

# Description of traditional land use, tourism and recreational activities in Nordreisa, Kåfjord, Storfjord, Käsivarsi and Enontekiö

Elina Hutton 2018

BuSK – Building Shared Knowledge Capital to Support Natural Resource Governance in the Northern Periphery

## Contents

BORDERLESS TRADITIONS AND FUTURE .....	2
LANDUSE NORDREISA, REISA NATIONAL PARK AND KÅFJORD .....	3
STORFJORD, LYNGEN (Including the Lyngen Alps) .....	9
LAND USE FINLAND .....	11
KÄSIVARSI WILDERNESS AREA, KILPISJÄRVI, LÄTÄSENO, PALOJOKI .....	13
NÄKKÄLÄ, PÖYRISJÄRVI, NUNNANEN.....	18
HETTA, SOUTHERN ENONTEKIÖ .....	21
REFERENCES.....	24

## BORDERLESS TRADITIONS AND FUTURE

With centuries old traditions and modern practises, Sami reindeer herding is a significant and visible land use form with historical, cultural and economic importance. There are several cultural heritage sites, old routes and current infrastructure which tell about reindeer herding and Sami culture around the region. Reindeer herding families and traditions used to connect the people and nature across the border, until the Finnish borders was closed with a reindeer fence in 1860s.

Recreational fishing, trekking and skiing, as well as snowmobiling are common activities for the residents of the region. They also cross the border frequently; traditional routes, shopping, fishing opportunities and for example snowmobiling are commonly practised in the neighbouring countries too. Many locals have family members across the border.

Nature tourism has long traditions in the region too. Fishing tourism in Norway's fjords and mountain lakes and rivers and wilderness lakes and rivers in Finland have attracted visitors from far away counties for over a century. Hiking and skiing tourism started to attract more visitors after the WWII. Today, northern lights tourism is growing fast, bringing a totally new visitor group to the region.

Tourism has long been developed and marketed by each country and each region alone. In the last years, the cross-border cooperation has been increasing and there are already some companies in the region offering cross border products. Northern light tours, hiking and skiing trips and lately also mountain biking are cross border services being marketed by the companies.

One of the most popular visiting destinations in the region is the three-nation border cairn in Kolttahti. Cross border hiking routes like Kilpisjärvi – Guolasjavri or Kilpisjärvi – Gappohytta – Rostahytta – Kilpisjärvi are popular too.

In social media, such as many Finnish Facebook outdoor and hiking groups, Kilpisjärvi and the surrounding wilderness area are a dream destination which some visit regularly and those who can't are dreaming about it. Northern Norway is becoming a more interesting location and in summer 2018 there was a notable increase in photos and stories shared from there too. Reisa National Park is not yet very well known in Finland.

In Facebook groups such as "Troms Turlag - DNT" and "Käsivarren vaellus" there are many conversations and recommendations of cross border trips. People don't talk about them as cross border though, they are just great routes and in the conversations the state borders are irrelevant. The borders are mainly an issue in conversations concerning maps: there are often complaints of needing several maps if the route crosses stated borders. There are some new maps, such as the new Reisadalen map, which continues to Finnish side equally detailed.

In the Facebook hiking and outdoor groups hikers recommend each other good routes in the region. There are some differences in the conversations: in the Norwegian groups the main focus is on the multiday hikes, whereas the Finns focus a lot on day hikes and the different variations for the Kilpisjärvi – Halti routes starting from Guolasjavri or Ditnu. Since Visit Lyngenfjord published the hiking guide for the Lyngenfjord region, many recommendations for day trips in the area have become more popular in the Finnish Facebook groups.

## LANDUSE NORDREISA, REISA NATIONAL PARK AND KÅFJORD

Reisa National Park / Ráisa álbmotlas meahcci and Ráisduottarháldi Landscape Conservation Area are located in the Nord-Reisa municipality in North Troms. The protected areas cover 887 km<sup>2</sup> in total and border with the Finnish Käsivarsi wilderness area, forming a large continuous protected area. Kåfjord is the neighbouring municipality southwest from Nordreisa. Both conservation areas were formed in 1986. (Halti nasjonalparksenter AS, 2008)

### Landscape

The Reisadalen valley extends from the barren tundra in the southeast to the alpine landscapes of the north-western coastline. Narrow valleys and gorges and the main canyon-line valley surrounded by high mountains cut through the landscape. Around 85% of the area is above the treeline. There are several waterfalls along the waterways. (Halti nasjonalparksenter AS, 2008)

The main river, Reisaelva / Ráiseatnu runs from Ráisjávri to the sea. Ráisjávri (5,1 km<sup>2</sup>) is the largest lake in the Reisadalen waterway. At first, Ráiseatnu runs through a relatively flat landscape, until it joins Njállajohka at the steep gorge. (Halti nasjonalparksenter AS, 2008). The most famous of the numerous waterfalls are the 269 m high Mollisfossen and Imofossen. The latter is only about 20 m high but is a place where two rivers plunge down to the gorge making it an impressive sight. (Visit Lyngenfjord 2).

Ráisjávri is located at the Finnmarksvidda, a large plateau with relatively small elevation differences, lots of lakes and marshes, and fell birch forests. North from Ráisjávri and east from Reisadalen is characterised with rounded top mountains and shallow river valleys. High mountains and Ráisduottarháldi landscape protection area are located west and north from Reisadalen. (Halti nasjonalparksenter AS, 2008)

Southwards, at the border with Finland and Kåfjord municipality, rises the mountain massif Ráisduottarháldi 1,361 m.a.s.l. Finland's highest peak Halti is part of this massif (Halti nasjonalparksenter AS, 2008). The wide U-shape glacial valley, Birtavarre, cuts through the landscape. Kåfjordelva river runs along the valley, forming a deep gorge towards the south east. The Kåfjordelva gorge is the deepest gorge in Northern Europe. Several side-rivers have formed deep gorges on both sides of the Birtavarre. South from the valley lies an inland plateau at the altitude of 800-1000 m.a.s.l. Soft, rolling slopes, like those in Finland, mark the landscape. Further north, the landscape is sharper and altitude differences higher. (Troms fylke 1984)

Birtavarre and Guolasjávri lake at the foot of Ráisduottarháldi, are important recreational areas in Kåfjord municipality with many hiking routes, snowmobiling and fishing destinations. Recently finished "Fra Ishavet til Halti" project has improved many recreational trails in Kåfjord. (Lepikkö 2015)

### Flora and fauna

The manifold biotope structures and the climate features result in rich diversity of flora and fauna. There are several red listed plant and animal species as well as palsa mires in the area. (Nasjonalparkstyret 2018) Nearly 200 of the Scandinavia's mountain plants have been observed in Reisa National Park, making the area completely unique in a botanical perspective. Rare species, such as red-tipped lousewort, Arctic bell heather, Arctic arnica and the rhododendron species Lapland rosebay can be found in the area. (Halti nasjonalparksenter AS 2008 & 2018)

Similarly, the area around Birtavarre in Kåfjord also have a great variety of flora. There are 84 red-listed species growing in the area, and more research is needed to fully map the richness of the whole region. (Troms fylke 1984, Miljødirektoratet 2018)

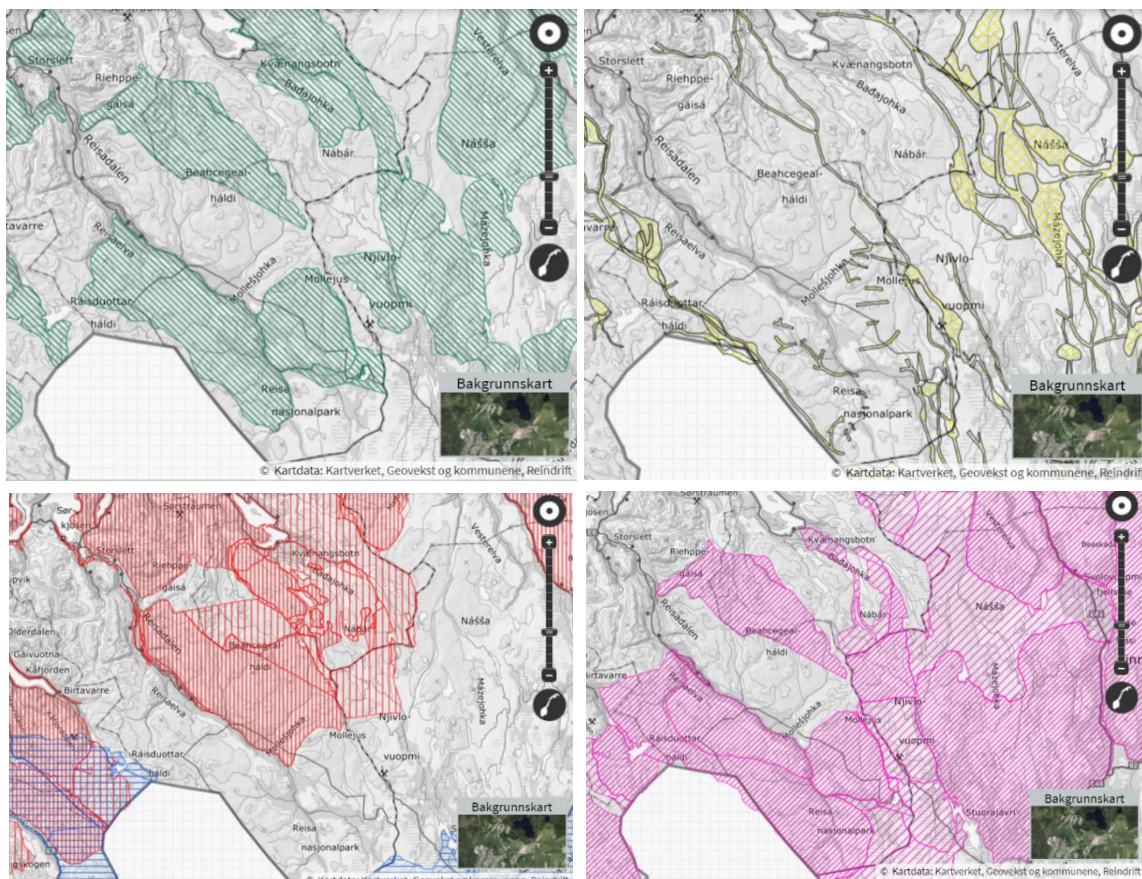
Birdlife is among the most species rich in Northern Norway, with features of several Eastern and Northern species. In addition, many birds of prey have good living conditions here. Lynx and wolverine are quite common, but bears, arctic fox and wolf are rare. There are salmon, arctic char and sea trout in the rivers. In the southern parts of the region, there is also white fish, perch and burbot, among others. Reindeer is headed in the region. (Halti nasjonalparksenter AS 2008 & 2018)

Due to the variety of biotopes and species in the area, the region is also interesting for researches and botanist, both professional and amateurs. Since late 19<sup>th</sup> century the area has been renowned for its rich flora and still today much of the area remains unexplored. Mountains like Avku, Bálggesoaivi and Lullis are interesting targets for botanic excursions. (Nasjonalparkstyret 2018)

### Land use

The area has been important region for three different cultures: Sami, Norwegian and Kvens (immigrants from Finland). The earliest wanderers around Reisa-valley have been dated back to early stone age. Near Sieimma, they have recently discovered some 4000 years old rock paintings presenting human and animal figures. For decades, the different interest groups have been using the land side by side: reindeer herding, recreational fishing and hunting, as well as hiking and skiing tourists. (Halti nasjonalparksenter AS 2018)

### Reindeer herding



The  
Sami

Some examples of reindeer herding areas: Reindeer calving paddocks (green), herding routes between summer and winter pastures (yellow), summer paddock (red), winter paddocks (blue) and autumn paddocks (purple). Source: <https://kilden.nibio.no/>

reindeer herding has always characterized the region and continues to do so today (Halti

nasjonalparksenter AS 2018). On both sides of Reisadalen, approximately 21.000 reindeer either graze or travel between summer paddocks on the coast of Nordreisa, Kvænangen, Kåfjord and Lyngen and winter paddocks at Kautokeino. (Nasjonalparkstyret 2018)

Reindeer husbandry has a priority right of the land use at the region, also at the national park and landscape protection areas. Herders are for example allowed to use snowmobiles at their work, although it is otherwise forbidden in the national park. Many recreational routes use the same areas as reindeer herding and any new developments must consider the reindeer herding needs in the area. On the other hand, also reindeer husbandry must also protect the nature as much as possible. (Nasjonalparkstyret 2018)

The hiking trails go through the spring and autumn pastures, passing also many Sami cultural heritage sites. Remains of old Sami settlements and árrans, fireplaces, can be found on the ground by an observant hiker, as well as several remains of hunting pits used to capture wild reindeers before the reindeer was tamed. Erosion has made the edges softer, but when used, the pits were deep and steep edged to prevent the reindeer getting up from the pits. (Nasjonalparkstyret 2018, Halti nasjonalparksenter AS 2018)

### **Recreational use and tourism**

The first visitors which can be classified as tourists, visited the area back in the 19<sup>th</sup> century for salmon fishing (Halti nasjonalparksenter AS 2018). Recreational use by locals and nature tourism is important form of land use in the region. The landscape and nature attract many user groups. The area between Sieimma to Imo in Reisadalen the numerous fishing lakes and waters in Kåfjord are the most visited areas for fisherman, tourists and local companies. (Halti nasjonalparksenter AS 2008, Lepikkö 2015) The law which prevented commercial use of national parks in Norway, was abolished in Reisa in 2003. Commercial tourism must be arranged in sustainable manner.

Tourism in the region has grown rapidly. For example, the number of visitors to Mollisfossen, the single most visited destination in Reisa National park has grown by 25% between 2008 and 2017. The local tourism companies report an increasing use of the area too, with the high season between June and September. (Halti nasjonalparksenter AS 2008, Reisa nasjonalparkstyre 2018).

Until recently the recreational land use in Kåfjord has been local recreational users and Finnish hikers visiting Halti from Guolasjávri. However, the municipality is putting a lot of effort to develop hiking and nature tourism. Kåfjorddalen is an excellent gateway to several hiking destinations, such as Reisa National Park and Halti and Käsivarsi wilderness area in Finland. The opening of Gorsabrua in 2011 is one of these development efforts. (Lepikkö 2015)

### **Riverboats – centuries old tradition**

In the 18<sup>th</sup> and 19<sup>th</sup> century permanent settlement started growing in Nordreisa and Kåfjord valleys. People arrived from the coastal areas in Troms and Finnmark and from Northern Finland. The Finns, called Kvens, brought along the riverboats, which are still in use especially on Reisaelva. Riverboats served the fishermen and hunters back in the days, and today they serve both professionals and recreational visitors of the national park and its surroundings. (Halti nasjonalparksenter AS 2018)

It is possible to take a riverboat all the way to Nedrefoss, but most boat tours stop at Nausi or Mollisfossen camp sites. The use of motorized boats requires a permit. Boat tours are often combined with overnighiting in the area and other activities such as fishing, hiking or hunting. Canoeing is also possible, although at high water times it requires high skill levels. Canoes are mostly used to continue up the higher parts of the river from Nedrefoss. The majority of visitors, as much as 70%, in the area use the boat transfers up the river. (Halti nasjonalparksenter AS 2018, Nasjonalparkstyret 2018)



## Fishing, hunting, forestry, agriculture

The natural resources in the region have always been utilized by the locals. Forestry, fishing, hunting and collecting berries are still important for both professional and recreational use.

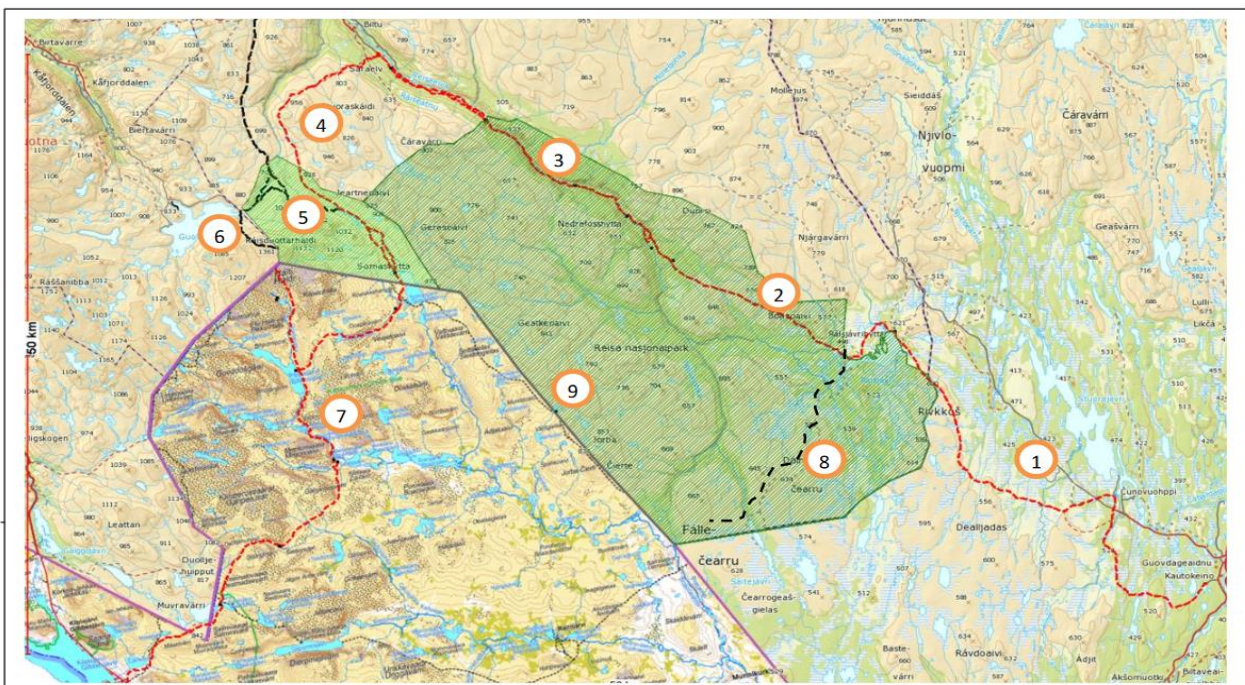
Fishing is the most important reason to visit the region, and there are also professional fishermen in the region. Salmon, arctic char and sea trout are the most searched catch by the fishermen, but also white fish, perch and burbot.

There is agriculture and some forestry, especially in Kåfjord municipality in Birtavarre valley. Agriculture has diminished in the recent years but remains an important livelihood in Kåfjord. Sheep are the most important livestock. Forestry concentrates mainly in firewood production. (Kåfjord Kommune)

Tar burning was an important trade for the Kvens, the tradition was kept alive until 1970s. Tar burning required good river connections between the pine forests, tar burning sites and trading sites, something Reisaelva offered. Today they still burn tar sporadically in the region. (Halti nasjonalparksenter AS 2018)

## Hiking and skiing

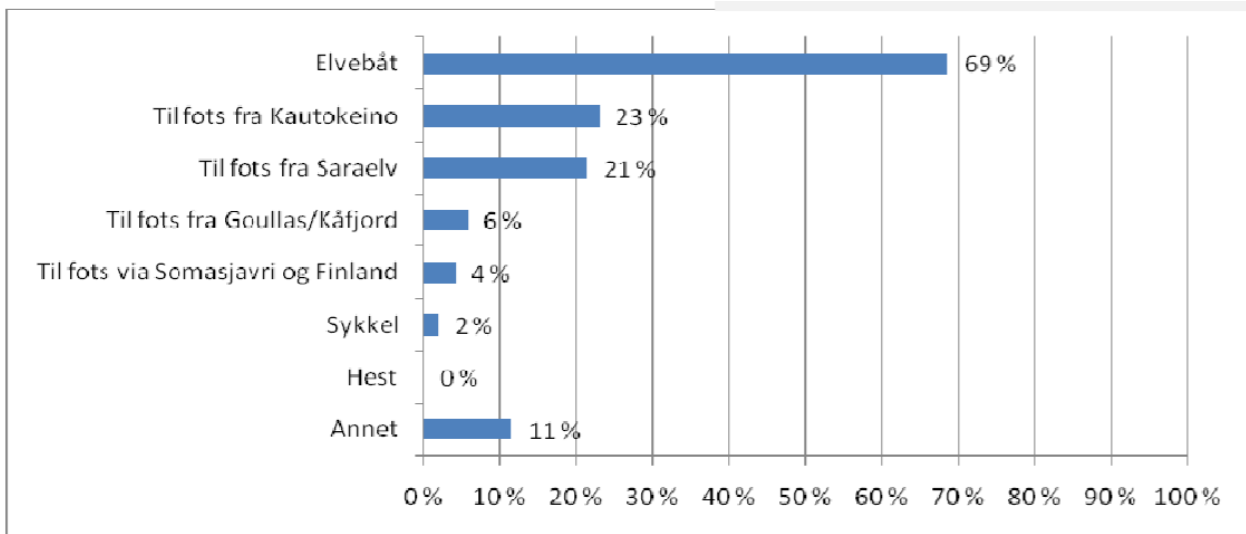
Reisa National Park was created in 1986, together with Ráisdouttarháldi Landscape Protection Area, and is important part of the area's natural and cultural heritage (Nasjonalparkstyret 2018). Nordkalottleden / North Calotte Trail, an 800 km hiking route, which runs from Kautokeino in Norway, through Finland down to Kvikkjokki in Sweden, was founded 1993. (<http://www.luontoon.fi/kalottireitti?inheritRedirect=true>)



Hiking trails (red), unmarked trails (black). Map from: 2018 Forvaltningsplan og besøksforvaltnings strategi. Reisa Nasjonalpark og Ráisdouttarháldi Landskapsvernområde

The region attracts hikers and skiers around the year. The North Calotte Trail hiking route follows the river

through the region. Nordkalottleden is in use all year around, with high seasons at July-September and February-April. (Halti nasjonalparksenter AS 2018)



Kilde: Delrapport i prosjektet "Tilrettelegging for arktiske nasjonalparkopplevelser", Nordreisa kommune 2008.

In wintertime, ice and waterfall climbing is a popular activity. During the darkest and coldest months of the year, skiing is the most common activity. The skiers use the good network of open and reservation huts as their base on long ski expeditions. (Nasjonalparkstyret 2018)

The hiking routes of Reisadalen are part of the nationwide *Historiske vandreruter* (historical hiking routes) project which promotes the history and cultural heritage along the hiking routes. In Reisadalen, the route goes from Saraelv to Ráisjávri. The focus on the route is to show how man has and continues to use the land and adapt the landscape's natural resources. The two characters of the land use are change and continuity. Change is presented in the transmission from wild to domesticated reindeers and continuity in the millennial old traditions of fishing and hunting in the region. (Halti nasjonalparksenter AS 2018)

In Kåfjord, the road from Birtavarre to Guolasjávri is an important route to the fells during the summer months. Fishermen use the road to get to the lakes and rivers and tourists come for the great views or visit the highest peak of Finland, Halti. A popular multi-day hiking route starts in Kilpisjärvi and continues to Guolasjávri via the Halti peaks. (Nasjonalparkstyret 2018)

Camping in the area is allowed under the *friluftslav* – outdoor law, for up to 5 days in one location, assuming there is no harm to the vegetation. (Nasjonalparkstyret 2018)

Cycling and horseback riding are allowed in existing routes, also in the national park and landscape protection area, as long as it is not regular and involves only a few people. Larger groups and permanent routing which can cause harm to the environment, require a special permit. (Nasjonalparkstyret 2018)

Dog sledging is considered similar to these activities and is allowed, although there is a rising concern about the possible threat the dogs can be both to wildlife and reindeer. There is some ice climbing in the region, mainly between January and March. Up to date, it hasn't been considered a threat for the cliff-nesting birds of prey. (Nasjonalparkstyret 2018)

### **Snowmobiling and ATV**

Snowmobiling in the national park is forbidden except for reindeer herders. (Nasjonalparkstyret 2018) In Kåfjord, snowmobiling is an important recreational activity and means of travelling to the ice fishing



destinations. Snowmobiling is popular in the spring months, and it is only allowed on marked routes and not at all at the protection area. (Statskog 2015)

There is one snow mobile route which goes through the protected areas, from Gahperus in Reisadalen via Čoalbmevággi to Somájávri. This route is popular for day trips and ice fishing tours in the region, as well as connecting route for longer routes. The route to Somájávri became popular at the 1980s, and it's one of the reasons why the area is landscape protection area, not national park. Unfortunately, there are no statistics about the users of the route, but it is general knowledge, that it is a popular route. (Nasjonalparkstyret 2018)

Guolasjávri is a popular snowmobiling destination too. The route from Birtavarre to Guolasjávri follows the summer road. From Guolasjávri onwards the snowmobile routes continue to Nordreisa and Kautokeino. (Statskog 2015)

ATVs are allowed in reindeer herding. Locals use ATVs also to travel to the fishing lakes. There are many ATV trails which are already visible in the fragile terrain. (Nasjonalparkstyret 2018)

### **Huts**

There are several open and closed huts in Nordreisa and Kåfjord. Some of the closed huts are for reindeer herders. Huts are administrated by Statskog, Troms Turlag, Reisa National Park administration and Statens reindriftsforvaltning (Reindeer husbandry directorate). There are also over 100 picnic and bonfire places along the Reisaelva river, mainly used by fishermen. Many of these places are built by the users, using the local natural building materials. (Nasjonalparkstyret 2018)

Statskog has plans for developing Miessevarri in Kåfjord to support recreational use in the region. (Jens Kristian Nilsen, Kåfjord Kommune)

### **Energy production**

Troms Kraft AS has several energy production dams in Kåfjord. Guolasjávri and Guolasjohka / Kåfjord elva river are regulated. The road up to Guolasjávri is primarily a maintenance road to the energy production plant. (Troms Kraft Produksjon AS 2017)

## STORFJORD, LINGEN (Including the Lyngen Alps)

The region's landscape is characterised with Lyngen Alps mountains, Lyngfjord and closer to the Finnish and Swedish borders, alpine plateau. The high elevation differences from the sea level to mountains means that there are a great variety of biotopes in the region. Near the sea, the valley basins are lush and thick growing, whereas near the Finnish border, the barren sub-arctic landscape is dominant.

Located between two large fjords, Lyngen and Ullsfjord, Lyngen Alps belong to one of the most significant mountain regions in North-Norway with high peaks and glaciers. The highest peaks are approximately 1800 m.a.s.l. (Oslo Economics 2018)

### **Reindeer herding, farming, agriculture**

Lyngen Alps is important grazing area, approximately 15.000 animals pasture in the valleys between May and September. Sheep, goat and horses are farmed in the area. Reindeer are herded in the area in summer season. Between the tree reindeer herding groups in the area, the total allowed number of reindeers in 900. (Norges Nasjonalparker 2016)

### **Hiking, skiing, cycling and other non-motorized recreational use.**

Lyngen Alps is a landscape protection area, famous internationally especially among mountaineers and free skiers. Most outdoor recreation activities are unorganised, individual people's trips. However, there are some organised activities too, such as guided *toptouring*, climbing and school trips. Lyngen Alps and other high mountains around Lyngenfjord are popular skiing destinations. (Norges Nasjonalparker 2016)

Recent efforts from the local tourism organisations have made the summer activities like day hikes and mountain biking more popular around the Lyngenfjord region. (Visit Lyngenfjord 1)

The Norwegian *friluftsliv* is strongly visible in the region. Dozens of hiking routes, reservation huts and lavas and bonfire places are kept by both Troms Turlag and local communities. Local people spend a lot of time in the outdoors; hiking, skiing are common, but also some horseback riding and dog sledding. (Oslo Economics 2018) Berry and mushroom gathering is also an important pastime for the locals.

### **Snowmobiles and other motorized vehicles**

There are marked snowmobile routes in the region, in which snowmobiling is allowed (Strofjord Kommune). In the Lyngen Alps landscape area, snowmobiling is also allowed in herding and some other agricultural operations. ATV use is restricted to certain routes and allowed for reindeer herding. (Norges Nasjonalparker 2016)

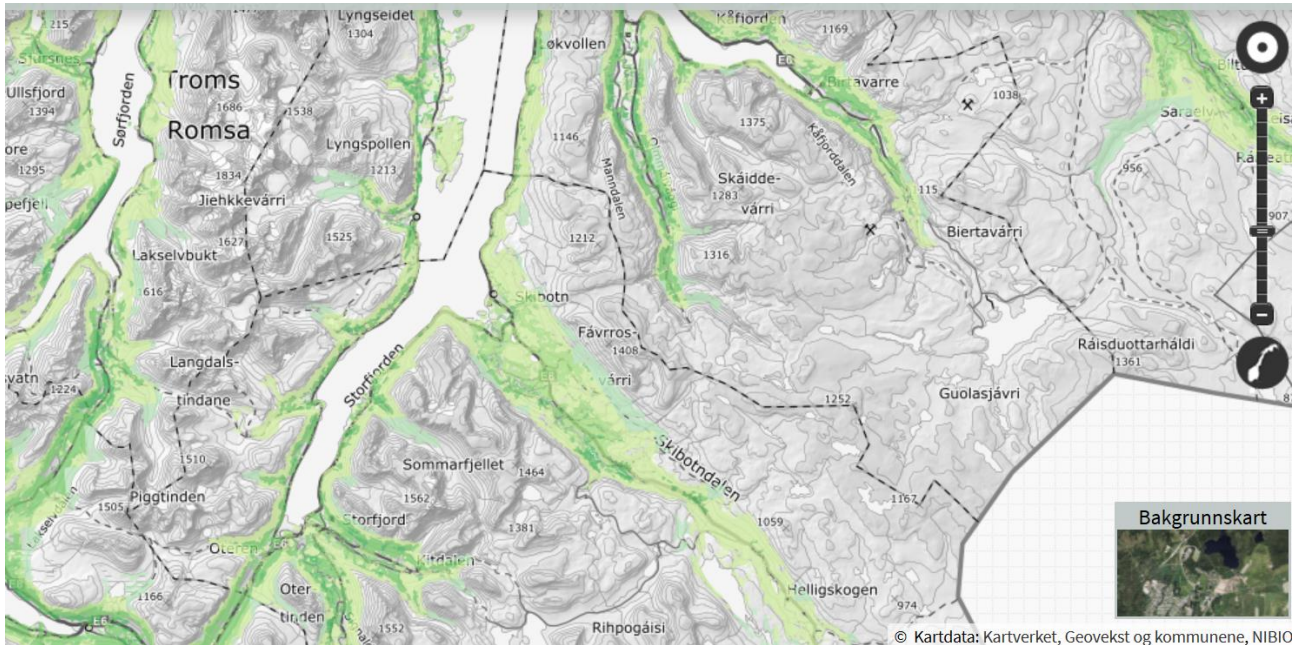
Parts of the airspace include the Armed Forces low-flying corridors. In the Lyngen Alps, the use of unmanned aerial vehicles, including drones, is forbidden. (<http://www.nasjonalparkstyre.no/Lyngsalpan-LVO/Nyheter/Er-det-lov-a-fly-med-drone-i-Lyngsalpan-landskapsvernomrade/>)

### **Fishing and hunting**

Fishing in the rivers, lakes and of course, the fjords is an important recreational activity for both local s and visitors. Both commercial and recreational sea fishing are important in the region, and there are companies built around fishing tourism too. (Høgtuns plankontor AS 2015)

### Other use (forestry, energy)

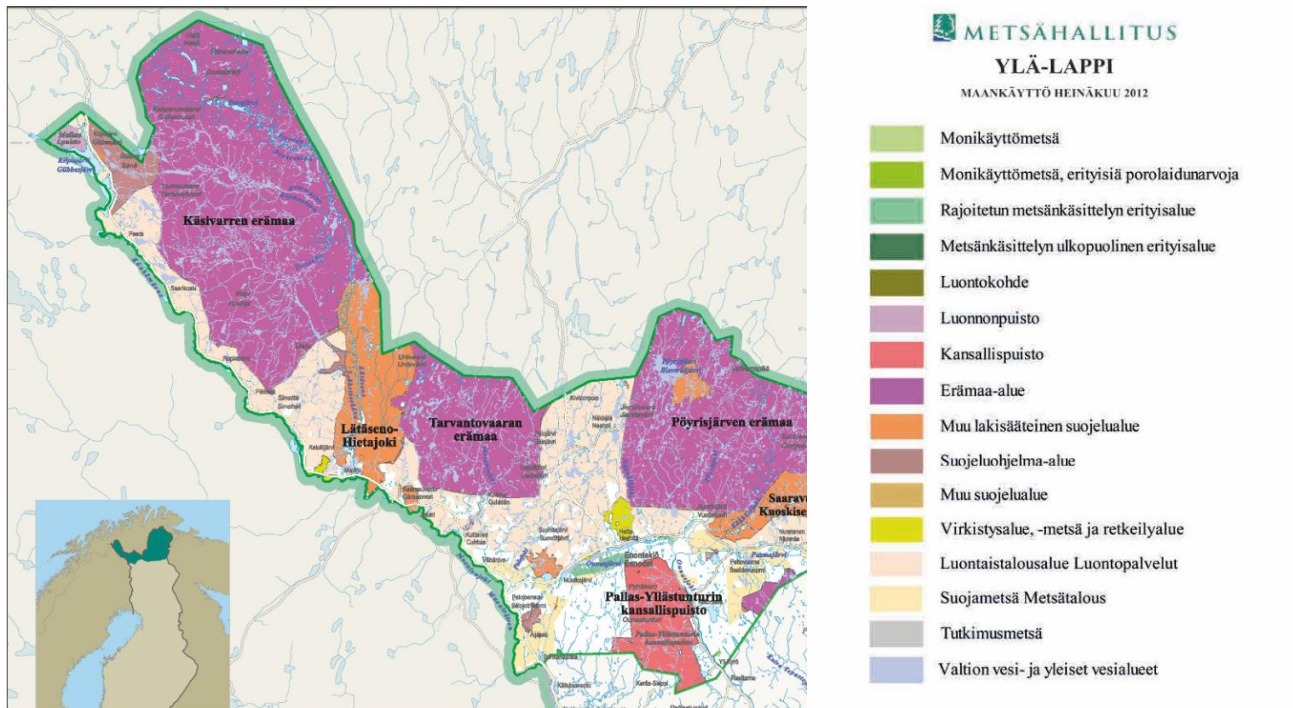
In Lyngen Alps landscape protection area, there is very little forestry. Most of the landscape area is above productive treeline. However, there is some forestry just outside the landscape area, and some potential conflicts with the large animal husbandry in the region have been recognised. (Norges Nasjonalparker 2016) In Storfjord, there is also some forestry along the valleys.



Forestry concentrates in the valleys and fjord shores around Lyngenfjord. Skogbonitet (AR50) kilden.nibio.no

Troms Kraft has several energy production dams along Skibotndalen. New dams have also been planned. (Statskog Energi 2015, Troms Kraft Pduksjon AS 2012)

## LAND USE FINLAND SUMMARY



Tolonen et al. 2013 <https://julkaisut.metsa.fi/assets/pdf/mt/mt68-maankaytto.pdf>

**Reindeer herding** is the most important form of land use in Enontekiö. There are two reindeer herding co-operatives in the region, both split into smaller herding groups. The majority of the herders are Sami. In the north-western parts of Enontekiö, the herders of Käsivarsi co-operative use summer and winter paddocks, but the paddocks are small and fragmented. In the south-eastern parts, at Näkkälä co-operative, the use of seasonal paddocks has become difficult due to the fragmentation. There are about 10.000 reindeers in the Käsivarsi co-operative and about 8000 in the Näkkälä co-operative.

**Tourism** is important industry and land use form in Enontekiö. Centres for tourism are Hetta, Karesuvanto and Kilpisjärvi villages, although even the more remote areas receive annual visitors. There are also a significant number of holiday homes in Enontekiö, owned by both Finnish and especially in Kilpisjärvi, by Norwegians.

**Hiking** concentrates in Kilpisjärvi and northern parts of Käsivarsi wilderness area and Pallas-Yllästunturi National Park. Pöyrisjärvi wilderness area is also visited by experienced hikers. In Kilpisjärvi, many people do day-trips to Malla Strict Nature Reserve and Saana fell. Summer is high season for tourism in Kilpisjärvi.

Some **mountain bikers** have already found the region, and there is a strong push by the municipality to promote the MTB routes mainly in Pallas-Yllästunturi National Park, Hetta and Pöyrisjärvi. There is also some canoeing and kayaking.

**Fishing** is popular in Enontekiö, the abundance of good fishing lakes, streams and rivers brings fishermen to the region. Some of the most visited places are Könkämäeno-Muoniojoki, Porojärvi, Lätäseno, and Pöyrisjärvi. Brown trout, grayling and salmon are some of the most desired catch. Ice fishing is popular on winter.

There is also some **hunting** tourism in the region, mainly small game such as willow grouse and rabbits.

In mid-winter, **northern lights** tourism is becoming increasingly popular also in Enontekiö. Most of the activities concentrate on the proximity of the villages, Kilpisjärvi, Karesuvanto and Hetta.

**Snowmobiling** season starts at the end of February, beginning of March. The routes direct snowmobiling on certain places, only in Kilpisjärvi there is reportedly some problems with wild snowmobiling outside of the routes and on Kilpisjärvi lake. Most snowmobiling routes are closed mid-April, early May to avoid disturbance to reindeer calving in the fells.

**Skiing** season is about the same with the high season of snowmobiling. Main skiing routes are in the Pallas-Yllästunturi National Park, Kilpisjärvi and Käsivarsi wilderness area. In the latter, there are no marked trails, except the trail to Halti.

There is some commercial dog sledging, mainly around Hetta, but some also in Käsivarsi and Kilpisjärvi. There are many private people mushing teams in springtime, mainly on snowmobile route to Halti.

The locals are very active in **recreational** fishing, hunting, berry and mushroom gathering. Snowmobiles and ATVs are used in these activities.

The main areas for commercial **forestry** are both located in the southern parts of Enontekiö where Enontekiö forestry co-operative runs two large estates.



## KÄSIVARSI WILDERNESS AREA, KILPISJÄRVI, LÄTÄSENO, PALOJOKI

### Landscape

Kilpisjärvi, Saana fell and Käsivarsi wilderness area are part of the larger, fragile sub-arctic landscape. The wilderness area continues across the borders to Reisa National Park and Ráisduottarháldi protected landscape in Norway and the vast wilderness areas in Northern Sweden. The southern borders of the Wilderness area border with Lätäseno Natura 2000-area. In Finland, the region has several protected zones: Malla Strict Nature Reserve, Saana Nature Reserve and Saana Site of Community Importance (Habitats Directive) and within the wilderness area proper, Annjalonji Nature Reserve. (Metsähallitus 2017a)

The Käsivarsi wilderness area and wilderness-like land between the highway (by Swedish border) and the wilderness area, are above the pine tree line. For a grand majority, the area is treeless alpine landscape. The largest river valleys are lush with fell birch and willow growth, up until 600 m a.s.l. All the over 1000 m high peaks in Finland are located in the northern parts of the area. (Metsähallitus 2011, 2017a, Kajala et al. 2001)

A water divide runs at the northern parts of Käsivarsi. North from Kahpelusvaara, the water runs to Skibotn basin, other streams run to the Könkämäeno – Muoniojoki – Torniojoki – river, which follows the state border with Sweden from Kilpisjärvi to Tornio. (Metsähallitus 2011, 2017a)

The Tarvantovaara wilderness area starts south from Lätäseno river. The landscape has less elevation differences; marshes, streams and rivers running to Muoniojoki and fell birch forest are predominant, while there are some pine tree forests in the southern parts of area. (Metsähallitus 2011)

The area is part of Sami homeland. Traditional Sami reindeer herding is practised in the region, and the whole area is important for recreational use both for locals and travellers. (Metsähallitus 2011, 2017a)

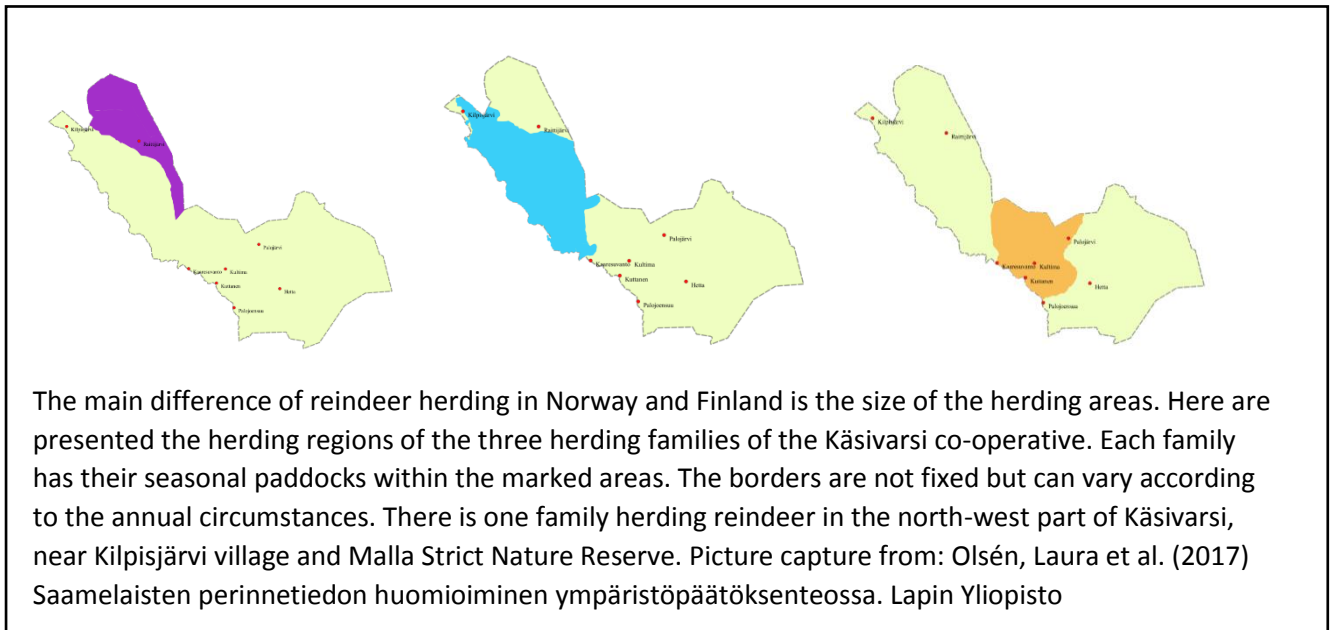
### Flora and Fauna

In this most arctic region of Finland, the soil rich of limestone, grows several red listed plant and animal species. There is arctic char, grayling and trout in the lakes. For a grand majority, the area is treeless alpine landscape. The largest river valleys are lush with fell birch and willow growth, up until 600 m a.s.l (Metsähallitus 2011, 2017a)

### Reindeer herding

The original place names in Käsivarsi are in Sámi. The tradition nomad lifestyle was still predominant in the early 20<sup>th</sup> century, longer than in other parts of Lapland. (Kajala et al 2001) The wilderness area forms 40% of Käsivarsi reindeer herding cooperative (Käsivarren paliskunta) herding area. All reindeer herders in the region are Sámi. There are approximately 10.000 reindeers herding in the Käsivarsi. The number of reindeers has increased strongly since 1950s. Three traditional reindeer herding groups, siida, and one separate family form the Käsivarsi cooperative. They somewhat follow the old paddock distribution of summer and winter paddocks, but the borders of these are flexible within the cooperative. Different to Norway, since 1850s the

reindeer herders don't have the access to the traditional summer paddocks on the Norwegian coast. Thus, the pressure on the paddocks is higher and has caused a lot of questions about over-herding of the land. Many reindeer herders feed the reindeer in the wintertime. (Olsén et al. 2017)



The small and fragmented herding area is suffering from competing land use in Käsivarsi. Especially tourism development threatens the paddocks in Kilpisjärvi and Karesuvanto where tourism is concentrated. Construction near the villages, increasing snowmobiling and use of new routes in summertime can disturb the herds. The snowmobiling route Palojarvi – Kilpisjärvi is closed on the 2<sup>nd</sup> of May, because it runs through important reindeer calving areas. (Metsähallitus 2017a, Olsén et al. 2017)

### Recreational use

The whole Käsivarsi area is important for recreational use for the local people. Especially fishing, but also hunting and mushroom and berry picking is an important local tradition. The locals enjoy the right to snowmobile also outside of the routes. (Kajala et al. 2001, Metsähallitus 2017a)

While the north-eastern parts of Käsivarsi attract thousands of visitors yearly, the Tarvantovaara wilderness area in the south-west is mainly used by locals. Apart from reindeer herding, the landuse in Tarvantovaara is low, and has very little impact on the nature. (Metsähallitus 2011)

The great majority of the visitors in the area are Finnish and Norwegians hiking, skiing, fishing and snowmobiling in the region. In the recent years, Kilpisjärvi has been becoming a popular place among foreign northern lights searchers. (Hutton 2018)

It is estimated that approximately 12.000 people visit the Käsivarsi wilderness area annually (Metsähallitus 2017a). The numbers have doubled since year 2000, when the number was close to 6000 people (Kajala et al. 2001) According to Metsähallitus' trackers, the number of visitors in the Saana – fell area is around 70.000 people, of which about a third on snowmobiles.

**The most popular destination in Kilpisjärvi and Käsivarsi wilderness area**

<b>(Metsähallitus 2011, 2014, 2017a,b)</b>		
	Estimates between	
<b>Saana fell (peak)</b>	15000	26000
<b>Saana's surroundings</b>	70000	80000
<b>Malla Strict Nature Reserve</b>	10000	15000
<b>Three country border cairn</b>	7000 (estimate, appr. 5000 arrivals on the Malla boat) The most popular snow mobile destination among foreign visitors	
<b>Tsahkaljärvi and Salmivaara</b>	1000	
<b>Käsivarsi wilderness area</b>	10000	15000
<b>Halti fell (peak)</b>	appr. 4000 new names on the visitor book annually	
<b>Visitor centre, Kilpisjärvi</b>	9093 (2013 tracker)	14200 (2016 tracker)

The number of registered overnights in Kilpisjärvi has grown by over 30% after 2002, when the village zoning plan set into force allowing building in the village. The number of overnights in Kilpisjärvi is close to 70.000 a year. The average stay in 2017 was 1,9 nights per stay, in comparison of the 5 nights in 1970s. (Hutton 2018)

The growth is highlighted nearest to the village, the day routes around Saana and in Malla have seen the biggest growth. The wear and tear of the landscape is also the strongest along these routes. Some growth on both visitor numbers and tourism impact can be observed along the longer routes too. (Hutton 2018, Metsähallitus 2014, 2017a,b)

### **Hiking, skiing, cycling and other non-motorized**

The most popular hiking route in the region is the 50 km long Kilpisjärvi – Halti hike along the North Calotte Trail (Metsähallitus 2017a) Nowadays, an increasing number of people continue the hike to Guolasjávri in Norway instead of returning to Kilpisjärvi on foot, like has been the tradition since the “founding” of the route by Kaarina Kari in the 1930s. (Lepikkö et al. 2015) There are also several other marked and unmarked trails around the Käsivarsi region, and Metsähallitus maintains 20 open or closed huts in the area ([www.luontoon.fi](http://www.luontoon.fi)).

Skiing is a popular activity especially during the spring season. Again, Kilpisjärvi – Halti route is to most popular route. In the last years, skitouring and winter biking has gained more popularity. Fatbikes are ridden mainly along the existing snowmobile routes. (Metsähallitus 2017a)

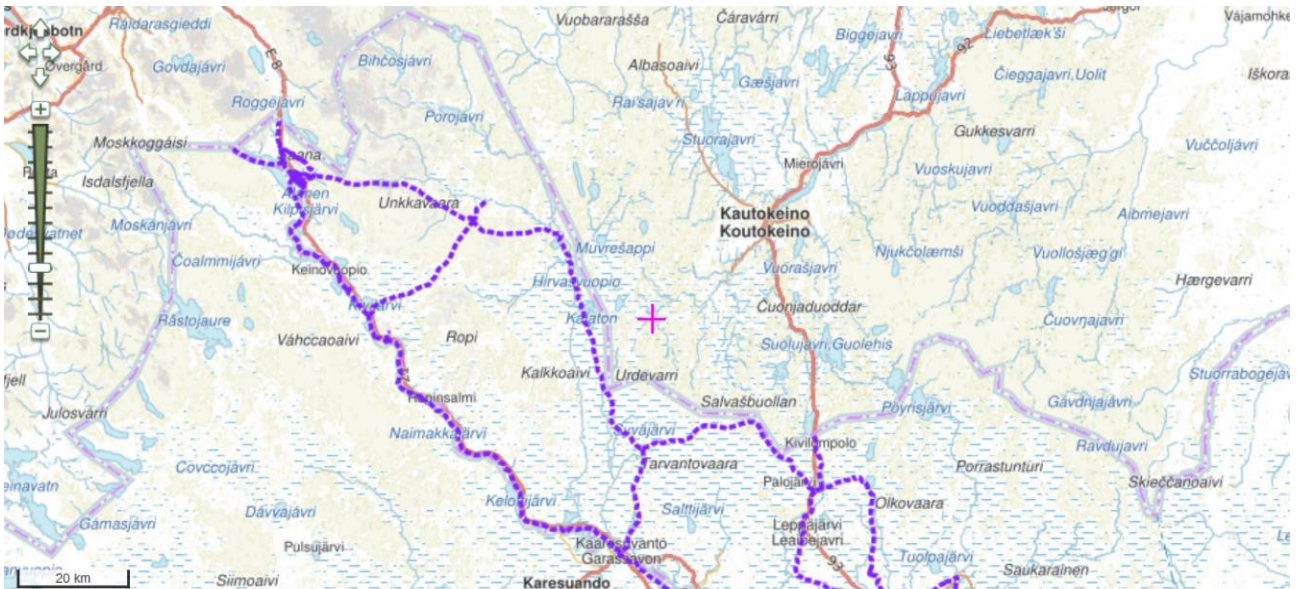
The municipality of Enontekiö has recently finished a mountain biking development project and efforts are being made to increase the number of mountain bikes in the summer season too. Mountain biking in its many forms is a growing activity and there are high hopes that it will bring more visitors to the area. (Enontekiön kunta, interviews)

In the spring time, there are many dog sledging tourers in the routes. Private groups don't need a permit, but commercial tours need to have a permit form Metsähallitus. The use of dogs in the wilderness area has increased so much, that Metsähallitus is building “dog parks” near the wilderness huts during summer 2018. (Metsähallitus 2017a)

### **Snowmobiles, ATVs and flights**

There are two major snowmobile routes in the Käsivarsi area: Kilpisjärvi – Palojärvi which Metsähallitus maintains and sells permits to routes around Kilpisjärvi, maintained by Kilpisjärven ladut ry. Snowmobiling to Halti is only allowed on the marked trail and with a guide who has the necessary permits. Snowmobiling

outside of the routes is not allowed. Local people get a permit for snowmobiling outside the routes except in protected areas. (Metsähallitus 2017a)



Snowmobile routes maintained by Metsähallitus. Source: [www.retkikartta.fi](http://www.retkikartta.fi) Metsähallitus 2018.

In summertime, the use of ATVs is allowed only for permanent residents of Enontekiö and with a special permit for maintenance activities related to nature tourism. (Metsähallitus 2017a)

In the summer season there are two commercial flight operators (seaplane and helicopter) in Kilpisjärvi offering transport to the wilderness area in Käsivarsi and northern Sweden. The companies estimate that they transport approximately 3000 passengers during one season, mostly fishermen going to one of the popular fishing lakes and rivers. About half of the fishermen visiting the region reported having used the flights<sup>1</sup>. Today, also many hikers get a transfer to more remote location, from where they start their hike back to Kilpisjärvi. Reindeer herders use the air transfers to get to the summer paddocks. (Metsähallitus 2017a)

There is also a regular boat service between Kilpisjärvi and Koltalahti. This is a popular route to visit the three country border cairn. (Metsähallitus 2017a)

### Fishing and hunting

Käsivarsi wilderness area is part of a larger gaming area and traditionally important to the locals. Nearly 40% of residents of Enontekiö have a hunting license. The fells are known for willow grouse which the locals still catch with traditional traps. Willow grouse is also hunted for sales. Moose and rabbit are also hunted and there are some bear hunting licences granted yearly because the area is reindeer husbandry area. (Kajala et al. 2001, Metsähallitus, 2017a)

Non-resident hunters can purchase a hunting license for small game and they are an important customer group for many accommodation providers (Kajala et al. 2001, Metsähallitus 2017a)

<sup>1</sup> Metsähallitus 2017: Käsivarren hks.

The water systems are healthy and clean, making the area excellent for fishing. Fishing has an important recreational, social and also economical meaning for the locals. Whitefish, arctic char, grayling, brown trout and salmon are common fish in the area. (Kajala et al. 2001, Metsähallitus 2017a)

The main summer fishing areas are around Poroeno and Lätäseno and their side rivers and streams. The spring, the popular ice fishing lakes are Toskaljärvi, Somasjärvi and Luontojärvi, Urttasjärvi and Rimmeljärvi lakes. Local safari companies offer snow mobile transfers to the fishermen to the popular ice fishing lakes. (Kajala et al. 2001, Metsähallitus 2017a)



## NÄKKÄLÄ, PÖYRISJÄRVI, NUNNANEN

### **Landscape, flora and fauna**

In the northern parts of this area, is Pöyrisjärvi wilderness area. The landscape north from lake Pöyrisjärvi is formed by sand dunes and moraine ridges. Barren fells in the north, and large marches in the middle, give the wilderness area an open feeling. A 2 km long Pöyrisvuoma march is one of the most important palsa-marches in Finland. Pine trees grow in the southern parts of Pöyrisjärvi wilderness area. The remote area is surrounded by several protected areas in Finland and in Norway. (Metsähallitus 2001)

Tall growing juniper, shrubs and some rare fell birch are the predominant vegetation. Lichen growth has diminished greatly in the last decades. The majority of the vegetation is low growing and humble in appearance. However, the many different types of biotopes makes the landscape varied in species. (Metsähallitus 2001)

Pöyrisjärvi lake and the marches are nesting areas for many migratory birds, among them ruff, whooper swan and snipe. Willow grouse, ptarmigan and Siberian jay are some of those birds who can endure the arctic winter in Pöyrisjärvi. Wolverine, lynx, wolf and bear are rare, but habit the region. Arctic fox has been seen, however it is extremely rare. The most common predators are weasel, stoat and American mink. (Metsähallitus 2001)

### **Land use**

The area has traditionally important recreational value for the local people: reindeer herding as well as hunting, fishing, berry and mushroom picking. While hunting and berry picking are seasonal activities, reindeer herders and fishermen can be seen in the region all year around. The high seasons are March-April and July-September, but the only really quiet month is May, the in-between month when the terrain is hard to access.

For many locals fishing, hunting and collecting berries and mushrooms has also economical importance. Produce is sold or visitors are guided and transported to the activities. (Metsähallitus 2001)

### **Reindeer herding**

The area is used by the Näkkälä reindeer herding co-operative, divided to smaller groups herding in their separate areas. The maximum number of reindeers in wintertime is 8000 reindeers. The paddocks are small and there are mainly no seasonal paddocks. The strong pressure on the vegetation can be seen in many parts of the area as both fell birch forests and lichen cover have suffered of the herding.

In the southern parts of the area, there herders are mainly Finnish, whiles at the Pöyrisjärvi wilderness area, they are Sami. The division of the two groups is obvious, and there has been a lot of effort to divide the co-operative officially into two co-operatives. (Metsähallitus 2001, Olsén et al. 2017))

### **Hiking, skiing, cycling and other non-motorized**

Pöyrisjärvi area has only one marked trail from Hetta to Näkkälä. This trail is not inside the wilderness area, where there are some routes, and one more popular from Kalmakaltio to Näkkälä, all unmarked. These trails are more popular among fishermen and seasoned hikers and skiers, as the environment can be harsh for beginners. (Metsähallitus 2001)

In recent years, mountain bikers have found the Kalmakaltio – Näkkälä trail and it is becoming increasingly popular among the bikers. The municipality of Enontekiö has made a virtual map of the route and is promoting Pöyrisjärvi area for cyclists. A rise in the number of summer time users is expected grow. Some winter cyclists and dog sledges visit the area in the spring season too. (Metsähallitus 2001)

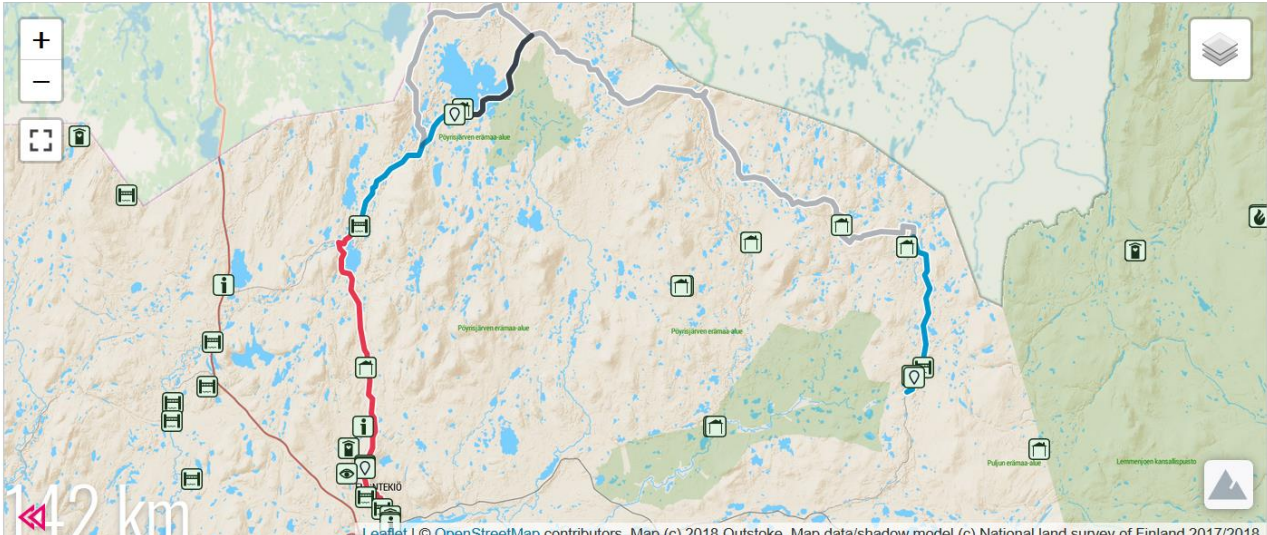
## Hetta-Pöyrisjärvi-Kalmakaltio mtb-reitit • trails

tosilappi

Hetta/Näkkälä/Kalmakaltio

★★★★★

Embed



Enontekiö MTB project mapped several MTB routes in the region. The Hetta-Pöyrisjärvi-Kalmakaltio is one of the most popular long routes. Source: <https://rewindr.cloud/route/qtGO8h62u8>

There are also two popular canoeing rivers; demanding Pöyrisjoki and Käkkälöjoki which is also suitable for beginners. Palojoki river west of the wilderness area is also popular for canoeing. Metsähallitus maintains 7 open huts and 1 reservation hut in the Pöyrisjärvi wilderness area. In addition, some companies have huts and cabins to let. (Metsähallitus 2001)

### Snowmobiles and ATVs

Residents of Enontekiö can get ATV permits for summer time under certain condition. Mainly the permits are given for cloudberry gathering, fishing and transporting large game. Reindeer herders don't need a permit on their work. The residents must remain on certain established routes to avoid unnecessary damage to the fragile nature. The most used routes are Näkkälä – Pöyrisjärvi – Kalkujärvi, Vuontisjärvi – Kalkujärvi and Kalmakaltio – Naltijärvi – Katajajärvi. In addition to these routes, there are some less used summer routes, used mainly by hunters and fishermen. Non-residents cannot get a permit for motorized vehicles in summer time. (Metsähallitus 2001)

Snowmobiling permits are granted for residents of Enontekiö. Many locals use snowmobiles in the wilderness area for hunting willow grouse and going to ice fishing on the remote lakes and rivers. Those non-residents who own a holiday home in the region, can get a snowmobile permit to travel to their cabins and nearby fishing areas along certain routes. Guides who have a good knowledge of the area, can get permits to use snowmobiles to support commercial ski expedition or lead guided snowmobile safaris. (Metsähallitus 2001)

**Fishing and hunting**

Pöyrisjärvi is the only lake inside the wilderness area where professional commercial fishing is allowed. Commercial fishing is also popular in the rivers and other lakes in the region. Number of recreational fishermen is high, as most local families fish for own use and many tourist visit the area for fishing. (Metsähallitus 2001)

Most commonly hunted game is moose and willow grouse. Residents of Enontekiö, who have a hunter's permit, can freely hunt in the state-owned land, including the wilderness areas, in Enontekiö. This right is based on honouring the age-old tradition and important part of the definition of wilderness area. Local hunting clubs can also build permanent infrastructure used in moose hunting, such as watch towers. (Metsähallitus 2001)

For non-residents, it is possible to purchase a limited number of licenses for waterfowl, willow grouse and rabbit hunting. (Metsähallitus 2001)

**Other use (forestry, energy)**

Within the Pöyrisjärvi wilderness area, only some fire wood collection is allowed. In other parts of the region, there is some small-scale forestry, mainly personal fire wood collection by local families. (Metsähallitus 2001)

## HETTA, SOUTHERN ENONTEKIÖ

### Landscape

The landscape of the southern parts of Enontekiö are dominated by the Pallas – Yllästunturi National Park fell range and pine and spruce tree forests. The northern parts of the national park are typical Fell-Lapland nature; barren fell tops, fell birch growing on the slopes, small lakes and streams. Pine forests lead to boreal forest zone further south. Ounasjärvi lake, Ounasjoki and Muoniojoki rivers are the main waterways in the area. The water divide runs mostly north-south along the national park fell range, dividing the waters to Muoniojoki on the west or Ounasjoki in the east. There are many small lakes and large string bogs. The last ice age moulded the landscape, and there are several terminal moraine ridges and other glacial formations, like gorges, still visible in the landscape. (Metsähallitus 2008)

Pallas – Ounastunturi national park was founded among the first national parks in Finland in 1938. Southern parts of the current park had already been protected under conservation laws, was joined to the national park in 2005, when also the name of the national park was changed to the current. (Metsähallitus 2008)

### Flora and fauna

The National Park has several biotopes from open oroarctic landscapes to boreal forests. Several northern and southern species have their furthest growth areas in the region.

There are several small mammals living in the region, but also moose and bear and lynx roam the area. Wolverines and wolves have been observed rarely. For birds, the areas varied forests offer a great nesting place, and it is known for its rich bird life. Among them, there are almost 50 threatened birds nesting here. The varied landscape means that the number of for example vascular plants, mosses, lichens and invertebrates is also very high. (Metsähallitus 2008)

### Land use

There are remains of habitats as old as 7000 years found in the area, mainly near the Muoniojoki river. The nomad Sami reindeer herding started in the 16<sup>th</sup> century and first farming settlements along the river a little bit earlier. Finnish farmers also adapted reindeer herding to the forest areas. In the 18<sup>th</sup> century, there was a strong tar burning tradition around current Muonio. Tourism started in the 1930s, the Hetta-Pallas hiking route was first marked in 1934. Within the national park, there are several cultural heritage sites like deer hunting pits, reindeer herding huts and corrals. (Metsähallitus 2008)

### Reindeer herding

Näkkälä reindeer co-operative members herd reindeer in the region, including in the northern parts of the national park. The herders have cabins and fences also inside the national park, and they are allowed to use ATVs when herding. (Metsähallitus 2008)

### Hiking, skiing, cycling and other non-motorized

The Pallas – Yllästunturi National Park receives over 500.000 visitors yearly. It is the most visited national park in Finland. The visitors are guided along the main hiking routes, which have been renewed in the recent years by Metsähallitus. The southern part of the park receives most of the visitors. (Kuusisto et al. 2017)

Hiking is a popular activity in the national park. The famous Hetta – Pallas trail starts in the north from Hetta with a lake crossing, several local companies offer boat services and car transfer services for hikers.

The majority of the visitors to the national park are day visitors, and the main reasons to visit the park are experiencing the nature and admiring landscapes. (Kuusisto et al. 2017)

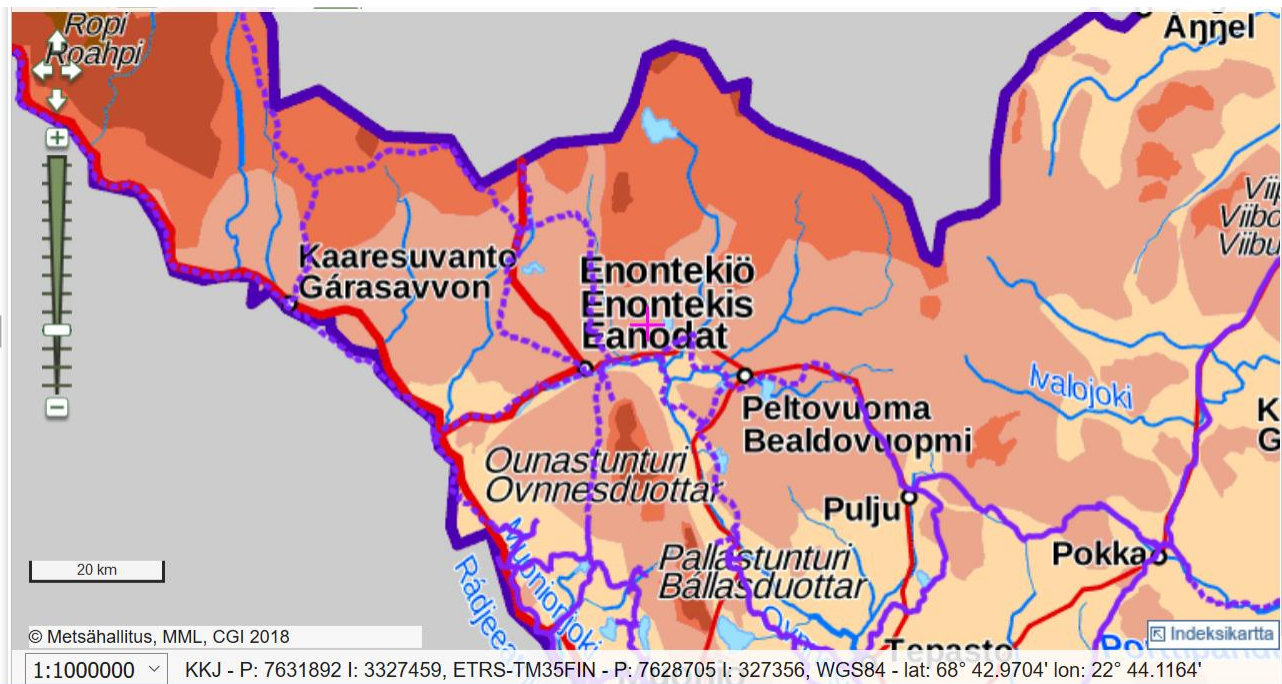
Cycling was allowed in the national park in 2015 and has since become more popular. (Kyöstilä et al. 2017) In 2018, the municipality of Enontekiö also had a MTB project in which routes elsewhere in Enontekiö were mapped and promoted. (Enontekiön kunta)

In mid-winter there are some skiers, but the high season for skiing is February – March. There are several routes in the national park and around Hetta. Ski tracks are maintained by Hetan Ladut Oy. (Kuusisto et al. 2017)

### Snowmobiles and ATVs

For non-residents of Enontekiö, snowmobiling is only allowed on the marked trails. The snowmobile tracks starting from the Hetta village are maintained by the municipality of Enontekiö. The Victoria route, which runs along the border of Finland and Sweden from Muonio to Kilpisjärvi. You do not need a permit to ride on them. For the snowmobile track leading from Palojärvi to Kilpisjärvi in the Käsivarsi Wilderness Area in Enontekiö, as well as for the Syväjärvi–Karesuvanto and Raittijärvi–Saarikoski tracks branching off the main track, you need to purchase a national off-road traffic permit from Metsähallitus. There are several local companies offering guided snowmobile tours. (Metsähallitus 2008)

Use of ATVs in summertime is only allowed to the locals. In the national park, the use of ATVs is prohibited, except in reindeer herding and Metsähallitus maintenance work. (Metsähallitus 2008)



The snowmobile routes of south and eastern Enontekiö marked with the purple dotted line.

Snowmobiling is not allowed in the national park, except for reindeer herding and Metsähallitus maintenance work. Map: [www.retkikartta.fi](http://www.retkikartta.fi)

### Fishing and hunting

Ice fishing is popular among residents and visitors. An annual two-week ice fishing competition is held around Enontekiö at the end of April. The last ice fishing competition of the season is the “vain kaksi kalaa”

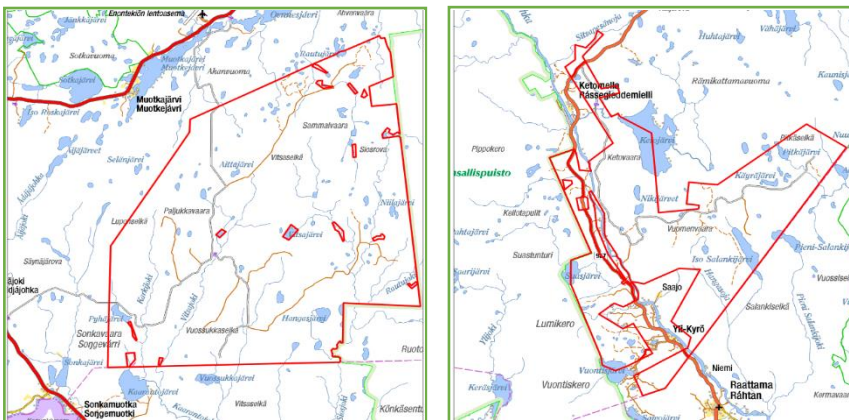


(expecting only two fish) in Kilpisjärvi in May. Summertime, fishing is important activity for the locals, and many visitors who come to fish in Enontekiö's fell lakes and rivers. (Metsähallitus 2008, Tolonen et al. 2013)

Enontekiön yhteismetsä forestry co-operative manages hunting licenses on their areas. Moose, bear, and small game are hunted. Some licenses are only sold to members. Metsähallitus manages the licences on state owned land. Hunting is permitted also in some parts of the national park. (Metsähallitus 2008, Enontekiön yhteismetsä <http://www.enontekion-yhteismetsa.fi/index.php?page=metsaesty>)

### Other use (forestry, energy)

Enontekiön yhteismetsä is a forestry co-operation, who manages the forest property of 830 estates, at a land of 30.000 hectares in two forest plots, both located in the southern part of Enontekiö. The annual harvest plan is 15.000m<sup>3</sup>. The co-operative maintains about 140 km forestry roads in the area.



Enontekiön yhteismetsä co-operative's forest plots are located on both sides of the Pallas – Yllästunturi National Park. Source: <http://www.enontekion-yhteismetsa.fi/>

## REFERENCES

- Halti nasjonalparksenter AS (2008) Lokal bruk av Reisa nasjonalpark / Raisa albmotlas meahcci og Raisduottarhaldi landskapsvernområde / Raisduottarhaldi suodjemeahcci  
[http://www.nasjonalparkstyre.no/Documents/Reisa\\_dok/Forvaltningsplan/Rapporter-kunnskapsgrunnlag/Lokal\\_bruk-Reisa\\_2008.pdf](http://www.nasjonalparkstyre.no/Documents/Reisa_dok/Forvaltningsplan/Rapporter-kunnskapsgrunnlag/Lokal_bruk-Reisa_2008.pdf)
- Halti nasjonalparksenter AS & Nasjonalparkstyret for Reisa nasjonalpark (2018): Øvre Reisdalen som Historisk vandrerute PROSJEKTBEKRIVELSE  
[http://nasjonalparkstyre.no/Documents/Reisa\\_dok/AndreProsjekter/HistoriskeVandreruter-ReisdalenBeskrivelseVer4.pdf](http://nasjonalparkstyre.no/Documents/Reisa_dok/AndreProsjekter/HistoriskeVandreruter-ReisdalenBeskrivelseVer4.pdf)
- Hutton E (2018) Loppuraportti. Kilpisjärven tutkimusjohtaja -valmisteluhanke. Helsingin yliopisto, Kilpisjärven biologinen asema. [www.helsinki.fi/kilpis](http://www.helsinki.fi/kilpis) (julkaistaneen elo-syyskuussa 2018)
- Høgtuns plankontor AS (2015) Interkommunal kystsoneplan for Gáinovuona/Kåfjord, Lyngen, Storfjord kommune  
<https://www.kafjord.kommune.no/getfile.php/3877341.136.svuqewssvx/Planbeskrivelse+med+konsekvensutredning+og+ROS-analyse.pdf>
- Johansen, L. P. (1999) Fra militært tomrom til militært tyngdepunkt: opprettelsen av brigaden i Nord-Norge. Hovedfagsoppgave i historie. Universitetet i Oslo.  
<https://www.duo.uio.no/bitstream/handle/10852/23404/johansenlape.pdf?sequence=2>
- Kajala L & Loikkanen T (2001) Käsivarren erämaa-alueen luonto ja käyttö. Metsähallitus. Helsinki.
- Kuusisto K, Erkkonen J, Ylläsjärvi J (2017) Pallas-Yllästunturin kansallispuiston kävijätutkimus 2016 Metsähallitus. Vantaa. Metsähallituksen luonnonsuojelujulkaisuja. Sarja B 230
- Kyöstiä M, Sulkava P, Ylläsjärvi I, Ylläsjärvi J (2017) Pallas–Yllästunturin kansallispuiston reitistösuunnitelma 2017. Metsähallitus.
- Metsähallitus (2001) Pöyrisjärven erämaa-alueen hoito- ja käyttösuunnitelma. Pöyrisvuoman soidensuojelualueen hoito- ja käyttösuunnitelma. Saaravuoman-Kuoskisenvuoman soidensuojelualueen hoito- ja käyttösuunnitelma. Metsähallituksen luonnonsuojelujulkaisuja. Sarja B 59.
- Metsähallitus (2008) Pallas–Yllästunturin kansallispuiston hoito- ja käyttösuunnitelma. Metsähallituksen luonnonsuojelujulkaisuja. Sarja C 36 [https://julkaisut.metsa.fi/assets/pdf/lp/Csarja/c36\\_teksti.pdf](https://julkaisut.metsa.fi/assets/pdf/lp/Csarja/c36_teksti.pdf)
- Metsähallitus (2011) Tarvantovaaran erämaa-alueen hoito- ja käyttösuunnitelma. Metsähallituksen luonnonsuojelujulkaisuja. Sarja C 92 <https://julkaisut.metsa.fi/assets/pdf/lp/Csarja/c92.pdf>
- Metsähallitus (2014) Mallan luonnonpuiston hoito- ja käyttösuunnitelma. MH 4765/623/2014.
- Metsähallitus (2017a) Käsivarren erämaa-alueen hoito- ja käyttösuunnitelma. Lausuntoluonnos 13.4.2017
- Metsähallitus (2017b) Saanan alueen hoito- ja käyttösuunnitelma. Lausuntoluonnos 12.4.2017  
[http://www.metsa.fi/documents/10739/1110148/saana\\_hks\\_lausunolle.pdf/4de34354-8aac-4ed4-9f9d-6c6ed096aed0](http://www.metsa.fi/documents/10739/1110148/saana_hks_lausunolle.pdf/4de34354-8aac-4ed4-9f9d-6c6ed096aed0)
- Nasjonalparkstyret (2018) Draft: Forvaltningsplan og besøksforvaltningsstrategi. Reisa nasjonalpark og Ráisdouttarháldi landskapsvernområde.  
[http://www.nasjonalparkstyre.no/Documents/Reisa\\_dok/Forvaltningsplan/2017-2018/ReisaNP\\_Fvplan-Bskfvstrategi\\_GodkjenningVer2.pdf](http://www.nasjonalparkstyre.no/Documents/Reisa_dok/Forvaltningsplan/2017-2018/ReisaNP_Fvplan-Bskfvstrategi_GodkjenningVer2.pdf)

- Norges Nasjonalparker (2016) Forvaltningsplan for Lyngsalpan landskapsvernområde/Ittugáissáid Suodjemeahcci (på høring)  
[http://www.nasjonalparkstyre.no/Documents/Lyngsalpan\\_dok/Forvaltningsplan%20og%20bes%3%b8ksstrategi/Forvaltningsplan%20for%20Lyngsalpan%20landskapsvernomr%3%a5de\\_h%3%b8ringsutkast%202018\\_opt.pdf](http://www.nasjonalparkstyre.no/Documents/Lyngsalpan_dok/Forvaltningsplan%20og%20bes%3%b8ksstrategi/Forvaltningsplan%20for%20Lyngsalpan%20landskapsvernomr%3%a5de_h%3%b8ringsutkast%202018_opt.pdf)
- Kåfjord Kommune <https://www.kafjord.kommune.no/landbruk.426894.no.html>
- Lepikkö T & Eriksen E (2015). Slutrapport Fra Ishavet till Halti prosjekt. Kåfjord Kommune.
- Miljødirektoratet (2018) Fakta: Naturtype Guolasjavri nordvest (Referred: 22.08.2018). <http://faktaark-gammel.naturbase.no/naturtype?id=BN00069974>
- Olsén L, Harkoma A, Heinämäki L & Heiskanen H (2017) Saamelaisten perinnetiedon huomioiminen ympäristöpäätöksenteossa. Lapin Yliopisto
- Oslo Economics (2018) Brukerundersøkelse i Lyngsalpan landskapsvernområde sommeren 2017.
- Reisa nasjonalparkstyre (2018) Besøksrapport 2017 Oversikt over ferdsel og bruk i Reisa NP  
[http://www.miljoernfond.no/Documents/Reisa\\_dok/%C3%85rsmeldinger/Bes%C3%B8ksrapport%202017-versj1.pdf](http://www.miljoernfond.no/Documents/Reisa_dok/%C3%85rsmeldinger/Bes%C3%B8ksrapport%202017-versj1.pdf)
- Statskog, Sweco, Kåfjord Kommune (2015) Detaljregulering for Base Camp Miessevárri – Halti Planprogram  
<https://www.kafjord.kommune.no/getfile.php/3224873.136.ercfyecvpb/Planprogram+Base+Camp+Miessev%C3%A1rri+--+Halti+13.10.2015.pdf>
- Statskog Energi (2015) Paras Kraftverk I Storfjord kommune, Troms Fylke. Søknad om konsesjon.  
<http://webfileservice.nve.no/API/PublishedFiles/Download/201200011/1619487>
- Storfjord kommune <http://www.storfjord.kommune.no/status-snoescooterloeytene.5947088-403621.html>)
- Tolonen J, Korhonen K, Tilja H, Keränen M, Siipola M, Heikkonen A, Mikkonen I, Stolt E, Heikkuri P, Tynys S, Tynys T, Katajamaa J, Perttunen P, Salmi J, Määttä J, Tuovinen T (ed.) (2013) Ylä-Lapin luonnonvarasuunnitelma. Kausi 2012-2021 Metsähallitus, Vantaa. Metsähallituksen metsätalouden julkaisu 68
- Troms fylke (1984) Guolasjavre 822 Kåfjordelva. Samlet plan for vassdrag.  
[http://www.miljodirektoratet.no/old/oversjonert/Vassdragsrapporter/Samla%20Plan/Troms/822%20K%C3%A5fjordelva%2005%20Guolasjavre%20\(Guolasj%C3%A5kka,%20Guolasjavri\).pdf](http://www.miljodirektoratet.no/old/oversjonert/Vassdragsrapporter/Samla%20Plan/Troms/822%20K%C3%A5fjordelva%2005%20Guolasjavre%20(Guolasj%C3%A5kka,%20Guolasjavri).pdf)
- Troms Kraft Produksjon AS (2012) økt produksjon i Skibotn og Lavka kraftverk.  
<http://viadora.tromskraft.no/dokumenter/Skibotn/Brosjyre%20TKP%20April%202012.pdf>
- Troms Kraft Produksjon AS (2017) Vilårsrevisjon av Guolasjohka i Kåfjord kommune Utredning på tema biologisk mangfold og elva som kulturell møteplass.  
<http://webfileservice.nve.no/API/PublishedFiles/Download/201503569/2044517>
- Verneområdestyret for Lyngsalpan landskapsvernområde (2016) Prosjektplan besøksforvaltning Lyngsalpan landskapsvernområde/Ittugáissáid suodjemeahcci  
[http://www.nasjonalparkstyre.no/Documents/Lyngsalpan\\_dok/Forvaltningsplan%20og%20bes%3%b8ksstrategi/Prosjektplan%20bes%3%b8ksstrategi.pdf](http://www.nasjonalparkstyre.no/Documents/Lyngsalpan_dok/Forvaltningsplan%20og%20bes%3%b8ksstrategi/Prosjektplan%20bes%3%b8ksstrategi.pdf)
- Visit Lyngenfjord (1): Guide. Hiking / Vandre Lyngenfjord <https://visit-lyngenfjord.com/sites/v/visit-lyngenfjord.com/files/053426771b8d4945a48b5f4994577d8b.pdf>

Visit Lyngenfjord (2): Reisa Nasjonalpark – Vile naturopplevelser året rundt <https://visit-lyngenfjord.com/no/reisa-nasjonalpark>

#### CONVERSATIONS WITH:

Enontekiö municipality: Hannu Autto, development director, Kirsti Näkkäläjärvi, tourism coordinator

Metsähallitus: Pertti Itkonen, Project manager, Halti project

Kåfjord Municipality: Jens Kristian Nilsen

Visit Lyngenfjord: Georg Sichelschmidt, Joel Kauppinen

#### FACEBOOK GROUPS:

Troms Turlag – DNT (NO)

Käsivarren vaeltajat (FI)

Vaellus (FI)

Vandrarna (SE)

Maastopyöräily (FI)

Kilpisjärvi ja käsivarren erämaa-alue (FI)

Reisa Nasjonalpark (NO)

#### MAPS:

Maps of land use: NIBIO Norwegian Institute of Bioeconomy Research resources <https://kilden.nibio.no>

#### MORE INFORMATION AND RELATED LINKS:

REISA NASJONALPARKSTYRE 2017. Ferdsel i Reisa NP og Ráisdouttarháldi VO 2016

<http://www.nasjonalparkstyre.no/Images/Reisa/%C3%85rsmelding-rapportermv/Bes%C3%B8ksrapport%20Reisa%202016.pdf>

Forvaltningsplan for Reisa nasjonalpark / Ráisa álbmotlas meahcci og Raisduottarhaldi landskapsvernområde / Ráisdouttarháldi suodjemeahcci

[http://www.nasjonalparkstyre.no/Documents/Reisa\\_dok/Forvaltningsplan/Ferdig%20utkast%20til%20nasjonalparkstyret%20forminsket.pdf](http://www.nasjonalparkstyre.no/Documents/Reisa_dok/Forvaltningsplan/Ferdig%20utkast%20til%20nasjonalparkstyret%20forminsket.pdf)

Historiske vandreruter Project <http://historiskevandreruter.no/>

Historisk vandrerute Reisadalen [https://lokalhistoriewiki.no/wiki/Historisk\\_vandrerute\\_Reisadalen](https://lokalhistoriewiki.no/wiki/Historisk_vandrerute_Reisadalen)

Historiske vandreruter, Riksantikvaren <https://www.riksantikvaren.no/Tema/Friluftsliv-og-kulturminner/Historiske-vandreruter>

Gørill Nilsen (2003) Brytninger mellom lokal og akademisk kulturminnekunnskap - En analyse av fortidsforestillinger i Nord-Troms og Lofoten. Universitetet i Tromsø.

Besøkskartlegging for Reisa Nasjonalpark 2008

[http://www.nasjonalparkstyre.no/Documents/Reisa\\_dok/Forvaltningsplan/Rapporter-kunnskapsgrunnlag/Bes%C3%B8kskartlegging\\_Projektrapport\\_2008.pdf](http://www.nasjonalparkstyre.no/Documents/Reisa_dok/Forvaltningsplan/Rapporter-kunnskapsgrunnlag/Bes%C3%B8kskartlegging_Projektrapport_2008.pdf)

Troms Kraft Produksjon AS Vilkårstrevisjon Guolas kraftverk, revisjonsdokument 15.05.2017

<http://webfileservice.nve.no/API/PublishedFiles/Download/201503569/2073259>

Visit Lyngenfjord (2018) Visitor statistic [https://visit-lyngenfjord.com/no/bransjenett/statistikk\\_Lyngenfjord](https://visit-lyngenfjord.com/no/bransjenett/statistikk_Lyngenfjord)

Enontekiön yhteismetsä. <http://www.enontekion-yhteismetsa.fi/>