger link: <https://samilehtinen.blogspot.com/>

APPENDICES

(Appendix 1)

Protected areas and conservation markings in the Saimaa Geopark area



(Appendix 2)

Agreement on operating at the sites of Saimaa Geopark

1 (7)

SOPIMUS Saimaa Geopark -kohdealueilla toimimisesta

1. Sopimusosapuolet

1.1. Maanomistaja

Nimi [<i>Jos maanomistajana on kuolinpesä tai yhtymä, merkitään kaikki omistajat.</i>]		
Osoite		
Puhelinnumero ja sähköposti		
Maksuosoite		
Tilan nimi [<i>Jos tiloja on useampia, merkitään kaikkien tilojen tiedot.</i>]		
Kunta	Kylä	Rekisterinumero

1.2. Kunta

Nimi
Osoite
Vastuuhenkilö
Puhelinnumero ja sähköposti

Me allekirjoittaneet sopimusosapuolet olemme sopineet Saimaa Geopark -kohdealueiden käytöstä ja kohdealueille sijoittuvasta toiminnasta seuraavaa:

2. Sopimuksen kohdealue

2.1 Tämän sopimuksen kohteena on [*kunnan nimi*] kunnassa sijaitseva [*esim. kohteen määritelmä ja nimi*] sekä kohteelle kulkeva kävelyreitti. Lisäksi tämä sopimus koskee kohdetta palvelevaa pysäköintialuetta, mikäli sellaisesta on erikseen tässä sopimuksessa (kohta 4.5.) sovittu. Jäljempänä tässä sopimuksessa käytetään termiä kohdealue kuvaamaan itse kohdetta, kohteelle kulkevaa kävelyreittiä ja mahdollista pysäköintialuetta.

2.2. Tähän sopimuksen on liitetty kartta, johon kohdealue on merkitty (Liite 1). Pysäköintialue ja kävelyreitti merkitään tarvittaessa myös maastoon maanomistajan kanssa erikseen sovittavalla tavalla.

2.3. Koko kohdealueen (mukaan lukien kohdealueella olemassa olevien maanomistajan rakennusten ja rakennelmien) omistus- ja hallintaoikeus säilyvät maanomistajalla.

2.4. Saimaa Geopark -hankkeen tavoitteet ja tässä sopimuksessa käsiteltävää kohdealuetta koskeva GTK:n laatima kuvaus taustatietoineen ovat tämän sopimuksen liitteenä (Liite 2). Tämän sopimuksen kohdealue on kuvattu liitteen sivuilla [*xx-xx*].

2.5. Muut mahdolliset huomioitavat seikat:

3. Sopimuksen kohdealueen käyttöön liittyvät nykyiset säännökset ja rajoitteet

3.1. Tässä sopimuksessa sovittavat toiminnot tai toimenpiteet eivät millään tavoin rajoita maanomistajan metsä- tai maatalouteen, elinkeinotoimintaan tai muuhunkaan kohdealueen käyttöön liittyvää toimintaa, ellei tässä sopimuksessa muuta sovita. Maanomistaja ei ole korvausvelvollinen, mikäli kohdealueen käyttö hankaloituu tai estyy osittain tai kokonaan maanomistajan käyttäessä omistamiaan alueita hyväkseen.

3.2. Kohdealueen käyttö perustuu pääosin jokamiehenoikeuksien hyödyntämiseen. Lisäksi kunnalla on tässä sopimuksessa tarkemmin määritellyin tavoin oikeus tehdä kohdealueella eräitä muita toimia, jotka tukevat jokamiehenoikeuksiin perustuvaa käyttöä.

3.3. Mikäli kohdealuetta käytetään yritystoimintaan, maksulliseen palvelutoimintaan ja/tai liiketoimintaan kunnan tai kolmannen osapuolen toimesta, maanomistajalla on oikeus sopia alueen käytöstä ja käyttöön liittyvistä korvauksista ko. tahon kanssa.

3.4. Kunta edistää osaltaan yritystoiminnan syntymistä ja tältä osin yritystoiminnan käynnistämisestä toivotaan voitavan neuvotella yhdessä maanomistajan, kunnan ja yritysten kesken.

3.5. Sopimusosapuolet toteavat, että arvio toiminnan laajuudesta käyntikertojen osalta vuositasolla perustuu jokamiehenoikeuden käytöstä saatuihin kokemuksiin mm. virkistysalueilla ja on sopimusentekohetkellä seuraava:

Käyntikertoja kohdealueella vuodessa: vähintään _____ enintään _____

3.6. Sopimusentekohetkellä kohdealueella sijaitsevat seuraavat luonnonsuojelualueet metsälain 10 §:n mukaiset elinympäristöt ja/tai vastaavat kohteet, ja niistä aiheutuu seuraavat, tällä hetkellä voimassa olevat rajoitteet: *[Tarvittaessa sopimukseen liitetään erillinen kartta tms. asiakirja, josta ilmenee kohteiden tarkempi kuvaus sekä rajoitukset ja oikeudet.]*

3.7. Muut mahdolliset huomioitavat seikat:

4. Toiminnan vaikutukset kohdealueella

4.1. Maanomistaja antaa tämän sopimuksen allekirjoituksin suostumuksensa kunnalle *[Tarpeettomat voidaan esim. yliviivata.]*

- sopimuksen karttaliitteeseen merkittyjen reittien käyttämiseen kävelyreitteinä;
- opasteiden ja pitkospuiden sekä muiden maastossa liikkumista helpottavien rakennelmien sijoittamiseen yhdessä maanomistajan kanssa määritetyille reiteille ja paikoille;
- laiturin, jätekatoksen, laavun tai muiden erikseen maanomistajan kanssa sovittavien rakennusten tai rakennelmien sijoittamiseen kohdealueelle karttaliitteessä määriteltäisiin ja maastoon merkittyihin yhdessä sovittuihin paikkoihin; ja
- pensaiden ja pienpuuston raivaamiseen kohteelle johtavalta kävelyreitiltä *[mittayksikkö, esim. kahden metrin]* leveydeltä sekä kaatuneiden puiden poistamiseen kävelyreitiltä ja pyssäköintialueelta sekä kaatumisvaarassa olevien, kohdealueella liikkuvien turvallisuutta vaa-

rantavien puiden poistamiseen kävelyreitit ja pysäköintialueen lähiympäristöstä ja itse kohde-alueelta. Pienpuuston raivaamisesta sekä kaatuneiden ja vaarallisten puiden poistamisesta on ilmoitettava ennakoon maanomistajalle. Puutavara kuuluu maanomistajalle. *[Tarvittaessa pienpuusto voidaan määritellä esim. siten, että rinnankorkeuslähimittana on alle 8 cm.]*

Lisäksi maanomistajalla on velvollisuus

- ilmoittaa kunnalle ennakolta, mikäli tarkka ajankohta on maanomistajan tiedossa, kohde-alueella suoritettavista metsänhoitotoimista ja hakkuista sekä muista vastaavista toimenpiteistä, joilla voi olla merkitystä kohdealueella liikkumiseen; ja
- informoida metsästysseuroja kohdealueen käytöstä, jos kohdealue on metsästysseuran käytössä.

Muut mahdolliset huomioitavat seikat:

4.2. Kunta sitoutuu

- ylläpitämään ja huoltamaan karttaliitteessä määriteltyä kohdealuetta siten, että kohdealueen ylläpitäminen ja huolto sisältää mm. rakennusten ja rakennelmien huoltamisen ja niiden siisteydestä ja käytettävyydestä huolehtimisen sekä kohdealueen yleisestä siisteydestä huolehtimisen;
- huolehtimaan mahdollisen jätekatoksen tyhjentämisestä;
- vastaamaan kaikista kohdealueen perustamis-, ylläpito- ja huoltokuluista;
- vastaamaan täysimääräisesti kaikista vahingoista, joita tämän sopimuksen mukainen toiminta tai toimimatta jättäminen maanomistajalle aiheuttaa;
- huolehtimaan vastuuvakuutuksista; ja
- sopimaan kaikkien rakennusten ja rakennelmien tekemisestä ja sijoittamisesta kohdealueelle erikseen maanomistajan kanssa etukäteen mm. niiden sijoituspaikkojen sopimiseksi.

Kunta on velvollinen kustannuksellaan hankkimaan tarvittavat luvat ja hoitamaan muut sellaiset menettelyt, joita tarvitaan rakennusten tai rakennelmien tekoon. Lisäksi kunta on velvollinen kustannuksellaan suorittamaan mahdollisesti tarvittavat maansiirtotyöt esimerkiksi polkujen, pitkospuiden, rakennusten ja rakennelmien tekemiseksi.

Muut mahdolliset huomioitavat seikat:

4.3. Sopimusosapuolet korostavat, että vastuu kohdealueen rakennusten ja rakennelmien turvallisuudesta ja siitä, että ne pysyvät asianmukaisessa kunnossa, on kunnalla.

4.4. Kohdealueella sijaitsevien kunnan omalla kustannuksellaan rakentamien rakennusten ja rakennelmien omistusoikeus kuuluu kunnalle. Kunta on velvollinen purkamaan ja/tai siirtämään rakennukset ja rakennelmat pois sopimuksen päättymisestä lukien *[ajanmääre, esim. kuuden kuukauden]* kuluessa tai luovuttamaan ne kolmannen osapuolen omistukseen ja käyttöön sen jälkeen, kun maanomistaja on tehnyt omistamansa alueen käyttöä koskevan sopimuksen kolmannen osapuolen kanssa tai kun siitä on maanomistajan kanssa muutoin kirjallisesti erikseen sovittu.

4.5. Pysäköintialueesta (esim. sijainti, laajuus, pysäköintialueen vaatimat rakenteet ja maanomistajan oma käyttö) sopimusosapuolet sopivat seuraavaa:

4.6. Kohdealueelle johtavan tiekunnan tien käytöstä ja siihen liittyvistä korvauksista kunta sopii erikseen tiekunnan kanssa. Maanomistajan oman tien käytöstä kohdealuetta palvelevan käytön osalta sopimusosapuolet sopivat seuraavaa:

4.7. Muut mahdolliset huomioitavat seikat:

5. Sopimuksen voimassaolo, sopimuksen muuttaminen ja sopimuksen päättyminen

[Sopimusehdot 5.1. A ja 5.1. B ovat vaihtoehtoisia.]

5.1. A) Tämä sopimus on voimassa toistaiseksi allekirjoituspäivästä lukien. Sopimusosapuolet sitoutuvat siihen, että tämän sopimuksen sopimusehdot tarkistetaan neuvottelemalla *[aikamääre, esim. neljän vuoden]* välein. Muutokset tähän sopimukseen on tehtävä kirjallisesti ja kummankin sopimusosapuolen on ne allekirjoituksellaan hyväksyttävä. Kummallakin sopimusosapuolella on oikeus irtisanoa tämä sopimus *[aikamääre, esim. yhden vuoden]* irtisanomisajalla. Irtisanomisaika alkaa, kun irtisanomisilmoitus on toimitettu toiselle sopimusosapuolelle kirjallisessa muodossa.

5.1. B) Tämä sopimus on määräaikainen ja se on voimassa *[aikamääre, esim. neljä vuotta]* sopimuksen allekirjoituspäivästä lukien, minkä jälkeen sopimus päättyy ilman eri irtisanomista, elleivät sopijaosapuolet ennen voimassaolon päättymistä kirjallisesti sovi sopimuksen voimassaolon jatkumisesta. Sopimusosapuolet sitoutuvat siihen, että tämän sopimuksen sopimusehdot tarkistetaan neuvottelemalla *[aikamääre, esim. neljän vuoden]* välein. Muutokset tähän sopimukseen on tehtävä kirjallisesti ja kummankin sopimusosapuolen on ne allekirjoituksellaan hyväksyttävä.

5.2. Kummallakin sopimusosapuolella on oikeus irtisanoa tämä sopimus *[aikamääre, esim. yhden kuukauden]* irtisanomisajalla kohteen käyttömahdollisuuksien muututtua sopimusosapuolista riippumattomista syistä niin, ettei sopimuksen voimassaololle ole enää perusteita. Jos sopimus irtisanoetaan tämän kohdan perusteella, maanomistaja on irtisanomisajan jälkeen velvollinen palauttamaan saamansa korvauksen jäljellä olevia täysiiä kalenterikuukausia vastaavalta osalta maksetusta korvauksesta. Irtisanomisaika alkaa, kun irtisanomisilmoitus on toimitettu toiselle sopimusosapuolelle kirjallisessa muodossa.

5.3. Kunnalla on oikeus välittömästi ilman mitään irtisanomisaikaa noudattamatta purkaa tämä sopimus, jos maanomistaja on omalla menettelyllään tietoisesti heikentänyt kunnan toimintaedellytyksiä tämän sopimuksen kohdan 4.1. vastaisesti. Jos sopimus puretaan tällä perusteella, maanomistaja on velvollinen palauttamaan saamansa korvauksen jäljellä olevia täysiiä kalenterikuukausia vastaavalta osalta maksetusta korvauksesta.

5.4. Maanomistajalla on oikeus välittömästi ilman mitään irtisanomisaikaa noudattamatta purkaa tämä sopimus, jos kunta laiminlyö sovitun korvauksen maksamisen tai rikkoo muita tämän sopimuksen sopimusehtoja. Jos sopimus puretaan tällä perusteella, maanomistaja ei ole velvollinen palauttamaan jo maksettuja korvauksia kunnalle.

5.5. Edellä sovitun lisäksi ja siitä riippumatta sopimusosapuolet toteavat sopimuksen voimassaoloon liittyen, ellei asiasta muuta sopimusosapuolten kesken kirjallisesti sovita, että tämä sopimus on voimassa ja kohdealuetta saa käyttää tämän sopimuksen mukaisesti jo ennen kuin Saimaa Geopark hyväksytään Unescon maailmanlaajuiseen geopark-verkoston. Tämä sopimus kuitenkin raukeaa välittömästi, mikäli Saimaa Geoparkin Unesco-status mahdollisen hyväksymisen jälkeen poistetaan.

5.6. Kumpikaan sopimusosapuoli ei ole velvollinen suorittamaan toiselle mitään korvausta tämän sopimuksen päättymiseen liittyen lukuun ottamatta sitä, mitä edellä on sovittu.

5.7. Muut mahdolliset huomioitavat seikat:

6. Korvaukset

6.1. Tämän sopimuksen mukaiseen toimintaan liittyvistä korvauksista sovitaan sopimusosapuolten kesken neuvottelemalla. Sopimuskohtassa 5.1. määritellyin tavoin tämän sopimuksen sopimusehtoja tarkistetaan neuvottelemalla säännöllisesti, millä tarkoitetaan myös korvausten tilanteen tarkistamista.

6.2. Sopimusosapuolet toteavat, että kunnan maanomistajalle maksettavaksi tulevat korvaukset määrittävät seuraavan jaottelun mukaisesti:

1. Perusmaksu, joka sisältää korvaukset seuraavista seikoista
 - Kohdealue
 - Maastoon tarvittavat merkinnät
 - Kävelyreitti
 - Pysäköintialue
 - Maastossa tarvittavat erikseen sovitut toimenpiteet, esim. rakennukset ja rakennelmat
2. Yksitystienkäyttömaksu maanomistajan oman tien käytöstä
3. Muu käyttömaksu

6.3. Sopimuksentekohetkellä voimassaoleviksi sovitut korvaukset on määritelty tämän sopimuksen liitteessä (Liite 3). Mikäli sopimusehtoja tarkistettaessa korvauksia muutetaan, muutokset on tehtävä kirjallisesti ja kummankin sopimusosapuolen on ne allekirjoituksellaan hyväksyttävä. Päivitetty liite on liitettävä tähän sopimukseen.

6.4. Korvaukset maksetaan *[aikamäärä, esim. kerran vuodessa]* siten, että ensimmäisen kerran korvaukset tulevat maksettavaksi *[aikamäärä, esim. yhden kuukauden]* kuluessa tämän sopimuksen allekirjoittamisesta ja sen jälkeen *[aikamäärä, esim. kunkin vuoden tammikuun viimeisenä päivänä]*. Mikäli korvauksia ei suoriteta määräajassa, maksaa kunta ylimenevältä ajalta korkolain mukaisen viivästyskoron.

6.5. Mikäli tämän sopimuksen mukaisesta toiminnasta ilmenee myöhemmin sellaisia haittoja, vahinkoja tai lisäkustannuksia, joita sopimuksen laatimishetkellä korvauksia määritettäessä ei ole otettu huomioon, on maanomistajalla tällaisen menetyksen ilmaannuttua oikeus lisäkorvaukseen.

6.6. Muut mahdolliset huomioitavat seikat:

7. Sopimuksen sitovuus kohdealueen siirtyessä uudelle omistajalle

7.1. Maanomistaja sitoutuu ilmoittamaan kunnalle omistajanvaihdoksesta välittömästi omistajanvaihdoksen tapahduttua.

7.2. Sopimus ei sido kohdealueen uutta omistajaa, kun kohdealue siirtyy vastikkeellisella luovutuksella uudelle omistajalle, ellei uuden omistajan kanssa toisin sovita. Mikäli tämä sopimus omistajanvaihdoksen vuoksi lakkaa olemasta voimassa, sopimuksen alun perin tehnyt ja kohdealueen luovuttanut maanomistaja on tällöin velvollinen palauttamaan samaansa korvauksen jäljellä olevia täysiä kalenterikuukausia vastaavalta osalta maksetusta korvauksesta.

7.3. Muiden saantojen (esim. perintö / testamentti / lahja / ositus) osalta tämä sopimus sitoo kohdealueen uutta omistajaa, jollei laista muuta johdu. Jos omitusoikeus kohdealueeseen siirtyy muulla kuin vastikkeellisella saannolla, tämän sopimuksen tehnyt maanomistaja sitoutuu ottamaan saantokirjaan ehdon siitä, että tämä sopimus sitoo uutta omistajaa.

7.4. Muut mahdolliset huomioitavat seikat:

8. Sopimuserimielisyydet

Tätä sopimusta koskevat erimielisyydet pyritään ensisijaisesti ratkaisemaan sopimusosapuolten välisillä neuvotteluilla. Jos vapaaehtoisilla neuvotteluilla ei päästä sopimusosapuolten kesken yhteisymmärrykseen, mahdolliset sopimusta koskevat riidat käsitellään siinä käräjäoikeudessa, jossa sopimuksen kohteena oleva alue sijaitsee.

9. Sopimuksen voimaantulo

Tämä sopimus tulee voimaan, kun molemmat sopimusosapuolet ovat tämän sopimuksen allekirjoittaneet.

10. Sopimuskappaleet

Tätä sopimusta on laadittu kaksi saman sisältöistä kappaletta: yksi maanomistajalle ja yksi kunnalle.

11. Paikka ja aika sekä sopimusosapuolten allekirjoitukset

Paikka ja aika

Maanomistajan allekirjoitus

Kunnan edustajan allekirjoitus

LIITTEET:

[Tarvittaessa liitteitä voidaan nimetä useampia.]

Liite 1: Kartta, johon kohdealue on merkitty

Liite 2: Saimaa Geopark -hankkeen tavoitteet ja tässä sopimuksessa käsiteltävää kohdealuetta koskeva GTK:n laatima kuvaus taustatietoineen

Liite 3: Sovitut korvaukset

(Appendix 5)

Management and administration questionnaire

1. Who administrates the sites in your municipality?

- For instance, have they been outsourced (e.g. Ekvás)

How is the management organised?

- Is the management outsourced

2. Does your municipality have a person who is responsible for the sites?

3. How do you feel the management and administration is currently working?