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Co-existence and conflict in a changing forest landscape

A case study of Maskaure reindeer herding district

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Abstract

Land use for reindeer husbandry and forestry are overlapping in large areas of northern Sweden. This co-location is characterized by dynamics in which the forest industry owns the land and the power to transform it, and the reindeer industry possesses a user-right for reindeer grazing and herding. During the last couple of years, critique towards the forest industry has grown louder, and reindeer-herding Sami people argue that their industry is made more difficult in the current form of the landscape. By drawing on tools from political economy, mobilizing landscape theory and the concept of access, this thesis critically investigates how the landscape is produced and reproduced by the practices of forestry, and how reindeer husbandry is affected by the changing form of the landscape.

To analyze these dynamics in the concrete, the thesis conducts a case study of Maskaure reindeer herding district. Maskaure is a forest herding district in northern Sweden, at the border between Norrbotten and Västerbotten, whose pastoral practices and activities are negotiated by the landscape transformations which they live in, and produce in. Through fieldwork, semi-structured interviews, and secondary data, this thesis examines how the Maskaure landscape is produced by forestry, and how the herding district's activities are affected, bounded, and negotiated by this form of the landscape. In extension, the thesis investigates how this affects the people who are living in and producing in this landscape.

Clear-cutting, fertilization, soil preparation, and re-plantation of densely-growing, non-native tree species – are all interventions in the landscape that create an evenly aged, productive forest landscape, functional for profitable forestry today and in the future. These practices, combined with overlapping land pressures from fossil-free investments into the northern Swedish landscape, result in a spatially fragmented forest for reindeer husbandry. In addition, the political framework set up to protect Sami land use are insufficient in this task, resulting in the political power of the herding district being undermined. Due to these dynamics, reindeer herders are living and working in a landscape that gradually is functionally disintegrated for the purpose of reindeer husbandry. These processes entail that reindeer husbandry in Maskaure today is more difficult, and more expensive, compared to 10-20 years ago.

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Definitions

Reindeer pasture lands – The areas in which reindeer husbandry may take place. This area covers approximately half of Sweden's surface and is defined in the Reindeer Husbandry Act.

Year-round pasture lands – Areas in which reindeer husbandry may take place all year. These are generally located further west in Sweden.

Winter grazing lands – Areas in which reindeer husbandry may take place between October 1st and April 30th. Generally, these are in forest areas, further east and towards the coast. From the 1st of May to September 30th, the herding districts may not keep reindeer in these areas.

Sameby, or herding district – An economic and administrative association with the purpose to manage reindeer husbandry within their given geographical area. For each herding district, this geographical area comprises both year-round pasture land and winter grazing land. There are 51 herding districts in Sweden, divided between mountain herding districts, forest herding districts, and concession herding districts.

Mountain herding district – A mountain herding district has year-round pasture lands in the mountain areas, and winter grazing lands in the forest landscape.

Forest herding district – The forest herding districts remains in the forest landscape all year but moves between different forest areas for their year-round pasture lands and winter grazing lands.

Concession herding district – In a mountain herding district and forest herding district, only Sami people can own reindeer. In a concession herding district, other people can own reindeer, but they still must be managed by a Sami reindeer herder who is granted a concession, a special permission, from the county administrative board.

Samråd, or consultations – Legally required consultations which forest companies, as well as other actors, are required to hold with affected herding districts before making interventions in the landscape.

Hectare – A hectare equals 10 000 square meters.

1. Introduction: Tracing out the challenges of co-location in the Maskaure landscape

On a Sunday morning in February, I met with a former reindeer herder at his house in Arjeplog. He began as a reindeer herder when he was 16, after finishing school, and inherited the reindeer from his father. Since then, he has worked as a reindeer herder for approximately 40 years. As for the first 10-20 years, he says that "there was no abundance, but you could make a good living on the yield".¹ But approaching the turn of the millennium, the preconditions he and the other herders faced in reindeer husbandry started to change, and the herd, as well as the returns, got smaller and smaller. Predators got more numerous, and the land was increasingly claimed by other industries and activities. A central cause for the decreasing returns was also the changing forest landscape. More and more of the forest was subjected to clear-cutting and other practices of industrial forestry, such as harmful procedures for soil preparation or the plantation of new, non-native tree species. The available grazing lands, particularly in the herding district's winter grazing lands, became smaller each year. After a while, he and the other reindeer herders had to start taking other jobs during the summer, when the activities of reindeer husbandry are not as demanding, to make ends meet over the year. A couple of years ago, the situation ultimately got unsustainable, due to the continuously declining yields, and he came to the decision to quit as a reindeer herder. He sold off most of his animals and started working at the test driving ranges outside Arjeplog as this gave a higher and more stable income. The first two years after he quit, he said, it felt weird not to be working in the forest anymore, and he is still involved in administrative tasks of the herding district and tries to help in the forest as often as he can.

This thesis is about the challenges faced in reindeer husbandry in northern Sweden, and how these challenges are related to the practices of the forest industry. It centers on the dynamics in which a landscape in transformation due to industrial forestry poses new challenges and preconditions for production, and in extension livelihoods, of reindeer-herding Sami people. Industrial forestry and reindeer husbandry are co-located in large areas of northern Sweden and use the same land for their activities. This study investigates what this means for reindeer husbandry in Sweden through a case study of Maskaure herding district.

Forestry today is characterized by cultivation, rather than extraction (Prudham, 2003), and due to intensive management and a long industrial history of forestry, few areas within the

¹ Original quote in Swedish found in Appendix 1.

Swedish forest landscape remain unlogged (Johnson & Miyanishi, 2012). Productive forests, meaning forests suitable for forestry in quality and characteristics (Statistics Sweden, 2021), make up 58 percent of Sweden's surface (SLU, 2021A). According to the industry organization Swedish forest industries, the industry employs approximately 115 000 people and makes up around 10 percent of Sweden's total export of goods (Skogsindustrierna, n.d.). At the same time, Sami interest organizations and herding districts, as well as environmental- and human rights organizations, are directing critique toward the Swedish forest industry, questioning how current management practices align with environmental sustainability, and the protection of Sami rights (Amnesty Sapmi, 2021; SSR, 2021). These issues are also brought to the fore in light of current trends of deregulation of the Swedish forest industry. The responsibility to protect ecologically valuable forests is increasingly transferred from state authorities to forest owners, and nature conservation is to a larger extent to be based on the voluntariness and initiative of the forest industry (Naturvårdsverket, 2022). The prevalent dynamics of overlapping claims for land use have resulted in conflicts over land (Johnson & Miyanishi, 2012) and raises issues revolving around what Neil Smith called the politics of geography – “who gets what, where, and why and who loses where?” (Smith, 2003, p. 23).

Due to its long history and importance for Sami culture and land use, reindeer husbandry is restricted to Sami people exclusively, and the activity is protected by Swedish law (Näringsdepartementet, 1971).² The reindeer husbandry area, defined in the Reindeer Husbandry Act (*ibid*), draws out the areas where reindeer grazing and herding may take place, and this area stretches over the northern half of Sweden. As a result, reindeer herders have access to use land that is owned and managed by other actors. Today, large areas of northern Sweden are increasingly claimed for several other interests, ranging from mining, wind power, hydropower, tourism, and forestry. As reindeer travel over vast geographical areas seasonally, which are historically fixed and difficult to change (Sametinget, 2021), reindeer husbandry is affected in multiple areas and ways by these conflicting land pressures. At the same time, challenges from land loss are aggravated due to climate change, as seasons and temperatures become more unstable, and the previously accessible food sources for reindeer have become harder to find (Fohringer, et al., 2021). The problem dealt with in this thesis is the co-existence of reindeer husbandry and forestry, the conflicting land use interests they hold for the landscape, and how the ensuing landscape transformations affect reindeer husbandry in Maskaure herding district.

² The Reindeer Husbandry Act (1971:437).

As for the structure of the thesis, the remaining of Chapter 1 draws out the context of forestry and reindeer husbandry in northern Sweden today and presents the purpose and research questions guiding the study. Chapter 2 positions the study within critical resource geography and agrarian change literature. The chapter outlines how dialectical historical materialism as a guiding method of thought, combined with landscape theories and the concept of access as conceptual tools, constitute a framework through which the situation in Maskaure is analyzed. Chapter 3 draws out the research design of the study, and the methods of data inquiry and processing are here developed. Chapter 4 presents the findings of the study and outlines how the members of Maskaure are gradually “squeezed” – spatially, politically, and economically – in a changing landscape. Finally, Chapter 5 gives some concluding remarks.

1.1. Forestry and reindeer husbandry in Sweden

Reindeer husbandry is primarily focused on meat production, which brings the primary income of the industry, but the activity is also vital for Sami tradition and culture (Sametinget, 2021). According to the Sami Parliament, there are approximately 4600 reindeer owners in Sweden, and 2500 people for which reindeer husbandry constitutes their primary source of income (ibid). Land use for reindeer husbandry is regulated by the Reindeer Husbandry Act (Näringsdepartementet, 1971), which states that Sami people are entitled to use lands for reindeer husbandry, hunting, and fishing. The reindeer husbandry area, where reindeer grazing and husbandry may take place, stretches over the northern half of Sweden. Although not all these areas are suitable for reindeer husbandry, the activity requires vast areas, being a pastoral system where the animals move across large distances with the seasons (Sametinget, 2021). The Reindeer Husbandry Act (Näringsdepartementet, 1971) lays out that Sami people have access to both private and public lands for reindeer grazing, transportation, and setting up enclosed pasture and other facilities needed for reindeer husbandry. In addition, the Act on National Minorities and Minority Languages (Kulturdepartementet, 2009)³ states that the public shall promote the opportunities for national minorities to maintain and develop their culture, where reindeer husbandry is an important part (Hagsgård, 2016).

The reindeer husbandry area is divided among 51 herding districts, or *samebyar*.⁴ Herding districts use different landscapes over the year, moving between year-round pasture lands and winter-grazing lands. The herding districts are administrative and economic associations with

³ The Act on National Minorities and Minority Languages (2009:724).

⁴ These terms are used interchangeably for the rest of the thesis.

a board responsible for managing reindeer husbandry within their geographical area. Consequently, a *sameby* is not a village, as the name implies, but an association of reindeer owners with a geographical area for reindeer husbandry tied to that herding district. Reindeer are held communally by each herding district but owned individually by its members (Scoones, 2021). The 51 herding districts in Sweden are divided between 33 mountain herding districts, 10 forest herding districts, and 8 concession herding districts.⁵ Mountain herding districts move to year-round pasture lands located in mountain areas over the summer season, while forest herding districts deploy the forest landscape all year. Winter grazing lands are however located in the forest landscape for all herding districts. For most herding districts, the winter season constitutes the bottleneck, as ice and crust formations capture ground growing lichens - the primary food source during the winter - under layers of snow (Sametinget, 2015). These conditions are also worsening as climate change causes more unstable and fluctuating winter temperatures (Sametinget, 2007). As a result, tree-growing lichens become an increasingly crucial resource during the winter season, as other sources of food are encapsulated (Sametinget, 2020).

Despite the winter-grazing lands posing the largest challenges for many herding districts, these are under weaker legal protection from clear-cutting and other forestry practices (Sametinget, 2016A). The Forestry Act (Näringsdepartementet, 1979)⁶ lays out that in areas where productive forests and reindeer husbandry are co-located, the forest industry is required to consider the needs of the reindeer industry. In the planning and practical management of forests, authorities must ensure that Sami people are given opportunities for influence (Kulturdepartementet, 2009). In both winter grazing lands and year-round pasture lands, forest companies should in addition strive for that “affected herding districts have yearly access to coherent pasture lands and the vegetation needed within the area for gathering, moving, and resting of reindeer” (Näringsdepartementet, 1979, 31§, author’s translation). Measures that result in substantial implications for reindeer husbandry may therefore not be carried out (Näringsdepartementet, 1971). However, these regulations are stronger in relation to year-round pasture lands, and *samråd*, legally required consultations with affected herding districts, are

⁵ Concession herding districts are granted reindeer husbandry on a special permission from the county administration board, and while only Sami can manage reindeer, others can own reindeer in concession herding districts, compared to mountain- and forest herding districts, where only Sami people are owners of reindeer. Hence, not only Sami people may own reindeer in Sweden, but reindeer husbandry is by law restricted to Sami people which are members of a herding district (Näringsdepartementet, 1971).

⁶ The Forestry Act (1979:429).

only required in year-round pasture lands (Näringsdepartementet, 1979).⁷ Voluntary consultations are recommended by the Swedish Forest Agency before implementing interventions in other areas as well (Skogsstyrelsen, 2020A), but the forest companies are not legally obliged to consult with affected herding districts in winter-grazing lands.⁸

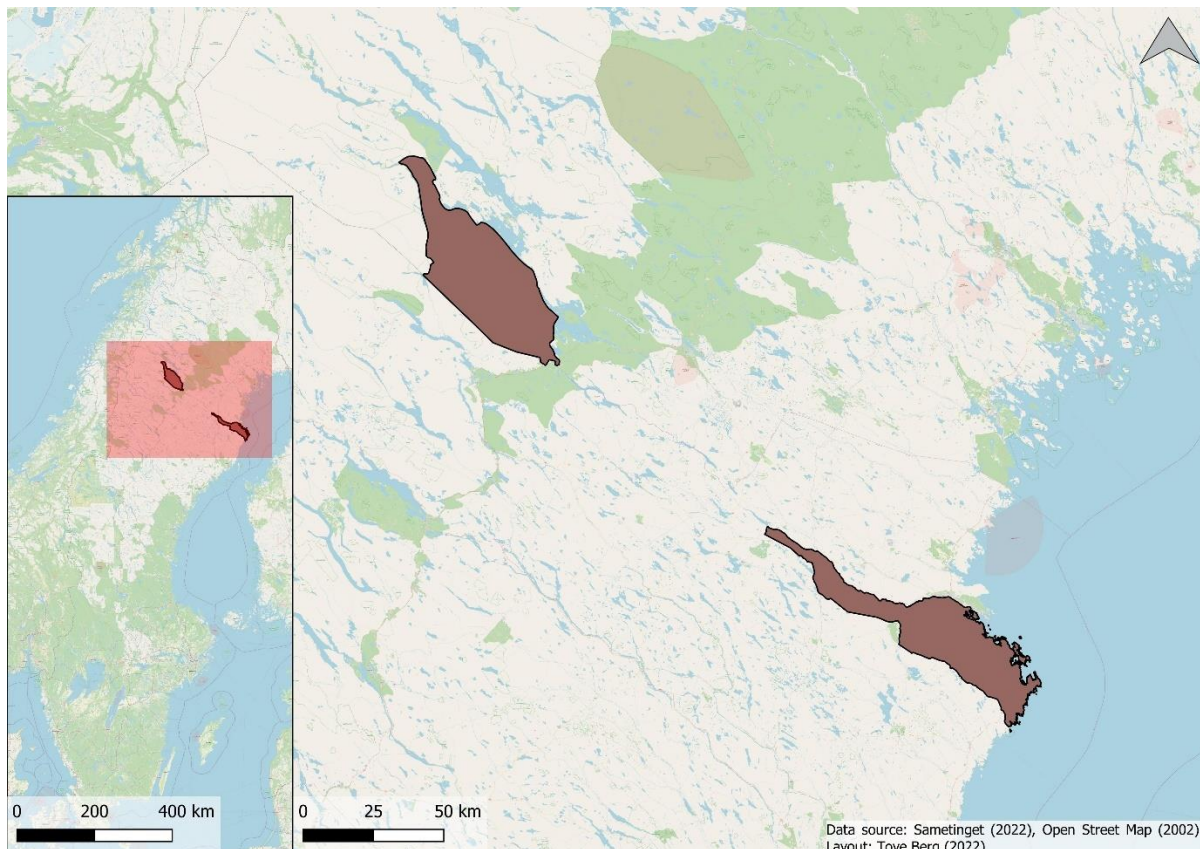


Figure 1: Map of Maskaure herding district. The brown area marks the herding district. The area to the north-west constitutes the year-round pasture lands and the area to the south-east marks out the winter-grazing lands.

This thesis investigates the co-existence of forestry and reindeer husbandry in northern Sweden through a case study of Maskaure *sameby*. Maskaure is a forest herding district located at the border of Norrbotten and Västerbotten (Figure 1). Being a forest herding district, Maskaure's reindeer are kept in the forest all year, although they are moved between Maskaure's year-round pasture lands and winter-grazing lands over the seasons. As a result, the practices of industrial forestry influence the landscapes in which Maskaure functions during the whole year. Maskaure's winter-grazing lands stretch over parts of Skellefteå and Norsjö municipality, from

⁷ Interventions covered by the consultation requirement includes clear-cutting, soil preparation, tree types for reforestation, building of forest roads, fertilization (Sveaskog, 2019).

⁸ For companies certified by the Forest Stewardship Council (FSC), which includes several of the large companies in Sweden, the requirements for consultation are however extended to the winter-grazing lands as well (FSC, n.d.).

the coast and inwards in the land. Their year-round pasture lands are located in Arjeplog municipality, approximately 94 kilometers west of the winter-grazing lands (euclidean distance, measured from the borders of the areas).

1.2. Aim and research questions

This study centers on how the landscape of Maskaure is shaped and modified by the practices of the forest industry, and how the current form of the landscape entails economic and social implications for the people within the reindeer industry. The thesis aims to explore how the landscape of Maskaure is produced and reproduced through the practices of industrial forestry, and to investigate what this form of the landscape means for production of reindeer husbandry and everyday lives in Maskaure herding district. To do this, the study interrogates the nature and extent of the power that the forest industry has in shaping the landscape, and the consequences and challenges this carries for reindeer-herding Sami people. Following this, the study sets out to answer the overarching research question:

- *How is the landscape of Maskaure produced and reproduced through industrial forestry, and what does this entail for the production process and people involved in reindeer husbandry?*

To answer this question, the study will be guided by three operationalizing questions:

- In what ways does the forest industry shape the landscape of Maskaure herding district?
- How does the current form of the landscape affect production in Maskaure herding district?
- How are the people involved in the reindeer industry affected by the current form of the landscape?

1.3. Delimitations

This thesis investigates how reindeer husbandry in Maskaure herding district is affected by the practices and ensuing landscape transformations of forestry. Hence, the study will first and foremost focus on how industrial forestry shapes the landscape. However, this must be understood in relation to other conflicting land pressures, developments, and challenges, both now and historically. The thesis will not focus on outlining how the reindeer industry itself shapes the landscape in which it functions. Due to the focus on how reindeer husbandry, and reindeer herders, functions in a changing landscape, interviews were only conducted with

people from the reindeer industry, and not from the forest industry. Furthermore, the study is centered on Maskaure herding district, and the results first and foremost outline how these dynamics unfolds in this particular landscape. Reindeer husbandry is a heterogenous industry which functions under different preconditions and challenges across Sweden. Yet, the ambition is that insights on the processes in Maskaure can add to existing knowledge on how the forest industry in other places influences the landscape and preconditions for reindeer husbandry, particularly in other forest herding districts.

2. Theoretical context and conceptual tools

This study is positioned within critical resource geography and agrarian change literature. The study furthermore draws on dialectical historical materialism as a theoretical lens and method of thought for approaching the case. In addition, Don Mitchell's landscape theory contributes to the theoretical framework of the study, while at the same time feeding into the conceptual framework, and contributing with tools by which the case is concretely analyzed. For the theoretical framework, landscape offers an overarching strategy for approaching the case, a "specific way of seeing" (Mitchell, 2005, p. 50). At the same time, it provides conceptual tools for analyzing the processes in that landscape. The thesis aligns with the commitment of landscapes as produced, through the continuous struggle between different actors over what the landscape should include, be, and mean (Mitchell, 2012). Insights derived from Mitchell's theory, focusing on functionality and the relational landscape, together with the concept of access (Ribot & Peluso, 2003), make up the conceptual framework for this thesis.

The first part of this chapter reviews current literature on landscape transformations in relation to resource production and extraction, and pastoralist societies. After having positioned the thesis within this existing literature, dialectical historical materialism is briefly elaborated on, as this guides the overarching approach and provides an ontological background for the study. The commitments of dialectical historical materialism also permeate Mitchell's landscape theory. Mitchell's framework provides a foundation for understanding "what the landscape *is* and *does*" (Mitchell, 2008, p. 33). His conceptualization of the production and reproduction of landscapes inform how landscape transformation is approached and understood in this study. Insights from this framework provide a combined focus on the political economy of landscape transformation and the implications for human livelihoods that these transformations entail. Ribot's and Peluso's concept of access (2003) in addition offers a tool for investigating changing dynamics of resource access and utilization in Maskaure. Combined with conceptual tools from Mitchell's landscape theory, their understanding of access opens for analyzing the differentiated ability that different groups hold to benefit from resources, and how this ability is affected by landscape changes. Lastly, Bernstein's (2010) four questions of political economy are applied to operationalize the conceptual framework. Combined, these approaches offer a strategy for understanding the production of the Maskaure landscape, what this means for resource access, and the implications that the current form of the landscape has for the people who live in and produce in this landscape. Accordingly, the theoretical insights

and conceptual tools do not aim to answer separate operationalizing questions, but are mobilized in unison to answer the research questions of this thesis.

2.1. Positioning the study

The thesis draws on critical resource geography and studies on agrarian change, particularly on pastoral societies. These two fields of literature are concerned with struggles over land control and access in capitalist society, and resource production and extraction. Critical resource geography yields insights on how resource landscapes are produced and controlled. Insights from pastoral studies include how pastoral systems are increasingly integrated within capitalist market logic, and the implications this has for people in these industries. Additionally, both fields examine the dynamics of resource production and the place-specific consequences of overlapping land-use interests. These insights contribute to framing the property regimes that are prevalent in this study, that allow the forest industry ownership over land, and the reindeer industry use-right of that same land.

Critical resource geography explores the political economy of resource extraction, production, and control. The field investigates the role resources play in societies, the dynamics by which nature becomes a resource, and the sites of resource extraction and production (Valdivia, et al., 2021). In the pursuit of cheap energy and resources, new sites of resource extraction are created, as capital expands into new geographical areas, and new technologies of extraction and production are mobilized (Moore, 2011). Expansions in resource production thus take both technological and geographical shape, through more intense usage of already existing resource sites, and the expansion into new areas of potential resource extraction. As capital and states expand their claims on land, new sites of resource struggle and tension emerge (Watts & Peluso, 2021). These struggles are directly dependent on the processes in which access to resources and land is politically made and remade (Werner, 2021). In this process, the state plays a necessary role, in making available new methods and areas for resource extraction. Property relations surrounding resource access are always, although not always exclusively, secured by the state (Bernstein, 2021). The modern state enables capital's access to resources through infrastructure projects, scientific and intellectual developments which make resource extraction economically viable, and the creation of place-based property regimes (Parenti, 2015). Capital's quest for unutilized nature and resources is thus mediated by the state, as the state formulates the property regimes which allow industries access to land. In northern Sweden, the state-led historical colonization of Sami land is an important backdrop for current property regimes. These processes set the

stage for the current relations of property, where the forest industry owns the land and the right to transform the landscape for their purposes (McCarthy, 2004).

Studies on pastoralism within the critical agrarian literature investigate adaptations and transformations of pastoral industries as a result of market integration, state intervention, and increasing competition over land. Studies on pastoralism centered on Scandinavia have focused primarily on reindeer husbandry (Scoones, 2021), and two main themes can be outlined in this literature. The first explores the relation between pastoral systems and the state, and the restriction of reindeer populations by state power, backed by arguments of over-grazing and limited carrying-capacities of the land (Benjaminsen, 2015; Benjaminsen et al., 2015). This strand focuses on state policies, power relations, and state-led endeavors to forcibly modernize or circumscribe pastoral industries (Scoones, 2021). The second theme focuses on the co-existence of reindeer husbandry with other activities such as extractive industries and tourism, and the conflicts that emerge around this. Land changes and shrinking opportunities for reindeer husbandry due to mining, wind farms, water dams, and infrastructure projects are central themes (Fohringer, et al., 2021). The extent to which reindeer lichens have decreased due to large-scale industrial forestry (Johnson & Miyanishi, 2012; Kivinen et al., 2012) is another field of investigation within this strand of literature. As multiple activities in northern Scandinavia compete over land, costs for reindeer husbandry have increased in several areas, making it more difficult for small-scale reindeer herders to cover production costs and respond to difficulties (Williams, 2003). For this thesis, studies on pastoralism bring insights on the particularities of pastoral industries, and how contesting land pressures pose unique challenges for pastoral activities that are expanded across vast geographical areas.

The thesis will add to critical resource geography and pastoral studies by first, studying the challenges of reindeer husbandry in a new case study area, Maskaure herding district. Secondly, the study contributes to the exploration of how pastoral industries, and the people within it, are operating in a contested landscape. Consequently, these fields of literature provide insights for understanding the dynamics of landscape transformation in Maskaure herding district, and the challenges in operating the reindeer industry in a contested landscape.

2.2. Dialectical historical materialism

The overarching approach of the study is informed by dialectical historical materialism as a method of thought. With point of departure in Marx's historical materialism, dialectical historical materialism offers a basis and strategy for grasping societal phenomena through a dialectical movement between the abstract and concrete (Ollman, 2003). It emphasizes how

general, more abstract categories are important to mobilize for understanding and analyzing more specific processes taking place (Campling, 2021). Grasping socioeconomic processes must in line with this thinking take as its point of departure a dialectical understanding of social, political, economic, and cultural relations (Harvey, 2010). Elements such as mental conceptions, technology, and social relations are in constant motion and dialectically linked to each other, and changes in one element feed into the others. No element or explanatory category precedes the others or are determinate, but instead, they are in constant interaction to negotiate their respective form (Harvey, 2010). Drawing on an example from the forest industry, new methods for soil preparation, fertilization, and imported non-native tree species, form new technologies of forestry, implemented by the forest companies. As the technologies of the industry change, this has implications for the production process as well as the form of the forest landscape, as it is modified using new methods and strategies. In extension, new methods for modifying forests open for a changing relation to these landscapes, new patterns of resource access, and the continued development of new technologies in this form of the landscape.

This thesis is guided by the overarching approach of dialectical historical materialism in that it aligns with the understanding of dialectical interconnectedness of different explanatory categories as central to the processes unfolding in Maskaure. In approaching the case study area, different elements - such as capital circulation, technology, and resource production – and how these are in constant motion and interaction with each other, are mobilized to understand the processes and dynamics in Maskaure. Dialectical historical materialism provides an approach to grasp how political, social, and economic processes interact with each other in transforming the landscape. It opens for understanding the landscape as a product of current and historical development, from which the preconditions for reindeer husbandry today are shaped.

2.3. Struggles over functionality in the landscape

Don Mitchell's conceptualization of landscape follows a relational and dialectical approach (Mitchell, 2012; 2017), reconnecting to the principles of dialectical historical materialism. Mitchell's theory formulates a framework for investigating what a landscape is, how it is produced, and the power structures at play in this production. His theory is grounded in the notion that any landscape is produced, shaped by the circulation of capital, and the activities, desires, and needs of different people and actors. At the same time, the produced landscape draws out the boundaries for future activities and relations (Mitchell, 2008; 2017). For this thesis, Mitchell's conceptualization of landscape offers a guiding framework and conceptual

strategy for understanding the production of the Maskaure landscape, the processes of landscape change, and how this shapes the activities and lives unfolding there today.

All landscapes are actively, although not always consciously, produced. They are built and constructed for a purpose, to serve a function (Mitchell, 2008; 2012). Under capitalism, the elements that constitute a landscape are set up, ordered, and modified to facilitate accumulation, and the circulation of capital. The landscape, accordingly, forms the material basis for current and future commodity production, social relations, and activities (Mitchell, 2012). For each step in the circulation of capital – production, distribution, realization – the landscape is the physical place in which these moments of circulation occur, hence the material basis for these activities. At the same time, the landscape is produced through these processes (Mitchell, 2012). Capital investments into the landscape are therefore a central component in the production and reproduction of the landscape. As a result, landscapes are not only produced by the actors within their direct boundaries, but the production of the landscape is relational. It stands in relation to production processes and investment decisions elsewhere (Mitchell, 2017). The landscape is a site of investments and a sphere of production, produced through the activities of local as well as global actors. The relations of production under which these actors function produce certain characteristics of the landscape.

Taking northern Sweden as an example, these landscapes are sites of, and constructed for several activities of commodity and resource production, e.g., industrial forestry, wind power, mining, and reindeer husbandry. The landscape is shaped and built to cater these activities and industries, to a varying extent. For instance, the long industrial history of mining and forestry in northern Sweden has contributed to a landscape with infrastructure, railroads, harbors, sawmills, and service industries facilitating these activities. It has also resulted in a political context and legal system benefitting these industries, and a labor force with relevant competence. While the industrial history of mining and forestry, along with other elements, has created the current landscape, the characteristics of the landscape also support the further development of certain activities. Fixed capital built into the landscape, infrastructure or built environment, etc., create the material basis for the circulation of capital, and therethrough facilitates certain activities while restraining other (Mitchell, 2003). The landscape is produced and reproduced through these processes - in relation to the activities and investments taking place in the land. Due to this, the landscape is a physical outcome, a concretization of history (Mitchell, 2008), at the same time as it creates the basis for future investments, activities, and relations. History, by producing the current landscape, lays the foundation for future production, capital circulation, political and economic activities, social relations, and struggles over all of

this. For this reason, the historical and current functionality of the landscape is central (Mitchell, 2008) - what function the landscape has, for who the landscape is primarily functional, and who holds the power to decide over this. Functionality is not static, but as the elements of a landscape are made more functional for one purpose, this can result in the landscape becoming less functional for others (Blaikie & Brookfield, 1987). The landscape is functional in two senses, both for the production and realization of value and for the reproduction of labor power.

First, the attributes of the landscape - built environment, infrastructure, arable land, etc. - form a site for the production of exchange values. The landscape is the physical site for production, holding the preconditions for productive activities, and therefore constitutes both conditions and means of production (Mitchell, 2008). Taking the case of forestry, the landscape constitutes a site of investments for the forest industry, a site for the production of exchange values, and is therefore a condition of production. The landscape also functions as a means of production, a physical instrument in the production process. For agriculture, forestry, and other cultivating industries, it is a required tool in the production process, and the productivity of the soil, the means of production, can be enhanced through e.g. fertilization, soil preparation, or trench digging (Marx, 1991 [1898]). The means of production, in this case, soil fertility, can be altered through interventions in it, modified by the actions of the capitalist cultivator (Campling & Havice, 2014).

Secondly, the landscape is functional in the sense that it is the site for the reproduction of labor, hence, for the everyday life of people. The form and function of any landscape, what is produced there, and in what ways people can live and work there, is always contested and struggled over (Mitchell, 2012). Different actors struggle to shape the landscape in accordance with their economic, political, and social interests, and the actors with a larger power to shape the landscape are also able to restrict, modify, or mediate the usages of the landscape for other actors. The landscape is therefore an expression of power structures, and power structures produce the landscape to come (Kirsch & Mitchell, 2004). Different agents on the landscape hold different interests for its shape, and have a differentiated ability to shape the landscape in line with their interests (Mitchell, 2012). The material manifestations of the deeds, wills, and activities of different actors, reflecting their uneven power and ability for influence, constitute the landscape. Accordingly, the landscape is an expression of power (Mitchell, 2008). It is produced by the physical manifestations of different industries and activities, resulting in that some people must conform to a landscape produced for other purposes. The restraints, boundaries, and opportunities of the landscape are a consequence of the landscape's functionality, and take a concrete expression in *access*.

2.4. Access to land and resources

With insights from landscape theory, a conceptual focus on access helps to grasp the dynamics in Maskaure where the forest industry and reindeer industry are granted legal access to the same geographical areas while holding differentiated power to shape that landscape. Ribot and Peluso (2003) define access as “the *ability* to derive benefits from things” in contrast to a narrower understanding of property, which is concerned with the *right* to benefit from things (Ribot & Peluso, 2003, p. 153). The concept broadens the focus from legally or socially acknowledged claims on land and resources, to a focus on the differentiated power that people, groups, or institutions hold to benefit from land and resources (Ribot & Peluso, 2003; Sikor & Lund, 2009). In this shift in focus, property rights remain as one factor through which an actor can claim and successfully derive benefits, but within a broader bundle of social relations, strategies, and entitlements which can also enable an actor resource benefits (Sikor & Lund, 2009). Access, then, encapsulates all the strategies or ways in which a person, group, or organization can benefit from resources, and in this, property rights constitute one (Ribot & Peluso, 2003). It broadens the analytical lens from a focus on property and rights, to a focus on access and ability, to explain the variety of situations where actors can benefit from resources – gain access – without holding a legal or in other ways acknowledged property right.

For this study, the concept of access is mobilized to understand the dynamics in which an actor – although possessing the *right* to benefit – holds a mediated or limited ability to derive benefits from resources. Through landscape changes, the ability to derive benefits from resources is restricted and limited for some actors (Peluso & Lund, 2011). Access to resources is influenced by elements such as technology, capital, authority, and social relations (Ribot & Peluso, 2003). For example, technology can enable the utilization of resources, capital can buy the right to extraction, and authority and social relations, in terms of one’s position within society, can imply a position in which resource access is granted. Technology, capital investments and social relations, etc., are elements in the landscape that when changed, have the power to influence the reindeer industry’s access to resources. The concept of access therefore elucidates how the ability for different actors to derive benefits is negotiated, changed, or restricted in a changing landscape.

The concept of access opens for investigating the differentiated dynamics surrounding resource access and control, and how systems of resource production are produced by those in power to make value judgments around what aspects of nature are deemed valuable resources (Valdivia, et al., 2021). Access, combined with insights from Mitchell’s landscape theory,

provides a framework for analyzing why and how the reindeer industry's ability to derive benefits from resources, is affected in a changing landscape.

2.5. Operationalizing the conceptual framework in the field

The above outlined conceptual tools are implemented on the study using Henry Bernstein's four questions of political economy; Who owns what? Who does what? Who gets what? What do they do with it? (Bernstein, 2010). The first of these questions helps to untangle the ownership structures in the area to understand who owns what, where, and why. Both concerning reindeer and other assets in the herding district and concerning land. The second question concerns the social division of labor, who performs which tasks within the reindeer industry, and within the herding district at large. The third question helps to untangle issues revolving around the incomes of Maskaure, where they come from, and how they are divided between different actors. The fourth question concerns expenditures and investments in the industry, and who decides over this (Bernstein, 2010). Additionally, all four questions allow for an investigation of if, how, and to what extent these dynamics have changed over time. The four questions of political economy help to operationalize the conceptual framework primarily by being a foundation in the development of interview guides, elaborated in section 3.2.3.

In applying these questions, the study sets out to understand the dynamics in Maskaure where a changing landscape is shaping the preconditions for reindeer husbandry, and how the reindeer herders and herding district at large are working and living in a landscape in transformation. Dialectical historical materialism constitutes an overarching method of thought. Mitchell's approach on the production of landscape allows investigating the struggles over functionality in the landscape, the power dynamics at play in the production and reproduction of landscape, and how the landscape itself exerts power over different agents. The concept of access, together with insights from Mitchell's landscape theory, offers a tool for investigating how and why resource access is mediated and negotiated in a changing landscape. It is an extension of Mitchell's notion that landscape is power, allowing for an analysis of how power is manifested through access. Bernstein's questions of political economy are mobilized as a concrete strategy to investigate how the different industries struggle over the functionality of the landscape, and how this modifies the ability to access and control resources in the landscape. The four questions function as an operationalization of the dialectical historical materialism and the conceptual framework, to unpack in practice how the landscape came into being, and how this shapes preconditions for economic and social relations and activities unfolding in that landscape today.

3. Research design and methods

After an initial outline of the study's research design and guiding assumptions, this chapter account for the selection of Maskaure herding district as the case study area, the fieldwork process, and the methods of data collection and processing. The chapter also addresses the sampling of interviewees and how the theoretical framework was operationalized in the practical implementation of interviews and fieldwork. Generally, this chapter answers what data was deemed necessary for answering the research questions, why, and how this data was gathered through interviews, fieldwork, and secondary data sources.

The ontology of dialectical historical materialism informs the methodology of this study. This means that the thesis follows the idea that the historical development and current relations of production, and all the elements that feed into these, shape the current form of the landscape, which in turn shapes the preconditions for future development (Harvey, 2010). It also means conforming with an idea that the abstract and concrete stand in relation to each other, and the research process includes moving from abstraction to the analysis of concrete processes in the Maskaure landscape (Ollman, 2003). In line with this, the thesis strives to identify dynamics and processes in the concrete landscape, while at the same time understanding these processes in relation to broader concepts and developments, such as capitalist structures, flows of capital, and class dynamics (Campling, 2021). The epistemology of the study also follows a dialectical historical materialist approach, as it is grounded in the assumption that these material characteristics of the landscape, and their implications for economic activities and people, can be studied and analyzed in the application of preformulated theory. While at the same time, the adopted theories are not a finished, all-encompassing set of models to explain the concrete situations to be studied. Instead, the processes of theoretical and empirical development are in dialectical conversation (Campling, 2021), and when entering the case site, the abstract categories and conceptions that are brought to the case are mobilized to understand the processes unfolding in the concrete landscape, at the same time as they are challenged and adapted.

Furthermore, the thesis deploys a case study methodology (Cresswell, 2014), in that it explores the situation in Maskaure herding district to get in-depth knowledge about the highly context-specific conflicts, landscapes, and processes in this particular place (Bryman, 2012). The research topic is investigated through a qualitative research approach, permeating all empirical processes – fieldwork, interviews, and secondary data – to openly investigate, and along the way create an understanding of the case study area. The process of data-gathering for

this thesis was reflexive, moving between gathering, coding, and analysis of material during the fieldwork, and the empirical process was theoretically informed by a couple of underlying assumptions. Firstly, the thesis took its point of departure in the notion that soil qualities and land degradation are relative, or subjective developments (Blaikie & Brookfield, 1987). Environmental changes, in soils, forests, and landscapes, are not one-dimensional physical processes understood uniformly, but what is deemed “degradation” depends on the interests’ held by different actors for the landscape (Benjaminsen & Robbins, 2015). The landscape can be transformed to hold better preconditions from the perspective of one industry, while at the same time being degraded from a different perspective. Secondly, Mitchell’s landscape theory was brought into the data-gathering process as an overarching theoretical lens for grappling with the dynamics in Maskaure. As stated in section 2, landscape, apart from offering analytical tools, is also a way of approaching the case, of viewing the processes taking place there (Mitchell, 2005). Insights from Mitchell’s landscape theory therefore informed the data-gathering process.

However, during the thesis work and fieldwork, relevant conceptual tools for understanding the situation was also continuously formulated. In speaking with people and learning more about the site and landscape, new insights emerged regarding which perspectives and theories would be relevant to explore, to understand the case study area. This abductive reasoning, where theoretical and conceptual development and empirical work are partly conducted in tandem, (Dubois & Gadde, 2002), is also in line with the overarching dialectical historical materialist approach of the study. These commitments allow for studying the place-specific processes in Maskaure, while at the same time developing insights on how these relate to broader, more abstract phenomena and concepts. By connecting the developments in Maskaure to broader processes of capital flows and structures, the study hopes to be able to contribute to knowledge on how similar processes unfold across other Sami territories, while still acknowledging the place-specific dynamics of Maskaure.

3.1. Maskaure herding district as the case study area

Being a forest herding district, Maskaure functions in a landscape of industrial forestry during both winter and summer seasons, and this makes it a suitable site for investigating the dynamics set out to study in this thesis. The decision to focus on Maskaure herding district was guided by two pilot interviews with key informants. The pilot interviews were carried out in January 2022, during the first stages of the thesis work, to gain initial insights on relevant perspectives and learn about whether there were any areas where the impacts of forestry are particularly felt.

The pilot interviews provided valuable insights and initial knowledge which was important in the following steps of the study. One of the interviewees, a writer originating from a herding district that has debated the impacts of forestry on their lands (Dahlgren, 2020), argued that forest herding districts are generally most affected by the practices of forest companies, as they use the forest all year. The other interviewee, a journalist situated in northeast Sweden, had previously written a reportage on Maskaure herding district and their struggle against forestry interventions. He discussed their situation as a clear example of the challenges herding districts face due to industrial forestry, and he additionally provided contact details to two people in Maskaure herding district. After reading up on the Maskaure area and confirming with the contacts that they would be interested to take part in the study, Maskaure *sameby* was chosen as the site for the study. While being a clear example on a herding district affected by the practices of forestry, the processes unfolding in Maskaure also reflect challenges experienced in several other herding districts across Sweden and Sami territories (Röstlund, 2021; Sandström, et al., 2016).

3.2. Data gathering and fieldwork in Maskaure

A field trip to Maskaure herding district was carried out between the 21st and 28th of February, 2022. Fieldwork and data gathering at Maskaure followed the systematic and reflexive interviewing and reporting (SRIR) method (Loubere, 2017). SRIR is a method of data gathering, coding, and analyzing, developed as an alternative to the traditional process of recording and transcribing all interview material. The method allows for a broader and more flexible data gathering process and is particularly useful for in-depth fieldwork (Loubere, 2017). The SRIR method offers an approach where initial analysis is started while still at the site of the fieldwork. According to Loubere (2017), the conventional method of recording and verbatim transcribing of interviews implies a couple of limitations. It risks leaving out contextual information which is not addressed in the interview, and in the process of recording and transcribing interviews, the coding and analysis are generally postponed to a later phase of the work, after fieldwork and transcription are completed. As the initial analysis takes place at the time of the fieldwork with the SRIR method, an understanding of the case can form immediately while in the field (Loubere, 2017). Additionally, the SRIR method offers more rich data to be collected, and a strategy to broaden what data is deemed valid. As the method opens for data to be collected outside the recorded interview, when recording is not possible or desirable, it allows an equal valuation of non-recorded data (Loubere, 2017).

These features were important in the data gathering process of this study, particularly during the first days of fieldwork when I stayed with a couple of members of the herding district. For three days, I stayed in the house which is collectively owned by Maskaure sameby and acts as an accommodation for the reindeer herders when they are moving with the reindeer to the winter-grazing lands. I came along in their workdays, joined into the forest, and partook in some easier tasks in the reindeer keeping, such as feeding, building fences for enclosed pasture, and warning traffic as a group of reindeer were herded along a smaller road. Staying at the house allowed for go-along interviews during the workday, more casual conversations during breaks and in the evening, and participating in the activities during the day created a natural platform to talk about how their practices and preconditions have changed over time. In addition to the recorded interviews, important information came up in more informal, non-recorded conversations during this time, and the SRIR method allowed for this data to be considered equally valuable (Loubere, 2017).

Staying at the winter accommodation with the reindeer herders for a couple of days was partly a solution to the reindeer herders being very busy, and not keen on scheduling and meeting up for formal interviews. The chairman was instead positive towards me visiting and simply following along during their workdays, and offered me to stay at the house. But foremost, this allowed for richer data with more nuances, and for me to find out about themes that would probably not have emerged during the limited scope of regular interviews. During the other 5 days of fieldwork, interviews were held with a representative from the planning department of Skellefteå municipality, and with so-called *skötselrenägare*, meaning people who own reindeer in Maskaure, but are not actively involved in the reindeer keeping. Three of these were former reindeer herders who were now retired or had changed to different occupations.

Following this, the gathering of primary data consisted of semi-structured interviews and participatory observations during the field trip to Maskaure. The semi-structured character was adopted to give room for the interviewees to steer the conversation towards topics deemed important for them. All interviews were recorded and fully or partly transcribed, except for one, where recording was not convenient (Loubere, 2017). The recordings were listened through afterward, and for interviews with e.g. active and former reindeer herders, which included a wide array of important topics, verbatim transcriptions of the whole recording were conducted. Other interviews, that were carried out in the later stages of the fieldwork, and where the information mainly confirmed topics already covered, were instead partly transcribed, following the SRIR method (Loubere, 2017). In addition, the participatory observations were

documented in systematic fieldnotes. During the first three days of fieldwork, in visiting the winter accommodation, fieldnotes were taken continuously during the days, on what activities we did and what happened during the day, what we talked about, and themes that emerged. Each evening, during the whole trip, I also wrote up my notes and elaborated on thoughts I had written down during the day. In the later part of the field trip, after the visit to the winter accommodation, the interviews were carried out under more formalized forms, taking place in arranged meetings. However, I met with the interviewees (apart from the municipal official) in their homes, and important information came up during lunch, coffee, and when they showed me around where they lived. In these situations, to record the conversations was not an option, and in several cases, the conversation continued when they led me to the car or in other situations when I had stopped recording. Continuous fieldnotes, compiled as soon as possible after the conversations, were then supplementary. These combined measures – recorded and transcribed interviews and systematic fieldnotes – aimed to create a trail throughout the process of data gathering, to “achieve a ‘rigour of trustworthiness’ rather than replicable and generalisable analysis” (Loubere, 2017, n.p). In the analysis, all information from the recorded interviews is referenced (*Interviewee X*), and all information from participatory observations, or conversations outside the recorded interview, written down in my fieldnotes, are referenced (*fieldnotes*). For the fieldnotes, information about where and how the data was gathered is also included in the footnotes.

For these purposes, the SRIR approach yields many benefits and was deemed suitable for the thesis. A limitation is however that the SRIR method is originally designed for pairs or groups of researchers, who can validate the data through reflection and discussion during the fieldwork (Loubere, 2017). As this was not possible in my case, other steps were taken to systematize the data collection and validate the data. First of all, the interview guides which stated which topics and themes to cover were guiding in many of the day-to-day conversations. I brought the interview guides with me during the days and got back to them to follow up on which topics we had not yet discussed. For example, a lot of time was spent in the car, driving between different places where the reindeer were, dropping off a snowmobile for repair, and looking for tracks in the snow after reindeer and predators. During those times, I could remind myself of questions and themes to cover. Secondly, field notes were taken continuously during the days of the field trip and elaborated each evening. Transcription of the recorded interviews was also initiated during the field trip, in the evenings, and between meeting with people. During the field trip, I started collecting a list of potential themes which was added to each day (elaborated in 3.3.). When transcribing the interviews, I started initial coding by marking out

sections that related to the themes that had emerged during the first days of fieldwork, or new topics that could form potential themes. Preliminary coding and analysis was thus initiated during the fieldwork (Loubere, 2017). In the reflexive interconnectedness between data gathering, coding, and initial analysis, I strived to validate the data through continuous and strategic note-taking, reflection, and getting back to the topics of the interview guides.

Lastly, secondary data sources were included to understand the economic development and changing landscape in Maskaure, and for triangulation of data. These were e.g. data on changing ownership in the forest landscape, investment flows into northern Sweden, and studies on the decline of reindeer lichens in northern Sweden. The gathering of secondary data was for the most part purposive and informed by the empirical data. It was guided by the research questions, and by the initial themes that formed during the field trip, by being reoccurring topics brought up by the interviewees. At the same time, in the process of learning more about the case in general, both during fieldwork and reading up on the case, new topics came to the fore and were explored as well. Accordingly, engaging with the secondary data was a reflexive movement between data collection, coding, and interpretation (Bryman, 2012). Accordingly, the methods of data collection consist of 1. Fieldwork. Visiting and learning about the landscape between the 21st and 28th of February in 2022, 2. Semi-structured interviews. With members of Maskaure herding district and one municipal official, and 3. Secondary data. To grasp the context of the area and triangulate information from the primary data gathering. Thematically, the data can be divided into three data subsets, or blocks of information, that together with insights from secondary data allows to answer the research questions:

- *Interviews with active and former reindeer herders.* 5 people. This data subset yields the primary information on the production and transformation of the landscape, how the production process of reindeer husbandry is affected by this, and what this means for the everyday life of those involved in the industry. The data subset provided information on how the landscape is produced through the practices of forestry, and which interventions in the forest affect their preconditions most.

- *Interviews with people who hold other roles in the herding district.* 3 people. These are involved in the activities of reindeer husbandry to a varying degree, helping in a few practical activities during the year, helping in everyday activities, or helping in administrative activities. This data subset provided information on if, and how, other roles within Maskaure were affected by changes in the production of reindeer husbandry.

- *Interview with municipal official.* 1 person. This interview contributed information on property relations in the area, the historical development of the landscape around Skellefteå, and the political context of development projects and capital investments in the landscape. This information gave insights for understanding the production of the landscape around Skellefteå.

3.2.1. Population and sampling

Maskaure herding district constitutes the population for this study. Before the field trip, two initial contacts were established, with the chairman of Maskaure, and a former reindeer herder who is responsible for forest issues in Maskaure today. As stated, these contacts were given by one of the pilot interviewees. Contacts with other interviewees from the herding district were established through snowball sampling (Bryman, 2012), but guided by purposive sampling. The ambition was to talk to people with different roles within the herding district, both active herders and people who own and pay others for the management of their animals, to get a broader understanding of how different actors within the herding district are affected by and experiencing a changing landscape. This also reflected Bernstein's 4 questions, as the interviewees hold different roles in relation to production, income, and decision power (Bernstein, 2010). The interview with Skellefteå municipality was set up through purposive sampling, to gain more information on ownership structures in the municipal land areas, and potential changes in this. In total, 11 interviewees contributed information for the thesis. Apart from the two pilot interviews, these were reindeer herders, former herders, partners to now-active and former-active herders, *skötselrenägare*, and one municipal official. The chairman of Maskaure and the municipal official also functioned as key informants, providing contextual information on the structure and roles within the Sami village, and the physical and economic development of the area. The interviewees, their roles in the herding district, the basic practicalities of the interviews, and which data subset they particularly contribute to, are summarized in table 1. All interviewees are anonymized throughout the thesis. The chairman of Maskaure is however difficult to anonymize due to his central role in the herding district, and his insights, from this position, are important for the thesis. Although his name is not used directly in the thesis, he has given consent to being non-anonymous.

Table 1: Interviewees

Interviewee	Who?	How?	Data subset
A	Pilot interview 1	Over Zoom	-
B	Pilot interview 2	Over Zoom	-
C	Chairman Maskaure, active reindeer herder	During field trip to winter accommodation	1, and key informant
D	Active reindeer herder	During field trip to winter accommodation	1
E	<i>Skötselrenägare</i> , former reindeer herder	At their house	1
F	<i>Skötselrenägare</i> , former reindeer herder	At their house	1
G	<i>Skötselrenägare</i> , former reindeer herder	At their house	1
H	Partner to active reindeer herder	During fieldtrip to winter accommodation	2
I	<i>Skötselrenägare</i>	At their house	2
J	<i>Skötselrenägare</i>	Over Zoom	2
K	Municipal official	At the municipal office, Skellefteå	3, and key informant

3.2.2. Limitations of the study

The composition of the sample, and the sampling method, constitute two limitations of the study. First, the sample includes only 2 active reindeer herders, whose primary income comes from the reindeer industry. Other active reindeer herders of Maskaure were not available during my visit. However, as three former herders were included in the sample during the second half of the fieldwork, this provided richer data to this data subset. Secondly, snowball sampling implies an additional limitation. During the first days of fieldwork, I received contact information for additional interviewees from the chairman of Maskaure, and this makes up for a potential bias in the sample group, as he decided which of the members within Maskaure I

spoke to. Yet, the chairman, functioning as a gatekeeper, was a key person in providing these contacts, which opened for a more in-depth understanding of the roles and changes within Maskaure. Although making up a potential limitation, this procedure was therefore deemed necessary in the study.

3.2.3. Developing and conducting interviews

During fieldwork, the recorded interviews had point of departure in interview guides of a semi-structured character. The interview guides, as stated, also functioned as a backdrop for day-to-day conversations, to keep track of topics that had not yet been covered in conversations, and perspectives to keep in mind. The interview guides were constructed for different groups of interviewees to get insights into the varying roles within the herding district, and different points of departure for experiencing the changing landscape and industry of Maskaure. The development of interview guides was informed by Henry Bernstein's 4 key questions of political economy; who owns what? who does what? who gets what? and what do they do with it? (Bernstein, 2010). Bernstein's 4 questions function as an operationalization of the theoretical and conceptual framework, to understand in practice how the landscape comes into being, and how this shapes preconditions for activities taking place in that landscape today. These questions, through the conceptual framework of Mitchell and the concept of access, help to emphasize how these transformations and relations unfold in the landscape of Maskaure today.

In carrying out the interviews, the pre-formulated interview guides acted as guiding tools for steering the conversation and making sure to cover relevant topics. Although Bernstein's 4 questions were the point of departure for all interview guides, they were adjusted to fit each data subset. In entering the field, I had one interview guide for reindeer herders, one for *skötselrenägare*, and one for the municipal official. In addition, the interview with the chairman of Maskaure was based on the interview guide for the reindeer herders but covered some additional questions on the structure and roles within the herding district. During the fieldwork, the interview guides at large remained in their initial form, but as I learned more about the case, and about topics that I had not known to cover beforehand, more focus was directed towards these areas in the later stages of the field trip. Some questions were also sensitive to ask. For example, questions regarding the number of reindeer each person had, and some direct questions on costs and compensations, e.g., how much each *skötselrenägare* pays to the herding district. In these situations, when a question was avoided on direct inquiry, this was simply left,

to alter the conversation after what was deemed comfortable to talk about. An example of the interview guides can be found in Appendix 2.

3.2.4. Ethical considerations

In one of the pilot interviews, the interviewee mentioned that I need to think thoroughly about ethics as I am an outsider to this issue. She argued that some groups within the Sami population are hesitant to talk to researchers and journalists from a non-Sami background, people that lack a connection or previous knowledge about Sami culture and activities. In other words, the interviewee raised the issue of positionality, and addressed that within some groups of the Sami population, this has received increased attention and is a precondition for access. Above all, this issue was taken into consideration in the thesis process by making sure that the participants of Maskaure were positive towards the study and my being there. In our first conversation, over the phone, the chairman of the herding district stated that forestry affected their preconditions and production severely and that it was an important issue to raise for them. Accordingly, he was positive towards the study and invited me to visit them. Secondly, the study focuses foremost on the reindeer industry, hence the economic aspects of reindeer husbandry and its social implications. The reindeer industry functions under specific legal conditions due to the Sami people's status as a national minority (Näringsdepartementet, 1971), and these need to be taken into consideration. However, the study focuses on how the industry, and the people within it, are economically and socially affected by a changing landscape. This study therefore takes a materialist approach and does not claim to interpret or explain the situated knowledge of Sami communities generally, and of colonial pressures in particular. Lastly, in the fieldwork process, verbal and recorded consent was collected from all people who contributed data to the thesis, ensuring they knew the purpose of the data gathering and the study.

3.3. Processing the data

The data processing followed a thematic analysis, to find reoccurring and central themes for understanding the landscape and dynamics in Maskaure. The findings identified, presented in the analysis, arose from themes that emerged in two stages. Both during the fieldwork and gathering of empirical data, and when the data was read over more thoroughly in relation to theory. First, the thematic analysis was initiated during the data gathering process in accordance with the SRIR method (Loubere, 2017). Reoccurring conversation topics and theoretically informed codes which seemed central to the interviewees, and to understanding the Maskaure landscape, were continuously collected during the field trip. For example, overlapping land

pressures from a variety of industries, an increased work burden, and a reduced predictability in the production process, because of the effects of climate change, were three topics that appeared in conversations during the first days of the field trip, and written down as potential themes. The codes emerged both in day-to-day conversations, during interviews, and in the process of transcribing. In writing up fieldnotes each evening of the field trip, and in the transcribing process, notes on potential themes were written down in the margins of the documents (Crang & Cook, 2007). During the fieldwork, the ambition was to write down topics and comments open-mindedly, simply documenting activities, conversations, and feelings. However, the process of writing fieldnotes implies filtering of the material, and a conscious and subconscious identification of themes always takes place (Ryan & Bernard, 2003).

Secondly, once the gathering of primary empirical data was done, all field notes and transcriptions were examined again, and looked over with Mitchell's six axioms for reading the landscape (Mitchell, 2008) in mind.⁹ Mitchell's axioms, although not central in the conceptual framework, are clear categorizations reflecting his broader landscape theory. Hence, although the axioms are not structuring the conceptual framework, they are coherent with the endeavour to apply insights from Mitchell's landscape theory to analyze the data for this thesis. The axioms were used as a strategy to start categorizing the data into more coherent themes, and to start tracing out what themes actually existed in the material. In this process, the already identified codes, quotes, and topics, which were written down during the field trip, were categorized into Mitchell's axioms, and new themes emerged as the empirical data was scanned with the conceptual framework in mind (Ryan & Bernard, 2003). Some quotes or comments previously glossed over, now seemed relevant when read in relation to the axioms. After this process, there were 9 different themes categorized under the six axioms. These were then grouped together, reduced to the most important parts, and information that was deemed irrelevant was erased (Crang & Cook, 2007). Eventually, all data was reduced and categorized under three main findings, and these are presented in the analysis.

Following the SRIR method (Loubere, 2017), the thesis process was characterized by a reflexive dialogue between data gathering and data processing. As initial thoughts on potential themes were written down during the fieldwork and transcribing (which was to a large extent conducted during the fieldwork), this to some extent guided the continuous data gathering. Topics that were marked as potentially central, influenced the interviews yet to come, to make

⁹ Mitchell's six axioms for reading the landscape are: "The landscape is produced; it is actively made. (...) Any landscape is (or was) functional. (...) No landscape is local. (...) History does matter. (...) Landscape is power. (...) Landscape is the spatial form that social justice takes. (...)" (Mitchell, 2008, pp. 34-45).

sure to continue to cover these themes. Although this flexibility could risk the validity of the data gathering process, it was a necessary process as I knew little about the situation in Maskaure before entering the field. This flexibility also allowed for richer, more relevant data to be gathered. In addition, secondary data was used to understand the landscape and processes in Maskaure, and to contextualize the themes that emerged during the fieldwork. Insights from secondary sources were hence grouped with the empirical data, and the processing of secondary data through this also followed a thematic analysis.

The next chapter lays out the analysis of the study, and due to the thematic character of data analysis, the chapter is structured around three main findings. Initially, the first section outlines background information on the structure and different roles within the herding district. Thereafter, three main findings are presented that are deemed central for understanding the dynamics in Maskaure. These three findings make up a strategy for presenting and discussing the processes that unfold in the Maskaure landscape. All quotes used in the analysis are translated by the author, and the original quotes in Swedish can be found in Appendix 1.

4. Analyzing shrinking margins: Producing and living in a changing forest landscape

There are 4 full-time working reindeer herders in Maskaure today. All of these, as well as the former herders interviewed for this thesis, are men, reflecting the broader gendered nature of the profession (Sametinget, 2021). Each reindeer herder has a separate reindeer herding company within the herding district and owns their own animals. Additionally, there are approximately 25 *skötselrenägare* (Interviewee C), meaning people who own reindeer within the herding district, but are less, or not at all active in the activities of reindeer husbandry. Each owner of reindeer has an individual *renmärke*, a combination of cuts on both ears of the reindeer, which is usually inherited within the family, and helps to identify who the animal belongs to. There are no wild reindeer in Sweden, but all are owned by members of herding districts (Sametinget, 2017). *Skötselrenägare* pays a fee for each reindeer to the herding district, to cover production costs and pay the reindeer herders for the management of their animals. Some *skötselrenägare* in Maskaure are active in more practical activities of the industry, by helping in the forest when needed, or by taking on more administrative tasks, while others are barely engaged in the activities at all.

For the *skötselrenägare* in Maskaure, the reindeer are not a large source of income. It is rather something they want to keep a connection to, due to being formerly active in reindeer husbandry, or due to being raised in a family where reindeer husbandry was central. One interviewee describes it as a hobby, which also contributes with meat once or twice a year (Interviewee J), while others keep reindeer calves for the active herders, to help with feeding (Interviewee E, F, and I). It is thus only for the active herders, 4 people in Maskaure today, that the reindeer industry constitutes their primary income (Interviewee C, D). The maximum number of reindeer each herding district may keep is regulated by the county administrative board, to consider other existing activities and interests, and for Maskaure, this is decided to 3000 reindeer (Sametinget, 2018). Before the 1990s, the number of reindeer was relatively stable just below this number. Today, the herd is about half the size, although varying over the year (Interviewee G). In the remaining parts of this chapter, three findings are presented and discussed to answer the research question: *How is the landscape of Maskaure produced and reproduced through industrial forestry, and what does this entail for the production process and people involved in reindeer husbandry?* The three findings emerge as three different processes in which the reindeer industry, and the herders active within it, are being gradually

“squeezed”: spatially, politically, and economically, due to the production and reproduction of the landscape. The three findings are the following:

- *Spatial fragmentation*: Competing land pressures in Maskaure result in spatial fragmentation of the landscape. Forestry is a major force in the production of the Maskaure landscape, but the influence of forestry over the landscape must be seen in relation to other overlapping extractive and development interests. The landscape of Maskaure is characterized by competing land pressures, stretching from mining, energy production, infrastructure projects, development projects, and forestry. Several of these land pressures stand in relation to an increasing flow of capital into the landscape of northern Sweden, and a green energy transition. For the reindeer industry, this entails forest fragmentation which increases the workload for the reindeer herders. The reindeer herders and their industrial activities are thus spatially squeezed in a more fragmented landscape, between other usages of the forest. In addition, it is today more difficult for the herders to choose where to live, as the area undergoes a development process due to investments into the landscape.

- *Undermined political power*: The power balance in the processes of decision-making is uneven, resulting in undermined political power for the members of the herding district. The consultation process, while being the primary arena for the herding district to influence how the landscape is produced, entails an enlarged workload. The reindeer herders are politically squeezed, as the exercising of their legal right for access to the landscape means an increased work burden. As a result, the reindeer herders' worktime increasingly encroaches on the sphere of reproduction, as their work hours are extended. Today, these dynamics are stretching into new forest areas, as the large forest companies are increasing their presence in and power over the landscape. In this process, the landscape is to a larger extent produced by actors located in other geographies.

- *Functional disintegration of the landscape*: As the landscape is transformed by the practices of industrial forestry, this results in a functional disintegration of the landscape for the reindeer herders. In Maskaure, the available and usable grazing lands shrink, resulting in the reindeer herders needing to add support feeding to the reindeer. Accordingly, the functional disintegration of the landscape leads to rising production costs for reindeer husbandry. Increased production costs, combined with a weak position to affect their level of income, has led to a situation where the industry is no longer economically sustainable. Under these dynamics, the reindeer industry, and the reindeer herders, are economically squeezed between rising production costs and stagnant levels of income which they hold little power to change.

4.1. Spatial fragmentation

Maskaure's land areas, both winter-grazing lands and year-round pasture lands, are experiencing over-lapping land pressure from different industries and projects, including wind power, mining, roads and railroads, and forestry (Interviewee C, D, E). These activities compete, with each other and with reindeer husbandry, over space (Harvey, 2018 [1982]), and over producing a landscape functional for their interests (Mitchell, 2008). For members of Maskaure, an increasing amount of extraction and development projects, and the entailing loss of grazing lands, combined with intense forestry and an increasing number of predators, are described as the main challenges they face today (Interviewee C, D, I). The forestry practices producing the landscape must therefore be seen in relation to other land interests, usages, and pressures (Fohringer et al., 2021). When asked what their biggest challenges are, one active herder stated:

First and foremost, it is the forestry, for us. Especially for forest herding districts, forestry is a major challenge. And then, when we are talking about developers, there are other types as well. It is everything possible; mining, road constructions, and the expansion of Skellefteå as well, which also claims large areas of grazing lands. So, different developers. (Interviewee D).

According to several members of Maskaure (Interviewee C, E), extraction and development projects are more prevalent within Maskaure's winter-grazing lands, which is also where the remaining grazing lands are most crucial (Sametinget, 2016B). By law, the year-round pasture lands are more protected towards extraction and development projects, and the companies are required to take larger measures to ensure the reindeer industry's needs are taken into consideration (Näringsdepartementet, 1979). In Maskaure, these dynamics are felt by the members, and in the winter-grazing lands, they experience that their position for influence is weaker (Interviewee C, E). However, formally protected lands are more common in the Swedish mountain area (SLU, 2021B). For Maskaure, with both winter grazing lands and year-round pasture lands in the forest landscape, this means that competing land pressures and intense forestry is felt in the year-round pasture lands as well (Interviewee D).

Resulting from this is a fragmented forest landscape in both Maskaure's winter grazing lands and their year-round pasture lands. The forest industry as well as developers often back their interventions in the area with an argument that they will only use a small portion of the total land area (Interviewee G). But as several different actors claim pieces of the landscape, this results in a fragmented forest, less useful for the purposes of reindeer husbandry

(Interviewee C, D). Rather than merely being small portions of land changing form, these interventions are part of a larger process of producing the landscape for other industries, people, and purposes (Mitchell, 2012). The spatial fragmentation, for an industry that requires vast coherent areas of lichen-bearing forests, means that the herders' ability to use the forest for their purposes is undermined. Resource access is therefore intertwined with the industries, technologies, and productive relations that are present in the landscape (Ribot & Peluso, 2003). The chairman of Maskaure previously moved his business to Maskaure from a closely located herding district due to the land there being too fragmented. As more and more land areas were claimed for different projects, the remaining forests got too small for the reindeer of the herding district, and the chairman decided to move to Maskaure in 1977 (fieldnotes, 22/2 2022).¹⁰ But now, Maskaure is experiencing a similar spatial "squeeze" (Mitchell, 2012), where the available lands for grazing are continuously shrinking. As the landscape is increasingly claimed for other land-based industries, the effects of forestry in remaining land areas become more severe. The reindeer herders are spatially squeezed in a fragmented landscape in which restricted land access, due to development and extraction projects, alongside a less useful landscape, due to forestry, leaves few areas left in which reindeer husbandry can efficiently be carried out. In the Maskaure landscape, several of the projects that claim land are intertwined with an investment boom into green energy production in Norrbotten and Västerbotten.

Investments into green technology and fossil-free energy production is rising massively in northern Sweden, with Northvolt (battery production) and HYBRIT (fossil-free steel production) being two recurring examples. According to the Swedish Export Credit Agency, investments into these industries amount to almost 1100 billion SEK and will fundamentally change the region (Exportkreditnämnden, 2021). This capital flow into the landscape of northern Sweden is seen as an opportunity for many northern cities to reverse a long trend of stagnation and negative population development (Region Norrbotten, 2021). As a result, many municipalities and regions are welcoming the projects, and competing over the establishment to take place in their municipality, due to the promised effects in terms of work opportunities and economic development. The investments into fossil-free projects in northern Sweden are concrete representations of capital seeking opportunities and sites for accumulation, and shape both the current landscape and the production of future landscapes (Mitchell, 2008). As the landscape increasingly becomes a site for green investments, the form and function of the landscape is modified, creating opportunities for some activities while restricting others (ibid).

¹⁰ Information from conversation during a car trip with the chairman of Maskaure.

As municipalities and regions compete over which geographies these projects will land in, through infrastructure development and facilitating for their establishment, these processes are further enhanced. Social, political, and economic dynamics are in this process negotiated to facilitate these new usages of the landscape (Harvey, 2010). The overlapping land interests, often requiring vast geographical areas in their establishment, create a more fragmented landscape with less remaining grazing lands. The investments as such, and the surrounding production of the landscape to suit these interests, produce a landscape less suitable for reindeer husbandry. Resources in this process become scarcer, fragmented across space, obstructing the production process of the reindeer herders.

In the implementation of landscape interventions or project establishments, it is also uncommon that the herding district receives any economic compensation for the land they lose due to clear-cutting, development projects, or resource extraction (Interviewee D). In the forthcoming establishment of “Norrbotniabanan”, a railway planned between Umeå and Luleå with an estimated cost of 40 billion SEK (Trafikverket, n.d.), the Swedish Transport Administration argued in the consultation that they could not afford to compensate the herding district for their loss of grazing lands (Interviewee C, K). The compensation practices from the companies are also in many cases kept secret (Kihlberg, 2022), which lessens the herding districts' position in negotiations. One member of Maskaure stated that it is a common practice that companies silence the herding district, by formulating contracts that state that the herding district may not communicate what compensation they have received (Interviewee I). Following this, the herding districts cannot compare agreements with each other, resulting in reduced opportunities to claim compensation, and a weakened political power.

In addition to creating a fragmented landscape, the investments into the landscape also change the terms for everyday life in Maskaure, through increased living costs. Maskaure is located around Skellefteå in the east, in the winter grazing lands, and Arjeplog in the west, in the year-round pasture lands (Figure 2). During the last couple of years, both Skellefteå and Arjeplog have undergone changes in their industry structure and attracted more capital from national and international investments. In 2017, Skellefteå was chosen as the location for the establishment of the battery factory Northvolt, which entails investments of almost 40 billion SEK (Rabe, 2017). The company has promised approximately 3000 new jobs in the area, and the establishment will entail development for the municipality at large, as related industries and services establish (Interviewee K).



Figure 2: Maskaure's land areas in relation to Skellefteå and Arjeplog.

According to the municipal official in Skellefteå, much of the development is dependent on a geographical expansion, for housing, industry, and infrastructure, leading to an increasing claim of reindeer grazing lands. Last year, the municipality sold out land areas worth approximately 100 million SEK (Interviewee K). The establishment of Northvolt and the rapid development of Skellefteå has also led to rising housing prices in Skellefteå and nearby (Svensson, 2021). In Arjeplog, similar dynamics are unfolding. The city is a center for winter test driving of cars and attracts large numbers of companies and workers from around Europe during the winter season. This has resulted in an entailing service industry and rising housing prices, and it is common for people to rent out their houses to test drivers during the winter (Interviewee C, H). For private people, it is difficult to compete with the purchasing power of large companies, and many houses and apartments are tied up in contracts with the car testing industry (fieldnotes 22/2, 2022)¹¹. One of the active herders discussed how he lives in a smaller town, one hour south of Arjeplog, due to housing prices being too high in Arjeplog (Interviewee D). It is thus more difficult today for the reindeer herders to choose where they want to live, due to the context of the landscape, and new flows of capital investments into the landscape.

¹¹ Information from a conversation around the dinner table with three people.

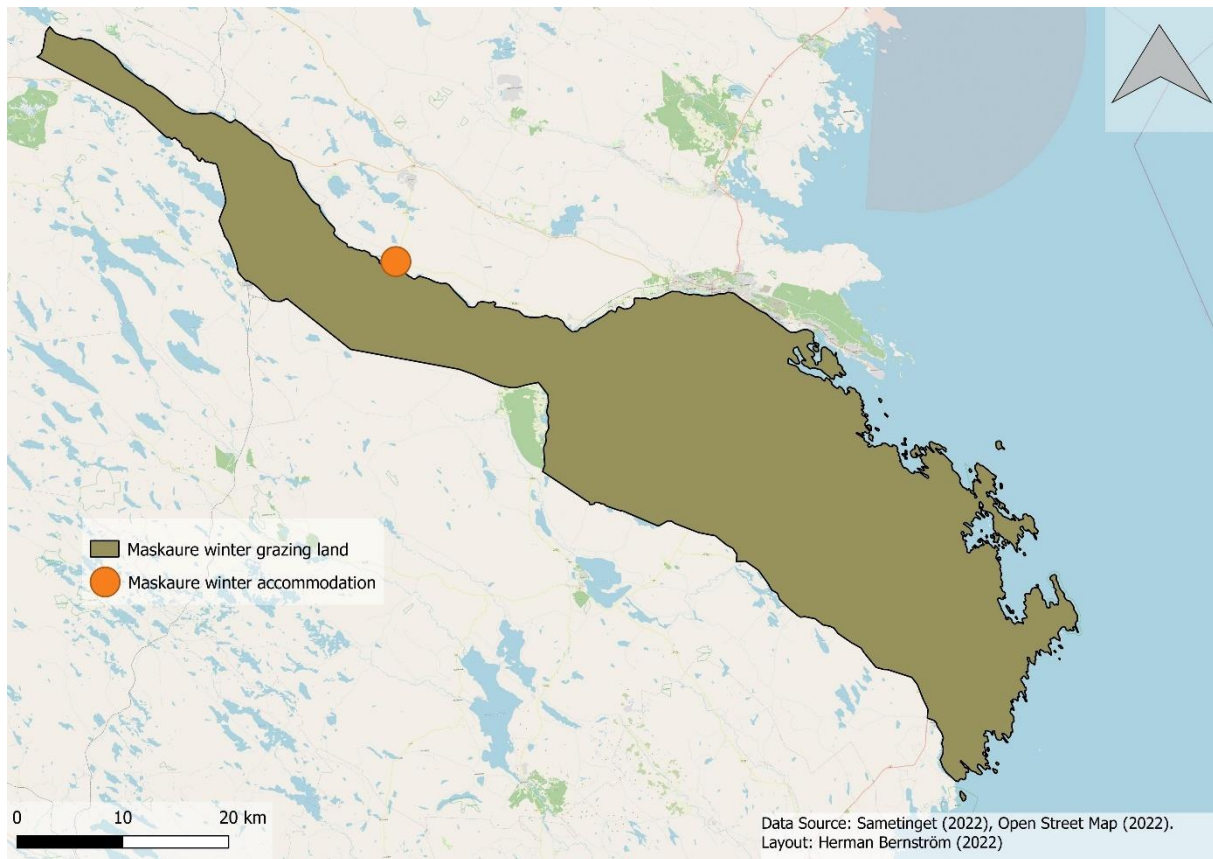


Figure 3: Location of Maskaure's winter accommodation.

The winter accommodation, a collectively owned house for the reindeer herders to stay in during the winter season, is another example of how the investments into the landscape shape the everyday life of the reindeer herders. The winter accommodation is located 30 minutes inland from Skellefteå (Figure 3), although the reindeer generally reside further south-west, along the coast. The chairman discussed how the location of the winter accommodation is not optimal, and the reindeer herders drive long distances each day to get to the animals (fieldnotes, 22/2, 2022)¹². This results in increased travel times, longer days, and a larger work burden. Rising fuel prices, further amplified by the Russian invasion of Ukraine, is also a growing problem both due to the fragmented forest landscape, requiring more transportation during the workday, and the extensive travel time the herders have to the animals' usual location. The networks of capital and commodity production in Arjeplog and Skellefteå are thus affecting both production within Maskaure, through increased land pressures and a fragmented forest landscape, resulting in rising production costs, and their everyday lives, by increasing living prices and longer travel distances.

¹² Information from a conversation around the dinner table with three people.

To conclude, the production of the landscape is related to wider capital flows (Mitchell, 2012), and the impacts of forestry must be seen in relation to other investments into the landscape. As the landscape is increasingly becoming a site of fossil-free technology investments, it is constructed to facilitate these emerging industries, projects, and profit interests (Mitchell, 2008; Mitchell, 2012). These processes amplify the effects of forestry interventions and entails that the reindeer herders are increasingly operating in a fragmented forest landscape. This spatial fragmentation results in a smaller capacity for the reindeer herders to benefit from the resources needed in their production. Resource access is in this process negotiated (Peluso & Lund, 2011). The shape of the landscape means an enlarged work burden and increasing fuel costs, and at the same time, these developments change the terms of everyday life of the reindeer herders as it is today more difficult to choose where you want to live. The modified material form which the landscape takes in the process of increased capital investments shapes the opportunities for reindeer herders to efficiently maneuver their industry. As a result, the herding district's operating space, and the reindeer herders, are spatially squeezed, between other land interests, and in a landscape where sufficient resource access is available in fewer, more fragmented, land areas.

4.2. Undermined political power

58 percent of Sweden's land area consists of productive forests (SLU, 2021A). Individual owners and corporations, including the state-owned company Sveaskog, are the largest owner categories, with 48 percent and 38 percent respectively (Skogsstyrelsen, 2020B; Sveaskog, n.d.). The ownership distribution between corporate forests and individually owned forests has remained relatively stable for the last 20 years (Skogsstyrelsen, 2020B). These two categories of forest ownership; forests owned by individual owners, and forests owned by corporations, are primarily central in the analysis of the Maskaure landscape.¹³

Generally, the herding district has paid less attention to interventions in the forest made by individual landowners (Interviewee C, E, G). In part, this is because the corporate forests of e.g., Holmen and Sveaskog, two major actors in the area¹⁴, are larger compared to the privately-owned forests (Skogsstyrelsen, 2020B), and interventions therefore risk being more damaging

¹³ The dynamics within forests owned by other actors, such as the church of Sweden, municipalities, or governmental authorities, did not appear as central during the fieldtrip and in conversation with the interviewees.

¹⁴ Sveaskog and Holmen Skog are two of the major landowners in the corporate forest landscape of Maskaure. The former in the year-round pasture lands, and the latter in the winter-grazing lands. The state-owned company Sveaskog holds 14 percent of the Swedish productive forests, making it the largest forest owner in Sweden (Sveaskog, n.d.). Holmen Skog is a private corporation and the fourth largest forest owner in Sweden (Holmen, n.d.).

to the herding district. But additionally, several interviewees describe how individual forest owners are more cautious in the management of their forests. According to the interviewees, individual owners generally clear-cut smaller areas at once, due to living within and near these landscapes (Interviewee C, E, G). Both in terms of practical forest management, and in the planning process of *samråd*, individual forest owners have therefore traditionally been a smaller problem for the herding district. However, several members of Maskaure describe how a shift has occurred since they started in the industry, in who the individual forest owner is (Interviewee E, F, G, I). A former herder stated that when he started, approximately 40 years ago, several of the people working in the forest, and owning the private forests, were neighbors, people from the area they knew, or knew about (Interviewee E). Then, they argue, you did not want to resist logging because they used the forest for their livelihood (Interviewee G), and profits and taxes from the industry to a larger extent ended up in the area (Interviewee E). On the topic of how forestry in Maskaure has changed since he started in the industry, one former herder stated that:

Previously, it was people from the village that worked with the forest. It was neighbors and relatives that were involved in the forestry. Today, some people arrive with their machines and stay for 14 days to three weeks and chop down a lot during that time. And this does not even result in tax money for the municipality (Interviewee E).

The municipal official from Skellefteå explained how an increasing percentage of private forest owners live elsewhere today (Interviewee K). In Västerbotten, where Maskaure's winter grazing lands are located, the share of non-resident ownership¹⁵ of forests increased by 13.7% between 2005 and 2017. Mirrored by Norrbotten, in which the year-round pasture lands of Maskaure are located, where an increase of 23.8% has occurred during the same period (Rotevatn & Larsson, 2020). The increasing scale of non-resident ownership has not only outsourced the potential profits from the local area, but also make the power relations over the landscape an affair increasingly external to its direct boundaries. The divorce of the local population from its landscape decreases the influence of people in the area, reindeer herders as well as others, over the form and function of the immediate landscape.

Although property distribution between corporate and privately-owned forests remains the same, a shift of access is occurring within the privately-owned forest, as the large forest companies are increasing their presence in the landscape. This shift in access entails a different

¹⁵ Meaning that the owner of the forest live outside of the municipality where the forest is located (Skogsstyrelsen, 2020B).

use of the forest (Interviewee E, G), and encourages a stricter view of the forest as a resource for commodity production. The municipal official of Skellefteå explains how it is a common practice that landowners living in other places are hiring the big forest companies, e.g., Sveaskog or Holmen, for consultation and management of their forests (Interviewee K). The large forest companies are therethrough substantially decisive for the landscape, even in areas where they are not the primary landowners (Interviewee K), as they are increasing their presence in the landscape. The forests which were previously managed by people living in the area, are now to a larger extent becoming sites of production, sites of industrial forestry. In this, the landscape goes from being both functional for the purposes of production, and as a site for reproduction for the forest owner, to being primarily functional for the purposes of commodity production. As more and more ground is put beneath the large corporations and their industrial practices, and pressure on the forest is enhanced, access to the resources needed for reindeer husbandry as such become more strictly guarded (Ribot & Peluso, 2003). Due to the large corporations being located in other places, this process also results in a landscape increasingly produced by actors located in other geographies, who, by pushing their interests in profitable forestry, change the form of the landscape. As a result, local productive activities, reindeer husbandry included, are undermined in, and by, the current form of the landscape (Mitchell, 2008).

The increased presence of large forest corporations is also affecting the legal space of herding districts for influence. As the large forest companies are increasingly stepping into the management of the privately-owned forests, this often includes representing the individual owners in *samråd* (Interviewee F, I). The consultations are the primary arena for herding districts to influence planned interventions in the forest (Hagsgård, 2016), and a central political forum for the planning of, and subsequently the production of the landscape. However, the method has been criticized due to uneven power structures, where the forest industry, i.e., the owner of the land holds a stronger position in consultations (SLU, 2009). In Maskaure, several members address that they lack the power to object to interventions in the landscape, although they are legally entitled to consultations with the forest companies for this purpose. The consultations, presented as a dialogue between the two industries, are often more experienced as one-directional information meetings (Interviewee C, E, I). This reflects an experience shared by other herding districts, in that they feel that they cannot affect the outcome of the consultations to any large extent (Hagsgård, 2016). One herder in Maskaure says that the consultations are always a “win-lose” situation, where they merely find out how much they lose, or how problematic the consequences of the intervention will be (interviewee C). The legal

institutions set up to protect resource access for the reindeer industry, are thus marked by asymmetric power relations.

These uneven power dynamics are reflected in several processes surrounding the consultations. The dates for consultations are set by the forest companies, forcing reindeer herders, and their production, to adhere to the logic of the forest industry while downplaying their own needs. In situations where no member of Maskaure has been able to attend, this has in some cases still passed as the only consultation offered by the company (Interviewee E). The consultations, characterized by skewed political power, are a mechanism through which the forest companies control and maintain resource access, while the reindeer industry holds a mediated ability to influence landscape interventions. A currently ongoing consultation between Maskaure and Sveaskog concerns Sveaskog's plan to clear-cut 36 different areas within Maskaure over a 5-year period. The areas combined amount to almost 460 hectares (fieldnotes, 22/2, 2022)¹⁶. In the consultation, Maskaure has denied clear-cutting of all areas with the motivation that the forests contain vital tree-hanging lichens. They were then informed by Sveaskog that they may not use the same motivation for all areas, but instead, need to argue for their rejection for each geographical area separately. As Sveaskog later replied to the individual motivations, they did so with the same response for all areas. In their reply, Sveaskog stated that their ambition is for forestry and reindeer husbandry to be able to co-exist, and that Sveaskog manages their forests in a manner that aims to maintain lichens in certain areas (ibid). Hence, while the consultation process is officially set up to protect the herders' sanctioned right to influence, the herders' complete lack of ability to set the agenda and define the terms of negotiation, results in a lack of control over the production of the landscape. Instead, the forest companies hold a better position in the decision-making process, and in determining what the landscape will consist of. The outcome is a landscape in which the herders' access to resources is limited, negotiated by the property right holder, i.e. the forest companies.

The lacking influence over the consultation process also means that the herding district experience an increased administrative workload. Several people state that there has over the last 10-20 years been an explosion in administrative work (Interviewee C, F, H, I). This includes consultations with forest companies as well as other companies, contact with municipalities and the county administrative board, project applications for funds, insurance issues in relation to

¹⁶ From looking at mapping tools from Sveaskog together with two of the herders.

predators and traffic injured animals, or making statements on certain issues. The chairman for example argues that:

...there are all these consultations with different actors that we need to take part in. (...) It is the municipality, hydropower, wind power, forestry. That part adds a lot of work for us, because that also makes up work time. And in addition, you need to leave written opinions on all these things. That is a time-consuming task. (Interviewee C).

The exercising of their right to influencing the landscape encompasses an imperative of unpaid labor, effectively taking resources away from the other productive activities of reindeer husbandry, as they are forced to engage in legal planning, arguing for their right to land. In this, the herders' political power is squeezed (Mitchell, 2012), as their primary mechanism for influence at the same time enhances their work burden. The institutions and procedures set up for the reindeer herders to maintain resource access, instead aggravate the conditions for a production it aims to facilitate. Their legal right to land and resources, is in this process hollowed out, to merely encompassing a right to the land which is increasingly useless for the purposes of reindeer husbandry, from which they cannot derive benefits.

To conclude, a growing share of non-resident ownership has paved way for an increased presence of large-scale forest corporations. This entails other management practices in the privately-owned forest. Consequently, although the landscape of Maskaure has for a long time had the primary function of commodity production, the dynamics and scales through which this takes place have shifted. In the effectivization of forestry, reindeer herders' resource access is further negotiated and reduced (Ribot & Peluso, 2003). Simultaneously, as the forest companies' presence grows, the production and reproduction of the landscape is increasingly moving to other geographies, becoming more interconnected with profit interests and economic activities elsewhere. These combined processes lead to an increasing administrative workload for the members of Maskaure, a decreasing ability for influence, and enforced struggles over the landscape. The reindeer herders' political power is undermined in a political squeeze where the exercising of their legal right to consultation also encompasses an enlarged workload. In extension, their ability to shape the landscape in accordance with their needs (Mitchell, 2012), and their ability to derive benefits from resources (Ribot & Peluso, 2003), is reduced.

4.3. Functional disintegration of the landscape

Large areas of northern Sweden are characterized by a trend of declining lichen covers in the forest, and several studies have documented a decrease in both ground-lichens and tree-growing lichens (Kivinen et al., 2010; Fohringer et al., 2021). Sandström et al (2016) outline that lichen-carrying forests have declined by 71% during the last 60 years. Kivinen et al (2012) furthermore describe how lichens have severely decreased due to the practices of industrial forestry, entailing major implications for the preconditions for reindeer husbandry, in a case study of Ståkke and Östra Kikkejaur herding districts (both located just north of Maskaure) (Kivinen et al., 2012).

In Maskaure, this development is observed by both current and former reindeer herders, particularly in relation to tree-growing lichens, and several people argue that there are barely any tree lichen-bearing forests left in the winter-grazing lands today (Interviewee C, E, G). According to a former reindeer herder, it takes approximately 120 years before the lichens are established to such an extent that they are useful for the reindeer industry (Interviewee E). 30-40 years ago, when several of the interviewees began as reindeer herders, lichen-carrying forests were so widespread in Maskaure that the reindeer industry could adapt, and move to other patches for grazing, as clear-cuttings were carried out (Interviewee C, E, F). But due to an extensive re-growth time for lichens, and more and more pieces of the landscape being targeted for clear-cutting, the functional grazing lands are continuously shrinking. Figures 4 and 5 show the areas which have been clear-cut during the last 20 years in Maskaure. The maps visualize how clear-cutting has been less extensive in the year-round pasture lands (Figure 4), compared to the winter grazing lands (Figure 5), in which Maskaure's lack of lichens is most acute. In total, the areas of logged forests across all of Maskaure's land area over the last 20 years amount to 19 262 hectares.¹⁷ These processes, together with the land losses due to extraction and development projects described in section 4.1, enforce the fragmentation of the forest felt by reindeer herders. Resource access for reindeer husbandry is continuously made smaller, due to historical and current clear-cutting, as reindeer herders are operating in a landscape produced by the practices of industrial forestry.

¹⁷ For reference, Malmö municipality covers an area of 15 840 hectares.

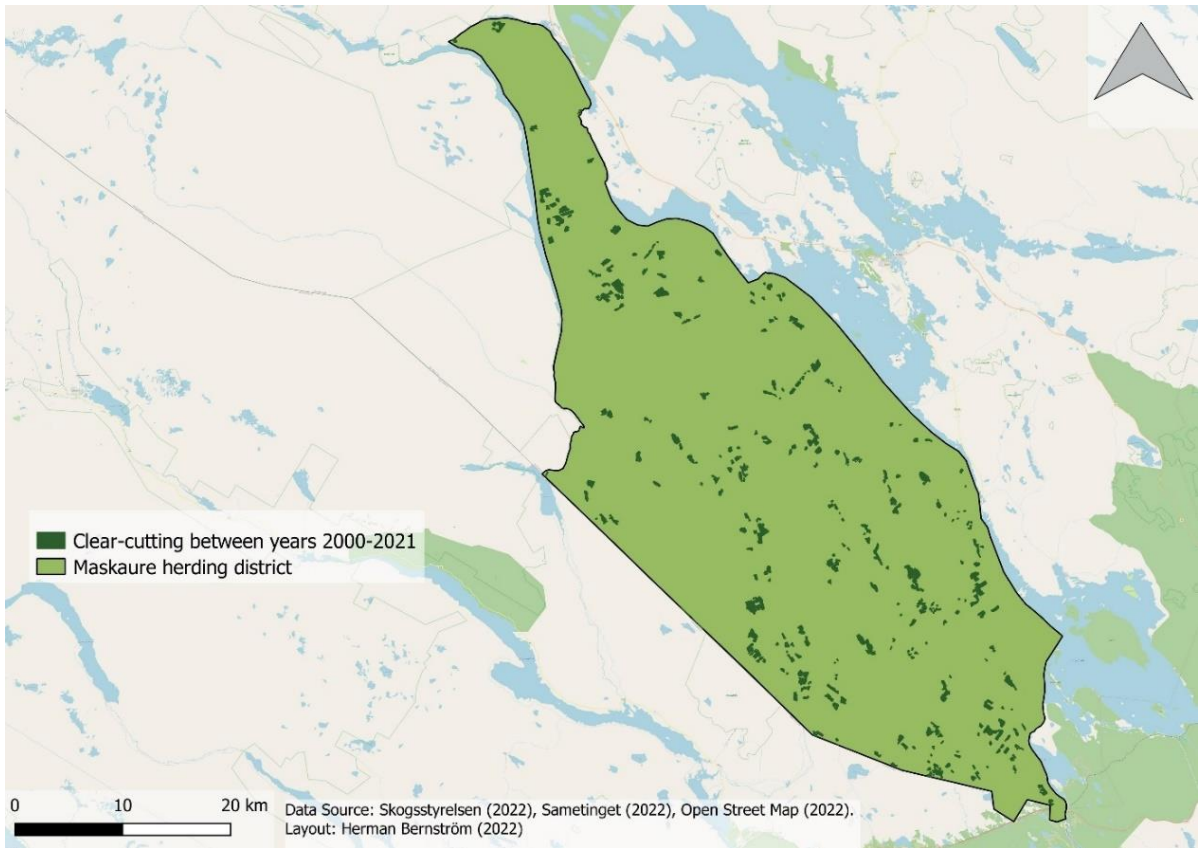


Figure 4: Clear-cutting in Maskaure's year-round pasture lands between the years 2000-2021. Clear-cutting is measured through satellite images by the Swedish forest Agency.

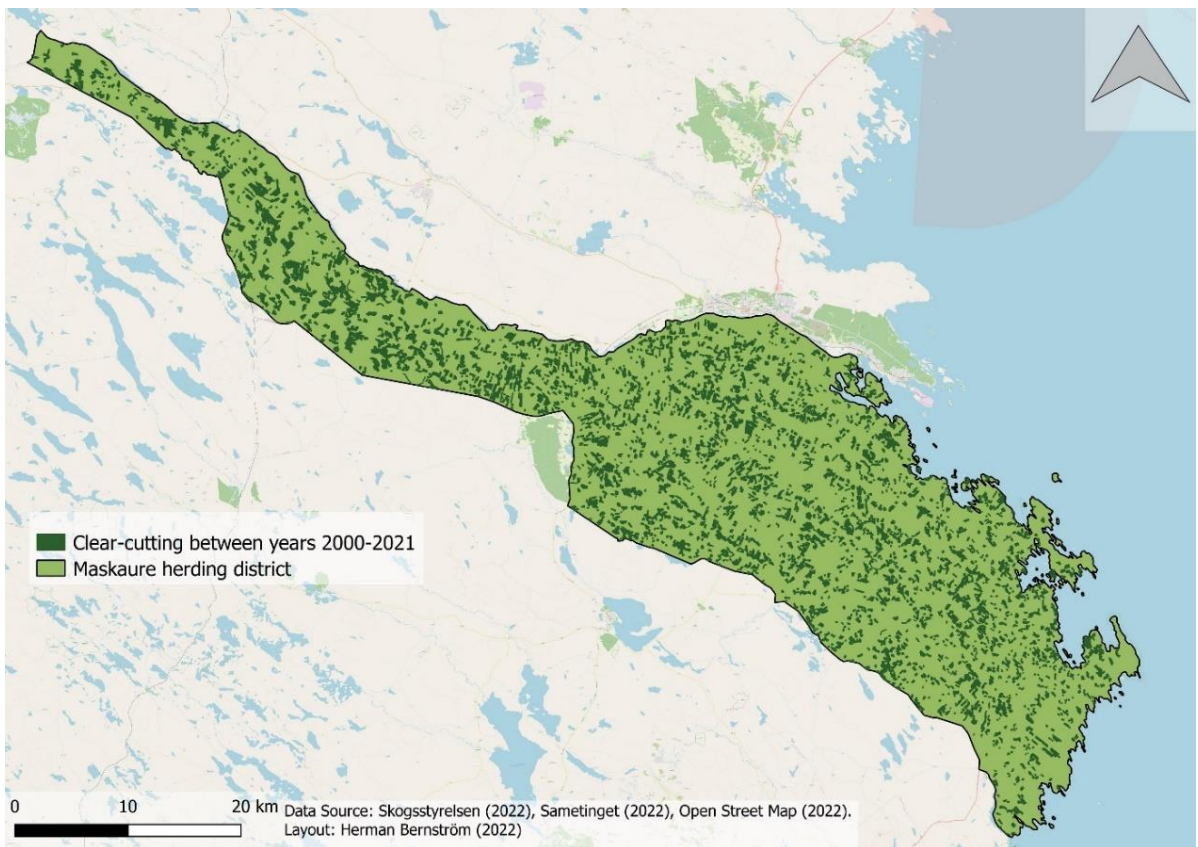


Figure 5: Clear-cutting in Maskaure's winter grazing lands between the years 2000-2021.

While shaping the current landscape, forest interventions and practices at the same time paves the way for a particular future shape of the landscape, mediating the possibilities for industries and people in that landscape (Mitchell, 2008). Clear-cutting does not only mean harvesting the current forest, but it also means re-planting an evenly aged forest of the same fast-growing, economically beneficial tree species. The forests are made younger, more evenly aged, and denser. Through this, clear-cutting today creates preconditions in the forest landscape which are beneficial for clear-cutting in the future. Modern practices of forest management create a landscape suited for these same practices in the next production cycle as well. The landscape is reproduced in these processes (Mitchell, 2012), as the practices of today create a landscape of industrial forestry in the future.

Apart from clear-cutting, modern practices for soil preparation and re-planting also amplify the modifications of the landscape (Kivinen, et al., 2010). In the process of soil preparation, many ground lichens are flipped down into the ground, making them unavailable to the reindeer. The planting of new, often more fast-growing tree species after clear-cutting, e.g., larch or contorta pine, has led to denser forests in many areas. In such forests, less sunlight gets through, hindering the re-growth of lichens (fieldnotes, 24/2, 2022).¹⁸ Figures 6 and 7 show examples of forest areas that are better for the purposes of reindeer husbandry (Figure 6), and forests that are too dense for grazing, and lichen re-growth (Figure 7). The practice of fertilization has also increased in the area during the last couple of years, to accelerate the turn-over time in tree production. With lichens generally growing in nutrient-poor soil, fertilization increases the risk of lessening lichen cover (fieldnotes 21/2, 2022).¹⁹ Through these practices, the forest companies enhance their means of production (Harvey, 2018 [1982]). When this results in decreasing lichen cover in the forest, their investments into the land at the same time damage the conditions of production for reindeer husbandry. These forestry practices entail that the forests that are useful for reindeer husbandry are shrinking, and the landscape becomes less functional for reindeer husbandry. As such, improved qualities of the soil, landscape, and forest for the purposes of forestry, in these cases means deteriorating qualities of the landscape for reindeer husbandry. The forest companies hold the power to negotiate what types of resources the reindeer industry has access to, in what form, and to what extent, as they hold control over what the landscape includes, how it looks and how it is transformed.

¹⁸ From conversation during a car trip with the chairman of Maskaure.

¹⁹ From conversation over dinner with the chairman of Maskaure.



Figures 6 and 7. Examples of different types of forests. To the left: An area pointed out as having good preconditions for ground lichens. To the right: A denser forest in which the re-growth of ground lichens is more difficult due to insufficient sunlight reaching the ground. Pictures were taken by the author, during field trip to Maskaure in February 2022.

However, in arguing for new areas of clear-cutting, the forest companies claim that the herders de facto have sufficient access to suitable forests. Up until the 1970s, forest companies in the area logged large-scale cohesive areas (Interviewee G), and clear-cuttings were often several hundred hectares in size (Simonsson, et al., 2015). In the 1970s, a debate around the consequences of modern industrial forestry accelerated, and regulations on the size of individual clear-cuttings were introduced (ibid). But in the planning of new clear-cuttings, the companies point to the areas which were logged up until the 1970s and argue for these being replaceable. The herders however view this landscape differently. Interviewee G stated:

They [the companies] make smaller clear-cuts today. But often, these areas border to these other logged areas, with young forests, maybe 4-5 meters tall. And then they point to these and say, “there are forests here”. But that is not a forest yet. (Interviewee G)

In these areas, the forest is too young to be functional for reindeer husbandry. The landscape is produced (Mitchell, 2008), and the forest landscape in Sweden has long been so, by the intertwined activities and investments of different industries and people. For that reason, there is barely any unlogged forest remaining in Sweden (Johnson & Miyanishi, 2012). Most of the

Swedish forest landscape is thus produced – socially, politically, and economically – rather than natural (Prudham, 2003), and this applies to the landscape which is in fact useful for reindeer husbandry as well. But for reindeer herders to be able to access resources and benefit from the landscape, the forest needs to meet certain qualities in terms of age, sparseness, and lichen cover. As the management of the forest is conforming to the production cycle of the forest industry, these qualities are not met. The landscape is produced in accordance with the production cycle of the forest industry, under which the re-growth of lichens cannot keep up. Under this management, the ability of the reindeer industry to derive benefits from resources in the land is undermined (Ribot & Peluso, 2003). This results in a functional disintegration of the landscape for the reindeer industry, and the people active in it.

The disintegration of the landscape has implications for the production process in Maskaure particularly as they are intertwined with the effects of climate change. Climate change causes more fluctuating winter temperatures today compared to a generation ago (Sametinget, 2007) (fieldnotes, 27/2, 2022).²⁰ As the snow melts and freezes again several times during the winter season, the ground lichens are trapped under sheets of ice (Fohringer et al., 2021). Historically, tree-growing lichens have served as a backup during winters with unfavorable weather conditions, or during periods of the season when the snow is too deep for the animals to reach ground lichens below. But as tree-growing lichens are barely existent in the winter grazing lands anymore (fieldnotes, 22/2, 2022 and 27/2, 2022)²¹, Maskaure experiences a shortage of available grazing areas. As the reindeer cannot find food in one area, they wander away looking for suitable grazing ground elsewhere. The spread out of the animals over larger areas means more work for the herders to keep track, circle, and bring back the reindeer. This results in larger fuel costs and increased risk for traffic killed reindeer, as they stray over roads and railroads in the search for lichens. A generation ago, the possibility of keeping the reindeer in one location was much larger (fieldnotes, 27/2, 2022).²² The chairman stated that: "these fragmented lands that are today have entailed an incredible increase in work" (Interviewee C). Hence, as resource access becomes scarcer, an increase in labor time is required (Campling & Baglioni, 2020).

The current form of the landscape in Maskaure, and more unstable winters, means that the reindeer herders need to add support feeding to their production, leading to increased

²⁰ From conversation with interviewee G, at his house.

²¹ From conversation during a car trip with chairman (22/2) and from conversation with interviewee G, at his house (27/2).

²² From conversation with interviewee G, at his house.

production costs. In periods when feeding is necessary, Maskaure spends approximately 10 000 – 12 000 SEK per day on pellets (fieldnotes, 21/2, 2022).²³ And for the last 20 years, this has been required all winters, for at least some period of the season. One former herder stated that

Previously, you could expect a bad winter occasionally, maybe every three or four years. But now, this is the situation every year. This winter has been okay. But it was 20 years ago since the reindeer grazing was this good. (Interviewee G)

The requirements of supplementary feeding, apart from resulting in increased production costs, also entail implications for the form of production in Maskaure. The animals need to be gathered and fenced in, to a larger extent, and the pastoral character of the industry is forced to take a step back due to new characteristics of the landscape. Rising costs for inputs such as fuel, snowmobiles, and cars contribute to rising production costs in Maskaure as well (Interviewee C, D). But foremost, a fragmented forest landscape and depleting resource access have resulted in required supplementary feeding, larger production costs, and an increased workload.

At the same time, the reindeer industry functions within a system in which they have little power to influence their level of income, as they are not in power to set the prices on reindeer meat. The reindeer district sells its meat to slaughterhouses, which re-sell the meat to consumers (Interviewee D). Today, it is the slaughterhouses that set the prices for the reindeer meat, resulting in a monopsony situation where the herding district cannot adjust the prices on meat to their production costs. Due to these combined dynamics, the reindeer herders are economically squeezed between rising production costs and stable income levels. As a result, reindeer herders in Maskaure today need to take other jobs during the summer, to make ends meet, and finance their industry during the winter season. The two active herders work with road construction during the summer, and this has been necessary for approximately the last 10 years (Interviewee C, D). Two of the former herders quit as reindeer herders due to the industry today being too unprofitable (Interviewee F, G). One of the former herders discussed that at the beginning of his career, during the 1980s, he could sustain himself on the yield from reindeer husbandry, but for the last 10-20 years, the industry has grown less and less profitable. After more than 40 years as a reindeer herder, he quit 5 years ago and started to work at the car test tracks in Arjeplog. He stated that:

²³ From conversation during a car trip with chairman.

eventually you came to the breaking point that... I saw that I needed to save what was left. I could have continued for another 10 years, but then I would have ended up with nothing left, after 50 years of hard work. And without an okay pension as well. (Interviewee G).

When asked about their visions and worries for the future, the economic situation is a reoccurring theme, and several people discuss how they worry that they will not be able to sustain themselves on reindeer husbandry. A shared vision among several people is better profitability in the industry in a near future (Interviewee D, H). Additionally, a common worry is that no one from the next generation will step into the industry and take over (fieldnotes, 21/2 and 26/2, 2022).²⁴ In many herding districts, the average age of the reindeer herder is rising, and many in the younger generation choose other occupations. Tracing out the reasons for this requires a separate discussion, but a couple of interviewees speculate that harshening conditions of production, low profitability, and a general feeling of being counteracted by industry, authorities, and the state, contributes to that few people from the next generation want to become reindeer herders (Interviewee D, H).

To conclude, the production and reproduction of the Maskaure landscape as a site for industrial forestry has resulted in resource depletion for Maskaure's reindeer industry. Forestry interventions modifying the landscape, making it more functional for the purposes, interests, and activities of forestry, are at the same time worsening the conditions of production for the reindeer industry. Landscape degradation and improvements are thus subjective processes (Blaikie & Brookfield, 1987), and the reindeer industry and herders are operating in a landscape that is functionally disintegrated for their purposes. Clear-cutting, soil preparation, and fertilization entail a decline of reindeer lichens in the forest, particularly felt in the winter grazing lands. These challenges are exacerbated by the increased unpredictability caused by climate change. The current form of the landscape entails an increased workload, rising costs for fuel, and a requirement for supplementary feeding. Due to rising production costs combined with the dynamics in which the herders cannot influence their level of income, reindeer husbandry is not economically sustainable in Maskaure. In this process, the actors of the industry are gradually trapped in an economic squeeze (Mitchell, 2012), and the herders are squeezed between rising production costs and stagnant levels of income over which they have little power to decide.

²⁴ From conversation during a car trip with chairman (21/2), and from conversation with interviewee J, over zoom (26/2).

5. Conclusion: Spatial, political, and economic squeeze of reindeer husbandry in the Maskaure landscape

When asked about his worries and visions for the future, one of the active reindeer herders stated that:

First and foremost, one major concern is that you will not have food for your reindeer. In other words, that you will not have enough grazing lands for the animals to have it tolerable. That is the biggest concern. And in that, forestry plays a big part. The other main concern is the economic challenges. (...) And the vision is of course that you will be able to have this as an occupation for as long as you want, and for me, I think that is for my whole life. So, the vision is to be able to build a reindeer herd big enough to be able to live on this, and that you can pass this heritage on later. (Interviewee D)

To reconnect to and summarize what this means for the research questions of this thesis, forestry practices - encompassing clear-cutting, fertilization, soil preparation, and re-planting of non-native, densely growing tree species – shape a landscape by and for industrial forestry. Historical and current forestry interventions, aggravated by other land pressures in the Maskaure landscape, result in spatial fragmentation, and declining resource access for reindeer husbandry. In this current form of the landscape, the activities of reindeer husbandry are circumscribed, and reindeer husbandry has become more difficult, and more expensive. Supplementary feeding, which was previously a more unusual practice, has been required for at least some period of the winter season for the last 20 years. For the people involved in Maskaure's reindeer industry, administrative as well as physical workload is larger today compared to 10-20 years ago. The increasing production costs in the industry, highly dependent on the transformations of the landscape, result in that the reindeer herders cannot make ends meet.

Maskaure herding district is operating in a landscape that is largely produced and reproduced by the practices of industrial forestry, as well as other industries. In this process, the reindeer herders are spatially squeezed, between land areas used and useful for other activities, interests, and processes of capital circulation. The forest industry is a major author of the Maskaure landscape and has been so for a long time. As the landscape of Maskaure is increasingly subjected to other land claims, reflecting broader trends of capital investments into fossil-free industries in northern Sweden, the effects of forestry are aggravated. At the same time, increasing unpredictability due to climate change means that the remaining patches of

older forests become more crucial for the herding district. The combined practices of forestry, intertwined with other land claims, result in a spatial fragmentation of the landscape where fewer, smaller, and increasingly fragmented areas are suitable for reindeer husbandry. For the reindeer herders, the spatial fragmentation of the forest landscape results in an enlarged workload, as it is more difficult to keep the animals in one place. The ensuing spatial fragmentation of resources results in declining resource access for reindeer husbandry.

At the same time, the members of the herding district are politically squeezed in legal arrangements set up to protect their rights to land. Consultations, being the primary arena for the herding district to influence forest interventions, and in extension the production of the landscape, are characterized by uneven power dynamics. Under the current procedures, the political power of the herding district's members is being undermined through the consultation process. The excessive bureaucracy surrounding the consultations, which become more numerous due to overlapping land claims, has resulted in an increase in administrative workload for the members of the herding district. Exercising their legal right to influence is paired with an imperative for unpaid labor. The current political framework mean that the herding district's effort to influence the form of the landscape to suit their interests – which would in extension mean a decrease in workload and production costs – implies an enlarged work burden. These dynamics of uneven power structures are also moving into new areas of the Maskaure landscape, as a growing share of non-resident ownership of privately-owned forests is making way for the increased presence of large forest companies. Following this, the privately-owned forests are managed differently. For the herding district, the changing relations of access, despite the remaining property distribution between privately-owned and corporate forests, entails decreasing resource access, as the landscape is produced as merely a site of commodity production. The increasing presence of large forest companies also implies a geographical expansion of the production and reproduction of the landscape, where actors external to the landscape are increasingly decisive for the form of the landscape at large.

A changing forest landscape and decreasing resource access results in that the herding district, and in particular the reindeer herders, are economically squeezed between rising production costs and remaining levels of income. Clear-cutting, fertilization, soil preparation methods, the introduction of non-native tree species, and densely planted forests – all these practices shape the landscape of Maskaure, by producing a landscape of industrial forestry. In extension, these practices also facilitate for the landscape to be reproduced in this form, by these methods, in the future. Clear-cutting today constructs a landscape in which clear-cutting is suitable, and beneficial, in the next production cycle. These processes combined result in a

functional disintegration of the landscape and resource depletion for the reindeer industry. The landscape becomes less functional for the reindeer industry, and today, reindeer husbandry in Maskaure is more difficult and more expensive. Resource scarcity entails that supplementary feeding must be added to a much larger extent today, compared to when many of the interviewees began as reindeer herders. This results in increased production costs for the herding district. As a result, the reindeer herders of Maskaure cannot make ends meet, but must seek other sources of income.

Maskaure herding district is operating at the intersection of these three processes – spatial fragmentation, undermined political power, and functional disintegration of the landscape. The practices of forestry produce, and reproduce, a spatially fragmented and functionally disintegrated landscape for reindeer husbandry. Coupled with the herding district's political power being undermined in the consultation process, the members of the herding district are gradually squeezed – spatially, politically, and economically – in the current form of the landscape. The reindeer industry in Maskaure is characterized by increasing production costs and a larger physical as well as administrative workload. Ultimately, this results in the reindeer herders of Maskaure today not being able to sustain themselves on reindeer husbandry. In extension, this reflects Sweden's inability to live up to the commitments of protecting Sami rights, in which reindeer husbandry is included.

Swedish forestry has been criticized on both ecological and human rights-based grounds, by organizations and institutions questioning whether the management practices of modern forests are consistent with the protection of biological diversity, and the upholding of Sami rights. The forest landscape of Sweden is characterized by resource production rather than extraction. Reindeer husbandry, on the other hand, needs vast coherent areas of lichen-carrying forests and uses the landscape for resource extraction. Due to ruling property regimes, enforced by the state, the forest industry owns the right to intervene in and transform the landscape, while the reindeer industry holds a right to use the same land for their productive activities. The conflicting land-use interests – where one industry conducts resource production and the other resource extraction – combined with ruling property regimes, results in reindeer husbandry's access to resources being undermined. The production of the landscape into a landscape of industrial forestry means that the legal right to land for reindeer husbandry is hollowed out to encompass merely just land, and not the resources on which the industry depends. Land access is increasingly decoupled from resource access, as the landscape is produced in accordance with other industries' functionality. In light of current trends of deregulation of the Swedish forest industry, some of these dynamics also risk being further enhanced. Similarly, the increasing

presence of large forest companies addressed in this thesis also means changing relations of production in the landscape and changing preconditions for reindeer husbandry.

Swedish commitments to international law state that Sami people have a right to maintain and develop their culture – in which reindeer husbandry is a vital component. But as reindeer herders cannot sustain themselves on the industry, the legal claims of protecting reindeer husbandry are undermined, as the people within the industry cannot continue it. Protecting Sami rights must include protecting the ability to live on reindeer husbandry. Challenging the extent and form of current forestry practices, and strengthening Sami people's ability for influence, is therefore central for promoting a more just form of the landscape.

5.1. Further research

To understand the nature and scope of these challenges met by reindeer herders in other areas of Sweden and Scandinavia, this thesis calls for further investigation of how profitability in other herding districts is affected by the current form of the landscape in which they operate. A lessening ability to live on reindeer husbandry has important implications for the continuing of the reindeer industry in the future. This topic could e.g. be explored through the investigation of statistics on slaughter numbers over time or on how the herd sizes have changed, price fluctuations on reindeer meat, or annual reports. It could also be further researched by a more thorough investigation on how political decisions surrounding forestry and reindeer husbandry and their co-location have changed over time. Such endeavors would further contextualize and address how costs and profitability of reindeer husbandry have changed and deepen the political economic analysis of these challenges. Similarly, this thesis also calls for further investigation on the side of forestry, how political and economic developments within ownership and strategies influence reindeer husbandry. For example, this thesis has addressed how an increasing presence of large-scale forest companies changes the production of the landscape, but merely scratched the surface of these processes. A larger historical focus, on how forestry in this and other areas have changed in terms of methods and interventions, and to what extent these occur, would benefit from further investigation.

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7. Appendix

7.1. Appendix 1: Cited quotes with original quotes in Swedish

Here follows the Swedish original quotes for all cited quotes from interviews which are referenced in the text. They are listed in order of appearance in the text.

Page 1:

”Man hade kanske inget överflöd, men man levde gott på avkastningen” ”there was no abundance perhaps, but you could make a good living on the yield”. (Interviewee G)

Page 31:

”Dom främsta utmaningarna är ju... Ja men först och främst är det ju skogsbruket, för oss. Speciellt för en skogssameby så är det ju skogsbruket. Och då är vi inne på olika exploatörer, så då är det ju också andra typer av exploatörer. Det är allt möjligt, gruvsdrift, vägbyggen, bara utbygganden av Skellefteå stad, det tar ju mycket betesmark i anspråk. Så olika exploatörer” (Interviewee D)

Page 37:

”det var ju folk från bygden som arbetade med skogen. Det var grannar och släktingar som var och arbetade med skogsbruket. Medan nu kommer det något folk med sina maskiner och är här i 14 dagar, 3 veckor och har huggit massor under den tiden. Det blir ju inte ens skattepengar till kommunen på det här.” (Interviewee E).

Page 40:

”Just de här fragmenterade markerna som har blivit gör ju att det blir ett otroligt mer-arbete. Men, till det tillkommer också alla dessa samråd med alla parter som vi ska sitta med. (...) det är kommunen, det är vattenkraften, vindkraft, skogsbruk. Så det är ju den biten som är jättemycket. Det är ju arbetstid det också. Och sen ska man ju sitta och skriva då yttranden om alla dom där sakerna. Det är också en tidskrävande uppgift.” (Interviewee C)

Page 45:

”Nu gör dom mindre hyggen. Men då gränsar dom ofta ihop med dom gamla, som kanske är en ungskog som är kanske 4-5 meter hög. Och då säger dom ”här är ju skog”. Men det är ju ingen skog än inte.” (Interviewee G)

Page 46:

”Just de här fragmenterade markerna som har blivit gör ju att det blir ett otroligt mer-arbete. Men, till det tillkommer också” (C)

Page 46:

”Förut kunde man räkna med dåliga vintrar kanske var 3e, var 4e år, men nu är det varje år. Fast i år hade dom klarat sig riktigt bra. Det var 20 år sedan det var så här bra renbete” (Interviewee G)

Page 47:

”Till slut var man i brytpunkten att... Jag såg att jag måste rädda det som finns kvar. Jag hade kunnat hålla på i 10 år till men då hade jag förmodligen slutat på noll, efter 50 års slit och släp. Och ingen bra pension dessutom.” (Interviewee G).

Page 49:

”Orosmomenten är ju egentligen först och främst att man inte ska ha mat till sina renar. Alltså att man inte ska ha betesmarker nog för att dom ska kunna ha det drägligt. Det är det största orosmomentet. Och där har ju skogsbruket en stor del. Och sen så är det... Det andra är dom ekonomiska utmaningarna. (...) Men sen visionen är ju att man ska få hålla på med det här så länge man vill, och det tror jag är hela livet, och lite till. Så visionen är att lyckas bygga upp en renjord så man har det drägligt, och att man kan föra det här arvet vidare.” (Interviewee D).

7.2. Appendix 2: Example on interview guide

Interview guide, chairman of Maskaure

Purpose: Overview of structure, ownership, decision-making. And same purpose as for the other reindeer herders: Understanding division of labor and income, and what challenges the herders are experiencing.

Berätta lite om mig själv och om projektet. Samtycke. Är personen okej med att jag spelar in intervjun?

Bakgrund: Ålder, hur länge har han arbetat med renskötsel? Varför började han? Var bor han under året, de olika säsongerna?

Who owns what?

Ägarstrukturer renar, tillgångar etc.

- Finns det flera renskötsel företag inom samebyn? Hur många och vilka driver dessa?
- Vad ägs individuellt och vad ägs kollektivt av samebyn? Hur bestäms detta?
- Har det skett några förändringar i detta på senaste tiden (till exempel om mer av tillgångarna ägs privat / kollektivt jämfört med en generation tillbaka)? Vad beror det på i så fall?
- Vem äger vinterboendet?
- Har de fler bostäder i samebyn, vem äger dessa?
- Hur många personer äger renar i samebyn? (Är detta samma som antalet renmärken i byn?)
- Har samebyn några gemensamma renar eller ägs alla individuellt?
- Hur många renar äger varje person (ungefär)?
- Finns det några som inte äger renar men arbetar med renskötseln?
- Har antalet renar varit detsamma länge eller förändrats, till exempel 1 generation tillbaka? I så fall, varför?
- Har det skett några förändringar i ägandet / ägarstrukturerna / reglerna för ägande av renar över tid? Jämfört med en generation tillbaka / jämfört med när personen började som renskötare? (kanske enklare att fråga informellt)
- Begränsas antalet renar varje individuell ägare kan ha? Hur regleras detta?
- Hur fick han sitt renmärke? Ärvde eller annat sätt?

Ägarstruktur vad gäller mark

- Vem äger marken inom samebyns gränser? Vinter- och året-runt markerna (Karta? Försöka förtydliga detta på något vis. Få med så många aktörer som möjligt.)
- Har ägandet av marken genomgått några större förändringar? Exempelvis 1 generation tillbaka.
- När ägandet ändras, får ni ha åsikter om detta? I vilken form?
- Har det varit eller är nu några konflikter kring ägandet av mark inom samebyns område?

Who does what?

Arbetsfördelning och roller inom samebyn

- Bedriver samebyn några andra aktiviteter? Fiske, jakt exempelvis. I så fall, i hela eller delar av området?
- Hur många aktiva renskötare är ni i samebyn idag?
- Använder ni hela samebyns område till rennäring eller delar? I så fall, vilka delar? (Karta? Försöka förtydliga så mycket som möjligt.)
- Hur många i samebyn äger och sköter / äger men sköter inte / sköter men äger inte?
- Har ni någon arbetsfördelning i vem som gör vad mellan er? Hur ser denna ut?

Utmaningar och skogen

- Vilka är de främsta utmaningarna de möter i renskötseln? Högt och lågt.
- Var möter de dessa svårigheter rent geografiskt? Året-runt eller vinterbetesmarkerna? I vilken typ av områden? Kalvning, transporter, bete, etc.
- Hur märker ni av det här? Märker olika personer av det olika mycket?
- Skillnader över året? Fler utmaningar sommar eller vintertid?
- Är året-runt-markerna och vinterbetesmarkerna olika hårt skyddade av lagen? Skiljer det sig åt i dessa områden när andra aktörer vill göra ingrepp i hur mycket / när i processen de behöver rådfråga samebyn?
- Erbjuds ni alltid samråd vid ingrepp i skogen? När / när inte?
- Hur bestämmer ni vad ni ska tycka i samrådet?
- Hur förhåller ni er till ingrepp i skogen över lag? Har ni någon policy eller bestämd åsikt?
- Vilken typ av ingrepp i skogen skadar era möjligheter till renskötsel och vilka typer av ingrepp gör det inte?
- Är det några pågående konflikter kring ingrepp i skogen? Vad för ingrepp?

- Har det på senaste tiden varit några?

Förändringar över tid

- Har förutsättningarna / utmaningarna förändrats på något sätt? Till exempel från en generation tillbaka, eller när de började som renskötare.
- Har eventuella förändringar främst drabbat vinter eller sommar-markerna? Mer specifikt, några geografiska eller strategiska platser där utmaningarna blivit större eller mindre?
- Har arbetsbördan för er förändrats över tid? Kortsiktigt / långsiktigt.
- Har arbetsfördelningen i vem som gör vad förändrats på något sätt över tid?

Who gets what?

Inkomster

- Varifrån kommer samebyns inkomster främst?
- Hur fördelas dessa mellan renskötare / renägare / samebyn?
- Har han någon annan inkomst vid sidan av rennäringen?
- Betalar han någon annan för att hjälpa till i skötseln av sina renar?
- Vad gör ni med det ni producerar? Hur stor andel ungefär säljs och hur stor del konsumerar ni själva / samebyn? Vilka säljer ni främst till? Finns det några mellanhänder i försäljningen?
- Priset på renkött: vad är det och hur har det förändrats över tid?
- Om samebyn har några gemensamma renar: hur fördelas inkomsterna för dessa?
- Förändras era inkomstnivåer under året? Från sommar till vinter? Sker försäljning vid viss tidpunkt?

Förändringar över tid

- Har det skett några förändringar i vilka som produkterna främst säljs till?
- Några förändringar i vad produkterna säljs för? På grund av exempelvis förändrad efterfrågan på renkött / skinn etc, förändrade produktionskostnader eller något helt annat?
- Generellt: förändringar i vad ni som individer och sameby tjänar på rennäringen?
- Har några inkomstkällor uppstått eller försvunnit? Blivit mindre eller större? I relation till jakt, fiske exempelvis.

What do they do with it?

Utgifter/återinvestering

- Vilka är samebyns största utgifter under året? Hur betalas dessa?
- Vem bestämmer vad som behöver göras / köpas in / investeras i?
- Behöver ni betala för tillgång till land på någon plats under året? Eller någon anläggning, hage, byggnad etc. Till vem i så fall?
- Skatt på rennäring, hur ser den ut?
- Får samebyn några statliga/ andra bidrag för rennäringen?
- Skulder eller överskott i sameby, hur hanteras det om det uppkommer?
- Har samebyn en årsredovisning eller motsvarande? Kan jag i så fall ta del av den?

Förändringar över tid

- Har utgifter / produktionskostnader förändrats över tid? (pga pellets, lastbilstransport exempelvis, eller annat.)