Norwegian
University of
Life Sciences

Master's Thesis 2023 30 ECTS

Faculty for Landscape and Society (LandSam)

The industrial landscape of wind farms, traditional reindeer herding and South Saami landscape values in Fovsen-Njaarke, Saepmi

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Master programme Landscape Architecture for Global Sustainability

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2023

Roan Wind farms - placed in the best winter pastures in Fovsen-Njaarke

Photo: Anna Skarin

Abstract

Wind power development in the Saami landscape has significant consequences for the Saami people and their way of life. The Fosen Case have led to displacement of reindeer pastures, disrupts traditional land use patterns, and generates noise and visual pollutions that negatively impact reindeer behaviour and health.

The Saami community in Fosen rely on traditional reindeer herding for their livelihoods and cultural identity, so any threat to the herds has a profound impact. Additionally, the lack of consultation and participation in decision-making processes further diminishes the control of Saami communities over their lands and resources.

Meaningful engagement, consideration of cumulative impacts, and appropriate mitigation measures are crucial for a sustainable landscape approach. The chosen methods and the results emphasize implementing South Saami landscape values and traditional ecological knowledge (TEK) systems in any matter involving Saami interests. This thesis discusses different possibilities to change the current situations and how the Saami cultural landscape should look like in the future, with consent (FPIC) from the Saami people.

Title:	The industrial landscape of wind farms, traditional reindeer herding and the South Saami landscape values in Fovsen-Njaarke, Saepmi
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Format:	A4
Credits:	30 Sp.
Photos:	All pictures in this thesis are approved from the respective owners, and will will be referred to and acknowledged.
Maps:	Maps from Hans Ragnar Mathisen (Elle-Hánsa Keviselie) are reproduced with the artist's permission.
Illustrations:	If not referred to the respective owner or sources, it is my own artwork or illustrations.
Key words:	South Saami landscape, Traditional Ecological Knowledge (TEK, Landscape planning, Indigenous rights, sustainability concepts, landscape values, nature values, wind turbines, industrial landscapes.

The land

is different
when you have lived there
wandered
sweated
frozen
seen the sun
set rise
disappear return
the land is different
when you know
here are
roots
ancestors

From Nils-Aslak Valkeapää, *The Sun, my Father*. DAT, Guovdageaidnu 1997.
Translators: Harald Gaski, Lars Nordström and Ralph Salisbury

Åvtebaakoe & gyjhteles - Preface & acknowledgements

Writing about the Saami landscape is to depict my world of family constellations, connection to my ancestors' footsteps and way of life. To identify how we value our landscape in land-use interactions, the urge to protect the landscape from more infrastructural exploitation and encroachments, are embedded in Bïerkenidh (to master and manage nature, and to use nature in a sensible and responsible way - You take what you need from nature for survival, but not more than that).

My attachment of the Saami landscape is two-sided; one foot in Southern Saami landscape (aehtjie/ father), and one foot in the Markasámi landscape (eadni/ mother).
I grew up in Ruŋgovuopmi, in a small Markasámi, barren valley (south Troms County), where the mountains are so high and steep that ice climbers from all over Europe come to us every winter for the thrill of climbing at Heandrihkágorži/ The Henrikka waterfall. When you get up at 1457 m.o.h at Ruŋgugáisá, you have a panorama view towards Riksgränsen, the Swedish border, in the South-east, Hinnøya and towards Lofoten in the West. From the Easth and South, my ancestors moved from Jukkasjärvi for two hundred years ago, to this barren canyon. They had to choose whether to live in Norwegian or the Swedish side of Sápmi due to high amount of taxes from both states. Parallelly, extreme weather conditions during the winter months in Sweden, forced them to move permanently to their summer pastures in Norway . After many hundreds of years, we have still contact with our kin in Talma Sameby and Saarivuoma Sameby reindeer herding unit districts in the Swedish part of Sápmi.

In the North towards Senja, and West in the Narvik area, wind power development plans are emerging. Most of these are in the development phase and have yet to start to build. This is the grazing land of Gielas reindeer herding unit. The panoramic view around Ruŋgugáisá will change, along with the reindeer herding grazing sites, and the Sámi cultural landscape. At this stage most locals are against wind farms.

In the Southern Saami landscape, I spent a lot of time with my father in my childhood and youth. Every summer, and sometimes in the winter, we visited the Renfjell family in their reindeer herding unit (Røssåga/ Toven Reinbeitedistrikt).
I must have been around 4-5 years old when I came for the first time to summer pastures at Toven outside Mussere (Mosjøen) and Leirfjord. The mountain is very steep and winding, with areas where you balance on large boulders to continue your journey to the summer pastures. The reindeer herding in this area, mainly Helgeland, differ from the North Sámi reindeer herding movement, where the summer grazing area are on the mountains along the coast, and the winter grazing area is located on the islands. The path has been used for many hundreds of years by the herders.
When you come down to the rock pit where the summer pasture cabin is located, you come to a magical world. On the north-facing side of the pass there is still snow, where you can keep food cool throughout the summer. There is also a river where drinking water is collected. And in the cabin, there is just enough for a small kitchen, an oven, and a few beds. While I was lying on the floor sleeping, I can still feel the athmosphere of the adults talking, the smell of cooking coffee and open fire, bearkoe (reindeer meet) and the safety of mountain life.
There were usually 7-8 of us inside the small cabin when there was mearhkodh/ ear tagging during summer. The reindeer herding family, me, and dad, and maybe some helpers. I mostly played with the youngest girl who was almost as old as me, and she tried to teach me how to handle both a knife, explain to me South Saami words and expressions, and that I didn't have to be afraid of the reindeer herd. Even if they run towards us in the gathering fence, they will never step on us. That was absolutely true!

Ear tagging usually takes place in early summer when the calves are a few months old. Me and Leisa used to make reindeer ear jewelry from all the ear lobes that were left. The earmark is a reindeer husbandry mark owned by the family throughout generations and shows who the reindeer belong to in the landscape when other herding units are using the same pasture simultaneously.
Being inside a reindeer fence as a small child when there is ear tagging in the summer, or *raarhkoe/reinskilling in the autumn, and hearing the trampling of the reindeer's hooves, it sounds like the whole landscape is shaking and the whole world is in action. I had the pleasure of experiencing this throughout my childhood. It was so far from my own everyday life and reality in Ruŋgovuopmi. Even though I wasn't brought up in a reindeer herding family, dad gave me the gift that I was still allowed to take part in the traditional reindeer husbandry, slaughtering and ear tagging, and not least the teaching that we depend on a landscape that should work for all creatures.
Today, Jillen-Njaarke sïjte next to Mussere (Mosjøen), adjacent to Røssågå Sïjte, are going through the same implications of wind farm encroachments as the herders in Fovsen-Njaarke. The court processes start this spring (2023), and the outcome are unknown. According to reindeer herders, the developers at Øyfjellet wind farm are destroying the grazing ground but also a holy mountain.

The reason for this story, is to narrate you into the Saami understanding on how we value the landscape. Linda Tuhiwai Smith who wrote 'Decolonizing Methodologies', frames that indigenous traditional knowledge systems and storytelling must be told through our own experience (Smith, 2012). Through these counter stories, new understanding of what was, what is, and what may happen will open doors

*Reindeer distribution and slaughter season: Some bucks are used for meat production, both privately and commercially. Raarhkoe is also done if other reindeer from another sïjte (unit) have strayed to another sïjte.

to spatialize and practicing our indigenous future.
Through the process of gathering information, I have learned South Saami landscape and herding terms. I recommend planners and developers who read this thesis to learn the landscape terms and the seasonal herding knowledge systems before consulting reindeer herders. Dialogues in consultation processes may become easier for all parties involved.

Gæjhtoe / Giitu / Thanks

I want to thank everyone who has making the way behind me - Saami scholars, philosophers, artists, and kin. The Saami sources chosen in this thesis depict the world views of Saami way of being, doing, and knowing. I also want to thank my father, who have given me information about South Saami landscape terms, knowledge about the herding seasons and the importance of resilient grazing grounds. And not at least my supervisor, Kerstin Potthoff, who have been calm when my writing process have been slow, who have help me to structure my mess, and still been
dedicated about my work. You rock!
During the Master programme in Landscape Architecture for Global Sustainability, I have learned a lot of contested landscapes and how to manage future landscapes and socio-ecological issues. I must give a thank to the teachers in GLA, and many thanks to my fellow classmates. Without feedbacks and recommendations, I would never have learned so many methods in landscape architecture.
At last, many thanks to my roomies (my siblings Stig-Emil and Anja, and our friend August), who have survived all my emotions, complains, and struggles the last two years. Thanks for support, feedback, and love. And many thanks to my mother for being patience and supporting me in many various ways through this process.

Inga Fossli, 2023

Ruŋgovuopmi Photo: Solfrid Fossli

Map created by Keviselie (Hans Ragnar Mathisen), 1975

List of abbreviations and terms

- CBD – Convention on Biological Diversity/ Konvensjonen om biologisk mangfold (anno 1992)
- EIA – Environmental Impact Assessment/ Konsekvensutredning (KU)
- Fovsen Njaarke Sïjte – Fosen reindeer herding district/ Fosen reinbeitedistrikt (with two separate herding units, South Fovsen Sïjte and North Fovsen Sïjte)
- FPIC – Free, Prior, and Informed consen. A specific right that pertains to indigenous peoples and is recognized in the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP)
- Frostating Court of Appeal – Frostating Lagmannsrett midt-Norge
- ILO169 – ILO-konvensjon nr. 169 om urfolk og stammefolk i selvstendige stater/ The ILO Convention no. 169 on indigenous peoples and tribal peoples in independent countries
- INON – Inngrepsfrie Naturområder in Norge
- ICCPR Art. 27 – International Covenant on Civil and Political Rights (Art. 27 – The right to enjoy culture)
- IPBES - The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
- IPPCC – Intergovernmental Panel on Climate Change
- MD – Miljødirektoratet/ The Norwegian Environmental Agency
- NIM/ NHRI – Norges Institusjon for Menneskerettigheter/ Norwegian National Human Rights Institution
- Njaarke – Peninsula
- NVE – Norges vassdrags – og Energidirektorat/ The Norwegian Water Resources and Energy Directorate
- OED – Olje- og Energidepartementet/ Ministry of Petroleum and Energy
- UNDRIP – United Nations Declaration on the Rights of Indigenous Peoples
- UNESCO - United Nations Educational, Scientific and Cultural Organization (UNESCO Convention for the Safeguarding of the Intangible Cultural Heritage, anno 2003)
- UNEP - United Nations Environmental Programme/ FNs miljøprogram
- Saemiedigkie/ Sámediggi – The Sámi Parliament of Norway/ Sametinget
- Saami languages – The South Saami landscape terminology/ Åarjelsaemien aerpiedaajroe are used in this thesis to explain values and TEK (Traditional Ecological Knowledge). I am using North Sámi language terms/ Davvisámegiella when writing about the North Sámi territory. E.g., Saepmi (South Saami), Sápmi (North Sámi).
- Saepmi/ Sápmi - Is the nation of the Saami people. It is a cultural region that spans across multiple countries in Northern Europe, including parts of Norway, Sweden, Finland, and Russia's Kola Peninsula in the East.
- Sámi Act of 1987 - Codified rights for the Sámi People, including the establishment of the Sámi parliament. Improved June 2021, Prop. 86 L (Stronger consultation processes).
- SSB – Statistisk Sentralbyrå/ The Norwegian Statistical Bureau
- Supreme Court of Norway – Norges Høyesterett
- TEK – Traditional Ecological knowledge

Table of contents

Roan wind farm

Winter grazing grounds are on the mountain ridges

Photo: Ole Morten Melgård

Introduction

Livelihood of indigenous groups threatened by renewable energy development

For many indigenous communities, their livelihood is threatened by exploitation and extraction of minerals, deforestation, dam construction, use of harsh pesticides, industrial agricultural expansion, privatization of water and many other anthropogenic activities (Carmen, 2015; EMRIP-OHCHR, 2007). With climatic pressures and global demand of raw materials, the transition to 'green energy' and new technologies, has increased the demand of wind power and therefore extraction of minerals in places where indigenous communities have their traditional livelihood and socio-economic stability (Jerez, 2021).

Researchers have studied the impacts from wind farms and renewable energy development in indigenous countries such as life under wind turbines in la Oaxaca, Mexico (Dunlap, 2017; Dunlap, 2019), and Isthmus of Tehuantepec in Oaxaca, Mexico (Ramirez & Böhm, 2021), Bahia in Brazil (Caramel, 2022), Lake Turkana in Kenya (Cormack & Kurewa, 2018; Lomax et al., 2023), wind farms and Saami reindeer herding pastures in Sweden (Cambou, 2020; Skarin et al., 2021).

One of the recent conflicts are the latest hydro power conflict between Statkraft SF (Norwegian owned state company) and the sacred rivers of the Mapuche people in Chile (Amundsen, 2023). According to their findings, there is a need to explore indigenous knowledge systems and/ or grasp decolonial methods for addressing climate change and biodiversity crises. By doing so, it may be possible to challenge the unequal power dynamics that hinder the freedom and self-governance of indigenous peoples. (Batel & Küpers, 2022; Dunlap, 2017; Dunlap, 2019; Fjellheim, 2023; Normann, 2021; Rubiano, 2021).

The development in Norway

Along with the development of renewable energy in Norway, concerns of negative effects on local ecosystems, Rangifer tarandus t. and indigenous communities have simultaneously increased the last decades (Bull, 2021; Eftestøl et al., 2023; Hermanstrand et al., 2019; Niebuhr et al., 2022). In the South Saami, indigenous landscape, fragmentation and perforation of reindeer herding pastures due to wind farm development along the coastline have disrupted the traditional reindeer herding system and ancestral way of living (NIM-Report, 2022; Skarin et al., 2019; Skarin et al., 2021).

The indigenous, South Saami communities in Scandinavia are among the most endangered ethnic groups in Europe, since the south Saami language is threatened (UNESCO, 2023). Their cultural existence is strongly linked to the semi-nomadic reindeer husbandry and is dependent on it for cultural survival (Nilssen, 2019). These few and small herding communities are now in the process of being wiped out due to infrastructure from renewable energy and other anthropogenic drivers (Fjellheim, 2020b).

The Fosen Saami are one of the few strong Saami communities in Trøndelag county which have preserved their culture for future generations (Fjellheim, 2020b). The South Saami landscape value and understanding are strongly linked to the south Saami language and reindeer husbandry, which explains the landscape conditions and sense of place and belonging in the landscape (Fjellheim, 1995; Hermanstrand et al., 2019).

To meet the needs of climate change adaptation measures and renewable energy state politics and avoid loss of the Southern Saami culture, there is an emergent need to include Saami landscape values and understanding in environmental impact assessments from developers of the wind farm industry (Riseth, 2012; Risvoll et al., 2022). For now, consultation processes in most wind farm projects in Norway within Saami territories have not valued Saami usufructuary rights to traditional land use, and several conflicts between the Saami and developers are ongoing cases (Bull, 2021; Fjellheim, 2023; Nellemann, 2017; NIM-Report, 2022; Strand et al., 2017).

The Fosen Case

In the Fosen peninsula in Trøndelag County, Fosen Vind DA, a partly state-owned company, has constructed one of the largest wind power plants in Europe, which had 151 operational wind turbines in 2020, in the South Saami reindeer herding landscape of Storheia and Roan (Bull, 2021). During the environmental impact assessment in 2008, the reindeer herders expressed concerns about the survival of their reindeer herding district due to the intervention in the reindeer grazing land, due to encroachments in the middle of their important winter grazing areas and the power lines connected to the wind farms that run through the heart of their spring calving pastures (ASK & SWECO, 2008; Tzay, 2020).

However, consultations between the wind power industry and the reindeer herders favoured green energy production, and assessment reports produced by developers later on did not take Indigenous rights to land-use into consideration (Bull, 2021; Supreme-Court-of-Norway, 2021). As a result, the established wind parks and powerlines have led to a significant decline in the reindeers' traditional pastures in the Fosen area (Brattland & Hausner, 2022; Skarin et al., 2019; Skarin et al., 2021; Tømmervik et al., 2022).

The Fosen Verdict ruled by the Grand Chamber of the Norwegian Supreme Court on October 11, 2021 (HR-2021-1975-S), established a precedent by recognizing that the rights of reindeer herders to engage in traditional reindeer herding were violated according to Article 27 of the International Covenant on Civil and Political Rights (ICCPR) (Høyesterett, 11.10.2021). This law safeguards the right of ethnic, religious, or linguistic minorities to preserve their culture (ICCPR). As a result, the Norwegian government has yet to decide what action to take with regards to the wind farms (spring of 2023).

To comprehend the challenges presented by the Fosen Case, it is essential to incorporate indigenous landscape values and perspectives into impact assessments, as well as engage in dialogues and gather information within developers' policy frameworks. This approach is in line with the United Nations' methodological assessment report on The Diverse Values and Valuation of Nature (IPBES).

The integration of indigenous knowledge systems and the valuation of such knowledge in decision-making processes is closely intertwined with the 2050 Vision for Biodiversity, the 2030 Agenda for Sustainable Development Goals (SDGs), and the United Nations' Human Rights Council on Expert Mechanism on the Rights of Indigenous Peoples (EMRIP-OHCHR, 2007; IPBES, 2022; SDGs, 2015).

Wind turbines, Storheia

Photo: Hanna Johre

Wind turbines, Roan

Photo: Knut Botten

Aim, relevance and problem statement

The central focus of the thesis is to illuminate how diverse perspectives and valuation on landscape are emphasized and highlighted by different stakeholders, in the South Saami cultural landscape of Fosen. To understand the strong negative reactions from the development of wind power has produced strong negative reactions from a Saami perspective due to landscape fragmentation (loss or degradation of pastures and cultural heritage sites). To understand these reactions from the Saami community, I will analyze the Saami landscape knowledge, values and 'Bïerkenidh' (i.e., the Saami understanding of the concept of sustainability).

Hence the thesis will also shed light on how the landscape changes due to wind power development affects the traditional reindeer herding system, and the South Saami way of living. Analyzing the impact processes prior, under and after wind power development in Fosen, may give us an understanding on how different landscape values between stakeholders have shaped the end-results of a difficult planning process, and court trials between the state/ wind energy sector and locals/ Saami reindeer herders affected by the infrastructure.

Finding relevant information through document analysis connected with theories of landscape approaches, may help to bridge different viewpoints into the debate on how different valuation of landscape can create conflicts and solutions of diverse land-use practices and industrial encroachments in the Saami landscape.

In this thesis, the focus will be on examining the Roan and Storheia wind farms, which is one of the six wind farms located in Fosen peninsula. The North and South Fosen herding units have relied on this area as their winter and late winter pastures, and it was also considered the best winter pasture in Fosen (Nellemann, 2017; Skarin et al., 2019).

The reason for selecting the Roan and Storheia pastures is that the reindeer herders were very clear during the scoping phase in 2008 that they were willing to sacrifice other pastures for wind power development but not Roan and Storheia. Currently, both Roan and Storheia pastures have now transformed into industrial landscapes with wind turbines.

To comprehend the issues raised by the Fosen Case, it is important to incorporate indigenous landscape values and understanding into impact assessments, as well as engage in dialogue and information gathering in the policy frameworks of developers.

This approach is consistent with the United Nations' methodological assessment report on The Diverse Values and Valuation of Nature (IPBES), The European Landscape Convention of 2001, and to protect indigenous rights to practicing their own culture (ILO169, ICCPR Art. 27). The implementation of indigenous knowledge systems and valuation in decision-making processes is linked to the 2050 Vision for Biodiversity, the 2030 Agenda for Sustainable Development Goals (SDGs), and the United Nations Human Rights Council's Expert Mechanism on the Rights of Indigenous Peoples (EMRIP-OHCHR, 2007; IPBES, 2022; SDGs, 2015).

Acknowledging and understanding the Saami landscape values and seasonal knowledge systems in planning processes should be in the best interests for all parties involved in the matter of landscape interventions where Saami interests are involved. This is an approach to avoid or reduce future landscape conflicts.

Based on the case study, theories and methods applied in this thesis, I have one research question

How does different stakeholders value and understand the Saami cultural landscape in the Fosen Case?

The research question is interesting since it wants to explore the root of the conflict between state institutions, reindeer herders and the wind power industry. The significance of studying indigenous landscape and land use, is to highlight the importance of understanding the perspectives and practices of indigenous communities in their territory (Riseth, 2012). In this thesis I will also discuss possible solutions to increase the indigenous landscape values and traditional ecological knowledge in landscape and land use planning.

The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES):

Main Goals: Values Assessment responds to the need to support decision-makers in understanding and accounting for the wide range of nature's values in policy decisions to address the current biodiversity crisis and to achieve Sustainable Development Goals.

(IPBES, 2022)

Chapter 2: Background

Renewable energy and wind power development in Norway

The development of renewable energy has been increasing in many parts of the world due to climate change mitigation policies. Norway has set a goal to become a low-emission society by 2050, with a target of reducing its greenhouse gas emissions by 50-55% compared to 1990 levels, by 2030 (Meld.St.13, 2020-2021; Vindportalen, 2022). In pursuit of this goal, the country has put a strong emphasis on developing renewable energy sources, particularly hydropower, wind power, and to some extent solar power.

Hydropower is the largest source of renewable energy in Norway, accounting for 88,2% of its electricity production, 146 TWh, in 2022 (SSB, 19.01.2023). Wind power development is one of the fastest growing renewable energy industries in Norway. Driven by incentives such as national government subsidies for green energy certificates and growing public demand, the expansion of wind power in Norway surged from 9.9 TWh in 2020 to 11.8 TWh in 2021, and most recent figures indicate a further increase to 14.8 TWh in 2022, constituting approximately 10.2% of the overall electricity generation.

According to the Norwegian Energy Regulatory Authority (NVE), Norway has a significant potential for wind power and has set a goal to increase its wind power capacity to 30-35 TWh by 2030 (SSB, 19.01.2023; Vindportalen, 2022). In addition, Norway is investing in the development of carbon capture and storage (CCS) technology, which could enable the country to continue using its abundant natural gas resources while minimizing greenhouse gas emissions (Meld.St.13, 2020-2021).

According to Norway's Climate Action Plan for 2021-2030, Norway's goal for green energy is to transition to a low-emission society and reduce its dependence on fossil fuels, while also leveraging its abundant renewable energy resources to become a leader in clean energy (Meld.St.13, 2020-2021).

Norway's renewable energy policy have introduced most of wind farms in remote, undisturbed nature areas and may lead to perforated, fragmented and disturbance of wildlife habitats. According to Eftestøl; "…documenting and testing the effect of WF [Wind Farms] infrastructure alone or in synergy with existing infrastructure is crucial considering their increasing density and dispersal throughout Scandinavia." (Eftestøl et. al., p.55). When scaling up local effects of wind farms on wildlife, it may have severe consequences at species population level for Rangifer tarandus tarandus and the socio-ecological systems for south Saami communities (May et al., 2019; Niebuhr et al., 2022; Skarin et al., 2021).

Wind farms and semi-domesticated reindeer herding in the Saami cultural herding landscape

Research concludes that reindeer herding is highly affected by wind power development in many herding pastures, and it cannot be fully reconciled by the traditional, Saami herding system (Skarin et al., 2018; Skarin et al., 2019; Skarin et al., 2021). According to the newly published research article, 'Effects of Wind Power Development on Reindeer: Global Positioning System Monitoring and Herders' Experience' (Eftestøl et al., 2023), wind farm development within the Raggonjarga reindeer district summer range in Finnmark, Norway, found most negative effects at the landscape scale.

It is important to mention that studies on effects on wind farms and associated infrastructure (roads and powerlines) on semi-domesticated reindeer habitat vary from no effect (Colman et al., 2013), to some effects on reindeer behaviour on pastures within wind farms (Skarin et al., 2015; Skarin & Alam, 2017).

However, most scientific articles claim, together with Saami herders' experience, that reindeer avoid infrastructure generated by wind farms and simultaneously lead to overgrazing in other pastures along with extensive herding activities to gather herds between associated infrastructures. These factors lead to major physical stress factors for Rangifer tarandus t. and the Saami herding practise (Colman J. E., 2020; Eftestøl et al., 2023; Fjellheim, 2023; Flydal et al., 2019; Skarin et al., 2019; Skarin et al., 2021; Strand et al., 2017; Tømmervik et al., 2022).

Norwegian National Human Rights Institution (NIM)

"It is a paradox that the green shift in many contexts has major consequences for indigenous peoples, as they do not contribute much to greenhouse gas emissions globally, but they will be hit particularly hard by climate change – both in the short and long term."

(NIM-report, 2022, p. 6)

Wind farms are being implemented to combat climate change, though climate change is already affecting reindeer husbandry due to unpredictable and unstable winter climate that reduce access to fodder (Bevanger & Jordhøy, 2004; IPPC, 2021). According to the Intergovernmental Panel on Climate Change (IPCC, 2021) the Arctic circumpolar north is warming three times as fast than the global average index. In a way are reindeer husbandry hit twice.

Fosen Peninsula, Trøndelag

A section of a map of the South Saami landscape, made by Keviselie (Hans Ragnar Mathisen)

Societal demands for renewable energy sources & climate change adaptation policies:

Impacts & concequenses

Keviselie, 1975

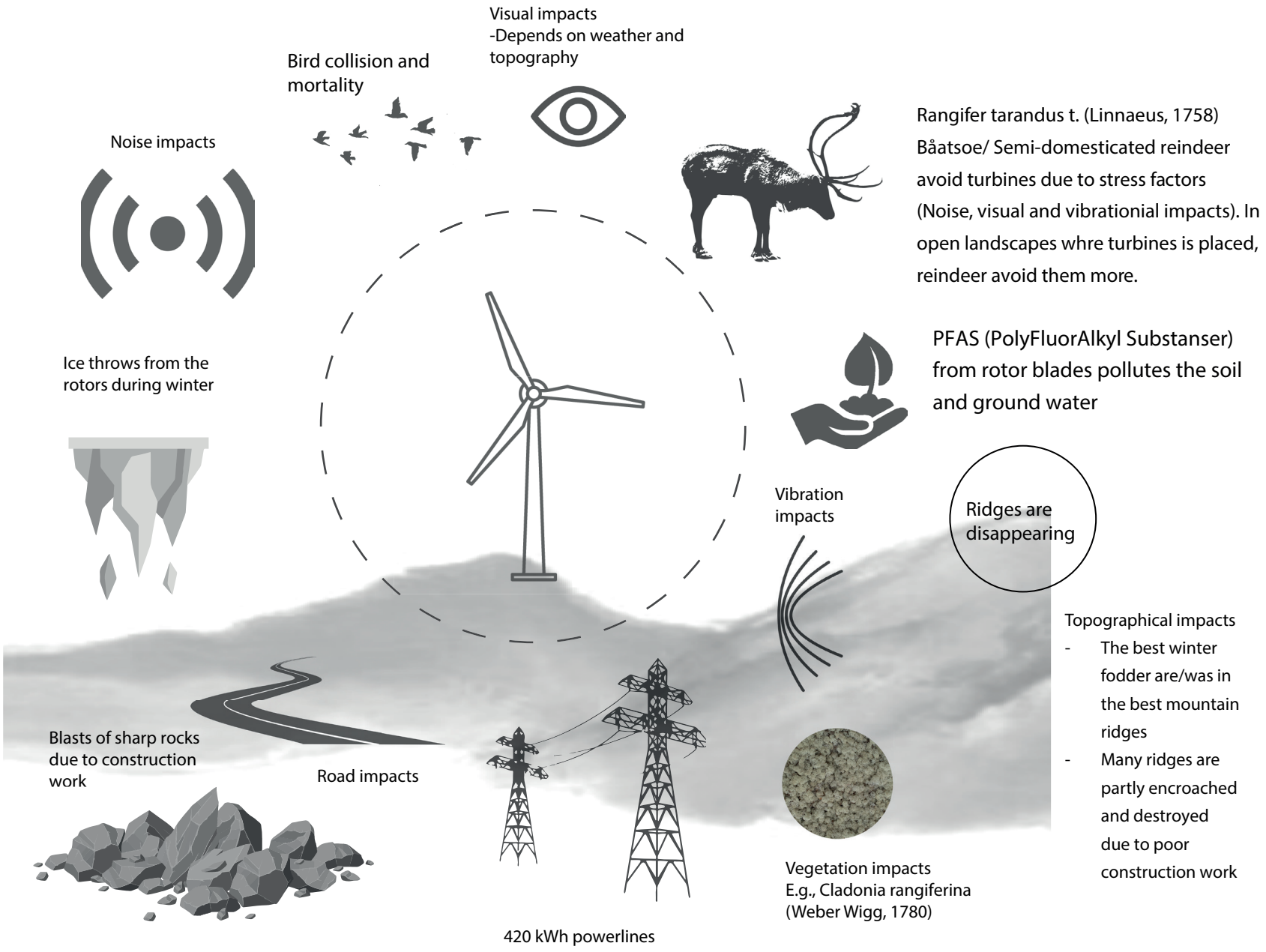


Fig. 1

Landscape and land-use planning

According to the European Landscape Convention (ELC) §40, landscape planning involves taking proactive steps to improve, restore, or create landscapes. This process includes formal studies, design, and construction with the aim of meeting the needs and desires of people affected by landscape changes. It particularly focuses on areas that are significantly impacted by change or damaged and require significant reshaping (CoE, 2000). The Convention focuses on globalization issues and achieving sustainable development processes, but according to Jones and Stenseke (2011) it lacks specificity on other important issues in the early 21st century, such as climate change, loss of biodiversity, and multiculturalism. These issues often lead governments to adopt authoritarian and top-down approaches rather than involving the public in the decision-making process at an early stage (Jones & Stenseke, 2011, p. 15).

Land-use planning in outlying fields aims to evaluate the features and significance of various landscapes in a particular area or society, and then deciding how to distribute land usage and manage development in a sustainable and fair way (Skjeggedal et al., 2021). This involves weighing conflicting interests, such as safeguarding natural and cultural sites against facilitating new infrastructure and development. Land-use planning can also integrate the principles of ecosystem management, social equity, and community participation to ensure that the planning process is inclusive and attentive to the concerns and desires of all stakeholders involved.(Jones & Stenseke, 2011).

In a Norwegian context, Skjeggedal et al. (2021) suggest that conflicts between different land user interests and conservation goals are rooted in the hierarchical management structure of local and national governance. Although the current management structure has facilitated some level of consensus-oriented processes, it is crucial to establish common arenas that can serve as a platform for mutual coordination between local, regional, and national planning in order to improve communication practices in a multilevel governance network (Skjeggedal et al., 2021).

The obligation of Norway to consult with the Saami people under the principle of Free, Prior, and Informed Consent (FPIC), are outlined in international environmental and human rights laws (ICCPR, ILO169). Although seeking consent is the goal, it is not always mandatory for projects that may impact Sami territories and landscape interventions (Larsen et al., 2017). There are currently consultation processes between the Saami Parliament and State institutions, but no co-management or community-owned management models that may favour Saami rights and interests in a specific landscape (Rudloff, 2021).

However, in 2021, the Sami Act was revised to include new provisions that require county municipalities and municipalities to consult with representatives of affected Sami interests in matters of local regulations and other decisions that could directly affect Sami interests (Regjeringen, 2021). This change in legislation aims to strengthen democracy by including the Sami people in decision-making processes that directly impact them.

Combination of several processes in a landscape

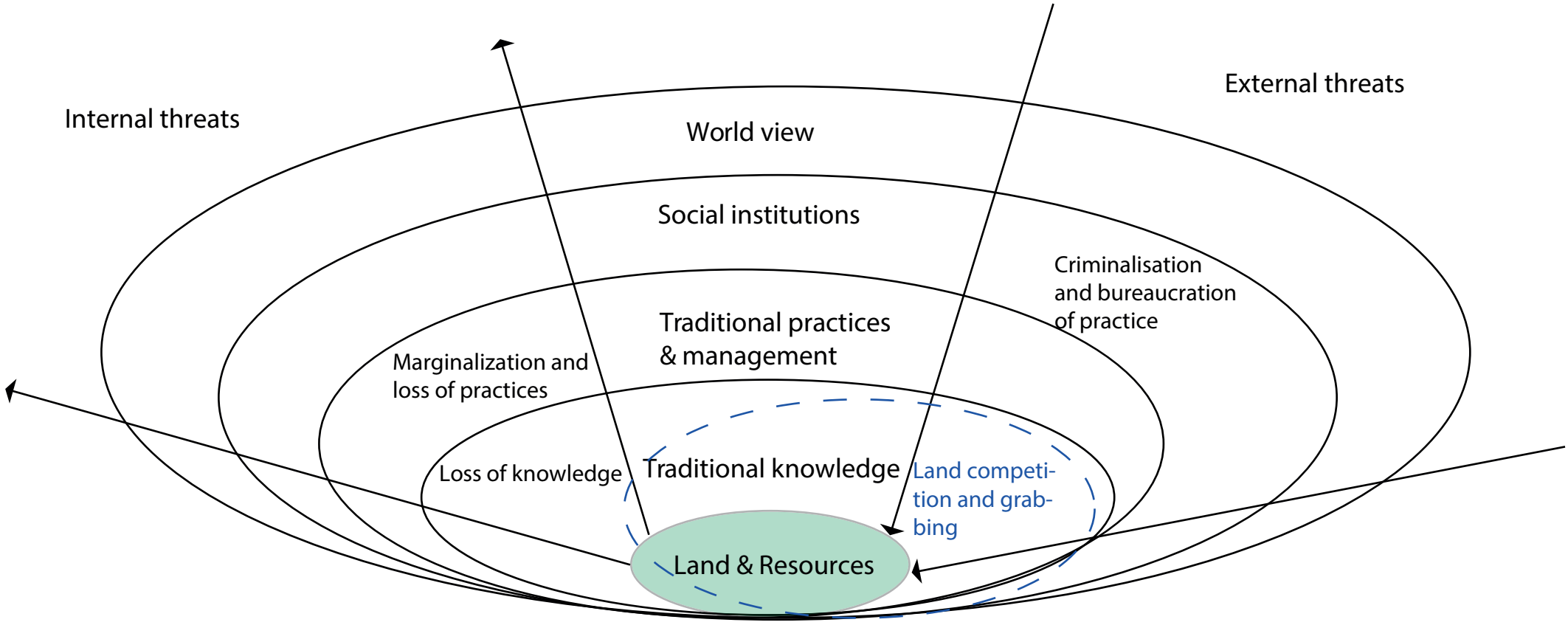


Fig. 2

Inspiration from a diagram in
Riseth, 2011, p. 128

Kjerstin Uhre's doctoral thesis revealed that the Nussir ASA copper mine in Kvalsund has caused significant landscape perforations that have affected the traditional reindeer herding practices of the indigenous Sami people. These perforations have led to changes in reindeer behaviour, which has negatively impacted the livelihoods of the Sami people and led to conflicts with the mining company. Uhre argues that there are knowledge gaps between different stakeholders with differing interests, including national and corporate interests versus local practices and livelihoods.

She suggests that a dialogue about future landscapes should involve different forms of knowledge, including the knowledge of reindeer herders about the terrain. Her thesis emphasizes the importance of recognizing and valuing the knowledge and experiences of Sámi communities and highlights the need for more inclusive and collaborative approaches to mineral resource exploration and extraction in Saepmi and other regions. The term 'perforated landscape' refers to a landscape that has been fragmented and disrupted by resource extraction activities, causing irreparable damage to the land and its natural resources, as well as social, cultural, and economic impacts on the communities that live in the affected area (Uhre, 2018; Uhre, 2020).

Voids in land use management:

"Proposing to change a landscape from being pastoral to becoming industrial is in itself an act of change, as the affected reindeer herders have to adjust their workdays in order to attend to growing volumes of paperwork and hearings to ensure their interests." (Uhre 2018, p. 151).
- The Nussir Case, Finnmark County (Copper mine in Fiettar reindeer district) -

In my thesis I use 'fragmented landscapes' that sums up the disruption and encroachments of the Southern Saami landscape. A fragmented landscape in the field of landscape ecology, refers to spatial processes of land conversion due to human activities and infrastructure development, and reflect species' responses to the total amount of habitat loss (Collinge & Forman, 2009). In my case, disruption of reindeer pastures, and decline of vulnerable nature types due to wind power infrastructure, reduces the habitat connectivity for Rangifer tarandus t. (Linnaeus, 1758) and decline of biodiversity (Niebuhr et al., 2022; Skarin et al., 2019; Skarin et al., 2021; Strand et al., 2017).

Fragmentation on landscape per se, can also have social and cultural impacts, particularly on Indigenous and traditional communities whose cultural practices and livelihoods may be closely tied to the land. Fragmentation can lead to a loss of access to traditional resources and cultural heritage (Bjørklund, 2013; Colman J. E., 2020; Dunlap, 2019; Ellingsen, 2020; Fjellheim, 2023; Porsanger, 2011b). See figure 2 (page 17).

The Nordic landscape

One of many concepts of ”landscape” in a Nordic context, referred to historical administrative-territorial units shaped by the customs and laws of people, according to Jones and Stenseke (Jones & Stenseke, 2011), as Landscape as Polity. This medieval concept incorporated the characteristics of the land, including its customs, institutions, and law-making bodies. In Scandinavia, the territorial ”landskap” was a politically organized unit where the shaping of the land expressed the practices of the area's legal system and culture. Although 'landskap' no longer exists as formal administrative areas, they remain important for people's feelings of regional identity (Jones & Stenseke, 2011). The role of custom in the landscape polity has inspired newer ideas of landscape as a reflection of habitus, practice, and performance, where changing customary usages and practices lead to changes in the landscape in ways that are considered acceptable and which do not represent a radical break with the past (Jones et al., 2011, p. 7-8).

Agriculture has historically been prioritized in Norway due to the strong influence of agrarian interests. Despite this, fishing has remained a crucial source of income for both locals and the nation (Jones & Olwig, 2008). Jones argues that until the establishment of parliamentarism in 1884, landowning civil servants considered agriculture to be more important than fishing. The duty to continue farming was seen as patriotic, and farmers were viewed as the primary keepers of Norwegian traditions (Jones & Olwig, 2008, p. 287). As a result, farmers have had and continue to have significant influence in parliament and a bias towards Southern Norway.

In her doctoral dissertation, geographer Bjørg Lien Hanssen (1998) examines the case of Norway's designation of agricultural land as a ”traditional cultural landscape” in the early 1990s, which aimed to safeguard it as a matter of national importance. However, the decision-making process was largely a top-down approach led by professionals, and state institutions, with minimal public participation. Lien Hanssen argues that the value of these landscapes was taken for granted to legitimize them as part of the national identity. Furthermore, the local people living in the selected areas were not consulted or involved in the definition and selection process (Hanssen, 1998, p. 269).

Though, the definition of the concept of 'Landscape' has evolved over time and has different interpretations across various disciplines, nations, and languages (Uhre, 2020). As pointed above, Michael Jones is reflecting on how the concept of ”landscape” has been used to represent the resource usage associated with the identity of a nation or region (Jones & Olwig, 2008).

The Nordic landscape have been idealized and romanticised as pure, natural (wilderness) and harmonious, and these ideals have been used to reinforce notions of racial superiority and purity by nation states (Jones & Olwig, 2008). Jones also explore the way Nordic landscapes have been transformed by industrialization, tourism, and other forms of human interventions:”…*from being something neutral and amenable to unbiased academic description to find itself at the centre of the rhetoric of environmental management policies”* (Jones & Olwig, 2008, p. 284).

If certain landscapes are viewed as the outcome of specific ways of using resources and are considered to symbolize the character of a nation or region, then any perceived environmental dangers to these landscapes are indirectly portrayed as dangers to the identity of the nation or region, according to Michael Jones (2008, p. 284). What Jones means here, is that values and interests of different groups in a society are presented as general values and interests of society. *"While regional representations may be used to counter or contest national representations, it should not be forgotten that a representation is no more than a partial truth; representations are susceptible."* (Jones & Olwig, 2008, p. 284).

Kenneth Olwig's article "The Recovering the substantive nature of landscape" (1996) is a significant contribution to landscape studies and highlights several key points. Firstly, Olwig argues that landscape is more than just a visual or aesthetic concept, but also a material, social, and cultural one, which should be understood as a "substantive" concept. Secondly, he shows that landscape is historically and culturally specific and socially constructed (Landschaft). Thirdly, he acknowledges that landscape is a contested concept and conflicts can arise when different perspectives clash. Fourthly, landscape is not only a product but also a process of social and cultural production that is continually transformed over time.

Finally, Olwig highlights the importance of examining the political and economic contexts that shape landscapes, as they can reinforce social hierarchies and power relations. Olwig calls for a more nuanced and comprehensive understanding of landscapes that considers their social, cultural, and historical dimensions, as well as their physical features, to recognize the complex and dynamic processes that shape them (Olwig, 1996).

Gunhild Setten's article 'Landscapes of gaze and practice' (2003) highlights many key aspects of the Nordic landscape concept, including the view that landscapes are not objective entities but subjective and socially constructed. Human practices, both practical and symbolic, shape landscapes, and there is a distinction between the gaze and practice as two ways of experiencing and engaging with them. It is important to understand the power relations and social inequalities that shape landscape practices and meanings.

Additionally, recognizing the diversity and multiplicity of landscapes and how different groups and individuals experience and use them in different ways is crucial. Setten's view of landscape of gaze refer to the visual understanding of what Olwig writes about, and Setten's landscape of practice refers to Olwig's 'substantive' understanding of landscape (a landscape created by people, Landscape as Polity) (Setten, 2003).

* Norwegianization processes of the Saami people: The assimilation process started in the 16-1700s (religious agenda: the state forbids the old Saami religion), and it accumulated towards theories in Social Darwinism and nationalism in the 1800s (the Saami were interpreted as primitive and uncivilised). In the 1900s, the assimilation process was included as a part of the 'social development' until the 1960s (Braseth, 2014; Minde, 2016). In short, if you wanted to be a part of the society, to buy land, to rent a home, to go to school, apply for jobs, you had to hide your Saami identity to be accepted among Norwegians. According to some Saami scholars, the extension of the Norwegianization processes continued to the 1980s, due to the Alta Case and structural racism in state institutions (Minde, 2016).

The South Saami landscape and history

The historical landscape of the South Saami settlement and landscape use have not always been recognised by history books. It is first the last 50 years that archaeologists, sociologists and historians have recognised immaterial cultural heritage of the Saami landscape (Fjellheim, 2012). This knowledge is not yet written down in the books of Trøndelag County history (Fjellheim, 2020a). As pointed in the previous section, the agricultural history was considered more important for the national identity in the 19th century – hence farmers' interests have had, and still have, a strong position in the National parliament and a South Norwegian bias, compared with coastal fishing and reindeer herding (Jones & Olwig 2008, p.287). Hence, due to geopolitical reasons and national politics of race biology, together with structural racism and assimilation* policies , most of reindeer herding sijte (herding units) in the South Saami landscape were forced to give up their ancestral practice of herding (Nilssen, 2019).

One of the reasons was 'Fremrykkingsteorien' (The advancement theory), research conducted by geographer Yngvar Nielsen (1891), who concluded that South Saami settlement immigrated as late as the 17th century to Trøndelag (Fjellheim, 2020a). This theory has been neglected by academia and the Saami communities, but the narratives still live as truth for many individuals in Hedmarken and Trøndelag Counties (Nilssen, 2019). The South Saami counter-stories of landscape use and historical continuity are still marginalized (Ibid.).

In the beginning of 1900, most of the herding units were lost in Trøndelag County. Many of these families change from a semi-

Map of the South Saami landscape, made by Keviselie (Hans Ragnar Mathisen)

nomadic system to a forced, settled life. Many lost their Saami identity, mother tongue, and way of living (Hermanstrand et al., 2019). Currently, only some few sijte (herding units) have survived after the Norwegianization period , hence the proclamation from UNESCO stating that the South Saami communities in Sweden and Norway is one of the most endangered ethnic groups in Europe (Fjellheim, 2020a; Hermanstrand et al., 2019; UNESCO, 2023).

Reindeer herding is one of the **'the material bases'** of the Saami culture and identity, including fishing and hunting. The South Saami reindeer herding landscape expand from Nordland County in northern Norway to Møre- og Romsdal in the west coast, to Hedmarken in the east in Norway– and stretches further into the Swedish coastline (Hermanstrand et al., 2019).

Approximately 350 km vertical line between South Norway and the Swedish border have been used by South Saami reindeer herders, along with the old Saami hunter-gatherer culture (before we started to domesticate reindeers) (Jones & Olwig, 2008). Because of these connections, links, and relationships - the vertical kin-space-timeline between South Saami communities in two countries, are still very strong today. When I chose the Fosen Case as a case study in my thesis, it is natural to mention the whole South Saami landscape, and the values within the spectre of immaterial and material land-use knowledge (across national borders and counties). The Fosen reindeer herders' units (sijte) are not a separate group of individuals but are very linked to the rest of the South Saami landscape due to reindeer's migratory paths and kin relations.

The Saami, intangible **(immaterial**) cultural heritage, such as offering stones, food storages, and sacred mountains have natural features of cultural meaning, together with traditional knowledge of terrain, seasonal measures, and place names (Braseth, 2014). Hence, the core of reindeer husbandry's landscape knowledge is knowledge of terrain and vegetation, and of the landscape, with access to shelter, food, and water source. Next, one must consider that weather and vegetation may vary from year to year, so it is not enough to know the basic knowledge of the eight seasons (see figure 4).

Depending on the climate and the size of the herd, it is necessary to have several living and grazing places in each of the seasonal areas, to minimize the risk of over-grazing (Bevanger & Jordhøy, 2004; Fjellheim, 1995). Social anthropologist Tim Ingold suggests that to understand how people view their landscape, we must first understand their practical relationship with it. People's understanding of their landscape differs from that of outsiders, as they possess practical knowledge of it through their lived experiences (Ingold, 2000). Ingold argues that the landscape should be understood as a process rather than a finished form, constantly being shaped and processed by the activities of those who inhabit it.

"It is to the entire ensemble of tasks, in their mutual interlocking, that I refer by the concept of taskscape. Just as the landscape is an array of related features, so – by analogy – the taskscape is an array of related activities. And as with the landscape, it is qualitative and heterogeneous: we can ask of a taskscape, as of a landscape, what it is like, but not how much of it there is. In short, the taskscape is to labour what the landscape is to land, and indeed what an ensemble of use-values is to value in general." (Ingold, 2000, p. 195).

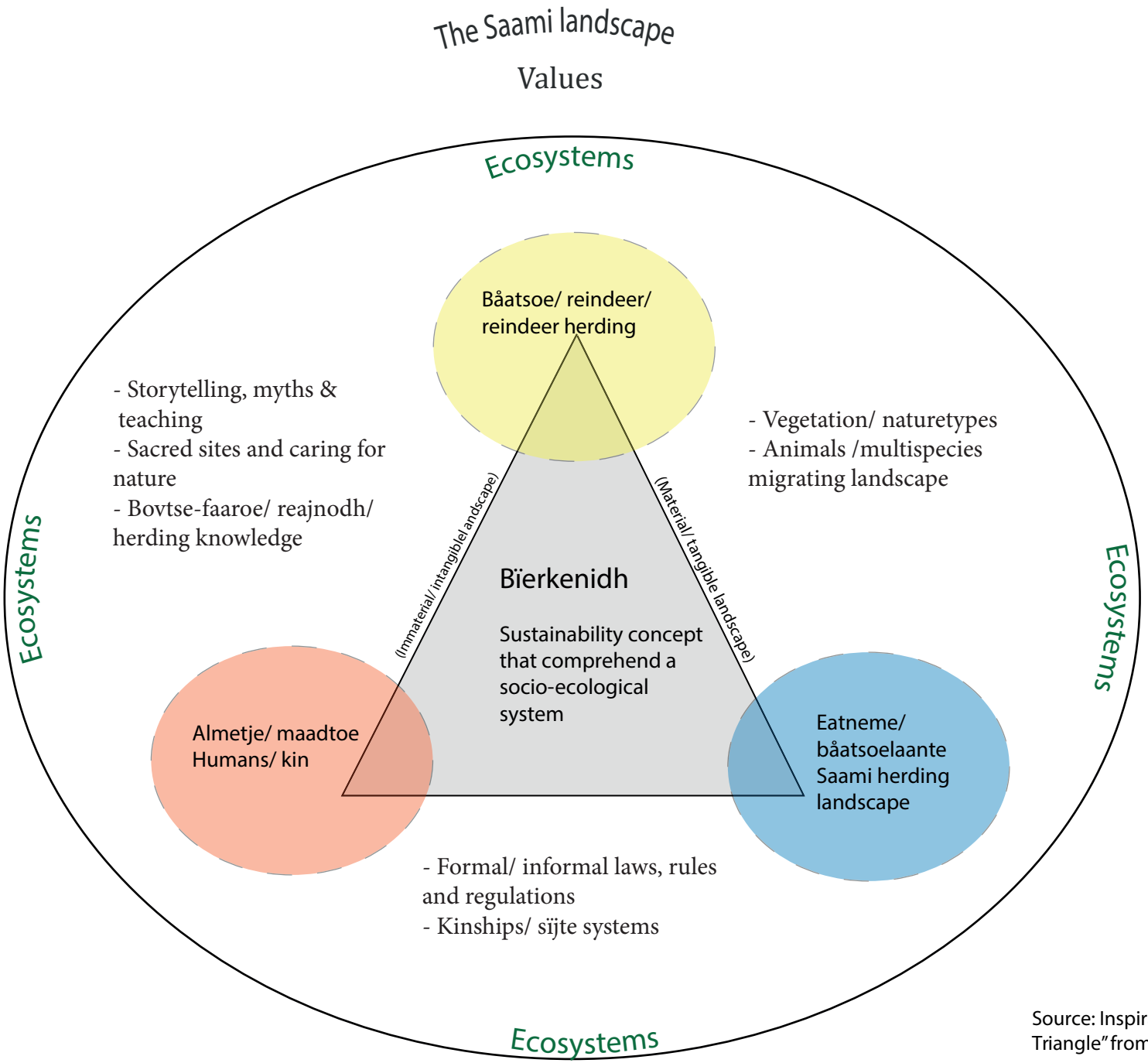


Fig. 3

Source: Inspiration "The Triangle" from Svonni et. al. 1986

He introduces the term "taskscape" to describe the dynamic nature of the landscape, which is woven with the life stories of those who lives and lived there, and the life cycles of plants and animals. Through the landscape, people can read signs of previous generations' lives and work. Ingold emphasizes that taskscape and landscape are interconnected, with individual tasks linked together to form a whole (Ingold, 2000). The South Saami terms for taskscape are synonymous with aerpiedaajroe (inherited knowledges and practises in outfields) in miehtjiedajve (outlying fields), to improve Bïerkenidh. As explained in the introduction, Bïerkenidh (see fig. 3) is a fundamental value in Sami culture which means being able to master, managing and using nature in a sensible and responsible way and are valued Saami skills where knowledge is passed on from generation to generation through active participation in land-use practices (Finbog, 2021; Porsanger, 2011b).

Anu Soikkeli, emphasizes the importance of understanding both tangible and intangible values of the Saami landscape, particularly in the context of landscape planning and land-use interventions in Saami territories (Soikkeli, 2021, p.125). If we are not part of a particular landscape, we may not fully appreciate or understand it until we recognize and acknowledge the ways in which people belong to it - their ways of life, knowledge, and cultural practices. By doing so, we also acknowledge the importance of their stories, myths, and rituals in shaping their relationship with the landscape (Soikkeli, 2021). The multi-embedded ways of 'doing' and 'knowing' a landscape from a south Saami perspective, may open our eyes to see 'intangible elements'. To 'see' the importance of a **boerne** , a **deava** , or a **tjahke** , in a migration path/**juhtedh** will implicit increase our understanding of the Sami landscape and land-use patterns (Greve, 2014; Meløe, 1988).

The text 'The Two Landscapes of Northern Norway', written by Jacob Meløe in 1988, is a work in the academic discussion of Northern Norwegian and Saami landscapes. He argues that a Northern place-theory must be closely linked to the subsistence practices of the region.

Meløe introduces two landscape terms, the "natural harbour" used by coastal fishermen and the jassa used by reindeer herders, which are important in understanding the connection between practices, landscape, and language in the region (Meløe, 1988). Meløe analyses the practical and spatial implications of these two concepts. Even this text is specific about Northern Norway, it resonates with the South Saami landscape and the coastal landscape in mid-Norway too.

- Boerne/Mat/melkegrop: For milk fermentation and winter storage of food in a sïjte or trekkleie/ pathway (juhtedh).

- Deava/hill/ slope: The reindeer likes to graze uphill. In winter, the top of deava has less snow and the pasture might be more accessible here (Svonni et.al., 1986, http://eatnemene.no).

- Tjahke/ Mountain peak: The foothills (deava) of a mountain (vaerie) or mountain peak (tjahke), may have lush vegetation (grass and herbs) which the reindeer can utilize during summer, but also in hard winter conditions when the lower outfields have thick ice between fodder and snow coverage. On hot summer days, the wind on tjahke, may be a popular place for reindeers to cool down (Svonni 1986, Riseth et. al., 2011).

- Juhtedh/ migration: Herders migrate their reindeer along migration paths between seasonal grazing areas, or important grazing areas (Sandström et. al., 2003). According to the Norwegian law, disturbing and blocking a juhtedh, is forbidden. In worst case, it will hinder the reindeer to utilize the juhtedh in an optimal way, since the reindeer migrate slowly and smoothly along a juhtedh. A disturbance will stress the reindeers; hence less consumption of fodder will occur (Svonni et. al., 1986).

The land of the eight seasons: The year begins when the reindeer migrate from the winter grazing grounds to the calving areas in the spring pastures

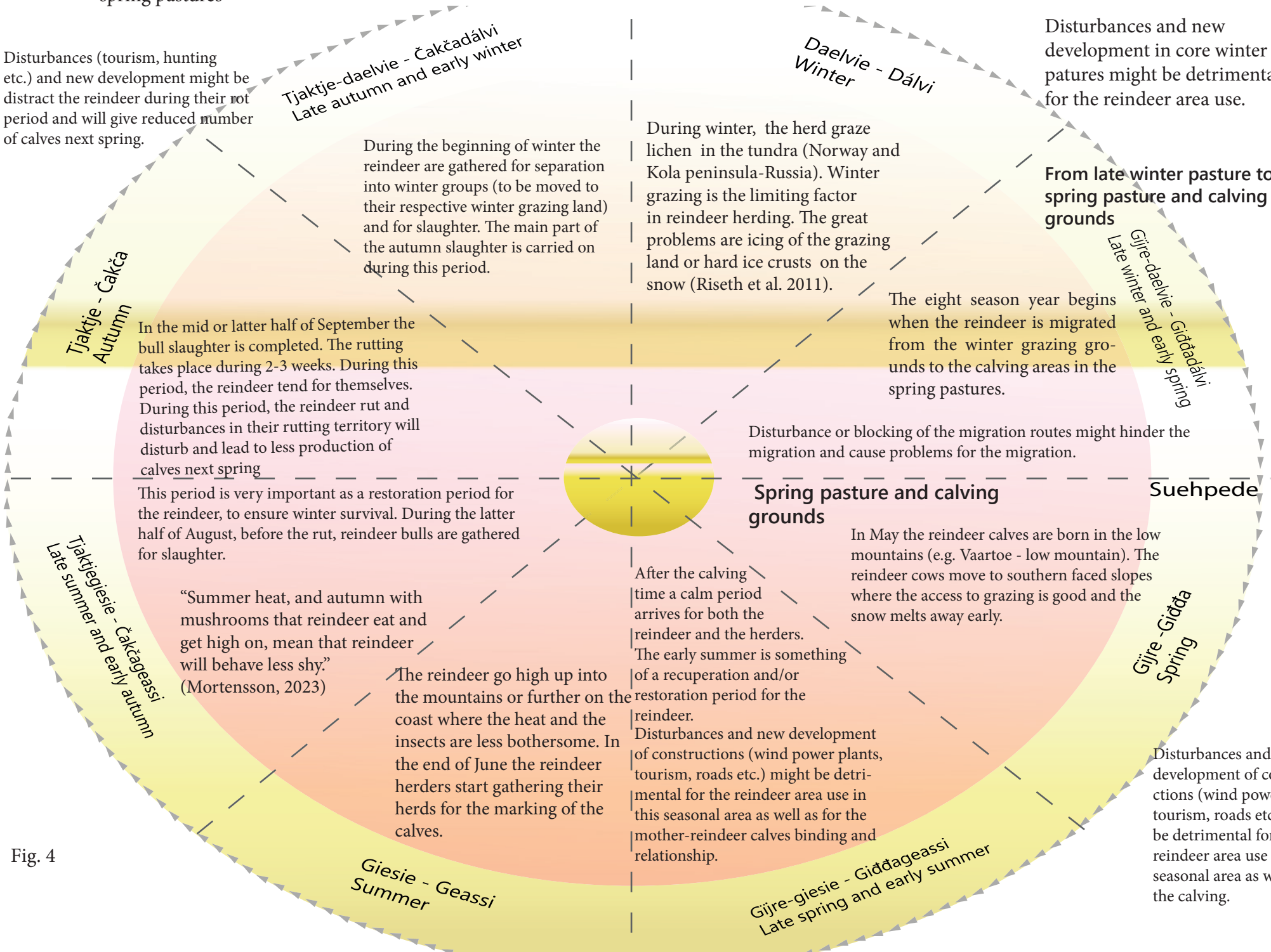


Fig. 4

The northern Saami word jassa means dielhtie in the southern Saami language and means a patch of snow glaciers that are of high importance in the summer where the reindeers escape the insect plaque, but it also a landscape patch for gathering the animals for earmarking, or before migrating them for earmarking in fenced areas (Svonni, 1986).

As mentioned earlier, the South Saami cultural landscape is characterized by subtle signs of human activity that may only be discernible to those with expertise. However, personal recollections of specific events or experiences in certain locations or seasons are typically shared among family members and close associates. For instance, individuals may recall that a particular area was once considered sacred, or that a valley used to house an old dwelling or shelter (Braseth, 2014).

Childhood memories might include the use of a specific place for autumnal slaughtering. The inherited understanding of nature-use brings the value of 'leave no trace', and only take as much as it is necessary for survival. The South Saami scholar, Sverre Fjellheim, points out that the South Saami landscape is almost impossible to distinguish between 'cultural' and 'natural' landscapes (Fjellheim, 1995).

It is a cultural-natural landscape where the Saami collected materials for woodworking, duedtie/ vætnoe (Saami handicraft and art), suejnie (Carex vesicaria, sennagress) for baarhkohke (komag/ Saami shoes), hunting (i.e., gaavaldahke/ ptarmigan bird trap*), fishing and berry picking, and other activities. This is an experience-based traditional knowledge system called aerpiemaahtoe or aerpiedajve (inherited knowledge and practices within a specific landscape), passed on from generation to generation in miehtjiedajve (outlying fields), within and between Saemien sïjte (South Saami kin/ herding units/ communities).

To sum up from Audhild Schanche, who is a scholar and archaeologist, provides a summary of the Saami cultural landscape in her book "The symbolic landscape - landscape and identity in the Saami culture" (Schanche, 1995). The Saami cultural landscape can be viewed from four different perspectives.

First, it can be seen as a historical landscape that reflects the Saami people's traditional settlement and land-use practices over time. Second, it can be viewed as a magical landscape that contains cultural and religious elements from the pre-Christian Saami religion, such as cult sites, graves, and offering stones. Third, it can be understood as a mythical landscape that has been shaped by the stories and myths of the Saami people and continues to influence their relationship with the land. Lastly, the Saami cultural landscape can also be seen as a political landscape that incorporates symbols of the Saami culture and has been utilized for political purposes. Since the 1980s, institutions have been established to preserve the Saami cultural heritage and recognize their unique historical past on an institutional level (Schanche, 1995).

* We have two different ptarmigans in Norway: Rïeksege (Ss.)/ lirype (No.)/ willow ptarmigan (en.) (latin: L. lagopus) and gïerene (Ss.)/ fjellrype (No.)/ rock ptarmigan (latin: L. muta).

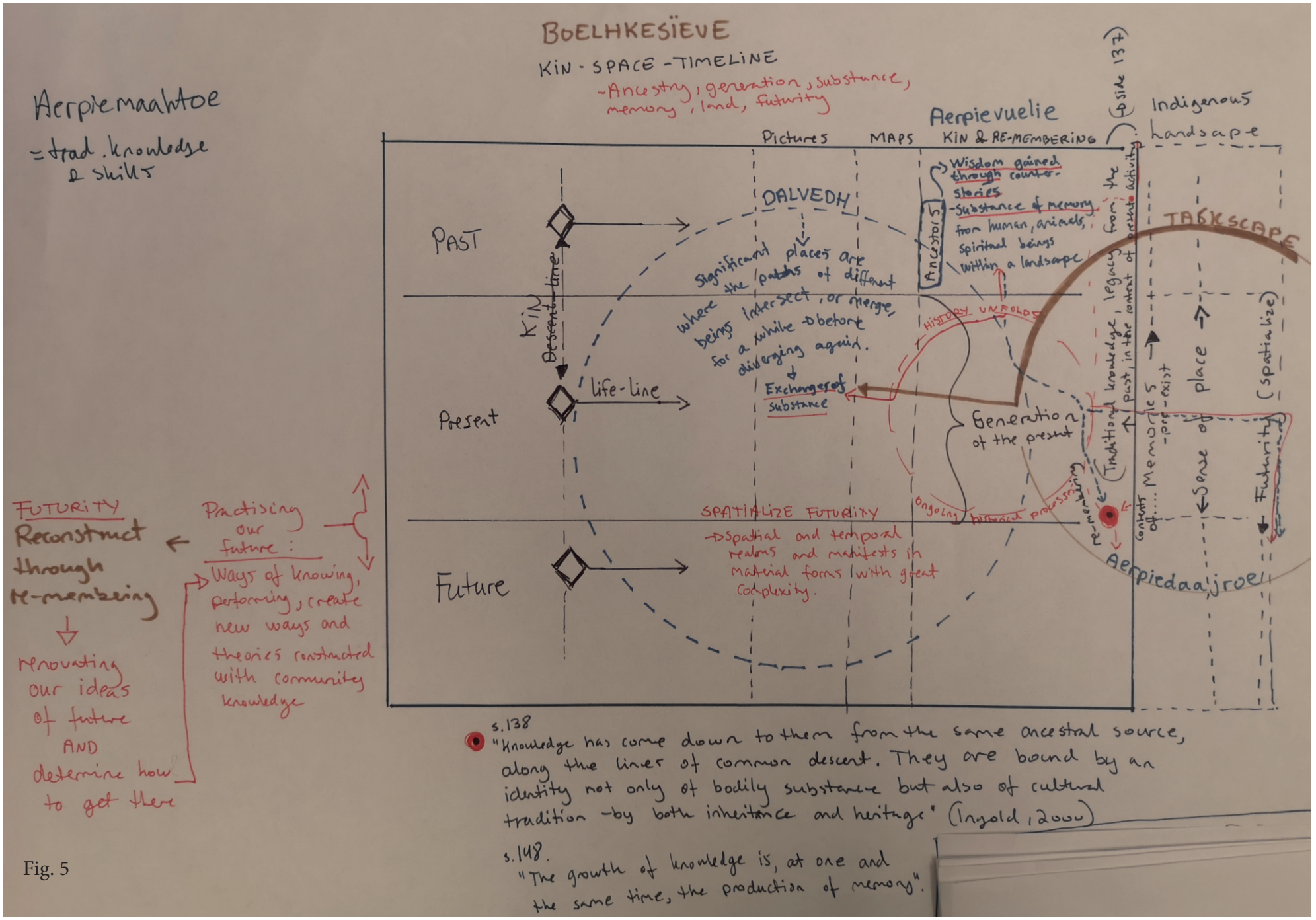

BOELHKESÏEVE
KIN - SPACE - TIMELINE
-Ancestry, generation, substance, memory, land, futurity
Aerpiemaahtoe
= trad. knowledge & skills
Aerpievuelie
KIN & RE-MEMBERING
Pictures
MAPS
Indigenous landscape
(p.137)
PAST
Present
Future
DALVEDH
Significant places are where the paths of different beings intersect, or merge, for a while before diverging again.
Exchanges of substance
Ancestors
Wisdom gained through counter-stories
-substance of memory from human, animals, spiritual beings within a landscape
Descent line
KIN
life-line
HISTORY UNFOLDS
Generation of the present
TASKSCAPE
Traditional knowledge, legacies from the past, in the context of present activity
Sense of place
Futurity (spatialize)
SPATIALIZE FUTURITY
Ongoing interactive processing
re-newing
Aerpiedaa'jroe
FUTURITY
Reconstruct through re-membering
renovating our ideas of future AND determine how to get there
Practising our future:
Ways of knowing, performing, create new ways and theories constructed with community knowledge
s.138
"Knowledge has come down to them from the same ancestral source, along the lines of common descent. They are bound by an identity not only of bodily substance but also of cultural tradition - by both inheritance and heritage" (Ingold, 2000)
s.148.
"The growth of knowledge is, at one and the same time, the production of memory".

Fig. 5

Chapter 3: Methods in indigenous methodology and landscape planning

This chapter will outline the procedures I used to gather and analyse data to address the research question. As mentioned before, this thesis will emphasize Saami traditional knowledge in land use planning strategies regarding wind power development, hence traditional knowledge in the chosen case study is emphasized in the document analysis.

To acknowledge the possibilities and benefits of Saami traditional landscape knowledge in landscape planning processes, I am studying perceptions and values of the South Saami landscape of Fosen, to see how it differs among stakeholders. Stakeholders from National institutional level in the Fosen Case are shown in the diagram (Fig. 6): The institutional structure of the energy sector in Norway is based on a bureaucracy where the ministries (OED and NFD) is in charge of the renewable energy sector, where Statnett SF and Statkraft SF operates and supply energy, and NVE is responsible for the whole management of Norway's water and energy resources. OED, NVE and Statkraft SF have been consultants for the Norwegian state in the Fosen Case, together with consultants from Fosen Vind DA with law firm Hjort DA as judicial experts. Statements from Hjort DA, Statkraft SF, and Fosen Vind DA have been included in the document analysis.

In the matter of perceptions of the Saami cultural landscape from other stakeholders, I choose to include these statements since they represent diverse views of the Saami cultural landscape in the Fosen Case. Statements are collected from the State administrator (Statsforvalteren), Frostating Court of Appeal (from 2020), observation from the court process from Ellingsen's thesis (2020) regarding state attorney Johan Remmen, and statement from judicial expert on reindeer herding law and the Sámi Act, Kirsti Strøm Bull. Statements from OED is also in this section since they are supposed to reflects views from The Norwegian Parliament and Government, i.e., Norwegian citizens, not only the wind power sector. The last statement is from a Saami elderly, Jon Mortensson, from the most southern herding district, Svahken Sïjte in Hedmark, who sums up the whole cyclical herding year and traditional knowledge in an essay, published in Ságat newspaper.

Indigenous methodology and planning

According to indigenous scholar Linda Tuhiwai Smith (2012), the context of researching indigenous landscapes and people, she argues that indigenous methodologies involve understanding the interconnectedness of the land, people, and cultural practices. She emphasizes the importance of respecting their knowledge and perspectives. This includes recognizing and addressing power imbalances in landscape research and planning, ensuring informed consent in consultations, and sharing research findings in a way that benefits the indigenous community. Through this approach, researchers can gain a deeper understanding of the complexities and nuances of indigenous landscapes and peoples and can help to facilitate a more sustainable land-use planning for all affected parties involved (Smith, 2012). Therefore, I have carried out a document analysis to investigate different landscape perceptions and values from various views from stakeholders through analytical landscape concepts to identify how stakeholders perceive the Saami landscape and knowledge systems.

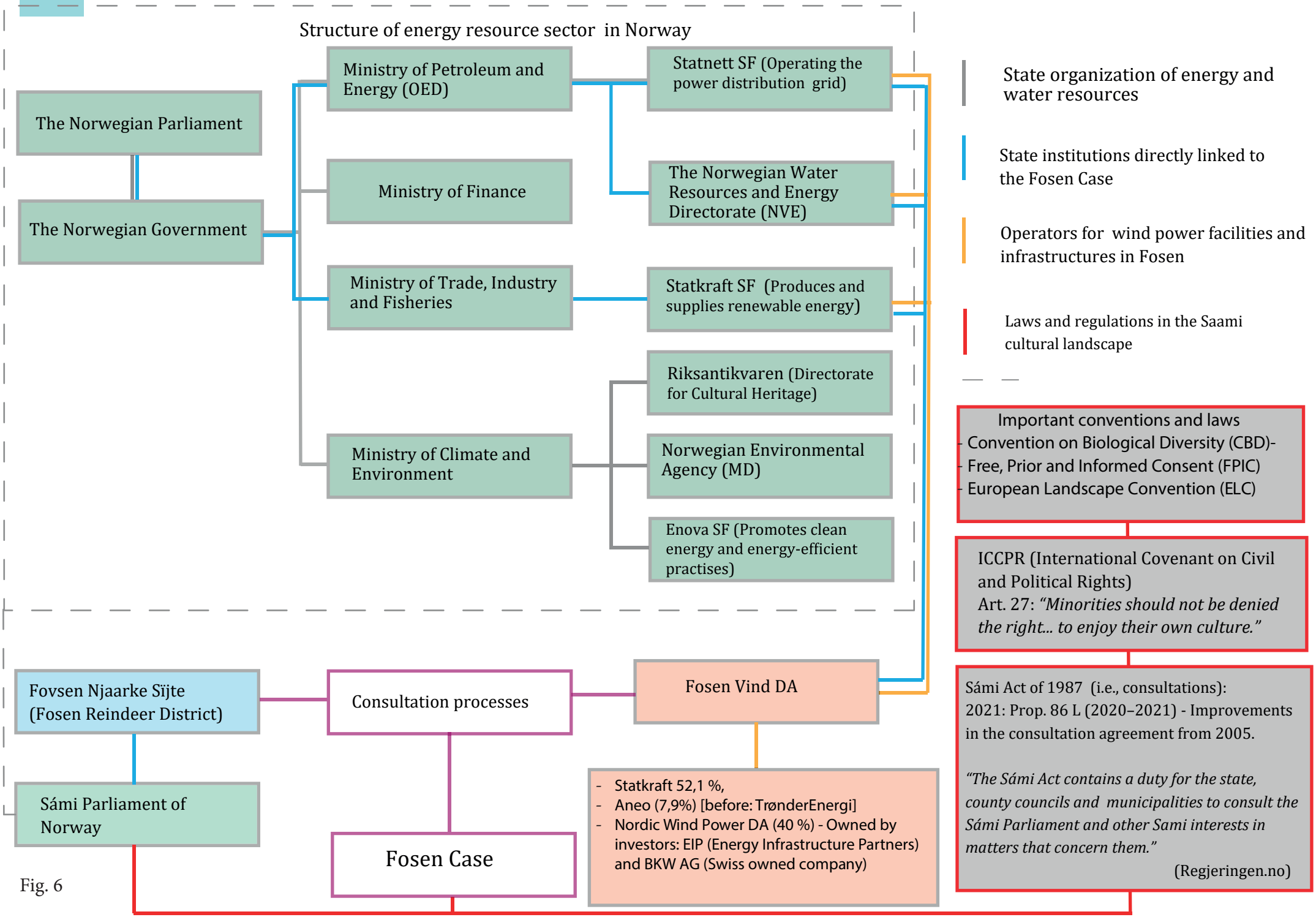

Structure of energy resource sector in Norway
The Norwegian Parliament
The Norwegian Government
Ministry of Petroleum and Energy (OED)
Ministry of Finance
Ministry of Trade, Industry and Fisheries
Ministry of Climate and Environment
Statnett SF (Operating the power distribution grid)
The Norwegian Water Resources and Energy Directorate (NVE)
Statkraft SF (Produces and supplies renewable energy)
Riksantikvaren (Directorate for Cultural Heritage)
Norwegian Environmental Agency (MD)
Enova SF (Promotes clean energy and energy-efficient practises)
State organization of energy and water resources
State institutions directly linked to the Fosen Case
Operators for wind power facilities and infrastructures in Fosen
Laws and regulations in the Saami cultural landscape
Important conventions and laws
- Convention on Biological Diversity (CBD)-
- Free, Prior and Informed Consent (FPIC)
- European Landscape Convention (ELC)
ICCPR (International Covenant on Civil and Political Rights)
Art. 27: "Minorities should not be denied the right... to enjoy their own culture."
Sámi Act of 1987 (i.e., consultations):
2021: Prop. 86 L (2020–2021) - Improvements in the consultation agreement from 2005.
"The Sámi Act contains a duty for the state, county councils and municipalities to consult the Sámi Parliament and other Sami interests in matters that concern them."
(Regjeringen.no)
Fovsen Njaarke Sïjte (Fosen Reindeer District)
Sámi Parliament of Norway
Consultation processes
Fosen Case
Fosen Vind DA
- Statkraft 52,1 %,
- Aneo (7,9%) [before: TrønderEnergi]
- Nordic Wind Power DA (40 %) - Owned by investors: EIP (Energy Infrastructure Partners) and BKW AG (Swiss owned company)

Fig. 6

Analytical landscape concepts

For the document analysis, I have been using different analytical landscape concepts that function as a guidance tool to be able to answer the problem statement. It connects the analysis of landscape concepts with the analysis of different stakeholders' relationship with the landscape.

I have used Kjerstin Uhre's theoretical framework (Uhre, 2020) to identify landscape values and perceptions expressed by different stakeholders. I have decided to divide into four landscape terms to easier sum up different knowledges, values and understanding of land use practices within a landscape. I have used Kjerstin Uhre's PhD thesis 'The perforated landscape: a study on contested prospects in Sápmi' from 2020, as an inspiration when different land use interests evolve into land use conflicts within a landscape. She refers to four analytical categories of landscape concepts in the history of Saepmi and the Nordic countries - 'Governable landscape', the 'Worlding landscape', the 'Counter prospecting landscape', and the 'Migrating landscape' (Uhre, 2020). To divide the document analysis into different analytical landscape concepts, as explained above, is to better understand values, knowledge, and interests from different perspectives.

In the coming sections, I will introduce these concepts that will be used in Chapter 4 (Results) and Chapter 5 (Discussion). I have identified the analytical concepts through the chosen statements/ views and divided the statements in three different charts: reindeer herders, the wind power sector, and other views.

Governable landscapes (GL) – Nordic landscape discourse

Governable landscapes are directly linked to 'Landscape as Polity' in the Nordic discourse on how to understand 'landscapes' through customs and laws (Uhre 2020, p. 38), and can also be read in the chapter 'The Nordic landscape', where Jones and Olwig definition of the Nordic landscape are described (Jones & Olwig, 2008). According to the European landscape convention, by acknowledging concerns of justice and democracy, we can make landscape and landscape perception governable. In other words, if we consider issues of fairness and equality, and involve people in the decision-making process, we can create a system of landscape management that is fair and just.

This approach would recognize that landscapes are not just physical environments, but also social and political entities that have a significant impact on people's lives. By valuing and respecting the perspectives of all stakeholders, we can create a more inclusive and democratic approach to landscape management (CoE 2000, Article 1: a & Article 5: a).

Though, seeing a landscape through the lenses of the Governable landscapes, Uhre explain: "Governable landscapes, a category derived from a concept of landscape as domain, makes it possible to talk about land rights defined by custom and presence in the landscape from time immemorial. These are rights that have been subverted during the formation of the modern national states and colonial empires, but that have survived and gained strength after the postcolonial conjunction in time." (Uhre 2020, p. 38-39).

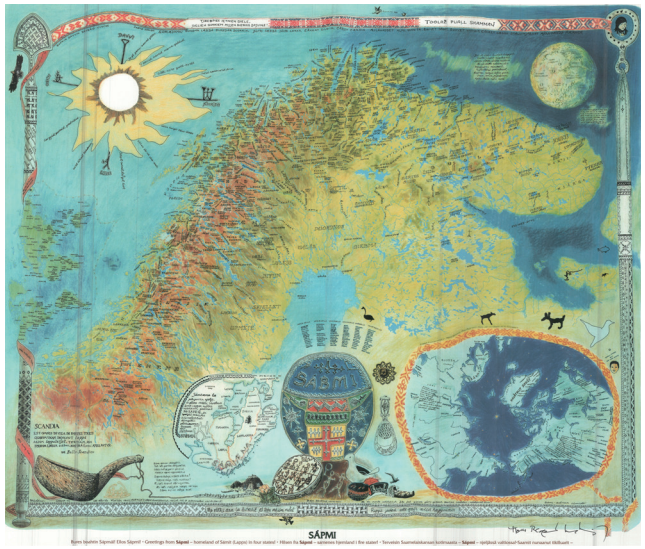
Coherently, Tom Mels and Don Mitchells' text 'The right to landscape' explore the Landscape as Polity, as they bridge landscape, environmental justice, and human rights in landscape research (Mels & Mitchell, 2013), where the Governable landscapes as such is an important concept of landscape justice – however it can also be an administrative void in the diverse interests within a landscape. Overall, The Governable landscape unites laws and regulations from political laws and regulations, and cultural practices and customs. Overall, the Governable landscapes makes it possible to discuss land rights defined by custom and presence in the landscape from time immemorial (Uhre, 2002, p. 39).

The Worlding landscape – Indigenous & Saami landscape concepts

In the 1970s, the Saami people began the process of revitalization that focused on reclaiming their cultural identity, languages, and land rights. This movement was motivated by a desire to reverse the effects of the Norwegianization [Assimilation] processes that had caused the loss of their language and traditional way of life (Minde, 2016).

Saami scholars and artists began producing literature that explored various aspects of Saami culture, including reindeer pastoralism, art, traditional knowledge, ethics, and aesthetics, which helped frame Sami landscape terms. At the same time, a Saami cartographer named Hans Ragnar Mathisen (also known as Elle-Hansa Keviselie) began creating maps of Saepmi that included Sami place names, without the state borders of Norway, Sweden, Finland, and Russia (Tangen, 2021). By recognizing and visualizing Sami territory on maps, Mathisen helped develop a political framework for asserting the Sami people's rights to their own culture and land use (Uhre, 2020).

What Mathisen did, was 'counter mapping'. Counter mapping was framed by Nancy Lee Peluso, and it emerges postcolonial and Indigenous mapping practises which shows traditional land rights and land use practises that was invisible in state maps. She gave at the same time critique to hegemonic mapping practises, and power structures in contested landscapes (Peluso, 1995). Mathisen's maps show belonging, connectedness of historical continuity of Saami place names – that describes the Saami landscapes, kin, and land use. With the worlding landscape that combined the immaterial (intangible, i.e., landscape knowledge) and the material (tangible – i.e., reindeer herding) elements, are then the space of practice and relations that connect the right to land and water, but also the right to the landscape (Schanche, 1995; Schanche, 2002).



Map of Saepmi, 1975 by Keviselie

The Counter prospecting landscape – The future landscape Kjerstin Uhre considers how landscape architecture can contribute to negotiating human interests and nurturing the benefits of various species, and proposes a method called "Counter Prospecting" (Uhre, 2020, p. 19), which can be linked as a dialogue/ linkage with traditional, indigenous ecological knowledge systems (Uhre 2020, p. 26). As we head towards counter prospecting in Saepmi as a tool for imagining the future, she implies; "Competing prospects in meahcci [miehtjiesdajve] – the outfields – imply a competition between the futures of different realms of landscape activities." (Uhre, 2018, p. 156).

The emergence for imagining the future of landscape, are crucial to determine how sustained and resilient the environment, ecosystem services and traditional, and indigenous 'way of doing and living' (ontological) will develop when landscapes being contested by developers. The Fosen case is an example of how landscape politics and encroachment practices are connected. Landscape as Polity, or the Governable landscape approach, regulate natural resources and forms and shapes the landscape through policies. The Counter prospecting landscape approach explores other prospects and acknowledging a diverse set of views and values in contested landscapes, and how power structures and encroachments are interlinked (Uhre 2020, p.365). Through visualisation methods in landscape architecture, illustrating views, opinions, and knowledge from a bottom-up perspective.

Uhre claims that the plans of Saami pastoral and coastal fishery communities for the future have been marginalized by planning authorities. The counter prospecting approach, which involves filling the gaps in the landscape with new interpretations of its value and presenting alternative prospects for the future.

Counter prospecting involves exploring different perspectives in the negotiation of the future of the north and should involve close collaboration with those who have expertise in cultural concepts and traditional landscape practices. The voids in the landscape represent a loss of agency, as those who exploit the landscape hold the power to direct its future development. Counter prospecting seeks to return power to the people and the landscape itself, by asking the core questions about the future direction and methods for answering them (Uhre, 2020, p. 157-158).

Counter Prospecting

"Counter prospecting is an experimental and interpretative praxis-based method that operates on two intersecting planes: It resists dominant and already given prospects, while on a plane of anticipation it reaches beyond these in a pro-spective exchange towards possible alternate futures."

(Uhre, 2018, p. 26)

Saami scholar Juho Niilas (Nils Jernsletten, 1934-2012) about traditional knowledge:

"[It] is transmitted through observing, learning skills, and systematising this in linguistic expressions, terms, and professional jargon."

(Jernsletten, 1997, p. 89)

From chapter "Sami traditional terminology: Professional terms concerning salmon, reindeer, and snow" in Sami culture in a new era / Harald Gaski (ed.) Kárášjohka: Davvi girji, 1997.

The Migrating landscape – Flexibility in time and space & multispecies interests

The migrating landscapes refers to multispecies seasonal migration pathways. Seeing a specific landscape as map layers with multiple movement and connections (E.g., reindeer herding, roads, railways, hiking paths, etc.). Migratory landscapes are understood as landscapes that are 'scaped' – or dalvedh – by seasonally migratory events in the Saami landscape (Uhre, 2020, p. 88). Tim Ingold refers this concept to significant places where paths of different beings intersect, or merge, for a specific time – before diverging again (Ingold, 2000, p. 136).

As Tim Ingold call this a 'taskscape', though in the south Saami language, this is Aerpiedaajroe (Trad. landscape knowledge) where the migratory events, such as moving the reindeers to calving and grazing pastures during the spring season, are the main tasks through aerpievuekie – "re-membering" ancestors' wisdom and knowledge through dalvedh in the migratory landscape.

As miehtjisedajve (Outlying fields – The Saami landscape) fragments and perforates due to infrastructural aspects, the reindeer husbandry finds it difficult to migrates due to reindeers' physical stress factors. Combining traditional ecological knowledge (TEK) elements like aerpievuekie (traditional knowledge) and aerpiedaajroe (traditional landscape knowledge) in the Saami reindeer herding's migratory landscape forms a socio-ecological system. In the Saami context, the term "traditional" in TEK signifies cumulative, flexible, and adaptable processes that are open to change (Berkes et al., 2001; Berkes, 2008; Riseth, 2012).

Saami scholar Jelena Porsanger highlights that the Sami way of life has always required a high degree of flexibility (Porsanger, 2011, p. 243). This aligns with Fikret Berkes' concept of TEK, which encompasses both the process of knowing and the knowledge itself (Berkes, 2008, p. 8).

In this socio-ecological systems of Saami reindeer herding and landscape practises we have the year of the eight seasons (Husk årshjulet her), that show the tasks of every season. There are no specific months in each season since the seasons fluctuates every year, i.e., higher precipitation, mild temperatures, and locked winter grazing ground may lead to earlier migration in spring. In the figure 'the eight seasons' shows the specific seasonal year for Fovsen Njaarke reindeer district, since every district have different variables of migration routines and use of the migrating landscape, though there are many similarities in Saepmi. Hence the Saami conception of time is cyclical (Jernsletten, 1997), just like the Saami proverb 'time is a ship that never casts anchor' (Gaski, 2022).

Saami proverb:

Jahki ii leat jagi gáibmi.
(North-Sámi language)
One year is not the brother of another year.

Document analysis

The document analysis entails mainly descriptions from different judicial court processes, newspaper articles by affected stakeholders (mainly interviews), scientific articles where the researchers have been interviewing participants in the Fosen case, and other scientific research articles and reports documenting different values and knowledge systems in the Saami cultural landscape related to the Fosen Case. This is to triangulate the available information and build a better understanding of the current situation as a whole. Due to the large number of documents available I decided to carry out a document analysis instead of conducting interviews.

As my research method involved document analysis, I acknowledge that the findings may differ from those obtained through fieldwork and direct interviews. To mitigate this limitation, I tried

to gather diverse sources from various parties involved in the Fosen Case, which provided multiple perspectives on landscape perceptions. Pictures, graphs, and maps, along with diagrams that showcase traditional Saami methods of herding and pasture rotations (which represent traditional ecological knowledge), can be helpful in documenting and understanding various landscape concepts and values, as well as the nstitutions involved and changes taking place in the Saami cultural landscape.

Information gathered from the reindeer herders

Document analysed to get an understanding of the reindeer herder's valuation and perception of the Fosen landscape are from newspapers and master thesis. Henrikke Ellingsen's master thesis (2020) explores the resistance against wind power development in Norway, particularly in the Fosen and Frøya landscapes in Norway. The study examines how different forms of power and knowledge production shape the development process and how resistance emerges as a response to perceived injustices.

Through in-depth interviews and document analysis, the thesis reveals the complex power dynamics at play, where the interests of large energy companies and local communities clash over the use of land and resources. The study argues that the resistance movement is not only about opposing wind power development but also about challenging the dominant power structures and promoting more equitable and inclusive decision-making processes. She interviewed members from the North Fosen reindeer herding unit that have lost most of their winter grazing land to wind farms (Ellingsen, 2020).

An interview facilitated by Morgenbladet (weekly newspaper) with reindeer herders was published March 3rd, 2023. This interview was conducted by journalist Håkon Gundersen, at one of the reindeer herder's homes in Åfjord (Trøndelag), close to Roan wind farms. It is an extensive interview by North Fosen reindeer herding unit, where their perceptions on the Saami cultural landscape and traditional knowledge were framed, and also their sorrow of losing the landscape to wind farms (Holtan Pavall Arbogen et al., 2023).

Interview facilitated by VG (daily newspaper) with reindeer herders was published February 28th, 2023, conducted by journalist Runa Engen. There were herders from both reindeer herding units in Fosen (North and South), where they talk about the landscape prior, under and after the wind power development (Engen, 2023).

Interview facilitated by NRK (the public service broadcaster in Norway) with reindeer herders from South Fosen reindeer herding unit, was published Nov 16th, 2022, and conducted by Saami journalist Jan Robert Larsen. The main point of the article was to discuss the areas of the Roan wind power plant, and that grazing was reduced by up to 50% within 5-15 km of the wind power plant. One of the reindeer herders explained that reducing grazing in one area results in increased use of other areas and changes in traditional grazing and migration patterns create challenges during herding and gathering (Larsen, 2022).

Information gathered from the wind power industry

Documents analysed to get an understanding of the wind power industry's valuation and perception of the Fosen landscape are newspapers, and a research report. The document analysis of the wind power industry is based on interviews from NRK (The public service broadcaster in Norway), statements from law firm Hjort DA (representing Fosen Vind DA). When I write 'the wind power industry', it is a selection of various stakeholders in different sectors working with the development of wind farms and renewable energy for Fosen Vind DA.

An interview facilitated by Teknisk Ukeblad (weekly news magazine) with the leader for Statkraft, Christian Rynning-Tønnesen, was published March 2nd, 2023, and conducted by journalist Ellen Synnøve Viseth. According to Rynning-Tønnesen, previous plans were changed to account for reindeer grazing rights, and an agreement was reached for compensations during the development phase.

However, there is currently no similar agreement in place for measures to be taken during the operational phase. He also stated that the area in Storheia wind farm was only a 'reserve grazing area' for South Fosen reindeer herding district (Viseth, 2023).

An interview facilitated by NRK (the public service broadcaster in Norway) with the communication manager at Fosen Vind DA, Thorbjørn Steen, was published Oct 11th, 2021, and conducted by journalists Johannes Børstad, Jan Rune Måsø, Kirsti Kringstad, Elisabeth Strand Mølster.

Thorbjørn Steen emphasizes that reindeer herders' voices were heard in the consultation processes and that they were given special treatment in the consultation processes regarding the pastures (Børstad et al., 2021).

An interview facilitated by NRK (the public service broadcaster in Norway) with Communication manager in Statkraft, Geir Fuglseth, was published April 26th, 2023, and conducted by journalist Ingrid Stranden.

Geir Fuglseth claim that the Ministry of Oil and Petroleum should find a proper solution to what will happen with the wind farms in Storheia and Roan herding landscapes. He wants that production of renewable power should be manageable together with sustainable reindeer husbandry in Fosen (Stranden, 2023).

The law firm Hjort DA with laywer Kristin Bjella, working for Fosen Vind DA, sent a report to the Ministry of Oil and Petroleum, June 16th, 2022.

Fosen Vind Da want to investigate what kind of scientific research that has been done under and prior the construction phase. In the report they are questioning the research on how the reindeer reacts to wind farms, and they want to conduct their own studies on that matter. They frame that reduction in reindeer numbers can be compensated by giving the herders some other cultural practises to maintain while the wind farms are installed the next 20 years (Hjort, 2022).

Information gathered from other view concerning the Saami landscape and wind farms

Documents analysed to get an understanding of stakeholders' views, valuation, and perception of the Fosen landscape are gathered from newspapers and judicial notes. Document analysis is based on interviews and reflections from NRK (The public service broadcaster in Norway), Klassekampen, Teknisk Ukeblad, Frostating Court of Appeal, and statements from judicial expert Kirsti Strøm Bull.

Interview facilitated by NRK (the public service broadcaster in Norway) with state administrator (Statsforvalter), Siv Merethe Belbo, was published Nov 16th, 2022, and conducted by Saami journalist Jan Robert Larsen. Belbo states that reindeers' natural seasonal movements are disturbed by the wind farms, and there are enough scientific evidences that prove that changed grazing patterns contribute to new challenges for the husbandry (Larsen, 2022).

Article facilitated by Teknisk Ukeblad (weekly news magazine), was published Feb 28th, 2023, and conducted by journalist Gunhild Haugnes.

She refers to the Ministry of Petroleum and Oil (OED), where they proposed different mitigation strategies in September 2022. OED want to move the reindeer with transportation from the old grazing ground, replace the old migration routes with new, introduce soy forage, and stop the turbines in winter and spring season (Haugnes, 2023). These OED statements was also pointed out by Klassekampen (newspaper), March 2nd, 2023, by journalists Skårderud og Krokene (Skårderud & Krokene, 2023).

In 2020, The Frostating Court of Appeal expressed the opinion that industrial forage serves as the most effective mitigation measure, as stated in their ruling during the case between Fosen Vind and the Fosen herding district (Overskjønn, 2020).

They also suggested the possibility of locating alternative winter pastures in different regions, as reported by Ellingsen (2020).
According to Kirsti Strøm Bull, a professor and legal expert on reindeer herding law and the Saami Act, states that reindeer herding is not only a job, but important part of Saami culture and livelihood. Since herding is a material basis of the culture, and part of the Saami cultural landscape, the grazing areas must be protected. She refer to the High Supreme Verdict from 2021 (Bull, 2021).

Jon A. Mortensson, a reindeer herder from Svahken Sïjte in the South Saami region, explains in an article in the Saami newspaper Ságat the significance of seasonal pastures for reindeer and highlights the importance of simultaneously taking care of the landscape and the herd, when referring to the Fosen Case.

Mortensson also emphasizes the need for guidelines or rules that promote the careful treatment of reindeer habitat and strengthen the Saami reindeer herding culture in the cultural landscape when land interventions are framed by developers (Mortensson, 2023).

Storheia

Photo: Hanna Johre

Roan

Photo: Knut Botten

Chapter 4: Results: Presentation of landscape perceptions in documents

By examining the case study, as well as the theories and methodologies employed in this thesis, readers will gain an understanding of how various stakeholders perceive and value the significance of the Saami cultural landscape.
What I can see from the results from the document analysis, several valuations and perceptions of the Saami herding landscape emerge with wind power development.

View from reindeer herders

In the table, there are several statements from both South and North Fosen reindeer herding units, explaining their traditional herding knowledge and their relation to their cultural landscape. These views reflect different landscape concepts. Terje Haugen (herder) was interviewed by Henrikke Elllingsen's thesis in 2020:

"*Well, it has always been a Sámi way of thinking that we use and borrow the land. As we say, we borrow the land we operate in, and then we deliver it to the next generation in a healthy condition. That will not be possible here at Fosen, since the government has destroyed as much as they have. I feel it as my obligation to facilitate, so there may be opportunities to take over after me because reindeer herding is a labour that is valuable in many ways, and we produce Norway's most sustainable food. No one can compare with us on that, so it is clear that it is a driving force in itself for me, it is also a profession that we are proud of and which I want to pass on to the next generation."* (Interview Terje Haugen 02.07.2020 in Ellingen, 2020, p. 66)

Through the concept of the Worlding landscape, Haugen emphasizes the importance of taking care of the land, since we (the humans) are borrowing the land for the next generations. This is also aligned with Elise Holtan Pavall Arbogens statement about how the reindeer herders utilize the landscape:

"*We do not exploit nature and that is precisely why the other party raised doubts in court as to whether the area was used for grazing at all. We had to prove that we have used the areas at Fosen for generations, but it is not so easy when the whole point is that we use nature in a way that does not show it. But nobody believes us, we have to document everything, says Elise."* (Holtan Pavall Arbogen et al., 2023).

Reindeer herder Aslak explains that the symbiotic relationship between reindeer herding, nature and the south Saami language is interlinked with each other:

"(...) nature and reindeer herding becomes a symbiosis; you cannot separate between being out and working. Reindeer herding uses nature as a way to learn languages; the Sámi languages have many nuances in nature, weather, and berries. Especially in South Sámi areas, where so much language development, language training, and being Sámi are synonymous with working in reindeer herding. In the end, if society then manages to squeeze out reindeer herding, the South Sámi language will no longer exist. Being out in nature and working with reindeers is so essential to how we shape ourselves as human beings that I think it is not easy to understand the relationship with nature, especially if you do not get the opportunity to work with reindeer herding." (Quote from Aslak 26.06.2020 in Ellingen, 2020, p. 81)

Understanding of landscape concepts and knowledge systems	Reindeer herders *All quotes that are translated from Norwegian to English are showed with *
The worlding landscapes - Saami landscape concepts and knowledge - Traditional ecological knowledge (TEK)	**Reindeer herder Aslak:** "(...) nature and reindeer herding becomes a symbiosis; you cannot separate between being out and working. Reindeer herding uses nature as a way to learn languages; the Sámi languages have many nuances in nature, weather, and berries. Especially in South Sámi areas, where so much language development, language training, and being Sámi are synonymous with working in reindeer herding. In the end, if society then manages to squeeze out reindeer herding, the South Sámi languagewill no longer exist. Being out in nature and working with reindeers is so essential to how we shape ourselves as human beings that I think it is not easy to understand the relationship with nature, especially if you do not get the opportunity to work with reindeer herding." (Interview Aslak 26.06.2020 in Ellingen, 2020, p. 81) **Interview with Terje Haugen (reindeer herder), 02.07.2020 by Henrikke Ellingsen (University of Oslo):** "Well, it has always been a Sámi way of thinking that we use and borrow the land. As we say, we borrow the land we operate in, and then we deliver it to the next generation in a healthy condition. That will not be possible here at Fosen, since the government has destroyed as much as they have. I feel it as my obligation to facilitate, so there may be opportunities to take over after me because reindeer herding is an industry that is valuable in many ways, and we produce Norway's most sustainable food. No one can compare with us on that, so it is clear that it is a driving force in itself for me, it is also a profession that we are proud of and which I want to pass on to the next generation." (Interview Terje Haugen 02.07.2020 in Ellingen, 2020, p. 66) **Interview with North Fovsen reindeer sïjte, from Morgenbladet (News paper), 3. March, 2023:** "In the Sami way of thinking, it is like that we have received the areas we use from the generations before us, and we want to leave it to the generations that come in the condition in which we received them. It works, because with reindeer husbandry we don't destroy the areas. We do not exploit nature and that is precisely why the other party raised doubts in court as to whether the area was used for grazing at all. We had to prove that we have used the areas at Fosen for generations,
The Migrating landscape - Defragmentation - Biodiversity - Reindeer's migrating habitat	but it is not so easy when the whole point is that we use nature in a way that does not show it. But nobody believes us, we have to document everything, says Elise." (Holtan Pavall Arbogen et. al., 2023) **VG (News paper), 28.Feb. 2023** "They don't calve where they calved before, they spread to all corners. It can have lasting consequences, because the reindeer return to the area where they last calved. There has been a lot of work on the mountain, much more than before. They have made it difficult for us [says herder Lena Haugen]. In the meantime, the reindeer graze on the other winter grazing areas that the families have, but it is only a matter of time before they are grazed down. We have tried in vain for several years to correct this and keep the reindeer together. If it continues like this, it's only a matter of time before it's over, says father Haugen." (Engen, 2023) **Morgenbladet (News paper), 3. March, 2023: Roan : The tenderloin among the winter pastures** * "- Look up at the Roan wind farm. They have destroyed the migration routes that we have used to move reindeer between grazing areas. And my father said he didn't recognize himself when he was up on the mountain. They have shot down well-known ridges, made large cuts and the turbines are there and create both movement in the air and a loud noise, so the reindeer avoid the area. Besides, it is the pastures that are crushed. We have lost winter pasture in Roan. After all, GPS evidence was submitted which showed that when it came to Roan, the area was used as pasture right up to the time of construction", says Sissel [Stormo Holtan]. "- I would say it is the tenderloin among the winter grazing areas," says Terje [Haugen]. (Holtan Pavall Arbogen et. al., 2023) **NRK** news article, 16. Nov, 2022:** Leif Arne Jåma (South-Fovsen Sijte) state that the reindeers move to a greater extent in the forestline and down to cultivated agricultural land to graze when wind farms are blocking. The result: Difficult to herd when the herds are splitting up due to encroachments, and they will not use the pastures in a sustainable way when grazing: *"In order to have reindeer husbandry at Fosen, we are dependent on all the seasonal pastures we have. We cannot take away a winter grazing area and still think it is sustainable, Jåma points out." (Larsen, 2022) ** NRK (The public service broadcaster in Norway)
The counter prospecting landscape The future landscape Hopes and dreams of a sustainable landscape	**Interview with North Fovsen Sïjte, from VG (News paper), 28.Feb. 2023:** In a year's time, father Terje Haugen (Leader for North Fovsen Siida) will also be of retirement age, but he does not want to let his daughter take over completely just yet. "It is intended that I shall pass on the land in at least as good a condition as I received it. That is what this is all about, says Haugen. I intend to quit, but I cannot completely give up until I have seen the end of this. I have a warm heart for this here." (Engen, 2023) - "Maybe Elises and my children can drive reindeer and talk about the time when there were lots of windmills there, says Sissel [Stormo Holtan]." (Holtan Pavall Arbogen et. al., 2023)

Terje Haugen and daughter Lena Haugen explains the disturbances of the migrating landscape to VG (newspaper):

"They don't calve where they calved before, they spread to all corners. It can have lasting consequences, because the reindeer return to the area where they last calved. There has been a lot of work on the mountain, much more than before. They have made it difficult for us [says herder Lena Haugen]. In the meantime, the reindeer graze on the other winter grazing areas that the families have, but it is only a matter of time before they are grazed down. We have tried in vain for several years to correct this and keep the reindeer together. If it continues like this, it's only a matter of time before it's over, says father Haugen."
(Engen, 2023)

Leif Arne Jåma state that the reindeers move to a greater extent in the forest line and down to cultivated agricultural land to graze when wind farms are blocking the migratory pathways. The result: Difficult to herd when the herds are splitting up due to encroachments, and they will not use the pastures in a sustainable way when grazing:

"In order to have reindeer husbandry at Fosen, we are dependent on all the seasonal pastures we have. We cannot take away a winter grazing area and still think it is sustainable, Jåma points out." (Larsen, 2022).

Sissel Stormo Holtan are being interviewed by Morgenbladet (newspaper) about how they imagine their herding landscape in the future:
"Maybe Elise's and my children can drive reindeer and talk about the time when there were lots of windmills there, says Sissel [Stormo Holtan]."
(Holtan Pavall Arbogen et. al., 2023)

Her longing is a statement that the wind turbine infrastructure is not a part of the Saami cultural landscape of Fosen.
In a year's time, father Terje Haugen (Leader for North Fovsen Sïjte) will also be of retirement age, but he does not want to let his daughter take over completely just yet. His statement refers to their long journey of court processes and negotiations with the wind power industry and state institutions:

"It is intended that I shall pass on the land in at least as good a condition as I received it. That is what this is all about, says Haugen. I intend to retired, but I cannot completely give up until I have seen the end of this. I have a warm heart for this here."
(Engen, 2023).

The analytical concept of the Counter prospective landscape aims to see the future landscape through the lens of Saami reindeer herder, their wishes, and dreams for the generations that will come after us (Uhre, 2020).

North Fosen reindeer unit

Photo: Frank Lervik

Views from the wind power sector and facilitators (Fosen Vind DA)

The table presented below depict the main findings from the perspective of the wind power industry. The primary solutions and mitigating strategies identified to address Saami herding practices within wind power infrastructure involve reducing the reindeer population (Hjort, 2022), relocating the reindeer to alternative grazing areas (Viseth, 2023), actively transporting the herd between pastures with suitable vehicles, and providing economic and cultural compensation for herd relocation (Hjort, 2022), maintaining the wind farms within the herding district (Stranden, 2023), and granting special treatment to the reindeer herding district to compensate for encroachments (Børstad et al., 2021).
When interpreting the chosen documents from facilitators of Fosen Vind DA, I found that their understanding of landscape at Fosen reindeer herding district is based on the concept of Governable landscape (Uhre, 2020), or what Jones and Olwig would name it, Landscape as Polity (Jones & Olwig, 2008). The words and statements are based on political decisions of distributing renewable energy across the country.

According to the director of Statkraft DA, Rynning-Tønnessen, they followed all the laws and regulations according to the political and administrative decisions prior and under the construction phase. But he acknowledge that the licensing process had its complications due to protests from the reindeer herding district, but they tried to mitigate measures to compensate for the wind turbine encroachments and road construction in the winter pastures (Viseth, 2023).

According to the communication manager in Statkraft, Geir Fuglseth, they are keen to seek a consensus where both wind farms and traditional reindeer herding can coexist (Stranden, 2022).
Communication manager from Fosen Vind, Torbjørn Steen, stated that: *"Since 2013, we have ensured that we received a final license from the Norwegian authorities. A license that was granted after a long and thorough licensing process where all affected parties were heard and where the relationship with reindeer husbandry was given special emphasis in the treatment."* (Børstad et al., 2021).

Steen emphasize that they had follow all procedures correctly and had consultations that gained both parties, and that they even reduce the number of turbines to compensate for the loss of pastures.

Law firm Hjort DA who are representing Fosen Vind DA, wrote a letter to the Ministry of Petroleum and Oil (OED) after the Supreme Court Rule in 2021, where they are questioning the scientific reports made by research scientists (Hjort, 2022), mainly from Anna Skarin (Skarin et al., 2019).
They are questioning the scientific data and herders' knowledge about reindeer physiological stress factors due to wind power infrastructures. They want to active driving the herd to other suitable areas as compensation, which is not aligned with traditional herding (Hjort, 2022). But they do acknowledge that some part of the pastures may be lost due to encroachments and understand the implications of the conflicting land use interests, which can be considered as a value in the landscape concept of 'the migratory landscape'. But their mitigating strategy does not synchronize with the herding knowledge of the migratory landscape of the reindeer.

Understanding of landscape concepts and knowledge systems	Fosen Vind DA	Statkraft 52,1 %, Aneo (7,9%) [Trønderenergi] Nordic Wind Power DA (40 %) - Owned by investors: EIP (Energy Infrastructure Partners) and BKW AG (Swiss owned company)	* All quotes that are translated from Norwegian to English are showed with *

The Governable Landscape

Landscape as Polity
Laws, rules and regulations
Customs

Leader for Statkraft, Christian Rynning-Tønnesen to Teknisk Ukeblad (weekly news magazine), 2. March, 2023:

"- This is a reserve grazing area, says Christian Rynning-Tønnesen, about Storheia wind farm. The project as such has gone very well, purely in terms of development. But we must note that the licensing process was not thorough enough."

Rynning-Tønnesen mentions that the plans were altered in the past to consider the rights of reindeer grazing and they came to an agreement regarding compensations for road construction and other interventions during the development phase. However, they have not yet reached a similar agreement regarding measures to be taken during the operational phase. (Viseth, 2023)

Communication manager at Fosen Vind, Torbjørn Steen to NRK, 11. Oct 2021 (After the High Supreme Court Verdict) .**

"- Since 2013, we have ensured that we received a final license from the Norwegian authorities. A license that was granted after a long and thorough licensing process where all affected parties were heard and where the relationship with reindeer husbandry was given special emphasis in the treatment." (Børstad et. al., 2021)

** NRK (The public service broadcaster in Norway)

Communication manager in Statkraft, Geir Fuglseth to NRK , 26.april 2023:**

"- We are keen to seek to reach a consensus on an agreement that ends the case and focuses on the addition of sustainable reindeer husbandry at Fosen while ensuring the production of renewable power." (Stranden, 2023)

** NRK (The public service broadcaster in Norway)

Law firm Hjort DA, working for Fosen Vind DA, in a letter to OED*, 16. June, 2022:**

"An assessment should be made of which input factors are necessary for the reindeer herding in the area, in personnel, equipment, etc., to maintain the current reindeer numbers, and what reduction in reindeer numbers will mean a corresponding reduction in income, costs and other elements such as are important for the cultural practice of the Siida / Southern Sami. As reindeer husbandry is crucial for cultural practice for the Southern Sami, in this context it must be taken into account to what extent, if any reduced reindeer numbers will lead to fewer people being able to make a living from reindeer husbandry in the area, or if one reduction in reindeer numbers can be compensated for by establishing culture-bearing activities that can contribute to maintain cultural practice." *** OED (Ministry of petroleum and Energy in Norway)

(Hjort DA, 2022).

The migrating landscape

Multispecies interests
A landscape ecological discourse:
Grazing seasonal pastures
Migratory pathways

Law firm Hjort DA, working for Fosen Vind DA, in a letter to OED*, 16. June, 2022:**

"As a basis, pasture research should be carried out, cf. step 1, a new assessment of how big should be made grazing areas that must be considered lost as a result of the wind farms. This must be clearly stated in this assessment what proportion of the reindeer herd is assumed to be avoiding and in what large area. The assessments must be based on experiences from other wind farms and similar facilities as far as they can be considered relevant. As part of this, it should be examined in more detail whether there are studies on possible habituation to wind farms and similar facilities. It should also initiate research that can provide information about possible adaptation, possibly in combination with mitigating measures such as herding and active driving of the herd."

(Hjort DA, 2022)

Other views

The table presented below depict the main findings from other viewpoints. The statements show the spectre of views that have a more diverse perspective on the matter of the traditional herding landscape and landscape practice. The Ministry of Petroleum and Oil (OED) statements are in line with the analytical landscape concept of the 'Governable landscape'. According to Skårderud and Krokene (2023), OED wants to compensate the loss of grazing pastures by introducing alternative pastures, but do not have any recommendations since other herding districts have their own grazing pastures they are dependent on (East of Fosen peninsula). OED also want to compensate with 'dynamic turbine management', which means that wind turbines stop rotating when reindeer approaching the facilities (since reindeer reacts to rotating motions).
According to Haugnes (2023), an article from Teknisk Ukeblad (weekly newspaper), OED wants to arrange new migratory routes, but does not state where. The Ministry also wants to mitigate the encroachments by introducing fences and soy forage where the reindeer can gather. In terms of traditional reindeer herding, this is not aligned with sustainable herding practices since the reindeer are semi-domestic (not tame) are used to follow traditional ways and finding their own fodder. Compensating of lichen and evergreen with industrial soy forage, may only happen when all pastures are locked due to ice cover under the snow for the reindeer's survival. OED do admit that due to the Supreme Court Rule of 2021 (Høyesterett, 11.10.2021), they may have to move or remove some turbines, but this is not solved yet.

Another example of values and perception from 'the Governable landscape' is a statement from Frostating Court of Appeal (Overskjønn, 2020), where Fosen Vind DA won over the herding district. The Court ruled that:

"The Frostating Court of Appeal's decision assumes that reindeer herding can be replaced with fodder for three months during the winter, and claims that the winter grazing area at Storheia has not been utilized for ten years, and therefore cannot be considered a significant area for reindeer herders." (Overskjønn, 2020).

Implicit, the limited knowledge of how the reindeer husbandry utilizes the pastures are shown in the rule. Replacing lichen and evergreen for three months, does not align with traditional ecological knowledge.
Professor Kirsti Strøm Bull (Bull, 2021) who is one of the judicial experts on the reindeer herding law (Reindriftsloven), states that :

"Reindeer herding is not only a job but also an important part of Saami culture. Protection of this culture also involves the material basis for the culture that must be protected, in this context the grazing areas. Through the Human Rights Act of 1999, the convention is incorporated into Norwegian law and, according to § 2 nr. 3, takes precedence over other legislation." (Bull, 2021)

Considering this as a part of the landscape concept of 'The Worlding landscape' since this statement reflects a valuation of Saami culture and their land rights.

Understanding of landscape concepts and knowledge systems	Other views	*All quotes that are translated from Norwegian to English are showed with *
The worlding landscapes Saami landscape concepts and knowledge Traditional ecological knowledge (TEK)	**Old reindeer herder from Svahken Sijte, Jon A. Mortensson:** "In Nord-Fosen, a smaller wind farm [Bessakerfjellet, 2008] had been built prior to the Roan wind farm, and the reindeer herders had tried to cooperate and accommodate with the wind farm development. They did so in order to avoid being ignored when it came to the larger Roan project (built in 2018/19). However, the Roan wind farm was considered too large and wrongly placed. To ensure the survival of Sami reindeer herding culture, there needs to be guidelines or rules that promote careful treatment of the reindeer's habitats and the Sami reindeer herding culture in the cultural landscape." (Mortensson, 2023) **Professor on judicial expert on reindeer herding law, Kirsti Strøm Bull:** * "With the evidence on herders' knowledge of pasture areas, reindeer's physiological factors, important winter pastures and migration routes, it was still not enough evidence for the developers to find other areas or alternatives to come to an agreement. With several complaints from the herders, in 2010, 2013, 2014, and in Tingretten in 2018 (District Court), and in the Frostating Lagmannsrett in 2020 (The Court of Appeal), the wind farms were still built between 2018 and 2020 in Roan and Storheia reindeer pastures." (Bull, 2021) **During the December 2019 the court case at the Frostating Court of Appeal, Johan Remmen, who used to be a state attorney and was now representing Fosen Vind Da, made an argument to the one previously made by the Norwegian state, regarding the inefficiency of reindeer meat production in Fosen.** "I was partly present during the court case in Trondheim and listened to Remmen argue that the total production in reindeer herding is so small, that there is practically nothing to consider when considering wind power development. There are so few tons of meat coming out of Fosen that society can ignore it; it has little social significance. At the same time, the international conventions, like ILO 169, says that we should not compare reindeer herding with economics, that it is an absolute right to maintain an indigenous culture and traditional livelihood independent of the economic production value" (Interview Kjell (herder) 01.07.2020, in Ellingen, 2020, p. 66-67)	
The Governable Landscape Landscape as Polity Laws, rules and regulations Customs	**Klassekampen (News paper), 2.Mars, 2023:** The Ministry of Petroleum and Energy (OED)is responsible for following up on the High Supreme court Rule. OED is now looking for so-called mitigating measures to prevent the wind turbines from having to be demolished. Among the measures being considered are: - So-called "dynamic management" of wind power production. This means that the wind turbines stop when the reindeer approach. - Alternative pastures. That grazing areas be released elsewhere as compensation for the lost winter pastures. (Skårderud & Krokene, 2023) **Frostating court appeal, 2020:** * "The Frostating Court of Appeal's decision assumes that reindeer herding can be replaced with fodder for three months during the winter, and claims that the winter grazing area at Storheia has not been utilized for ten years, and therefore cannot be considered a significant area for reindeer herders." (Overskjønn, 2020). **Teknisk Ukeblad (weekly news magazine), 28. Feb, 2023:** In September 2022, OED (Ministry of Petroleum and Energy in Norway) put forward a proposal for a topic that can be investigated "which can secure the basis for continued reindeer husbandry at Fosen" (Translated to English): - Replacement pastures and expansion of pastures - Measures for collecting and moving reindeer: Transport, arranging migration routes, crossing points with roads -Investigate whether the areas in/near the wind power plants can be used for grazing through feeding, herding, edge guarding, fences or stopping turbines - Increase accessibility in the wind farms, for example by reduced plowing or temporary turbine shutdown when reindeer are gathered - Change roads, road closures and other traffic restrictions - Moving or removing turbines (Haugnes, 2023)	
The migrating landscape Multispecies interests A landscape ecological discourse: Grazing seasonal pastures Migratory pathways	**NRK** news article, 16. Nov, 2022:** At Fosen, the state administrator (Statsforvalteren), Siv Merethe G. Belbo, is aware that reindeer move to a greater extent in the forestline and down to cultivated agricultural land. *"We have experience with this from other reindeer grazing areas also if reindeer are disturbed in their natural seasonal movements. Changed grazing patterns contribute to new challenges for reindeer husbandry when herding the herds, Belbo explains in the note." (Larsen, 2022) ** NRK (The public service broadcaster in Norway)	

Chapter 5: Discussion

To provide a concise summary of the main findings in this chapter, it serves as a logical bridge to the subsequent interpretation and discussion. These findings stem from an analysis of documents and reveal a varied understanding of how Saami herders utilize the cultural landscape in the Roan and Storheia wind farms. Furthermore, it sheds light on the framing and (mis)interpretation of South Saami traditional ecological knowledge (TEK) by consultants from the wind power industry and state institutions. The chapter explores the differences in knowledge regarding the cyclical and seasonal structure of reindeer herding throughout the year, including the significance of winter and spring/calving pastures and the interconnectedness of migratory pathways. These disparities in understanding between herders and developers will be further examined and discussed in this chapter, along with potential strategies for mitigating the impact of infrastructure interventions in the Saami cultural landscape, where reindeer herding plays a central role.

Landscape concepts

To identifying the results from the document analysis, I divided the views of the Saami cultural landscape into four landscape approaches: The Governable landscape, The Worlding landscape, The Migrating Landscape, and The Counter Prospecting landscape. The reason was to find answers and a platform to identify the importance to investigate indigenous landscapes in a way that create knowledge-building between different views and landscape interests. The literature provided in this thesis, I have learned that the cultural landscape holds symbolic significance and values and often carries narratives that evoke emotions and shape individual identities.

It is not merely what we perceive visually, but also how we interpret it, using our minds to assign intangible values to the landscape. Preserving heritage aims to safeguard these cultural values. The Saami landscape encompasses substantial local elements that may not always be apparent to evaluators without specialized knowledge. Recognizing both tangible and intangible aspects of the landscape is essential for effective planning and land use. For the Saami people, their cultural landscape is the result of longstanding interactions between humans and nature spanning multiple generations. Anu Soikkeli sums this up:

" For a non-Sámi person, the northern cultural landscape may appear as simply a natural landscape with no visible elements of any culture. However, the landscape is full of landscape-related meanings, Sámi stories, placenames and oral traditions that express and form part of the surrounding nature. For those who can interpret the signs and understand the traces, know the names and remember the tales, the landscape is apparent. For the uninitiated, the message is invisible and inaccessible." (Soikkeli, 2021, p. 126)

As mentioned earlier in this paper, Michael Jones claims that environmental policymakers have focused more on agricultural landscape rather the Saami cultural, often intangible elements (Jones & Olwig, 2008). What we can see from the results from the document analysis, several valuations of the Fosen landscape emerge with wind power development. State institutions and the wind power sector appear to recognize the significance of traditional reindeer herding and have made attempts to develop solutions that minimize the negative impacts of encroachments. However, the proposed measures aimed at resolving conflicts over land use between developers and herders have proven ineffective. There is a discrepancy in how developers perceive the value of traditional reindeer herding and the Saami landscape compared to the perspectives of the herders themselves.

Recommendations and possible future solutions

1) FPIC* and Impact assessments

Various approaches exist for promoting equal rights in participatory processes related to environmental planning. In developed countries, such as those in the Global North, these processes are influenced by trends like urbanization, the growth of green industries, and the revitalization of rural areas for both production and recreation. However, conflicts often arise due to power dynamics and disputes over autonomy between different levels of governance, including local and decentralized resource management, regional county management (as outlined in the Planning and Building Act), and national institutions (Skjeggedal et al., 2021).

An Environmental Impact Assessment (EIA) process could enhance the autonomy of the Saami people in Norway by enabling them to take part in decision-making processes and have a say in the final outcome of a project. The EIA process can identify and potentially prevent adverse impacts resulting from natural resource extraction activities, such as mining or wind turbine installations, in the Saami landscape. Additionally, the EIA process can examine a project and suggest measures to mitigate any negative impacts it may have on the environment, according to Rudloff (2021).

In their examination of land use planning processes in Norway and multilevel governance, Skjeggedal et al. (2021) argue that conflicts arising from different user interests and protection stem from the structural management of local and national governance, characterized by a hierarchical bureaucracy.

* Free, Prior, and Informed consent: A specific right that pertains to indigenous peoples and is recognized in the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP).

While the consensus-oriented processes have been somewhat effective, there is a need to establish common arenas that serve as platforms for mutual coordination between local, regional, and national planning, with the aim of improving communicative practices within the multilevel governance network (Skjeggedal et al., 2021). Additionally, Scharpf (1999), in his book 'Governing in Europe: Effective and Democratic,' contends that participation in decision-making processes may enhance the democratic process but may not necessarily lead to a more just outcome or output legitimacy in the end (Scharpf, 1999).

The obligation to consult the Sami people varies and seeking consent is the objective, but it is not mandatory for projects that impact Sami territories, as seen in the recent Fosen case. Co-management or community-owned management that prioritize Sami rights and interests is generally lacking. However, this changed in 2021 with the revision of the Sami Act and the enactment of new provisions related to consultations. One such provision states that county municipalities and municipalities have a duty to consult representatives of affected Sami interests in matters of local regulations and decisions that could directly affect Sami interests (Regjeringen, 2021).

The Consultations Act aims to establish procedural rules for the Sámi Parliament's consultations at the state level and enshrine the obligation to consult for municipalities and county councils. This legislation will enhance democracy by including the Sami people collectively in decision-making processes concerning matters that directly affect them.

In conclusion, Sami rights encompass various aspects such as maintaining their traditional way of life, preserving their traditional lands and resources, and exercising self-determination.

In the context of Environmental Impact Assessment (EIA), it is crucial to consider and address the potential impact of proposed projects on Sami rights during the scoping process.

While scoping mechanisms in EIA can provide opportunities for Sami interest holders to express ongoing and future concerns about Sami territories during project analysis, criticisms arise when they are involved too late or merely consulted for the sake of EIA without meaningful participation in decision-making processes. Larson emphasizes the need to move towards co-management and community-owned Impact Assessment (IA) with stronger indigenous demands for rights to Sami territories and resources (Larsen, 2018).

To enhance the effectiveness of the scoping phase in EIA within a Sami context, recommendations include transforming the platform of communication and dialogue to align with the principles of Sami self-determination, as Norway has ratified ILO Convention No. 169, which obliges the country to address Sami rights and interests regarding their territories and resources. This transformation will assist government agencies in fulfilling their duties under national and international laws and regulations.

According to reindeer herder miscommunication, stressful dialogues and lack of Saami landscape knowledge in the consultation processes, were one of the main reasons developers did not understand the herders' values and perceptions (Ellingsen, 2020; Fjellheim, 2020b). Kirsti Strøm Bull, a professor and legal expert on reindeer herding law, even though the herders had provided evidence of their traditional knowledge during the consultation processes from 2008 to 2018 and had filed complaints, the wind farms were still constructed between 2018 and 2020 in Roan and Storheia herding pastures (Bull, 2021).

The Fosen Saami reindeer herding units have been interviewed and have been asked how they felt during the consultation processes went during impact assessments, and under the court processes (Ellingsen, 2020; Fjellheim, forthcoming). According to the Fosen herding units, the consultants from NVE and wind farms was not trustworthy. The same consultants were hired both by NVE and Fosen Vind AS (now Fosen Vind DA), to legitimate the operation of wind farms, and tried to neglect any violation of Saami usufructuary rights to the pasture areas. The reindeer herding knowledge and landscape understanding were strategically ignored by the developers, according to the herders (Fjellheim, forthcoming).

Saami scholar Øyvind Ravna (Ravna, 2020), wrote 'The duty to consult the Sami in Norwegian Law' in 2020. The right to be consulted in the matter of participation in decision-making processes regarding land use intervention in indigenous territories/ the Sami cultural landscape, is one of the cornerstones of international indigenous laws* , implemented/ enshrined in ILO169** , ICCPR Article 27*** and UNDRIP**** (Ravna, 2020, p. 236). On a global scale, consultations and participation on decision-making is one of "the main challenges in the relationship between indigenous peoples and the majority population in many states" (Ibid.). In nations where ILO 169 (ca 23 nation states in 2020) are ratified, consultation and participation are central aspects to decision-making processes that affect indigenous peoples' rights, positions (Article 6). Norway ratified ILO 169 in 1990, which means that the state is obligated to consult Saami people when policies (legislative or administrative measures) may affect them (the way of living, doing and being).

* NOU 2007, 13, 217 - Norwegian Public Report about the New Sami Act). And: Indigenous & Tribal Peoples' Rights in Practise: A Guide to ILO Convention No. 169, International Labour Standards Department, 2009, 59.

** From Regjeringen.no about ILO 169: "The main principle in ILO Convention no. 169 on indigenous peoples and tribal peoples in independent countries is the right of indigenous peoples to further develop their culture and the authorities' obligation to initiate measures to support this work. Norway ratified the convention in 1990." (https://www.regjeringen.no/en/topics/indigenous-peoples-and-minorities/urfolkryddemappe/the-ilo-convention-on-the-rights-of-indi/id487963/)

*** From OHCHR (UN Human Rights Office of the High Commissioner) webpage about Article 27: Article 27 of ICCPR is the most widely accepted legally binding provision on minorities and provides the basis and inspiration for the UN Declaration on Minorities. Article 27 reads: "In those States in which ethnic, religious or linguistic minorities exist, persons belonging to such minorities shall not be denied the right in community with the other members of their group, to enjoy their own culture, to profess and practise their own religion, or to use their own language." (https://www.ohchr.org/en/special-procedures/sr-minority-issues/international-standards).

**** From Norwegian National Human Rights Institution's webpage: Human rights conventions such as the ICCPR, ICERD (International Convention on the Elimination of All Forms of Racial Discrimination) and ILO 169 form part of the international legal basis for the protection of indigenous peoples against interferences in their traditional business activities, The UN Declaration on the Rights of Indigenous Peoples (UNDRIP), which is a newer instrument, is based in part on these conventions as well as on practice and customary practices. "UNDRIP is not in itself legally binding but is largely inspired by and reflects legally binding provisions, in particular ICCPR Article 27 as interpreted by the Human Rights Committee, as well as ILO 169." (https://www.nhri.no/en/report/human-rights-protection-against-interference-in-traditional-sami-areas/2-international-conventions-and-their-status-in-norwegian-law/)

2) Interesting design on wind turbines for further studies within the field of landscape architecture and landscape planning

Horizontal Axis wind turbines (HAWTs) are the most common design in the European wind turbine marked (Möllerström et al., 2019). Due to significant noise disturbances (Liu, 2017) which is called 'trailing edge noise', and visual and migratory impacts on reindeer (Eftestøl et al., 2023; Niebuhr et al., 2022; Skarin et al., 2021), reduction on forage (Tømmervik et al., 2022) and bird collisions as another major problem (Möllerström et al., 2019) - there has been some research on introducing Vertical Axis Wind turbines (VAWTS) to reduce physiological stress factors for mammals, and reduction on bird and bat collisions (Hansen et al., 2021; Möllerström et al., 2019).

In the context of Fosen, there is more ice under the snow in the valleys, while it is often colder and better snow conditions higher up in the mountainous landscape, and therefore easy access to lichen and evergreen. According to researcher Skarin, "One strategy for finding good pasture is to go higher up, but that is often where developers set up wind turbines" (Heldahl, 2023). She refers to the Fosen case (Storheia and Roan), where the best winter pastures are localised in the wind farm areas. The visibility and noise from horizontal axis wind turbines (HAWT) increases the physiological stress factors (Skarin et al., 2021). Vertical axis wind turbines (VAWTs) are a type of wind turbine that rotates vertically, in contrast to horizontal axis wind turbines (HAWTs) where the blades rotate horizontally. When considering the safety of mammals, and avian species, there are specific factors to consider with VAWTs.

According to a study led by Professor Iakovos Tzanakis at Oxford Brookes University, VAWTs are also more efficient than traditional HAWTs because the vertical design leads to an increase in kinetic energy, and the studies shows that VAWTs will probably reduce land use and also significantly increase energy production per km2 (Hansen et al., 2021). Furthermore, the visual movement effect is reduced since the rotor design is integrated into the turbine body. However, there is limited research available on the impact of VAWTs on terrestrial mammals and ungulates, indicating the need for further investigation in this area.

The main implications:

1. Collision Risk: One concern is the potential for collisions between mammals and the turbine blades. Unlike HAWTs, VAWTs have a vertical rotor that may be more visible to wildlife, reducing the risk of collisions. However, it is still important to assess the specific location and environmental factors that could affect the likelihood of collisions (Marques et al., 2014).
2. Noise and Disturbance: Wind turbines, including VAWTs, produce noise during operation. Excessive noise can disturb mammals, particularly those with sensitive hearing, such as bats. Proper site selection and noise mitigation strategies can help minimize the impact on mammal populations (Liu, 2017; Skarin et al., 2021).
3. Habitat Disruption: The installation of wind turbines, including VAWTs, may require clearing land or altering the landscape. This can result in the loss or fragmentation of habitats, potentially affecting Rangifer tarandus' populations by restricting their movement patterns, access to resources, or disrupting breeding and foraging areas. Mitigation measures such as habitat restoration or the implementation of wildlife corridors can help mitigte these effects (Strand et al., 2017). Though, in Norway where they have installed turbines in ridges and pathways where Rangifer tarandus have their winter and spring grazing areas, should be avoided. Other optimal areas for wind farms should be identified.
4. Electromagnetic Fields: Wind turbines generate electromagnetic fields (EMFs) as a by-product of their operation. While research on the impact of EMFs on mammal populations is limited, it is an area of ongoing study and monitoring to understand any potential effects on behaviour, navigation, or other physiological responses (McCallum et al., 2014).

It is crucial to conduct thorough environmental impact assessments and site-specific studies before the installation of wind turbines, including VAWTs, to evaluate and address potential risks to mammal populations. These assessments can help inform the implementation of appropriate mitigation measures to minimize any adverse effects and ensure the long-term sustainability of wind energy projects while safeguarding mammal safety.

Regarding Sami landscape knowledge and traditional ecological knowledge (TEK), wind farms in general will disrupt and perforate the migrating landscape of reindeer and traditional reindeer herding. The nexus of introducing wind farms in the Saami cultural landscape will change the landscape characterises and will have implications on traditional herding and cultural practice. Landscape fragmentation due to encroachments, visual and noise impacts, vibrations from powerlines and transformers, do not align with the values and knowledge in the South Saami cultural landscape. Pleatnjasjidh (grazing peace) are one of the major factors for sustainable, resilient reindeer herding practice, and the peace will be disrupted due to wind farms.

The Saami landscape also have a sacred and mythological part (immaterial), which also should be considered in interventions. The Saami mountainous landscape have and still are a place for migratory pathways for reindeer husbandry but is has also been a place for peace and to hide from the society when life is hard. The Saami landscape is also a part of INON ”inngrepsfrie naturområder i Norge” (”intervention-free nature areas in Norway”), the few parts of undisturbed nature in the outlying fields in Norway. According to Naturpanelet, the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), who published an report in 2022,'The Diverse Values and Valuation of Nature' (IPBES, 2022), states that the main cause of the global nature crisis is the way we value nature in political and economic decisions. One of the key main messages (Key Message II) in the report, they acknowledge:

"Despite the diversity of nature's values, most policymaking approaches have prioritized a narrow set of values at the expense of both nature and society, as well as of future generations, and have often ignored values associated with indigenous peoples' and local communities' worldviews." (IPBES, 2022, p. 10)

Politicians and other decision-makers have prioritized some of nature's economic values over others, which has been explained in the Fosen Case. Thus, the key to solving the nature crisis is also closely linked to the appreciation of nature's values through implementing Saami landscape values and tradition in planning. On a global scale, 75% of the earth's land area are significant changed, due to expansion of cities, roads, industrial agriculture, and forestry (IPBES, 2022). In Norway, the percentages of undisturbed nature are around 11-12 % (Miljødirektoratet).

Renewable energy facilities are among the most expansive infrastructure projects that diminish biodiversity in areas where nature is still intact. If we are going to take care of these undisturbed nature types according to IPBES, the SDGs* , the European Landscape Convention, and the Convention on Biological Diversity (CBD) - and at the same time valuing and acknowledge Indigenous rights to land and water, and their traditional practises – we need implement these landscape values into land use planning where renewable power projects are being constructed.

According to IPBES, Key message number 6:
"Despite increasing calls to consider valuation in policy decisions, scientific documentation shows that less than 5 per cent of published valuation studies report its uptake in policy decisions" (IPBES, 2022, p. 12).

IPBES wound that scientific studies of valuation reveal differences in target for the valuation, the methodological approach, the specific value types that are considered, the life frameworks they fit into, the value indicators that are used, the scale of use. Going back to the different landscape concepts, and how different stakeholders value undisturbed landscape/ the Saami cultural landscape, there is a need to maintain these areas as INON, for migratory undulates, the Saami cultural practices, and other ecosystem factors.

* SDGs:
Norway has committed to adhering to the Sustainable Development Goals (SDGs), viewing the 2030 Agenda and its 17 SDGs as a comprehensive global framework that guides both national and international endeavours. The country sees these goals as instrumental in the pursuit of eliminating extreme poverty, safeguarding the environment, fostering prosperity, peace, and justice (SDGs, 2015).

According to Knut Botten who studied the nature intervention at Roan wind farms, the infrastructure had major impacts on the landscape than was actual acknowledged by Fosen VIND DA and NVE (Botten, 2021). The road encroachment tripled the size, and blasts of sharp rocks was spread around the mountainous environment. In a way are the Saami cultural landscape changed towards an industrial landscape with fragmented ecosystems, where important morass types have been destroyed, migratory pathways are disrupted, decrease in reindeer's winter forage, and bird collision are major problems for the biological diversity.

Ministry of Petroleum and Oil just published report from Energikommisjonen (the Norwegian Energy Commission), where they conclude "More of everything - faster". It is a political goal to double Norway's power consumption within a short time, with hopeless plans for electrification of oil platform, battery factories, hydrogen and ammonia production, capture and storage of CO_2 plus the creation of facilities for cryptocurrency and Google (NOU, 2023).

This will remove our power surplus momentarily, and lead to massive construction of wind power both on land and at sea. Statkraft's forecasts are 40 TWh by 2030, and 85 TWh by 2050 (Meld.St.13, 2020-2021). This may cost large sums with subsidies from the State, where the money will be collected from the tax bill or the electricity price and network rent for all electricity customers. At the same time, undisturbed nature areas together with the Saami cultural landscape will decrease at fast speed.

There are controversies on how to combat the climate crisis and other SDGs, though it must go along with the biological diversity crisis in indigenous territories (Walker et al., 2019). The UN Declaration on the Rights of Indigenous People's (UNDRIP, 2022) have stated these concerns, together with the Saami Parliaments in Norway, Sweden, and Finland.

3) Counter prospecting landscape approach in the field of Landscape Architecture

What occurs when some stakeholders are given preferential treatment and prioritized based on economic considerations rather than socio-ecological factors? What happens when power imbalances exist during the scoping and construction phases, resulting in local voices feeling disregarded in their right to participate and shape the future of their environment and landscape? These circumstances can give rise to feelings of mistrust, anger, hopelessness, and sadness, which may then manifest as forms of resistance - actions taken to oppose those in power and decision-makers through various artistic means.

In their work from 2018, scholars Janike Kampevold Larsen and Peter Hemmersam explore the question of "What is the future North?" and delve into the concept of 'Solastalgia' (Larsen & Hemmersam, 2018) developed by philosopher Glenn Albrecht (Albrecht et al., 2007). Solastalgia refers to the emotional distress that arises from the loss of a sense of home and a healthy relationship with the landscape due to environmental and landscape changes (Larsen & Hemmersam, 2018, p. 3). As the Southern Saami landscape perforates and fragments due to infrastructures, the era of the industrial landscape arise together with Solastalgia.

In the context of the Worlding landscape, resistance takes the form of counter mapping and global indigenous resistance movements, empowering local indigenous communities to assert their self-determination and fight for their right to question large-scale interventions that impact their way of life. Expanding on this idea, countering the future prospects of the landscape and environment involves reclaiming agency through visual resistance within the field of landscape architecture.

Uhre discusses the need to decolonize landscape architectural methods when approaching the dynamics of contested landscapes in the Arctic. It highlights the importance of critically reviewing the role of built-environment professions in serving public land-use policy and calls for the development of tools to understand and engage with landscapes that have contested futures. The Counter prospective concept is a tool for defining the future of the Saami landscape, from our perspectives and value systems. Uhre argues that landscape architecture should be considered among the "prospective arts," and introduces the idea of "counter prospecting" to understand and engage with landscapes that have contested futures. Uhre calls for greater responsibility in landscape architecture to address the exclusion of Indigenous people's landscape relationships in landscape management and design (Uhre, 2020, p. 8).

For future studies on the Saami cultural landscape where projected outcomes interfere with the Saami ways of being (ontology), of knowing (epistemology), and of doing (methodology), should be implemented in landscape projects. These values give raise to the Migratory landscape, the Worlding landscape, and the Governable landscape where indigenous land rights are intertwined in impact assessment and landscape interventions.

Conclusion

The development of wind power in the Saami landscape and reindeer pastures has significant consequences for the Saami people and their way of life in Fosen. One of the major impacts is the displacement of reindeer pastures, which are essential to the Saami culture and economy. Wind turbines and associated infrastructure such as roads, power lines, and substations take up a considerable amount of land, making it difficult for reindeer to graze and migrate freely.

The construction and operation of wind turbines also generate noise, vibration, and light pollution, which can negatively impact reindeer behaviour, health, and productivity. Reindeer may avoid areas near wind turbines, leading to the fragmentation of their grazing grounds and migratory networks. The increased disturbance and stress caused by wind power development may also affect the health and reproduction of reindeer.

Wind power development can also have social and cultural impacts on the Saami people. The development of wind farms can disrupt traditional land use patterns, limit access to important cultural sites, and diminish the cultural significance of the landscape. The South Saami people rely on the reindeer for their livelihoods and cultural identity, so any threat to the reindeer herds can have a significant impact on their way of life. Furthermore, Saami communities have expressed concerns about the lack of consultation and participation in the decision-making process regarding wind power development, which can result in a loss of control over their lands and resources.

To sum up, wind power development in the Saami landscape and reindeer pastures has significant consequences for both the environment and the Saami

people. It is important to ensure that the development of wind power projects is done in a way that considers the cultural, social, and environmental impacts on the Saami people and their way of life. This can be achieved through meaningful consultation and participation of Saami communities in decision-making processes, consideration of cumulative impacts on the landscape, and the development of appropriate mitigation measures to minimize negative impacts on reindeer herds and their pastures.

As concluding remarks, wind turbine development in the Saami cultural landscape will inherently change the environment for many species and local communities. Considering moving wind farms from undisturbed nature areas to already contested landscapes are one of many considerations in future research. Landscape architects and planners have an obligation to think interdisciplinary when projected outcomes interfere with socio-ecological systems and should emphasize indigenous landscape knowledge into the design and assessment reports.

During the time of writing this thesis, Saami youth activists held demonstrations in Oslo (from 23rd February to 3rd March 2023) to highlight that the Norwegian government had not yet determined a course of action regarding the illegally constructed wind turbines in the Fosen Njaarke peninsula. This was in response to a High Supreme Court Verdict on October 11, 2021. The ensuing public debate provided insights into the management of sustainability, the interplay between renewable energy and biodiversity, and the rights of indigenous communities to preserve their cultural landscape. Karoline Bakka Hjertø, in her article in the Norwegian newspaper Dagens Næringsliv, emphasizes the significance of EU legislation, stating that for an activity to be considered sustainable and align with the sustainable shift, it must simultaneously safeguard climate, nature, and human rights (Hjertø, 2023). Hjertø effectively captures the essence of the Fosen Case, and I will leave it with this.

Storheia

Photo: Per Inge Oestmoen

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A

Tjaangedidh- Preparing to gathering the herd for moving.

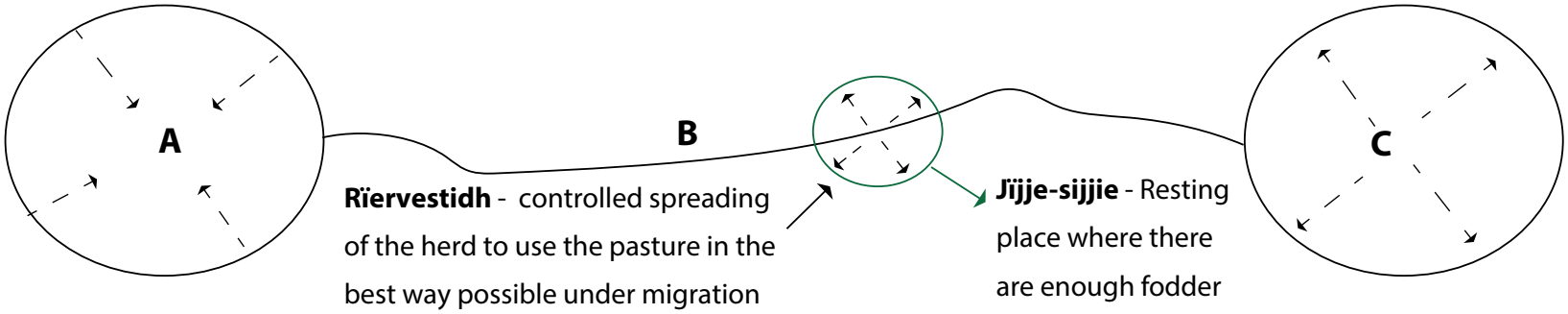
B

Jåhtaldahke/ migrating pathway

During late winter/ early spring the herd have loosed weight and need time to graze in different jïjjie-sijjie. The resting should not take too much time, since the cows can give birth earlier than expected.

C

Veajhtoestidh - spreading the herd with less controlled herding. The cows need peace to give birth.



Gïjre-daelvie
Late winter/ early spring

Gïjre
Spring/ calving season

Daaletje present

Contested landscape
wind farm encroachments & surrounding landscape

An example from Roan winter pastures

A From winter pasture..

Tjaangedidh - Preparing to gathering the herd for moving.

Disturbances of wind farms makes it harder to gathering the herd into the jåhtaldahke.

B

Jåhtaldahke/ migrating pathway

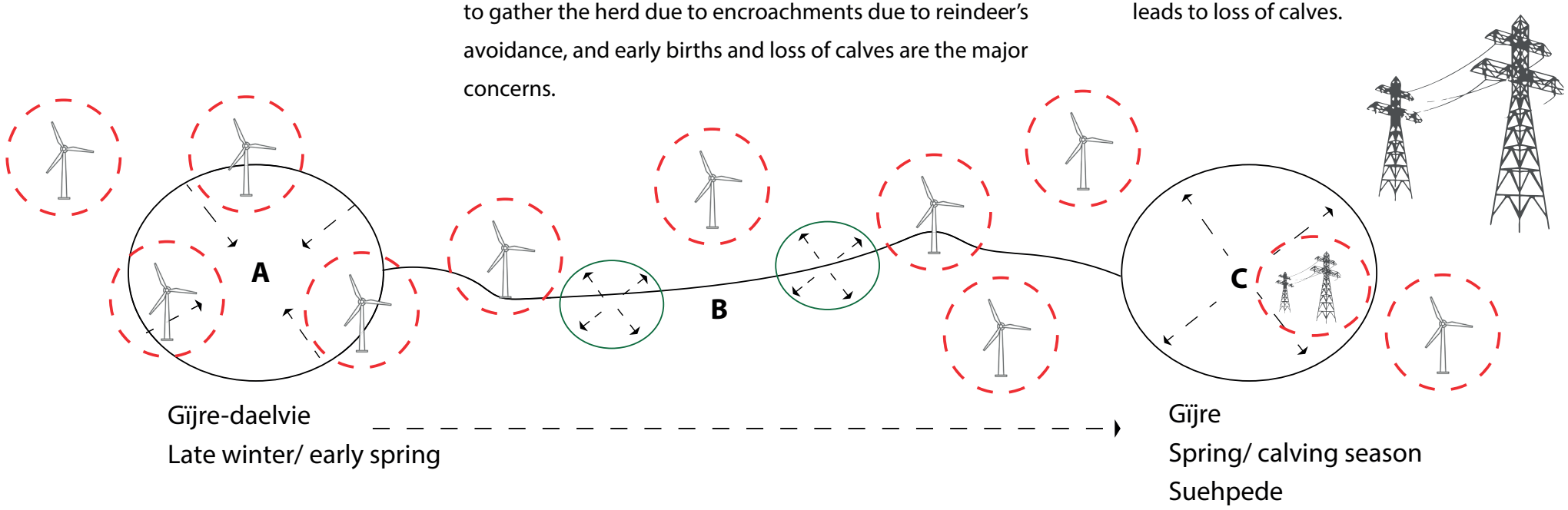
During late winter/ early spring the herd have loosed weight and need time to graze in different spots in jåhtaldahke. The resting should not take too much time, since the cows can give birth earlier than expected.

Disturbances abrupt and cause stress: It takes longer time to gather the herd due to encroachments due to reindeer's avoidance, and early births and loss of calves are the major concerns.

C ...to spring pastures

Veajhtoestidh - spreading the herd with less controlled herding. The cows need peace to give birth.

Disturbances of 420 kWh powerlines (and wind turbines nearby) cause visual, noise and - vibrational impacts and the risk may leads to loss of calves.



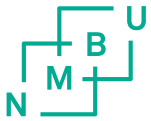
Rïervestidh - controlled spreading of the herd to use the pasture in the best way possible under migration. During this time of the year, rïervestidh is happening where there are best access to lichen and evergreen.

Disturbances: Due to wind farms, it is very difficult to use the pastures in a sustainable way. Gathering takes extra amount of time and it is very labour intensive when wind farm encroachments are implemented in jåhtaldahke. Many places, rïervestidh is difficult or impossible to accomplish. Sometimes the herd wants to move back to the winter pasture, or individuals going in different directions.

Appendix 2

	Landscape terms	Explanation	Seasonal pastures	Implications & disturbances	References
Doedtere vaerie/ Mountain landscape	Vaerie - Mountain	The mountain consists of many different landscape elements and the variety of these elements is important to keep intact without any construction of infrastructure and tourism development.	All seasons	Construction of roads along or across such a landscape element will in the worst cases stop the free movements or migration of reindeer. Even a construction of a small cottage can stop the free movement up and down the várrenjunni.	Svonni et. al., 1986
	Vaerienjuenie - End of mountain often shaped as a ridge ("boat shaped feature")	Vaerienjuenie - end of mountain often like a "boat" shaped feature - is very important landscape element concerning herding and migration of reindeer. Since the reindeer like to follow the Vaerienjuenie in order to either walk down to the forests or vice versa it is very easy to herd/migrate the herd along the Vaerienjuenie. The Vaerienjuenie is exposed for sun and wind, and during the late winter/early spring - bare spots of vegetation/land (bïevle-njuana) occur and therefore Vaerienjuenie is a very important spring grazing area.			Svonni et. al., 1986
	Deava – Hill/slope	This landscape feature is of importance since the reindeer like to graze uphill and in winter the top of deava has less snow and the pasture might be more accessible here.			
	Tjahke - Mountain peak	Mountain peak. The foothills (deava) of a mountain (vaerie) or mountain peak (tjahke) may have lush vegetation (grass and herbs) which the reindeer can utilize during the summer. Tjahke is also important for the reindeer to escape to during warm summer days.	Mostly used during the growing season, but the reindeer may escape up to the mountain peaks during winter due to severe grazing conditions in the lower mountains or in the lowland.		Riseth et al. 2011, Svonni et. al., 1986
	Gaejsie - High mountain or mountain peak.				
	Vijrenohke – Large mountain plateau	Large mountain plateau with vegetation.	All seasons		Svonni et. al., 1986
	Dielhtie - Snow and glaciers patches	These feature are of high importance during the summer period in such way that the reindeer can escape the insect plaque but also in order to use this landscape for gathering the reindeer for earmarking on the snow and ice or gather before migrating (dielhtie) them for earmarking in fenced areas.	Summer		Svonni et. al., 1986

	Landscape terms	Explanation	Seasonal pastures	Implications & disturbances	References
Doedtere vaerie/ Mountain landscape	Guevtele – Barren mountain ridge often with boulder.	These features are of high importance during the summer period in such way that the reindeer can escape the insect plaque but also in order to use this landscape formation for gathering.	All seasons	Construction of wind farms can disturb the reindeer so they escape to other areas that can have a cascading effects on other sïjte/ units.	Svonni et. al., 1986, Skarin et. al. 2021
	Låemie - small depression or small valley	Smaller depression or small valley – often with grass land or other important grazing types. Can also be found in the forests.	Mainly growing season		Svonni et. al., 1986
	Vaartoe - low mountain	Low mountain with some ruggedness and often in combination with rivervalley. The reindeer like this landscape very much, especially during spring and this kind of landscape is mainly used as calving area.	Early spring, spring and calving season. But also important winter grazing land.	Construction of wind farms can have detrimental effects and reindeer will escape such an area and find an alternative calving area if they exist. This happened at Roan East wind farm.	
	Garse/Kluptie/Garphe -canyon or deep valley	This feature will together with deep fjords, rivers and lakes act as natural barriers for the reindeer.	All seasons	Constructions and development of infrastructure might be established here - if they not disturb or inflict with migration routes or important grazing areas close to them	Svonni et. al., 1986, Skarin et. al. 2021
	Vaegkie - valley	This landscape type is important during both the growing season and the winter season since it give the reindeer some shelter from wind on the mountain ridges as well as this landscape type may deliver more diverse vegetation like meadows, heath vegetation, scrubs, wetlands and mire vegetation.	All seasons		Svonni et. al., 1986
	lïtnje - ledge or niche	This landscape feature is of importance for the reindeer when they migrate from an area to another grazing area.	All seasons	Disturbance and construction here will inflict with the free movement of the reindeer.	



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