Laponian Area

2025 Conservation Outlook Assessment

SITE INFORMATION

Country: Sweden
Inscribed in: 1996
Criteria: (iii) (v) (vii) (viii) (ix)

The Arctic Circle region of northern Sweden is the home of the Saami people. It is the largest area in the world (and one of the last) with an ancestral way of life based on the seasonal movement of livestock. Every summer, the Saami lead their huge herds of reindeer towards the mountains through a natural landscape hitherto preserved, but now threatened by the advent of motor vehicles. Historical and ongoing geological processes can be seen in the glacial moraines and changing water courses.
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SUMMARY

2025 Conservation Outlook

Finalised on 11 Oct 2025

GOOD

The overall state of conservation of the Laponian Area and its values is good and stable. Established in 1996, the World Heritage site included areas that were already protected: four National Parks (among which three are awarded by the European Diploma for Protected Areas) and two Nature Reserves (designated as Ramsar sites). Their management is mostly effective. There are few direct threats affecting site’s values - the main one being the potential impacts of climate change on the sensitive boreal ecosystem of the area. Other potential threats are the possible development of mining prospecting in the vicinity of the property, which could impact on both its natural and cultural values, and increasing pressure from tourism. Since 2011, a participatory management board (Laponiatjuottjudus) is in charge of implementing the management of the World Heritage site, according to the management plan adopted in 2012. This is encouraging as the board comprises members from different stakeholder groups, including representatives of local Indigenous Sámi village organizations. Consensus decision-making is the basic working method for the Laponian management board. A management effectiveness assessment conducted in 2016 showed that the governance model and organizational collaboration is working well. However, some concerns were raised, for example that the management plan lacks clear objectives and priorities, lacks a strategy for managing tourism, as well as measures to evaluate management impacts on the site’s values. Some priorities stated would be to develop buffer zones and zonation within the Laponian Area, visitor management, as well as surveillance and inspection to address illegal activities. With a new management plan being developed, there is potential to further improve overall management by including these aspects.

FULL ASSESSMENT

Description of values

Values

World Heritage values

▶ **Variety of landscapes, with spectacular mountain scenery** **Criterion:(vii)**

The World Heritage site is remarkable by its large area (almost 941,000ha), and offers a great variety of natural landscapes of exceptional beauty, that can be divided into two dominant landscapes types: the eastern lowland of Archaean geological origin, which comprises marshland, many lakes, and mixed woodlands; and the western mountainous landscape with spectacular mountain scenery, covering two-thirds of the site. This higher part comprises a thinly-vegetated mountainous landscape with steep valleys and powerful rivers. The site contains more than 100 peaks higher than 1,800m and about 100 glaciers, mainly located in Sarek and Sulitelma areas (IUCN, 1996). Most of the valleys and lower mountains have been used for centuries as reindeer migration corridors and Summer reindeer grazing areas. Reindeer husbandry has been a key factor for vegetation and landscape development (IUCN/ICOMOS 2024).

▶ **Natural phenomena of exceptional beauty** **Criterion:(vii)**

A great variety of natural phenomena of exceptional beauty relates to the variety of landscapes of Laponian Area. The World Heritage site is one of the floristically richest areas of Sweden, recording birch, low heath and alpine meadows, which are found below boulder fields, permanent snow fields and glaciers. The large alpine lakes in Padjelanta, with the mountain backdrop on the Swedish/Norwegian border, are of exceptional beauty. The extensive Rapa Valley provides a total contrast with the alpine areas, as it is a very active delta area, surrounded by cliffs of rocky outliers with sheer faces plunging to the delta (IUCN, 1996; World Heritage Committee, 2016).

▶ **Examples of historic and on-going geological processes (associated with glacial activity)** **Criterion:(viii)**

The World Heritage site offers a wide variety of features illustrating both historic and on-going geological processes associated with glacial activity: U shaped valleys, glacial cirques and moraines, talus accumulations, drumlins, presence of large erratic and rapidly flowing glacial streams. Excellent examples of ice and frost action in the tundra setting are found, including formation of polygons and an area of spectacularly collapsing and growing pulsas. Glacial rivers originating in the snowfields continue to cut through bedrock. Large unvegetated areas illustrate the phenomenon of weathering (IUCN, 1996; World Heritage Committee, 2016).

▶ **Examples of on-going ecological and biological processes** **Criterion:(ix)**

The vast mire complex of Sjávnja is the largest in Europe outside Russia. The area is virtually impenetrable for humans, except during winter. The Laponian Area includes primeval coniferous forest with dating indicating ages as old as 700 years. Natural succession continues here unimpaired (IUCN, 1996; State Party of Sweden, 2006; World Heritage Committee, 2016). A large part of the site's vegetation and landscape is maintained by a century-old reindeer grazing tradition, whose continuation is crucial to the biological and landcape conservation. (IUCN/ICOMOS 2024)

Other important biodiversity values

▶ **Significant biodiversity values**

Vegetation: the dominant vegetation is open woodland of white birch (Betula pubescens) with a ground cover mostly of mountain crowberry (Empetrum hermaphroditum) and bilberry (Vaccinium myrtillus) and meadows with globeflower (Trollius europaeus), (Aconitum septentrionale) and blue sowthistle (Lactuca alpine). The eastern lowland is taiga interspersed with large open heaths. Forests of Norway spruce (Picea abies) and Scots pine (Pinus sylvestris) in drier areas form the largest single block of virgin forest in Sweden (44,000ha). The oldest trees of the pine forests of Muddus are about 700 years old.
Botanically the west of the Laponian Area, containing a rich alpine flora, is one of the most interesting mountain regions in the country. The Padjelanta alpine meadows and particularly Jeknaffo mountain support scarce species such as Arctic cinquefoil (Potentilla hypartica) and creeping sandwort (Arenaria humifusa) (UNEP-WCMC, 2011; Laponiatjuottjudus, 2012).
Fauna: The site have a greater number of vertebrate species than any other mountain region in Sweden. The native reindeer (Rangifer tarandus) are all semi-domesticated. The Laponian Area counts some rare mammals, such as brown bears (Ursus arctos), wolverine (Gulo gulo), European otter (Lutra lutra), Arctic fox (Vulpes lagopus), Eurasian lynx (Lynx lynx), and a large population of moose (Alces alces) in the Rapa Valley (UNEP-WCMC, 2011; Laponiatjuottjudus, 2012).
Resident large birds include white-tailed eagle (Haliaeetus albicilla), golden eagle (Aquila chrysaetos), gyrfalcon (Falco rusticulus), peregrine falcon (F. peregrines) and merlin (F. columbarius). In the Sjaunja mires and the bog surrounding Muddusjaure, more than 150 species have been seen, at least 100 of which have been confirmed as breeding, some 50 being dependent on wetland habitat (IUCN, 1996; UNEP-WCMC, 2011; Laponiatjuottjudus, 2012). Recent monotoring results for large mammals and birds are available (Galland & Adem, 2023).

Assessment information

Threats

Current Threats

High Threat

While logging and the use of new technologies for herding appear as relatively low threats, climate change induces a rapid glacier decline that jeopardizes the World Heritage site's natural values. Global warming also affects the reindeer grazing in wintering quarters and during migration. Ice crusts forming in the snow prevent the reindeers to feel the lichens and to have access to them. Additionally, the evolution of mining and associated infrastructure at the vicinity of the Laponian Area and potential power grid development within the Stubba nature reserve remains to be considered with impact on both the natural and cultural values by restricting reindeer movements in and around the site.

▶ **Logging, Harvesting & Controlling Trees**

Low Threat

(Intensive logging outside the site)

Outside site

Boreal forests of northern Sweden have long been exploited for logging industry (starting more than a century ago) and are still used for intensive logging (Berg et al., 2008). No such activities are operated within the boundaries of the Laponian Area and its century old national parks, but logging activities can occur just outside those borders. This is for example the case in the area of Muddus (east part of the site), where one can see clear-cut forest landscapes outside the national park while being inside the protected area. This phenomenon may thus affect the aesthetic value and unity of landscapes. Intensive forestry activities also impede reindeer grazing activities namely during seasonal migration to the site and regarding winter grazing from Sámi pastoralists. There is a trend of land use change from pastures to intensive forestry activities (Courault and Cohen, 2020). Old-growth lichen rich forests are essential for reindeer feeding in Winter; re-establishment of mature lichen communities after clear cut might take up to a century. Combined with climate change, this could threaten the Sami reindeer herding practices. Replanting after clear-cut with exotic faster growing tree species happened during the last decades but seems to have been stopped (IUCN/ICOMOS 2024).

► Changes in traditional ways of life and knowledge systems that result in negative impact

Very Low Threat
Outside site

(Modernization of techniques and use of motor vehicles (for herding))

According to IUCN's evaluation of the Laponian Area World Heritage nomination (IUCN, 1996), "the site's integrity issue in relation to reindeer herding focuses mainly around the use of technology in the husbandry activity itself", referring, for example, to the increasing use of aircrafts (or more recently helicopters and drones), motorcycles and snowmobiles to round up the herds and move them between pastures, that generate noise pollution (Sámi herders have special rights regarding the use of motor vehicles within the protected area). Off road driving can also damage the sensitive vegetation of the site (IUCN Consultation, 2024). The 1996 IUCN evaluation report concludes that "in the overall context, the use of motor cycles is not seen as a threat to the integrity of the site which does not mean that local impacts should not be assessed"; a conclusion on the whole shared by the appraisal report for European diploma of Protected Areas, stating that "however, it has to be expected that some compromises will have to be found to allow modern way of life in accordance with conservation objectives" (Galland, 2012). The previous management plan of the Laponian Area (Laponiatjuottjudus, 2012) addresses this issue on the basis of a cooperation between the diverse authorities involved in the management of the site, and endeavours to maintain a sustainable management of the area allowing the necessary modernization of herding techniques in harmony with conservation objectives (Laponiatjuottjudus, 2012). The revision of the Management Plan in process (Galland & Adem 2023) should re-assess the use of modern technologies.

► Changes in Temperature Regimes

High Threat
Inside site, extent of threat not known
Outside site

(Rising temperatures)

In the Fourth Cycle of the Periodic Reporting, submitted to UNESCO in 2023, several potential and current conservation issues were observed. In particular, climate change can affect flora, fauna and cultural heritage in the Laponian Area (State Party of Sweden, 2024). Climate change has a negative effect on the sensitive northern flora and fauna. Species that are adapted to warmer climate spread further north while the sensitive arctic fauna and flora are pushed northward or outcompeted. Temperature increase leads to the forest border moving upwards resulting in bush and tree vegetation on higher altitudes, as well as glacial melting with snow and slush slides due to faster melt off. High alpine specialized species might be affected in the long term. More extreme changes in weather and snow coverage make it more difficult for reindeers and other animals to find food during the winter (State Party of Sweden, 2024). Especially traditional livelihoods of Sámi communities are and will be affected by the effects of climate change, and the provision of ecosystem services from subarctic ecosystem services will be affected (Kelman and Næss, 2019; Markkula et al., 2019).

► Roads, Trails & Railroads, Utility & Service Lines

High Threat
Inside site, localised(<5%)
Outside site

(Powerlines grid development, road and railway infrastructure development)

The Kallak mining development, located > 30 km outside the property, has a limited impact by itself. However, any mining activity is bound to be followed by a reinforcement of the powerlines crossing the property as well as the transportation corridor between Muddus and Saunja. Powerlines will have an overall impact on the spectacular landscape. Larger roads and railways may have an impact on wild animal migration. The State Party reports on plans to extend and reinforce the National Grid's energy transmission system, including within the Stubba Nature Reserve, which is part of the World Heritage property (State Party of Sweden, 2024). A concession application for a power line between Porjusberget and Vitafors was submitted in December 2023. The company will need to obtain a permit from the Land and Environment Court for any activities or measures that may have a significant impact on the natural environment in a Natura 2000 protected area. The planned extension of a second powerline through the Stubba Nature Reserve to Naalojärvi-Messaure is at an early stage of planning, with a consultation process to identify potential impacts on the property, including an impact assessment (UNESCO, 2024). Outside the property, the roads and / or railways connecting the mines to the national network will have

a negative influence to the reindeer seasonal migrations (IUCN/ICOMOS 2024).

Potential Threats

Low Threat

The overall potential threats affecting the World Heritage site are considered as low or very low and the general state of integrity of the site is reported as good. The main potential threats listed are taken into account in the recent process and plan for managing the site. The most significant threats relate to increasing pressure from tourism, fires and potential mining in the vicinity of the Laponian Area. Next to the property, mining could impact on both the natural and cultural values by restricting reindeer movements around the site and affecting the landscape.

▶ Mining & Quarrying

Low Threat

(Mining prospecting at the vicinity of the site)

Outside site

In 2012-2013, investigations related to two mining projects were launched in the surroundings of the Laponian Area, the first one (in Ruoutevare) being situated in and adjacent to the southwest boundary of the World Heritage site. After the first permits allowing investigations expired, no further mining projects were launched and mining activity is not likely to be operated in this area. The second project is situated about 30 km south-southeast from the boundary of the Laponian Area, in Kallak (Gállok in Sámi). The potential area of extraction is situated fully outside the World Heritage site, but both the Swedish National Heritage Board and the Swedish Environmental Protection Agency consider this mining activity potentially harmful to the values of the site since the migratory routes of the reindeer would be obstructed, thus affecting biodiversity values as well as herding practices (cultural values) (Mahmood and Janson, 2013). This concern has been communicated to the World Heritage Centre by the Swedish National Heritage Board and the Swedish Environmental Protection Agency (see for instance Swedish National Heritage Board, 2015). The Swedish Society for Nature Conservation and the Sámi village of Jåhkågasska also appealed the granting of the Kallak mining development and exploitation concession in 2022. However in 2024, the Court dismissed the appeal and chose to uphold the previous government's decision to approve the concession. The 2024 monitoring mission recommended the Swedish government to cancel the Kallak mining development project (IUCN/ICOMOS 2024). Although a further environmental permit would be required under the Swedish Environmental Code before mining can take place, it is recommended that a revised EIA focussing on the potential impacts on the OUV and its attributes is completed (UNESCO, 2024). Until then, the potential negative impact on the site's OUV is difficult to predict.

▶ Recreational Activities

Very Low Threat

(Increasing pressure from tourism)

Inside site, throughout(>50%)

The tourism industry in the Laponian Area is based on the principles of eco-tourism, and the tourist culture and popularity have grown over the years. However, development of a sustainable tourism industry has not been prioritized and a clear tourism management strategy, as well as a framework for granting tourist business authorizations, are needed to tackle tensions between different interests (PWC, 2016; Laponiatjuottjudus, 2012). There is a concern that an increase in visitor numbers will put pressure on this sensitive ecosystem, and reindeer herders have experienced issues with summer tourism constantly disturbing the reindeers during these few months of very important grazing time (Laponiatjuottjudus, 2012). However, too strict regulations on visitation would go against the freedom of the Swedish Right of Public Access (Koninx, 2018) and deny local communities the benefits from sustianable tourism. The Laponia management board, Laponiatjuottjudus, is considering some management options such as zoning, which could direct people away from sensitive areas to places that are able to withstand higher visitor pressure and/or are prepared for visitors to minimize disturbance for the reindeer industry (Laponiatjuottjudus, 2012). Some examples of sustinabale toursim projects include Arctisen (2021) and a Sapmi Nature Camp.

▶ Fire & Fire Management

Very Low Threat

(Fires)

Inside site, localised(<5%)

Fires have always been part of ecosystem development and are well documented. However, global warming might increase the risk and the size of natural fires.

► **Hunting, Collecting & Controlling Terrestrial Animals** — **Very Low Threat**

(Poaching of large carnivores)

Inside site, extent of threat not known
Outside site

Other targeted species names

Ursus arctos, Gulo gulo, Lynx lynx

Rauset et al. (2016) have also shown that large carnivores, such as brown bears (Ursus arctos), wolverine (Gulo gulo) and Eurasian lynx (Lynx lynx), are all exposed to the risk of poaching inside the boundaries of the Laponian Area. It is suggested that illegal killing add up to 42–69% of the total mortality of these species and that the large size and remoteness of these areas, with low public presence, low intensity of patrolling and thereby low risk for poachers to be detected, are factors contributing to these high rates (Rauset et al., 2016). However, currently this does not seem to be an active threat affecting the site's biodiversity values.

Overall assessment of threats — Low Threat

Current and potential threats to the World Heritage site itself are relatively low, well identified and addressed by the managing authorities, except the consequences of climate change on ecosystems and especially on the local 155 glaciers that are one of the key natural features of the site. Climate change is especially intense in this high latitude region and monitoring and anticipating its effects on local natural and cultural heritages will constitute a major issue for managing authorities. Logging in the vicinity of the park should also be considered. Additionally, the evolution of mining and other energy projects at the vicinity of the Laponian Area remains to be considered in the long-term horizon; potential mining in the vicinity of the site could impact on both the natural and cultural values by restricting reindeer movements in and around the site. Development of guidelines for a sustainable tourism industry in the Laponian Area is also needed.

Protection and management

Assessing Protection and Management

► **Involvement of stakeholders and rightsholders, including indigenous peoples and local communities, in decision-making processes** — **Serious Concern**

Since 2011, a participatory management board (Laponiatjuottjudus) is in charge of implementing the management of the World Heritage site, according to the management plan adopted in 2012. This is very encouraging as the board comprises members from different stakeholder groups, including representatives of local Indigenous Sámi village organizations. Consensus decision-making is the basic working method for the Laponian management board. However, in 2022, the UN Special Rapporteurs on Indigenous Peoples and on human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment raised concerns about the failure to obtain the free, prior and informed consent of the Sámi for the Kallak mining project and about threats to their environmental and cultural heritage rights (IUCN/ICOMOS 2024; Tzay & Boyd, 2022). According to the latest SOC report, these concerns are now being addressed by including specific conditions in the terms of the proposed mining concession to minimise negative impacts on reindeer husbandry. These include consultation with the Sámi reindeer herding communities and the Sámi Parliament, using the smallest possible area of land (condition 3), compensating affected reindeer herding communities (conditions 4 and 5), and facilitating reindeer migration past the concession area as much as possible (condition 6). Regular consultations aimed at reaching a consensus with reindeer husbandry communities on how to avoid disruption to reindeer husbandry are required, and an annual report on consultations is required (condition 8). The impact assessment will need to address the rights of Sámi as Indigenous peoples in accordance with the aforementioned Guidance and the 2022 Act on consultation on issues concerning the Sámi people, which contains specific consultation provisions on the rights of the Sámi to influence matters affecting them

(UNESCO, 2024)

▶ Legal framework — Some Concern

Most of the World Heritage Area is protected by law as National parks, nature conservation areas and Natura 2000 sites, however there are gaps in the protection of the adjacent areas, with potential effect on the property itself.

▶ Governance arrangements — Mostly Effective

The site is managed by Laponiattjuotjudus and the County Administrative Board of Norrbotten. The Swedish Environmental Protection Agency is the focal point for Natural World Heritage in Sweden and is responsible for overarching administration of the outstanding universal values within Laponia together with the Swedish National Heritage Board (IUCN Consultation, 2024). The governance system (Laponiatjuttjudus 2012) is adequate; however it is limited to short-term periods (currently until 2026) and should be extended for a long-term or unlimited period (IUCN/ICOMOS 2024). Furthermore, ensuring the involvement of the Sámi people in decision-making processes remains of utmost importance.

▶ Integration into local, regional and national planning systems (including sea/landscape connectivity) — Data Deficient

No national planning available for mining and forestry

▶ Boundaries — Mostly Effective

Although the current boundaries are clear and effective, there is no buffer zone and as most threats are coming from activities in the vicinity of the site, the establishment of a "formal" buffer zone or more harmonized regulations in the vicinity is recommended (IUCN/ICOMOS 2024).

▶ Overlapping international designations — Mostly Effective

3 of the 5 national Parks constituting the site have received the European Diploma for Protected Areas (renewed in 2024 for 10 years).
A better coordination between WH, RAMSAR and the EDPA is needed; this would also contribute to an improved communication about international designations (Galland & Adem, 2023; IUCN/ICOMOS 2024).

▶ Implementation of World Heritage Committee decisions and recommendations — Some Concern

Following previous recommendation (World Heritage Committee, 2023), Sweden has invited in 2024 a monitoring mission (IUCN/ICOMOS 2024). The report is going to be addressed to the national authorities and will be discussed by the Committee in 2025. Thus far progress has been made in regard to the concerns raised by the UN Special Rapporteurs on the rights of Indigenous Peoples and the UN Special Rapporteur on the human right to a clean, healthy and sustainable environment regarding the free, prior and informed consent (FPIC) of the Sámi Indigenous peoples as part of the conditions for the proposed Kallak mining concession. The threats from mining developments around the site and energy grid development within the site remain concerning and have not been addressed sufficiently by the State Party (World Heritage Committee, 2024).

▶ Climate action — Data Deficient

Climate change is an important topic in relation 1) to change in the high mountain landscape and 2) to the impact on reindeer herding. Mitigation measures do not exist, but significant research and monitoring is done on climate change.

▶ Management plan and overall management system — Mostly Effective

Although the current Management Plan is good, it has expired and a revision is in process. A better coordination between Culture and Nature ministries is advisable (IUCN/ICOMOS 2024).

▶ Law enforcement — Mostly Effective

Efficient, despite the size of the area. Concerns the visitors, but also traditional activities (fishing, reindeer herding) that include use of motor vehicles on snow, water and land. However, there is some concern, that due to the size of the property, the effective supervision of tourist companies by the County Administrative Board of Norrbotten may not always be possible (IUCN Consultation, 2024).

► Sustainable finance — Mostly Effective

Finances are deemed sufficient and there is good collaboration between the site managers and the Norrnbottern county authorities. However, more resources are needed for example in form of project-financing and to improve tourism infrastructure (IUCN Consultation, 2024).

► Staff capacity, training and development — Mostly Effective

Staff capacity is adequate, people are highly qualified. The limitation to staff recruitment is the limited time duration of the management structure. Local people (Sámi) are integrated into the staff.

► Education and interpretation programmes — Mostly Effective

The education system is very effective, and staff are qualified. A very good information centre, "Naturum", was built and offers good exhibition and information for visitors. In addition the Jokkmokk Ajtte Museum presents the Sami people history and traditions, namely the reindeer herding system, in a very comprehensive manner. The information about the World Heritage Convention, as well as the other international designations, is relatively limited. A joint systematic presentation of the different labels would be welcome (Galland & Adem, 2023).

► Tourism and visitation management — Some Concern

The fragility of the mountain ecosystem is sometimes in conflict with tourism activities and there is no overall tourism strategy in place. Plans are under discussion to drive tourism outside of the reindeer summer grazing areas, in order to avoid disturbance. A weakness is that because of the vast size of the Laponian area, the County Administrative Board of Norrbotten cannot supervise that all tourist companies follow the conservation legislation. There is also insufficient financing for footbridges and other constructions that would protect the vegetation from the visitors (IUCN Consultation, 2024). However, there are interesting projects driving the development of sustainable tourism from which local communities benefit. The Arctisen project aimed increase knowledge of sensitive tourism development, open up dialogues between different actors and make a change in the product development to be based more on cooperation and being true to oneself. If implemented in a large scale, this kind of shift might ensure tourism is more sensitive, sustainable and responsible after-COVID-19 in Arctic areas and beyond (Arctisen, 2021). At Pittja’s company Sápmi Nature, glamping experiences in the WH site focus on storytelling and sharing Sámi knowledge and values with guests. This type of small-scale, sustainable tourism could foster understanding and mutual respect for local communities, while benefiting local economies (Gardiner, 2021: Sapmi Nature, 2024).

► Sustainable use — Highly Effective

The reindeer herding system has remained the same for many centuries and is highly sustainable. However it is relatively sensitive to climate change (warming) and also the socio-economic situation of the Sámi families. Only a few Sámi people depend exclusively on reindeers nowadays.

► Monitoring — Highly Effective

Monitoring on ecosystems is done by researchers and the Norrbotten county administration. It is very efficient and good statistics on large predators, birds and other organisms are available (Galland & Adem, 2023). Researchers are also following closely the impact of climate change, namely on glaciers. Sámi nowadays monitor their reindeer herds using GPS trackers and drones. Research on the history of forest fires is also very well documented.

► Research — Highly Effective

Research is performed by different institutions and to some extent a better coordination and a single database might be helpful. But it is very efficient and helpful for the managers (IUCN Consultation, 2024).

▶ **Effectiveness of management system and governance in addressing threats outside the site** — **Some Concern**

Since there is no buffer zone designated as such, there is also not a single management authority outside the property. There is a lack of regional or national planning for activities like mining and energy production. Overall logging planning does not appear to exist. This lack of integration poses a threat for the natural and cultural values of the site as demonstrated through the process of the current mining development.

▶ **Effectiveness of management system and governance in addressing threats inside the site** — **Mostly Effective**

The current management system is efficient, but it is still limited in regard to the time increments it is valid. A revision of the system and management plan should lead to a more long-term stable system. The management team has the current threats well under control, aside from climate change impacts, which are difficult to address with management actions at the site-level (IUCN Consultation, 2024).

Overall assessment of protection and management — **Mostly Effective**

The protection and management of the World Heritage site is mostly effective, thanks to the century old national parks system of the country, and the effectiveness of its more recent participatory management system. However, a revision of the management plan and the perenniality of the management structure should be realized soon. Some more work is needed to ensure a future sustainable balance between tourism, conservation and reindeer husbandry and further efforts are needed to address the factors affecting the adjacent areas and susceptible to impact the site itself (reindeer husbandry essentially).

State and trend of values

Assessing the current state and trend of values

World Heritage values

▶ **Variety of landscapes, with spectacular mountain scenery** — **Low Concern** — **Trend:Stable**

The natural landscapes of the Laponian Area were reported in good state of conservation in the appraisal reports for European Diploma for Protected Areas (Galland, 2012; Galland & Adem, 2023) as well as in the recent monitoring mission (IUCN/ICOMOS 2024). Some concerns exist, however, these relate to actual and potential future impacts of climate change and increasing temperatures.

▶ **Natural phenomena of exceptional beauty** — **Good** — **Trend:Stable**

The state of preservation of the World Heritage site’s natural phenomena is good. The site contains areas of exceptional natural beauty and extensive and well preserved uninhabited taiga and mountains (UNEP-WCMC, 2011). However, increasing pressure from tourism could potentially impact negatively on this fragile landscape.

▶ **Examples of historic and on-going geological processes (associated with glacial activity)** — **Good** — **Trend:Stable**

The current state of historic and on-going geological processes is good. Apart from climate change, potential threats from outside of the World Heritage site, such as logging, mining and energy production, are being closely monitored.

▶ **Examples of on-going ecological and biological processes** — **Low Concern** **Trend:Stable**

As well as other values of the World Heritage site, the more recent reports evoke a good state of conservation of Sjaunja Area (UNESCO, 2006; Galland & Adem, 2023). Climate change as well as logging and mining in the vicinity of the property could pose potential future threats to ecological and biological processes within the site in relation to traditional reindeer activities.

Summary of the Values

▶ **Assessment of the current state and trend of World Heritage values** — **Good** **Trend: Stable**

The overall state of conservation and trend of World Heritage values are good and stable. All reports share the conclusion of good management practices and few threats that could directly affect the values of the site in the short- and medium-term. The main concern in the long-term is the potential and uncertain impacts of climate change and in the medium-term the potential of logging, new mining and energy-related activities nearby and increasing pressure from tourism.

▶ **Assessment of the current state and trend of other important biodiversity values** — **Low Concern** **Trend: Stable**

The overall state of conservation and trend of other important biodiversity values are generally seen as good and stable, however, some concerns exist regarding threatened species of flora and fauna. The boreal ecosystems of the Laponian Area, situated in northern Sweden above polar circle, are likely to be affected by future climate change (Kaarlejärvi et al., 2012; Maliniemi et al., 2018), moreover, potential increase in tourism pressure could also pose a negative impact on these fragile ecosystems (Koninx, 2018; Tolvanen and Kangas, 2016). Rauset et al. (2016) have also shown that large carnivores, such as brown bears (Ursus arctos), wolverine (Gulo gulo) and Eurasian lynx (Lynx lynx), are all exposed to the risk of poaching inside the boundaries of the Laponian Area. Significant changes in reindeer husbandry condiitons, mainly in the vicinity, could also influence the vegetation and landscape inside the property.

Additional information

Benefits

Understanding Benefits

▶ **Water provision (importance for water quantity and quality)**

The World Heritage site contains an important water stream network (many rivers, lakes, marshlands, waterfalls, etc.), several of which have their source in the numerous glaciers of the west of the area. The water is naturally potable in the all area.

Factors negatively affecting provision of this benefit :
- Climate change Impact level - Low, Trend - Continuing
- Pollution Impact level - Low, Trend - Continuing
- Overexploitation Impact level - Low, Trend - Continuing
- Habitat change Impact level - Low, Trend - Continuing

► Contribution to education

The World Heritage site presents a potential to contribute to disseminating knowledge on, for instance, Sámi culture, nature history and botany. As such, some tourists, or even guided tours follow the itinerary of Carl von Linné, who made botanic expeditions in the area in 1732.

Factors negatively affecting provision of this benefit :
- Climate change Impact level - Low, Trend - Continuing
- Pollution Impact level - Low, Trend - Continuing
- Overexploitation Impact level - Low, Trend - Continuing
- Habitat change Impact level - Low, Trend - Continuing

► Importance for research

Especially for the local indigenous Sámi people, the Laponian Area is important for the transmission of knowledge and know-how related to Sámi livelihood and reindeer husbandry. It is also important for visitors and for scientific interest as it contains huge and almost untouched natural areas.

Factors negatively affecting provision of this benefit :
- Climate change Impact level - Low, Trend - Continuing
- Pollution Impact level - Low, Trend - Continuing
- Overexploitation Impact level - Low, Trend - Continuing
- Habitat change Impact level - Low, Trend - Continuing

► Outdoor recreation and tourism

Nature based tourism is an important activity in the World Heritage site. Main tourist practices are mountain hiking (during summer season), and cross country skiing (during winter season). The site offers good infrastructures for those activities, comprising maintained trails and overnight cabins. Tourism is an important complementary resource for local people. Fishing is also an important leisure activity in the site.

Factors negatively affecting provision of this benefit :
- Climate change Impact level - Low, Trend - Continuing
- Pollution Impact level - Low, Trend - Continuing
- Overexploitation Impact level - Low, Trend - Continuing
- Habitat change Impact level - Low, Trend - Continuing

► Wilderness and iconic features

Several sacred Sámi sites are comprised within the property, often related to emblematic landscapes, as for instance, the Skierfe mountain in the Rapa Valley. Landscapes and toponymy have essential cultural values, as the old indigenous Sámi nomadic culture is based on transhumances with reindeer herds in the huge natural landscapes of northern Sweden. The Sámi names of places are very descriptive of the landscapes, which has allowed the Sámi reindeer-herding communities to move safely in those vast areas for centuries. Traditional knowledge and know-how related to landscpes and tranhumances are thus important heritage values.

Factors negatively affecting provision of this benefit :
- Climate change Impact level - Low, Trend - Continuing
- Pollution Impact level - Low, Trend - Continuing
- Overexploitation Impact level - Moderate, Trend - Continuing
- Habitat change Impact level - Low, Trend - Continuing

► Sacred natural sites or landscapes

Because of its huge natural landscapes, with few obvious traces of human presence, and its century old conservation systems, the World Heritage site is often associated with the values of wilderness, in spite being a predominantly Sámi cultural landscape. The "wilderness" values are nevertheless notably important in terms of tourism development.

Factors negatively affecting provision of this benefit :
- Climate change Impact level - Low, Trend - Continuing
- Pollution Impact level - Low, Trend - Continuing
- Overexploitation Impact level - Moderate, Trend - Continuing
- Habitat change Impact level - Low, Trend - Continuing

► History and tradition

There have not been many archaeological investigations in the mountain region in Sweden, due to earlier Swedish archaeological ideas and believes that no one lived or left any traces there. Today, researchers have recognized that this area is very interesting, and that there are evidences of human presence from as far back as 7000 BP. Some archaeological settlements located inside the Laponian Area demonstrate long continuous use of the area by the Sámi indigenous people. The Laponia Area management organization or Laponiatjuottjudus has done some archaeological investigations in the area, and can already show many new findings, for example, that both Sámi and non-Sámi people have been living in the Sjávnjá mire area for several thousand years.

Factors negatively affecting provision of this benefit :
- Climate change Impact level - Low, Trend - Continuing
- Pollution Impact level - Low, Trend - Continuing
- Overexploitation Impact level - Low, Trend - Continuing
- Habitat change Impact level - Low, Trend - Continuing

► Access to drinking water

In line with the Swedish Right of Public Access to nature, non commercial water use is permitted in the World Heritage site. Clear water is a huge resource in the area as it is potable everywhere in the streams and lakes of the site. Both tourists and inhabitants use it for ordinary consumption (drinking, washing, cooking).

Factors negatively affecting provision of this benefit :
- Climate change Impact level - Low, Trend - Continuing
- Pollution Impact level - Low, Trend - Continuing
- Overexploitation Impact level - Low, Trend - Continuing
- Habitat change Impact level - Low, Trend - Continuing

► Livestock grazing areas

Reindeer husbandry is an important activity in the area, and an essential dimension in the Sámi culture. As well as an important subsidence for Sámi reindeer-herders and also other locals.

Factors negatively affecting provision of this benefit :
- Climate change Impact level - Low, Trend - Continuing
- Pollution Impact level - Low, Trend - Continuing
- Overexploitation Impact level - Low, Trend - Continuing
- Habitat change Impact level - Low, Trend - Continuing

► Fishing areas and conservation of fish stocks

Fishing is an important dimension in the traditional Sámi livelihood and culture. As reindeer herders, nine Sámi village organizations also benefit from special rights for fishing in the protected area (they are for instance allowed to use nets). The local reindeer-herding Sámi people are also allowed to sell fish, which provides them with a small and seasonal complementary income. Leisure fishing is allowed in specific zones, which makes them attractive for fishing tourism.

Factors negatively affecting provision of this benefit :
- Climate change Impact level - Low, Trend - Continuing
- Pollution Impact level - Low, Trend - Continuing
- Overexploitation Impact level - Moderate, Trend - Continuing
- Habitat change Impact level - Low, Trend - Continuing

► Collection of wild plants and mushrooms

A specific Swedish constitutional right, the "allemansrätt" (right of public access to nature, independently of property rights) allows harvesting of common plants (if not protected) everywhere in Sweden, including in protected areas (though some rules may restrict or expand the Right of Public Access in the case of protected areas). So wild food plants and mushrooms collection is permitted within the Laponian Area World Heritage.

Factors negatively affecting provision of this benefit :
- Climate change Impact level - Low, Trend - Continuing
- Pollution Impact level - Low, Trend - Continuing
- Overexploitation Impact level - Low, Trend - Continuing
- Habitat change Impact level - Low, Trend - Continuing

► Legal subsistence hunting of wild game

Hunting is allowed in the site for people belonging to one of the nine local Sámi village organizations according to special authorizations based on their continuous presence and use of the area as their traditional lands. Other people can hunt seasonally with special permits (applied at the regional County Administration).

Factors negatively affecting provision of this benefit :
- Climate change Impact level - Low, Trend - Continuing
- Pollution Impact level - Low, Trend - Continuing
- Overexploitation Impact level - Low, Trend - Continuing
- Habitat change Impact level - Low, Trend - Continuing

Summary of benefits

The Laponain Area World Heritage site generates a number of important key benefits, such as general environmental services, knowledge production and transfer, cultural and spiritual values, health, recreation, food and water. The effect of potential negative factors to these benefits are generally low, however the threat from climate change and potential mining could potentially pose a threat to all of the benefits listed above (especially environmental, cultural and spiritual services), if realized in practice. Previous extensive hydropower exploitation (installed long before the World Heritage designation) has had detrimental effects on the water stream network and iconic natural and cultural features (such as Stuor Muorkke/Stora Sjöfallet) in the area, as well as submerging Sámi settlements and reindeer grazing land, devastating enormous areas and depleting fish populations and animal life. The effect of invasive species (especially invasive plants) is potentially a risk to the benefits, but so far there is a lack of information here and a need for effective monitoring systems to evaluate this potential negative factor further.

Projects

Compilation of active conservation projects

№	Organization	Brief description of Active Projects	Website
1	Laponiatjuottjuddus	Participatory management board implementing conservation objectives of the Laponian Area	Laponia.nu
2	Naturvårdsverket	Swedish Environmental Protection Agency, supervising the overall conservation planning for Swedish protected areas	http://www.swedishepa.se/Enjoying-nature/Protected-areas/ https://www.naturvardsverket.se/Var-natur/Skyddad-natur/Nationalparker/ (in Swedish)

REFERENCES

№	References
1	Tzay & Boyd (2022). José Francisco Cali Tzay (Guatemala) and David R. Boyd (Canada)i are the Special Rapporteurs on the rights of indigenous peoples. UN press release, GENEVA (10 February 2022)
2	Arctisen (2021). Culturally Sensitive Tourism in the Arctic (2018-2021). University of Lapland, Finland. Available at: https://sensitivetourism.interreg-npa.eu/
3	Berg, A., Östlund L., Moen, J., and Olofsson, J. (2008). 'A century of logging and forestry in a reindeer herding area in northern Sweden'. Forest Ecology and Management, 256 (5) : 1009-1020.
4	Bosson, J. B., Huss, M., & Osipova, E. (2019). Disappearing world heritage glaciers as a keystone of nature conservation in a changing climate. Earth's Future, 7(4), 469-479.
5	Courault, R. and Cohen, M. (2020) 'Evolution of Land Cover and Ecosystem Services in the Frame of Pastoral Functional Categories: A Case Study in Swedish Lapland', Sustainability, 12(1), p. 390. doi: 10.3390/su12010390.
6	Fourcade, Y., Åström, S. and Öckinger, E. (2019). Climate and land-cover change alter bumblebee species richness and community composition in subalpine areas. Biodiversity and Conservation, 28(3), pp.639-653.
7	Galland, P. & Adem, S, (2023). Appraisal Report for European Diploma of Protected Areas. Muddus National Park, Sarek & Padjelanta National parks. Strasbourg, France: Council of Europe.
8	Galland, P. (2012). Appraisal Report for European Diploma of Protected Areas. Muddus National Park, Sarek & Padjelanta National parks. Strasbourg, France: Council of Europe.
9	Gardiner, K. (2021). Stereotypes have fueled a tourism boom in Europe's icy North. Can things change? National Geographic Travel. Published online February 3, 2021. Available at: https://www.nationalgeographic.com/travel/article/changing-…
10	IUCN (1996). World Heritage Nomination – IUCN Technical Evaluation, Laponian Area (Sweden). In: IUCN World Heritage Evaluations 1996, IUCN Evaluations of nominations of natural and mixed properties to the World Heritage List. [online] Gland, Switzerland: IUCN, pp.97-106. Available at: < https://whc.unesco.org/document/154240> [Accessed November 2020].
11	IUCN / ICOMOS (2024). Report on the joint UNESCO World Heritage Centre/ICOMOS/IUCN Reactive Monitoring Mission to the World Heritage property 'Laponian Area' (Sweden)
12	IUCN Consultation (2024). IUCN World Heritage Confidential Consultation form: Laponian Area, Sweden.
13	Kaarlejärvi, E., Baxter, R., Hofgaard, A., Hytteborn, H., Khitun, O., Molau, U., Sjögersten, S., Wookey, P., and Oloffson, J. (2012). 'Effects of warming on shrub abundance and Chemistry Drive Ecosysytem-Level changes in Forest-Toundra Ecotone. Ecosystems, 12 (8) : 1219-1233.
14	Kelman, I. and Næss, M. W. (2019) 'Climate change and migration for Scandinavian Saami: A review of possible impacts', Climate, 7(4), pp. 1–14. doi: 10.3390/cli7040047.
15	Koninx, F. (2019). Ecotourism and rewilding: the case of Swedish Lapland. Journal of Ecotourism, 18(4), pp.332-347. https://doi.org/10.1080/14724049.2018.1538227
16	Laponiatjuottjudus (2012). The Management Plan of the Laponian World Heritage site. Regulations and Maintenance Plan for the National Parks and Nature Reserves. (Tjuottjudusplána / Förvaltningsplan) [online]. Laponiatjuottjudus / Laponiaförvaltningen (Laponia management board). Available at: https://laponia.nu/wp-content/uploads/2014/08/Laponia-forva…. Accessed June 20 2017.
17	Mahmood Q. and Janson R, (2013). Letter on "mining projects in the vicinity of the World Heritage property "Laponian Area", Sweden".

№	References
18	Maliniemi, T., Kapfer, J., Saccone, P., Skog, A. and Virtanen, R. (2018). Long-term vegetation changes of treeless heath communities in northern Fennoscandia: Links to climate change trends and reindeer grazing. Journal of Vegetation Science, 29(3), pp.469-479. https://doi.org/10.1111/jvs.12630
19	Markkula, I., Turunen, M. and Rasmus, S. (2019) 'A review of climate change impacts on the ecosystem services in the Saami Homeland in Finland', Science of the Total Environment. Elsevier B.V., 692, pp. 1070–1085. doi: 10.1016/j.scitotenv.2019.07.272.
20	Olvmo, M., Holmer, B., Thorsson, S., Reese, H. and Lindberg, F. (2020). Sub-arctic palsa degradation and the role of climatic drivers in the largest coherent palsa mire complex in Sweden (Vissátvuopmi), 1955–2016. Scientific Reports, 10(1), pp.1-10.
21	PWC (2016). Laponiaförvaltningen - En utvärdering (Evaluation of the Laponia management) [online] (in Swedish). PWC, September 2016. Available at: https://laponia.nu/om-oss/dokument/ [Accessed 23 April 2020]
22	RTS (2024) : https://www.rts.ch/info/sciences-tech/environnement/2024/ar…
23	Rauset, G.R., Andrén, H., Swenson, J.E., Samelius, G., Segerström, P., Zedrosser, A. and Persson, J., (2016). National parks in northern Sweden as refuges for illegal killing of large carnivores. Conservation Letters, 9(5), pp.334-341. https://doi.org/10.1111/conl.12226
24	Reimerson, E. (2016) 'Sami space for agency in the management of the Laponia World Heritage site', Local Environment, 21(7), pp. 808–826. doi: 10.1080/13549839.2015.1032230.
25	Rouet-Leduc, J. and von Essen, E. (2019) 'The Compromises of Rewilding in Swedish Laponia: Implications for Nature Reconciliation', The Journal of Transdisciplinary Environmental Studies, 17(1). Available at: http://www.journal-tes.dk/.
26	State Party of Sweden (2006). Periodic Report Second Cycle Section II: Laponian Area. [online] Paris, France: UNESCO World Heritage Centre, pp.1-5. Available at: < https://whc.unesco.org/document/163344>. [Accessed November 2020].
27	State Party of Sweden (2024). Report of the State Party to the World Heritage Committee on the state of conservation of the Laponian Area (Sweden). [online] pp.1-7. Available at: https://whc.unesco.org/en/list/774/documents/
28	Stjernström, O., Pashkevich, A., & Avango, D. (2020). Contrasting views on co-management of indigenous natural and cultural heritage – Case of Laponia World Heritage site, Sweden. Polar Record, 56, E4. doi:10.1017/S0032247420000121
29	Tolvanen, A. and Kangas, K. (2016). Tourism, biodiversity and protected areas–review from northern Fennoscandia. Journal of environmental management, 169, pp.58-66. https://doi.org/10.1016/j.jenvman.2015.12.011
30	UNEP-WCMC (2011). Laponian Area, Sweden. UNEP-WCMC World Heritage Information Sheets. [online] Cambridge, UK: UNEP-WCMC. Available at: <https://yichuans.github.io/datasheet/output/site/laponian-a…; [Accessed November 2020].
31	UNESCO (2022). SOC report Laponian Area.. UNESCO World Heritage Center
32	UNESCO (2024). SOC report Laponian Area. UNESCO World Heritage Center
33	World Heritage Committee (1996). Decision 20COM VIII.B. Inscription: The Laponian Area (Sweden). In: Report of decisions of the 20th session of the World Heritage Committee (Merida, Yucatan, 1996). [online] Paris, France: UNESCO World Heritage Centre, pp.62. Available at: < http://whc.unesco.org/en/decisions/2974> [Accessed November 2020].

№	References
34	World Heritage Committee (2023). Decision 45 COM 7B.32. Laponian Area (Sweden). In: Report of decisions of the 45th session of the World Heritage Committee (Riyadh, Kingdom of Saudi Arabia, 10-23 September 2023). [online] Paris, France: UNESCO World Heritage Centre. Available at: https://whc.unesco.org/en/decisions/8306
35	World Heritage Committee (2024). Decision 46 COM 7B.45. Laponian Area (Sweden). In: Report of decisions of the 46th session of the World Heritage Committee (New Delhi, India 21-31 July 2024). [online] Paris, France: UNESCO World Heritage Centre. Available at: https://whc.unesco.org/en/decisions/8571