

Raporta/Rapport

Sami Statistics Speak

Numbers and Commentary









Čujuhus: Hánnoluohkká 45, NO-9520 Guovdageaidnu Telefuvdna: +47 78 44 84 00 postmottak@samiskhs.no www.samiskhs.no

Raporttat-čálaráidu ásahuvvui Sámi Instituhta raporttaid almmuheami várás. Sámi Instituhtta laktojuvvui Sámi allaskuvlii 2005:s. Sámi allaskuvla vuođđuduvvui 1989:s, ja dat lea oahpahus- ja dutkanásahus man ulbmil lea seailluhit ja ovddidit sámi giela, kultuvrra ja servodateallima buotsámi perspektiivvas.

Denne skriftserien ble etablert for å formidle Nordisk Samisk Institutts (NSI) forskningsresultater. NSI ble tilknyttet Sámi allaskuvla / Sámi University College i 2005. Sámi allaskuvla ble etablert 1989. Sámi allaskuvla er en institusjon for høyere utdanning og har som formal å styrke og utvikle samisk språk, kultur og samfunnsliv sett I et allsamisk perspektiv.

Reports series was established in order to publish research findings of the Nordic Sámi Institute, which was affiliated with Sámi allaskuvla / Sámi University College in 2005. Sámi University College was established in 1989. It is an institution of high education and research. Sámi University College's purpose is to strengthen and develop the Sámi language, society and culture.

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Preface

Sami Statistics Speak as a collection of articles translated to the English in order to reach researchers and others who might have an interest in specific knowledge on Sami affairs in Norway.

Each year we publish a book on Sami statistics in Sami and Norwegian, and after ten years of doing so we thought it was time to let a broader audience have a chance to study the topics.

This book focuses on a wide range of Sami topics, such as Education of Sami students, reindeer herding, health in a Sami context, and discrimination.

We hope you enjoy reading the articles and find them useful in your work.

The Expert Group for Sami Statistics wants to thank the autors of the articles and the translator, Bella Crespin, for their tremendous work!

Last but not least we give our thanks to the secretary of the Expert group, Yngve Johansen¹ who always makes sure that all tecnical aspects work out perfectly.

Sincerely,

Kevin Johansen,

leader of the expert group, Nord University

Snefrid Møllersen, deputy leader, Health Finnmark

Torkel Rasmussen, Sámi University of Applied Sciences

Iulie Aslaksen, Statistics Norway

Per Tovmo, Norwegian University of Science and Technology

¹ Kevin Johansen and Yngve Johansen are not related.

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1 Introduction

In 2008, the ministry with responsibility for Sami affairs (AID) decided to establish an Expert Group to edit and publish statistics on Sami issues. For a long time, there has been a need for quantitative knowledge on a wide range of topics relevant to a Sami context.

Since its establishment, the Expert Group has published approximately 80 articles written by researchers with in-depth knowledge on Sami affairs and statistics.

All articles have been published in both Sami and Norwegian. However, there has been an increasing demand for information on Sami topics in English so that researchers, scholars and others around the world are able to keep abreast of developments in Sami issues.

The following chapters are a good start for increasing and sharing knowledge on these subjects.

2 Sami Statistics Data Sources

Recommendations based on articles in Samiske tall forteller 1-8

Jon Todal, leader, Expert Analysis Group for Sami Statistics

Summary

The most frequently used information sources for articles in Samiske tall forteller have been based on data from so-called STN-areas (Sami Parliament subsidy schemes for business development areas). These geographically based statistics have proided a lot of knowledge on Sami society. In a number of social areas, however, ethnicity based statistics would have provided more relevant information than geographically based ones but there is no data source that can be used to make ethnicity-based statistics in Norway. The article recommends that Statistics Norway continue to produce Sami statistics based on data from STN-areas. Further, it recommends a report on how to best chart Sami-speakers in Norway. A number of Sami social areas lack statistics. We must assess what information can be obtained from the data. The Expert Analysis Group for Sami Statistics has completed its second four-year appointment, and the group has published eight issues of scientific papers, Samiske tall forteller 1 - 8. Based

on available statistics, authors have commented and analyzed changes in Sami society. Many of the authors in Samiske tall forteller have also commented and assessed the data they based their articles on. The summaries in this article are based on these comments and assessments.

2.1 Two Types of Data

The first article in *Samiske tall forteller 1* is about data sources for Sami statistics. In this article, Paul Inge Severeida points to two types of data for this type of statistics, geographical and ethnic.

Statistics Norway has geographically based data for traditionally Sami communities. However, Norway has no registry of ethnic Samis which can be used to make individual based Sami statistics.

In his article, Severeide discusses where one nonetheless can find individual-based Sami data, and how this can be used to establish what he calls a "statistical Sami population" to compile statistics applicable to Samis as an ethnic group in Norway. We will come back to this later.

Every second year since 2006, Statistics Norway has published a book called *Samisk Statistikk* (Sami Statistics). Statistics in this publication area based on data from STN-areas. An STN-area is a geographical area made up of counties and parts of counties in which businesses receive

economic support from the Sami Parliament.² These areas are comprised of traditionally Sami communities north of Saltfjellet and a large portion of the Sami population lives there.

Severeide point out that a portion of Samis in Norway live outside of STN-areas and are therefore not included in such statistics. A number of ethnic Norwegians and immigrants also live in STN-areas; they are included in the statistics. How much they affect the data depends on what theme is being analyzed.

2.2 Sami Demographic Data

Samiske tall forteller has had five articles on demographic changes in Sami communites.

In 2008, Svanhild Andersen and Torunn Pettersen went through population developments in STN-areas (at that time called SUF-areas3). Andersen and Pettersen characterised the changes in these areas as "catastrophic". However, not all the demographic changes were equally negative everywhere. The authors recommended studying the statistics in further detail in order to make conclusions about the reasons for the variations4. The recommendations included a more active use of existing statistics; they did not make any proposal regarding the collection of other data.

A demographic article by Øivind Rustad in 2010 showed how population decreases in STNareas were continuing. This article contained no statistical recommendations.5 The three demographic scientific papers in the 2012 issue of Samiske tall forteller did not contain any recommendations about the collection of other types of data either6.

Based on this, we can say that despite being aware of weaknesses in the statistics (weaknesses already pointed out by Paul Inge Severeide in Samiske tall forteller 1, see above), the authors of demographic articles consider existing statistics with data from STN-areas to be a sound basis for making analyses.

2.3 Data Sources for Sami Health Information

The 2009, 2010 and 2015 issues all contained articles on health.⁷ Magritt Brustad wrote the first two articles, while the last, from 2015, was co-authored by Magritt Brustad and Torhil

² The acrony STN stands for The area of activity of the Sami Parliament subsidy schemes for business development.

³ SUF was the acronym of the Sami development fund at the time.

⁴ Andersen, Svanhild og Pettersen, Torunn (2008): «Befolkningsutvikling i samiske bosettingsområder – sentralisering og stabilitet.» in *Samiske tall forteller 1*.

⁵ Rustad, Øivind (2010): «Befolkningsutvikling i STN-området 1990-2010.» in Samiske tall forteller 3.

⁶ Broderstad, Ann Ragnhild og Sørlie, Kjetil (2012): «Bo- og flyttetrender i norsk-samiske kommuner gjennom 40 år i relasjon til sysselsetting.» in *Samiske tall forteller 5*.

Pettersen, Torunn (2012): «Samene i Norge 40 000 i 40 år?» in Samiske tall forteller 5.

Severeide Paul Inge (2012): «Stor befolkningsvekst, men hvordan fordeler den seg?» in *Samiske tall forteller 5*. ⁷ Brustad Magritt (2010): «Uføretrygd og Sosialhjelp.» in *Samiske tall forteller 3*.

Brustad, Magritt (2009): «Helse i samisk befolkning – en kunnskapsoppsummering av publiserte resultater fra befolkningsundersøkelser i Norge» in *Samiske tall forteller 2*.

Brustad, Magritt og Lauritsen, Torill (2015): «Tannhelse i samisk befolkning i Finnmark.» in *Samiske tall forteller* 8.

Lauritsen. The 2015 article was about dental health. The authors of this article did not discuss any special statistical challenges.

Lack of information regarding an individual's ethnicity can make it difficult to design approriate policies and plans within the public sector. Brustad discussed this theme in her 2010 article about disability and social security benefits. She wrote that "in order to describe the causal relationships between the environment or living conditions and disability and social security in the Sami populations, it is necessary to study how ethnic information on the individual is included." Such information does not systematically exist.

Nonetheless, several large health studies have tried to survey the relationship between health and Sami ethnicity, and Magritt Brustad's 2009 article was a summary based on such studies. Data for these studies was based on participants' responses to questions regarding ethnicity.

Brustad did not have any direct recommendations concerning future data sources but she explained how "Sami" was defined in the various surveys. There is no "official" definition of the term "Sami" but statistics needs categories and categories were definied.

We face a Sami statistics problem here. If each instance of data collection uses its own definition of categoires, comparison of the results becomes difficult.

2.4 Data Sources for Information on Industry in Traditionally Sami Areas

Svanhild Andersen wrote an article in 2009 about primary industry in traditionally Sami areas.⁸ She built on Statistics Norway's data from STN-areas and found the data useful when one kept to each specific industry within the area.

People who work in STN-areas do not necessarily work in only one industry however. The combination of different industris has a long tradition in Sami society. In the article, Andersen pointed out that further study on this aspect of industry in Sami areas was needed.

The ethnicity dimension is already discussed in the article on health and demographics above. The comments regarding lack of information on ethnicity applies for statistics on industry as well. One can ask what provides the best picture of Sami society. Is it figures on industry changes in traditionally Sami areas or is it information about the ethnicity of people who work there? The answer to the question is maybe that articles need to build on both types of data to provide the best picture.

Industry was the main theme of the 2014 *Samiske tall forteller* and four articles were about this theme.⁹ Else Grete Broderstad and Einar Eythórson wrote about fisheries and Jan Åge Riseth wrote about reindeer herding. Sigrid Skålnes analysed the development of industry within STN-areas in the 2000s and Gunnar Claus analyzed employment statistics for STN-areas.

A shortcoming of the statistics, the authors pointed out, was that no information was available about those who did not work or study. These fell outside of the statistics. The was little

Claus, Gunnar (2014): «Sysselsetting i STN-området.» in Samiske tall forteller 7.

⁸ Andersen, Svanhild (2009): «Primærnæringene reindrift jordbruk og fiske.» in *Samiske tall forteller 2*.

⁹ Broderstad, Else Grete og Eythórson (2014): «Hva skjer med fiskeriene i de sjøsamiske fjordene?» in *Samiske tall forteller* 7.

Riseth, Jan Åge (2014): «Ei bærekraftig reindrift?» in Samiske tall forteller 7.

Skålnes, Sigrid (2014): «Næringsutvikling innanfor STN-området på 2000-talet.» in Samiske tall forteller 7.

information about people who lived in the country for only the short term. This last group is important for industry in Sami areas today. The authors also wanted information on people who left declining industries.

Authors on articles on business in the 2014 report, like Svanhild Andersen in 2009, also wanted more information on job-combining and part-time work.

Except for the article on reindeer herding, all the industry articles were about specific geographical areas in the north. Reindeer herding is practiced in a larger part of the country, and for this industry, more comprehensive statistics have been compiled that apply to all of Norway. Since it is very clear which part of the industry is run by Samis and which part is run by Norwegian tame reindeer herders, ethnic based industry statistics were available. The author then compared Sami reindeer herding and Norwegian tame reindeer herding.

2.5 Data Sources for Infomation on Sami Language in Sociey

Six of the eight published reports of *Samiske tall forteller* contained articles about developments in the number of students chosing Sami as the language of instruction at school and those chosing to study Sami as a school subject. Only the reports from 2013 and 2014 did not include such articles. In 2015, Torkel Rasmussen wrote the aricle on language choice at school, otherwise these articles were written by Jon Todal.¹⁰

Statistics are available on how many student choose instruction in Sami as a first or second language at the primary and lower secondary level. The figures are presented each year by GSI (*Grunnskolens informasjonssystem* – the primary and lower secondary school information system). It is therefore easy to track developments and trends.

The statistics also show the distribution of students for each of the three Sami languages taught in the country. Even though the discussion has never been very detailed in *Samiske tall forteller*, it is possible to see the distribution of students geographically, down to the school district level. The quality of Sami instruction is difficult to quantify. Nontheless, it would be useful to know more than just the fact that Sami is taught as a first and second language. To gage the quality of Sami education, it is necessary, for example, to know how many hours of instruction *in* Sami schools offer, not just *of* Sami. We lack such data. We also don't know how much of Sami instruction is carried out outside of regular school hours. These conditions affect students' attitudes to the subject.

Kaisa Rautio Helander and Yngve Johansen wrote an article in *Samiske tall forteller 6* about Sami place names on public road signs within administrative areas for Sami language (areas where Sami has the same status as Norwegian). Norway has an official language policy with binding laws and regulations that the state, counties and municipalities must follow. The article showed that in many cases, the laws were not followed and that statistics were lacking on the implementation of these language policies. The authors themselves needed to collect data and

¹⁰ Rasmussen, Torkel (2015): «Samisk språk i grunnskolen og videregående opplæring.» in Samiske tall forteller 8. Todal Jon (2013): «Kvantitative endringar i den samiske språksituasjonen i Noreg.» in Samiske tall forteller 6.

Todal, Jon (2008): «Samisk språk i grunnskolen – jevn vekst og brått fall.» in Samiske tall forteller 1.

Todal, Jon (2009): «Samisk språk i barnehage og skule.» in Samiske tall forteller 2.

Todal, Jon (2010): «Samisk språk i barnehage og skule.» in Samiske tall forteller 3.

Todal, Jon (2011): «Alvorleg nedgang for faget samisk som andrespråk» in Samiske tall forteller 4.

Todal, Jon (2012): «Samisk språk i barnehage og skule 2011/12.» in Samiske tall forteller 5.

set up the necessary statistics in order to say something about the implementation of the Place Names Act on road signs.

In the 2015 issue of *Samiske tall forteller*, Tore Johnsen wrote an article on Sami language in the Norwegian church. The church has itself compiled statistics on the use of Sami in its work. As long as the church is part of the state, it is required to use Sami in accordance with the Sami Act. This requirement will lapse when the church soon separates from the state. Since the Norwegian church's standing in Sami society is strong, it is hoped that the church continues to use Sami and compiles statistics that could reveal possible changes in the use of the language.¹¹ The other articles on language in *Samiske tall forteller* have few recommendations regarding statistical data sources.¹² However, it has been pointed out that statistics to monitor the use of Sami in the public sector are needed, and that we know little about the transfer of language from generation to generaton at home.¹³ The last-mentioned statistics will be challenging to compile; the first should be easy.

2.6 School, Higher Education and Research

Beyond the school-related articles already mentioned (articles on language at primary and lower secondary school), *Samiske tall forteller* has had eight other articles regarding school, higher education and research¹⁴.

For five out of the eight articles, the authors had to collect data from various sources themselves in order to assemble the statistics. This applied to the following areas: the production of doctoral degrees with Sami themes (Else Grete Broderstad 2011), adult education in Sami language (Lene Antonsen 2015), production of study credit points in Sami (Kevin Johansen 2013), distance learning in Sami (Kevin Johansen 2015) and Sami research projects (Kari Morthensen 2015).

Furthermore, in her 2015 article about adult education in Sami language, author Lene Antonsen called for consolidated statistics on the resources used on this type of education.

The three other school articles were written by Yngve Johansen¹⁵ and concerned the level of education among Samis. Johansen based these articles on data from STN-areas.

¹¹ Johnsen, Tore (2015): «Samisk språk i den norske kirke.» in *Samiske tall forteller* 8

¹² Antonsen, Lene (2015): «Språksentrenes voksenopplæring.» in Samiske tall forteller 8

Rasmussen, Torkel (2013): «Sametingets midler til samiske språk.» in Samiske tall forteller 6

Todal Jon (2013): «Kvantitative endringar i den samiske språksituasjonen i Noreg.» in *Samiske tall forteller* 6 ¹³ *Samiske tall forteller* 6

¹⁴ Granseth, Tom (2015): «Gjennomstrømning i videregående opplæring.» in Samiske tall forteller 8

Johansen, Kevin (2015): «Samisk fjernundervisning.» in Samiske tall forteller 8

Johansen, Yngve (2008): «Utdanningsnivå i SUF-området – økende kjønnsforskjeller.» in Samiske tall forteller 1 Johansen, Yngve (2009): «Utdanning i SUF-området.» in Samiske tall forteller 2

Johansen, Yngve (2010): «Utdanningsnivå og bosted.» in Samiske tall forteller 3

Broderstad, Ann Ragnhild og Broderstad, Else Grete (2011): «Den samiskrelaterte doktorgradsproduksjonen ved Universitetet i Tromsø» in Samiske tall forteller 4

Johansen, Kevin (2013): «Studiepoengproduksjonen i samisk i høgere utdanning.» in Samiske tall forteller 6 Morthensen, Kari (2015): «Forskningsrådene – 40 år for samisk forsking.» in Samiske tall forteller 8

¹⁵ Johansen, Yngve (2008): «Utdanningsnivå i SUF-området – økende kjønnsforskjeller.» in Samiske tall forteller 1. Johansen, Yngve (2009): «Utdanning i SUF-området.» in Samiske tall forteller 2. Johansen, Yngve (2010): «Utdanningsnivå og bosted.» in Samiske tall forteller 3.

2.7 Political Participation among Samis

Samiske tall forteller has had two articles on political participation.¹⁶ The first was about voting participation in Sami Parliament elections and was written by Torunn Pettersen. The second article was written by Per Selle and Kristin Strømsnes and was about political participation among Samis, but not limited to Sami politics.

The basis for the article on Sami Parliament elections was data that the author acquired from Statistics Norway and the Sami Parliament. Prior to 2005, finding quality assured data was difficult and figures were not available electronically. These problems were resolved from 2005 onwards.

It goes without saying that the electoral register of the Sami Parliament is the best registry to use when making quantitative analyses of Sami Parliament elections.

The other articles on political participation were based on three sample surveys: the national *Medborgerundersøkelsen*, the *Borgerrolleundersøkelsen* conducted in five municipalites in Finnmark and the *Sametingsvalgundersøkelsen* conducted after the Sami Pariliament elections in 2009. Participants in the last survey were randomly selected among those registered in the Sami Parliament electoral register.

The response rates for these surveys varied. The lowest was for the Sametingsvalgundersøkelsen.

2.8 Data on Sami Media

Samiske tall forteller has had one article on media. The article, written by JohanJohan Ailo Kalstad, was about the popularity, extent and general conditions of Sami media¹⁷. The author used yearly statistics from the media, user surveys and annual reports from NRK (especially from NRK-Sápmi) and data from the Norwegian Media Authority.

The author could study his findings in light of Eli Skogerbø's report on Sami media from 2000, which was based on a sample survey. Other sample surveys could also have been used.

2.9 Environment and Resource Administration

There has been only one article on the theme of environment and resource administraton in Sami areas, written by Ole Bjørn Fossbakk¹⁸. The author wrote extensively and informatively on the availability of various data. *Rovviltforvaltninga* (the agency responsibe for predator management) and *Finnmarkseiendommen* (Finnmark Estate Agency) play a central role here.

 $^{^{16}}$ Pettersen, Torunn (2010): «Valgmanntall og valgdeltakelse ved sametingsvalgene i Norge 1989 – 2009.» in Samiske tall forteller 3.

Selle, Per og Strømsnes, Kristin (2012): «Samer i parti og val.» in Samiske tall forteller 5.

¹⁷ Kalstad, Johan Ailo (2010): «Samiske medier – oppslutning, omfang og rammebetingelser.» I Samiske tall forteller 3.

¹⁸ Fossbakk, Ole-Bjørn (2011): «Miljø og ressursforvaltning i samiske områder» in *Samiske tall forteller* 4.

Figures on hunting and fishing are available from Statistics Norway. The author criticized *Finnmarkseiendommen* for making their figures especially difficult to acquire.

In addition to data from STN-areas, Fossbakk has also included data from the South Sami reindeer grazing districts. The use of data from reindeer grazing districts has allowed him to hit on Sami interests outside of STN-areas as well.

2.10 Overview Articles

Paul Inge Severeide has written three articles called *Samiske tall* (Sami numbers).¹⁹ These articles present statistics for a range of social arenas. Commentary on statistics is brief and the main objective of the articles is to allow the reader to follow changes from year to year, also in social arenas not discussed in the longer articles.

Most of the statistics used area based on data from Statistics Norway for STN-areas. The exceptions are reindeer herding statistics and school language statistics.

2.11 Summary

Statistics Norway's figures for STN-areas appear to work well as a basis for analysis of Sami society, especially for analysis of demographics and industry. In total, 14 articles in *Samiske tall forteller* build largely on Statistics Norway's data from STN-areas. Without such numbers, it would be much more difficult to analyse changes in Sami society in Norway. The Expert Analysis group for Sami Statistics recommends that Statistics Norway continue to produce this type of statistics.

Articles in *Samiske tall forteller* show that there is no centrally collected data for a range of Sami social areas. There is reason to look closer at what can be done to improve the situation in the future.

Ethnicity based statistics is needed in addition to statistics from STN-areas in order to analyze matters such as Sami health and transfer of Sami language between generations. As we have seen, Paul Inge Severeide has already considered this in the first *Samiske tall forteller* in 2008. Severeide discussed whether it was possible to establish a "statistical Sami population" based on existing registries such as the 1970 census, the registry of reindeer herders and the Sami Parliament's electoral register.

The establishment of such a Sami statistical population has been evaluated but has been put aside. One reason for this was that it was not certain if the available material would represent all ethnic Samis. In the end, it was concluded that a large portion of Samis would most likely be excluded. Another reason to reject the proposal was the legal and privacy challenges tied to establishing such a population. These aspects must be carefully investigated before establishing a statistical Sami population.

¹⁹ Severeide, Paul Inge (2013, 2014 og 2015): «Samiske tall.» in Samiske tall forteller 6, 7 og 8.

We in the Expert Analysis Group for Sami Statistics know that other parties have contacted Statistics Norway with the goal of compiling statistics on Sami speakers in Norway. Better knowledge on the language situation will be useful for future public language planning. The methods used to accomplish this will be the same as for the establishment of a Sami statistical population, but with language as the central marker, not ethnicity.

Before one can establish the basis for such Sami language statistics, it is necessary to have a thorough account of the methodology and a clarification of any legal issues. The Expert Analysis Group for Sami Statistics advises that work on such an account of the methodology begin and that any leagal questions around this be clarified.

2.12 Recommendations

On the Register

- Statistics Norway should continue to produce statistics based on data from STN-areas.
- It should be assessed whether it is methodologically possible to establish a "statistical Sami language population" (not based on ethnicity, but on language). The legal aspects of this should also be investigated.
- Privacy concerns regarding the possible establishment of a "statistical Sami population" (based on ethnicity) should be examined.

On Permanent Statistics

Statistics should be available on:

- changes in Samis' combination of different industries
- what happens to people who leave declining industries
- foreigners with temporary residence in Sami areas
- the amount of Sami language instruction in primary and lower secondary school
- the amount of Sami instruction conducted outside of regular school hours
- changes in the use of distance learning in Sami instruction and what type of languagea instruction distance learning is combined with
- changes in use of Sami language in the public sector
- the use of Sami in church (also after the separation of church and state)
- the implementation of existing legislation, for example how the Place Names Act is being implemented on public signs
- the development of Sami-related research and higher education (such as course study point production, number of PhDs, number of research projects financed by the Research Council of Norway and others)

In addition to this, statistics of great interest to society, such as statistics on *Finnmarkseiendommen*, should be more readily available.

Survey

Discussions should begin on whether it is possible to agree on Sami ethnicity definitions. Researchers could use these definitions to better compare results in the future.

3 Sami Health – a Summary of Published Results of Population Studies in Norway

Magritt Brustad (D. Sc.) Centre for Sami Health Research, Department of Community Medicine, UiT The Arctic University of Norway

3.1 Introduction

This chapter presents and comments on data from published works based on health surveys conducted among Sami populations in Norway. The chapter focuses on works that look at disease and disease risk factors as well as include information on Sami ethnicity.

3.1.1 Health Research among Northern Indigenous Populations

Health research among indigenous populations in northern areas has focused on themes which have been perceived as especially relevant for these population groups. Despite the large geographical span and significant variation in socioeconomic factors and living conditions, the literature presents several common features in health research on northern indigenous populations.

Much of the earlier research on northern indigenous populations focused on how living in cold climates could affect health. Incidence rates of various infectious diseases have also been studied, especially in countries with poorer living conditions and health care than, for example, Nordic countries. Inspired by the hypothesis of the protective effects of traditional seafood consumption such as seal, whale and other sources rich in marine fat, studies regarding cardiovascular disease were also conducted. Research from Greenland has been especially cited in this context.

More recently, research on chronic diseases has been updated in light of observed changes in lifestyle, activity level and diet. Increased rates of diabetes type II, cardiovascular disease and obesity have caused worry and initiated studies about changing patterns of nutrition and health among indigenous populations in northern areas.

Some research has focused on surveying the level of contamination in traditional diets and the possible health effects of this. This has been a special focus of research among indigenous groups with a high intake of food containing so-called persistent organic pollutants.

Studies on suicide and the use of alcohol and other intoxicants have also been of current interest to health researchers in northern areas.

3.1.2 Eugenics Perspectives in Medical Research

In the first half of the 1900s, measuring skull length and width of both the living and dead was common practice in eugenics research. The idea was that humankind could be divided and placed into an evolutionary hierarchy. This scientific interest in races had its roots in the 1700s, when pioneers in natural history began to divide people into biological categories based on external physical features. In the 1800s, this was a large and prestigious scientific field and the European populations were therefore divided into races. Northern European researchers placed blond, blue-eyed Germanic or Nordic races with elongated faces at the top of the evolutionary scale. An underlying ideology that characterized this philosophy was the idea that mixing races could degrade the upper layer of the hierarchy. Some eugenicists considered the main goal of the research to safeguard the purity of the Nordic race.

In the interwar period, eugenics research was conducted throughout Norway. In Northern Norway, the research concentrated on Samis and Kvens who received the screenings with strong scepticism and reluctance.

Understandably, head measuring is still a delicate subject in many places and has become a part of a negative collective historical memory. Even though today's research milieu is opposed to the ideology that characterized eugenics, this historical burden requires health researchers who work with Sami populations to ensure that research conducted today is ethically justifiable and conforms to current legislation.

Reference [1]

3.1.3 Ethnicity and Medical Research

A major challenge for Sami health research is how to ascertain a person of Sami heritage. Many aspects complicate this. First, many areas have a mixed ethnic population. Furthermore, language cannot necessarily be used as an indicator of Sami ethnicity. Long-standing Norwegianization policies have resulted in geographical variations of Sami language survival. Language affiliation is not enough to identify Samis in areas where the Sami language is weak.

Norway has no Sami ethnicity registry and it is prohibited to use the Sami Parliament's voter registry for health research. Consequently, the various studies that form the basis of this chapter have used different ways of identifying ethnicity. This may be confusing, but it is also a manifestation of how categorizing populations by mutually exclusive ethnic categories is problematic. The results presented here must therefore be interpreted in light of this limitation in the research.

In the main, three different categories of questions have been used to collect data on ethnic affiliation: kinship, language and self-reported ethnicity. Each subchapter explains how ethnicity is classified in the various studies referenced.

3.1.4 Data Sources

Generally, few published health studies in Norway include Sami ethnicity. This chapter is mainly based on results from the following health studies: *Finnmarksundersøkelsene*, *Ung i Nord, the SAMINOR-study (the Health and Living Conditions Study in Areas with Mixed Sami and Norwegian Communities)* and some epidemiological registry studies connected to the census of 1970. In all of these studies, health data has been analysed using different classifications of ethnicity. This chapter also refers to other selected studies that include ethnic data.

Finnmarksundersøkelsene (The Finnmark Surveys)

In the period between 1974 and 2003, the Department of Community Medicine at the University of Tromsø conducted six different population-based screenings in Finnmark of risk factors for cardiovascular disease. Gradually, the surveys were expanded to include other diseases as well.

All municipalities in Finnmark were surveyed with people between the ages of 20 and 68 participating, but some surveys were conducted in only a few of the municipalities with selected age groups. Information about ethnic affiliation was collected, based mainly on responses to questions regarding the participant's and/or grandparents' ethnicity as well as parents' and grandparents' language background.

Ung i Nord (Young in the North)

Data collection for the *Ung i Nord* study was conducted in 1994/1995 with a follow-up study three years later in 1997/1998. The purpose of the research was to study ethnicity, problem behaviour, mental health and use of intoxicants among youth in Northern Norway. Twenty-one upper secondary schools in Nordland, Troms and Finnmark were invited to participate.

All the schools were in larger or smaller communities. No schools in larger cities were invited. In total, 3,186 people participated in the first study (response rate: 85%) and 1,670 (55% of the original participants) participated in the follow-up study. Sami ethnicity was categorized based on one parent or grandparent reporting Sami heritage or Sami language skills.

SAMINOR studien (The SAMINOR Study)

The Centre for Sami Health Research at the University of Tromsø, in cooperation with the Norwegian Institute of Public Health, conducted the Health and Living Conditions Study in Areas with Mixed Sami and Norwegian Communities (SAMINOR study) in 2003/2004.

The study used questionnaires combined with a medical examination, including the collection of a blood sample. This study followed the screenings for cardiovascular disease which the Norwegian Institute of Public Health had conducted several times in various areas of Norway. In addition, with the help of a questionnaire, several extra questions were posed about, among other things, ethnicity and Sami cultural ties.

The survey was carried out in 24 selected municipalities in Finnmark, Troms, Nordland and Trøndelag. Based on information from the 1970 census, all the municipalities had at least a

5% Sami population. In a few municipalities, only some districts were included. All people in the survey area born between 1925 and 1967/68 as well as 1973/74 were invited to participate in the study. The study included 16,865 participants, constituting a response rate of 61%.

Ethnicity data from the *SAMINOR* is based on reported ethnic background, own, parents' and grandparents' language as well as participants' self-defined ethnicity.

Population Studies based on National Databases

The national Cause of Death and Cancer Registries are often used for population studies in Norway. They have also been used in some studies to look at diseases and death in the Sami population. Data from these registries, after approval from the Data Inspectorate and medical ethics committees, have been linked to ethnicity registries mainly from the 1970 census. Questions used to determine ethnicity from this census were own, parents' and grandparents' language as well as self-defined ethnicity. These questions were put into the census from 1970 in selected areas in Nordland, Troms and Finnmark.

Statistics Norway has also made available data on mortality rates in the Sami population. These have been studied in relation to geographical residence defined as within or outside of *samisk forvaltningsfondet* (SUF), Sami administrative areas.

3.1.5 Disease/Risk Factors Included in the Chapter

The contents of this chapter are mainly guided by published quantitative population-based health research on Samis in Norway. With few exceptions, the studies referred to have used a large amount of data, i.e. have had many participants. This chapter, therefore, also exposes the need for further study in order to obtain reliable and representative numbers on health in the Sami population of Norway.

The chapter contains data relating to widespread public health diseases such as cancer, cardiovascular disease and diabetes II, as well as mortality patterns. Incidents of asthma and allergies among children, as well as incidents of hip dysplasia and Bechterew's disease among adults, are also included. Studies on diet and nutrition are referred to, as are studies on the use of alcohol and tobacco. Mental health, including suicide and use of sleep medications are also included. The chapter concludes with several results from health care studies, and then a summary and update on the need for further study.

3.2 Mortality

Summary

Data show little difference in mortality rates for Sami and non-Sami populations. Nonetheless, some studies suggest a slightly higher mortality rate in the Sami population. Higher incidents of death and cerebral haemorrhages among Sami women and accidental death and suicide among Sami men may be a possible reason for this. Women living in inland Sami areas have had a low and stable mortality rate over time. There is still reason to be cautious however about the relatively high mortality rate among young men in Sami areas and about possible geographical differences in infant mortality.

3.2.1 Introduction

Mortality rates have been used as a measurement of a population's living conditions and state of health. Mortality rates can be given in different ways. Most used is the number of deaths per 1000 or 100 000 inhabitants in various age groups.

Infant mortality is defined as all deaths under one year per 1000 total live births. Life expectancy is also a measurement of mortality in the population. In Norway, there is a cause of death registry which can be used for population studies.

3.2.2 Sources

Until 1998, mortality in the Sami population of Norway had been studied based on connecting numbers from the Cause of Death Registry to ethnicity reports from the 1970 census. Sami ethnicity was defined as having at least one grandparent who spoke Sami or the respondent self-identifying as Sami.

Total deaths within and outside SUF has been used as a surrogate measurement of Sami ethnic affiliation, and has been compared in the period 1991-2006.

3.2.3 Mortality Rates

The combination of mortality statistics from the period 1970-1998 and ethnicity reports from the census of 1970 have shown a slightly higher mortality rate for Sami men (6%) and women (10%) compared to the regional reference population. Higher mortality rates due to cerebral haemorrhage, especially among women, can explain some of the difference. Men had a higher incidence of so-called violent deaths, especially accidents and suicide.

Figures 1 and 2 show the calculated probability of 15 year-old men and women reaching the age of 75, based on mortality patterns in various time periods. The figures differentiate between populations within and outside SUF, as well as coastal and inland.

These figures show that there is no big difference for women in relation to geographical areas or time. For men, however, there appears to be an increase in life expectancy. This can be explained by the decrease in cardiovascular disease which has affected men more than women. Further, it appears that men in SUF areas have had a somewhat higher mortality rate than both the national and non-SUF area rates (Figure 3). This may be explained by the high mortality rates of so-called 'violent deaths' in SUF areas.

Figure 3.1 Probability of 15 year-old men reaching the age of 75 in various geographical areas, based on mortality rates from various time. *Source: Brustad et al 2009, Scandinavian Journal of Public Health.*



Figure 3.2 Probability of 15 year-old women reaching the age of 75 in various geographical areas, based on mortality rates from various times.

Source: Brustad et al 2009, Scandinavian Journal of Public Health.



Figure 3.3 Mortaligy Rates for Men ages 15-59 in various geographical areas (2001-2005).



Source: Brustad et al 2009, Scandinavian Journal of Public Health.

Generally, one can say that the existing mortality figures show small differences between Sami vs. non-Sami populations. This can indicate that mortality patterns have evened out between geographical areas with low versus high density of Sami populations. This has been explained by similar living conditions, education and access to health care which is in contrast to the situation for other indigenous groups in the circumpolar region.

However, there is still reason to be careful about the relatively high mortality rate among young men in Sami areas.

3.2.4 Infant Mortality

Studies from Kautokeino from the 1940s and 1950s showed a very high infant mortality rate compared to the rest of the county and country. No ethnicity-based data on infant mortality is available from this period.

Table 1 shows infant mortality per 1000 live births within and outside SUF areas between 1991 and 2006. The table is further divided for inland and coastal Norway, north of Saltfjellet. The cities of Alta, Tromsø and Harstad are excluded from the table. Because the table is based on little data, one has to approach these mortality rates with caution. However, research over a longer period of time is necessary to see if inland areas outside SUF areas actually have a significantly lower infant mortality rate compared to the other areas mentioned.

Table 3.1Number of births, deaths in the first year of living and infant
mortality rates in various geographical areas in Norway, north
of Saltfjellet 1991-2006. (The cities of Tromsø, Harstad and Alta

are excluded.) Sourcee: Brustad et al 2009, Scandinavian Journal of Public Health

		SUF		Non SUF	
	Total	Inland	Coast	Inland	Coast
Number of births	49799	1471	6152	2577	39599
Number of deaths in the first year	266	10	35	7	213
Deaths in the first year per 1000 live births	5.3	6.8	5.7	2.7	5.4

References

[2-4]

3.3 Cardiovascular Disease

Summary

Cardiovascular disease has been studied in the Sami population. Some studies have suggested a lower occurrence of these types of diseases in Samis than in the reference population, despite the high incidence of known risk factors. Other studies have not been able to confirm these findings. More research is needed to study the questions related to Samis' risk of cardiovascular disease.

3.3.1 Introduction

Cardiovascular diseases are diseases of the heart and blood vessels in the body. Deaths due to cardiovascular disease have increased substantially in Norway from 1950 to the 1970s. As a consequence of systematic prevention programs started at the beginning of the 1970s in relation to known risk factors, there has been a halving of cardiovascular disease in Norway. The decrease has been especially marked over the last 15 years.

The most important risk factors for cardiovascular disease are fatty substances in the blood, smoking, blood pressure, being overweight and physical inactivity.

3.3.2 Source Material

Cardiovascular disease and Sami ethnicity has been studied in the so-called *Finnmark and Tromsø Surveys* where risk factors were registered. Data from both the *Finnmark Survey* and the 1970 census have also been linked up to the Norweigan Cause of Death Registry.

These studies used mostly language affiliation and Sami kinship to identify Sami participants.

The *SAMINOR Study*, analysed fats in blood in relation to ethnicity. Ethnicity was then divided into four groups: 1) people with three generations of Sami language, 2) people with at least one Sami marker (language, self-reported ethnicity or family background), 3) at least one Kven marker but no Sami marker and 4) Norwegian.

3.3.3 Cardiovascular Disease among Sami

Already in the 1960s, data from Statistics Norway showed a lower frequency of cardiovascular disease in inland Finnmark than on the coast. This led to the hypothesis that Samis were at a lower risk for this type of disease. In the 1970s, a number of studies suggested that Samis had lower risk of death due to heart attack.

The Tromsø Survey of 1974 showed that 8% of men with a Sami background reported cardiovascular disease in the immediate family. The rate was at 16% for men of Finnish decent and 13% for Norwegians.

The Finnmark Surveys from the same period showed that Sami men had a 40% higher risk for cardiovascular disease than Norwegian men. Self-reported cardiovascular disease was, on the other hand, considerably lower in the Sami population. The reason for this was unknown, but

genetic and environmental explanations have been suggested. Language problems, which led to disease and risk factors being systematically misreported across ethnic groups, has also been suggested as an explanation for this finding.

With further analysis of data from the Finnmark Surveys from the 1970s, ethnic differences disappeared when one considered known risk factors for cardiovascular disease. In a similar analysis of the same data, once people with a history of heart disease were taken out, it was found that Sami men had a lower frequency of cardiovascular disease than Norwegian men did.

Health studies that followed in Finnmark, at the end of the 1980s, showed no ethnic difference in the incidence of angina pectoris and heart attack for neither women nor men. At the beginning of the 1990s, clinical studies were conducted in four municipalities in Finnmark (Alta, Tana, Karasjok and Kautokeino) where no differences were found in the level of fat in the blood among Samis and Norwegians. However, Sami heart patients reported lower incidence of family heart disease than Norwegians. It is worth noting that the results in this study are based on a small sample.

By linking ethnic information from 1970 to the Norwegian Cause of Death Registry, studies have been conducted on the incidence of, among others, cardiovascular disease in the northernmost part of Northern Norway, with relation to ethnicity in the period 1970-1998. Results show that Sami men and women have had a higher mortality rate due to cardiovascular disease, 7% and 17% respectively, than those who reported Norwegian ethnicity in 1970. Similar figures were reported for aneurysms, 14% for men and 28% for women. Due to lack of information, it was not possible to study whether this difference could be explained by different incidence of known risk factors in the various ethnic groups.

This study also found that the risk was considerably lower among Sami men with strong ties to reindeer herding than for Norwegian men (approximately 30% lower risk). The risk increased for Sami men with reduced ties to reindeer herding, so that those with no ties had a 20% higher risk of cardiovascular disease than Norwegians. A similar pattern was not found for Sami women.

The SAMINOR study found that of respondents aged 65-79 years, Sami men and women had lower levels of cholesterol than Norwegians. The opposite was found for respondents aged 36-49 years; higher total cholesterol values were found for both Sami men and women.

There are still some unanswered questions regarding the risk of cardiovascular disease among Samis. No studies have been conducted with updated figures from the Cause of Death Registry over the last 10 years. In light of the general increase in weight and inactivity over the last few years, as well as a continued 'modernization' of life style, new studies are required on the incidence and risk of cardiovascular disease in the Sami population.

References [5-9]

3.4 Cancer

Summary

Studies have shown that for most forms of cancer, there was no difference between the Sami and reference population. Nonetheless, Samis had a lower risk of some types of cancer such as colon, prostate, lung and bladder cancer. The reason for this is unknown, but diet and lifestyle have been suggested as an explanation.

3.4.1 Introduction

Cancer is the result of uncontrolled cell growth or division. Cancer, in addition to cardiovascular diseases, is the most common cause of death in Norway and is the most important cause of potential years of life lost in the population. It is believed that a third of all cancer occurrences can be prevented.

Important risk factors for cancer are diet, smoking and physical activity, in addition to genetics.

Several Nordic studies have looked at the occurrence of cancer in Sami populations. Samis have been considered as a relatively 'closed' genetic group, and some Samis still lead a traditional lifestyle which separates them from the reference population.

Two important motivating factors for cancer research in this population have been the healthrelated consequences of atomic testing at Novaya Zemlya in the 1950s and 1960s and the nuclear reactor accident at Chernobyl in 1986.

3.4.2 Source Material

Cancer studies in Nordic Sami populations have used data from national cancer registries linked to language reporting in the 1970 census.

3.4.3 Types of Cancer

Cancer studies have shown an overall lower incidence of cancer for Sami men and women compared to both national and regional figures for the reference population. Generally, this can be explained by a lower incidence of some of the most common types of cancer in Norway such as breast, colon and prostate cancer.

Based on ethnicity reporting from the 1970 census, Haldorsen and Tynes have studied the incidence rate of various types of cancer in the Sami population of Northern Norway versus the regional reference population. A summary of the results is given in table 2. It appears that the pattern of a lower incidence of cancer among Samis in relation to the reference population is clearer among Sami men than women.

Table 3.2Summary of Research on the Incidence of Cancer among Samis
in Northern Norway compared to the regional reference

Type of Cancer	Men	Women
All types	Samis have lower risk	Samis have lower risk
Stomach	No difference	No difference
Colon	Samis have lower risk	Samis have lower risk
Bladder	Samis have lower risk	No difference
Breast	-	No difference
Prostate	Samis have lower risk	-
Lung	Samis have lower risk	Samis have lower risk

population. *Reference: Haldorsen and Tynes (2005), European Journal of Cancer Prevention*

3.4.4 Possible Explanations for Differences in Incidence of Cancer

It has been suggested that the relatively low rate of colon cancer among Samis is due to genetics and higher physical activity.

Prevalence of smoking is considered to be quite similar among the Sami and Norwegian populations. Lung and bladder cancer are both so-called smoking related types of cancers. Therefore, lower rates of these diseases cannot be explained by smoking habits.

It has been suggested that the lower rates of prostate cancer among Samis is due to diet and physical activity. However, it is also possible to suppose that Samis participate in screenings and examinations less frequently than the reference population and therefore have a higher portion of undiagnosed prostate cancer.

3.4.5 Cancer and the Environment

Since nuclear testing in Novaya Zemlya, northern Russia in the 1960s, the Norwegian Radiation Protection Authority has conducted full-body inspections of caesium-137 in reindeer herders and in reindeer meat. Breast and thyroid cancer, as well as leukaemia, are the types of cancer which can be related to exposure to ionized radiation. However, higher rates of these types of cancers have not been demonstrated among Samis, even when considering consumption of reindeer meat.

Since Chernobyl, no systematic analysis of the prevalence of cancer has been carried out in South Sami areas, though they were the hardest hit with radioactive fallout.

References [2]

3.5 Diabetes Mellitus Type II

Summary

No differences have been demonstrated between Samis and Norwegians in the rates of type II Diabetes. Nonetheless, there are indications of varying effects of known risk factors between the ethnic groups. Not enough research has been conducted to say something definitive about this.

3.5.1 Introduction

Type II diabetes mellitus is usually prevalent among people over the age of 40 and it is estimated that there are approximately 7000 new cases of type II diabetes in Norway each year. About 120,000 Norwegians have the disease. It is assumed that there are approximately 50,000-70,000 undiagnosed cases of type II diabetes in Norway.

In contrast to type I diabetes, patients with type II diabetes produce insulin, but not in sufficient amounts. In addition, many have resistance to insulin, which means that the body's cells do not absorb insulin and can therefore not absorb sugar from the blood, resulting in heightened blood sugar.

Rates of type II diabetes have had a clear increase in the last few years. The diabetes epidemic can be attributed to increased rates of obesity and physical inactivity. Several studies have shown that in the wake of modernisation, an increasing portion of indigenous populations have also contracted the disease.

3.5.2 Sources

Based on data from the Finnmark Surveys of the 1970s, analyses have been carried out on the rates of self-reported diabetes among Samis. In these analyses, Sami ethnicity was established based on two or more grandparents having a Sami background.

Another study looking at the risk of diabetes linked the Cause of Death Registry with ethnicity reporting in the 1970. However, this study made no distinction between the two types of diabetes. The criteria for Sami ethnicity in this study was that the respondent identified themselves as Sami or had at least one grandparent who spoke Sami.

3.5.3 Type II Diabetes among Samis

Studies show no ethnic differences between the Sami and reference population with regard to the rate of type II diabetes, neither for self-reported cases nor for diabetes as the cause of death. It is interesting to note that many of the studies showed that Sami women had a higher body mass index¹ (BMI) which is one of the most important risk factors for type II diabetes. Nonetheless, this did not correlate with an increase in rates of the disease.

A possible explanation for this has been that BMI does not reveal fat distribution on the body, which could be significant when determining risk. There is also discussion around the suitability of using BMI when one compares populations with relatively large height differences.

More research is needed to determine if being overweight disposes Sami women to type II diabetes to the same degree as those of Norwegian decent.

It would also be interesting to study the development of type II diabetes among Samis in Norway with regard to changes in physical activity and diet. No such studies have been conducted thus far.

References [8;10;11]

¹ Measurement of the relationship between height and weight.

3.6 Asthma and Allergies

Summary

Studies conducted in Northern Norway have shown higher rates allergies and asthma among Sami children than Norwegian children. There are no corresponding studies for the adult population. The findings for children are interesting but need to be confirmed before one can reliably say something.

3.6.1 Introduction

Asthma is a chronic lung disease which leads to fits of wheezing, shortness of breath or coughing. Asthma often co-occurs with eczema and allergies, and can be triggered by various environmental factors such as tobacco smoke, pollution and mould in people with a predisposition for the disease. When in contact with allergens such as house dust, pollen or furbearing animals, allergies can cause afflictions such as itchiness, eczema, conjunctivitis, stuffy nose, coughing and difficulty breathing. One hypothesis is that 'too-strict hygiene' can increase the risk of asthma and allergies.

It is believed that both asthma and allergies are genetic. Studies have also shown that different ethnic groups in a country can have different rates of asthma.

3.6.2 Sources

Studies on the rates of asthma and allergies among Sami versus Norwegian children in Northern Norway have been conducted over a period of 10 years, from 1985 to 1995. These studies defined Sami ethnicity as children with minimum two grandparents with Sami as a mother tongue.

3.6.3 Asthma among Samis

Over all, there has been an increase in the rates of asthma and allergies among children in Northern Norway from 1985 to 1995. Sami children had a higher rate of asthma and allergies than Norwegian children. Rates were highest among Sami boys (Tables 3 and 4).

Table 3.3Rates (%) of Asthma and allergies among Sami and Norwegian
children in Northern Norway in 1985 and 1995.

	1985	1995
	(n=10 093)	(n=8 676)
Asthma		
Sami	6,0	13,6
Norwegian	5,1	8,2
Allergic conjunctivitis		
Sami	19,4	32,6
Norwegian	16,1	21,6
n = number of people		

Source: Selnes et al (2002) Pediatric Allergy Immunology

As far as we know, no population studies have been conducted in the adult Sami population regarding the rates of asthma and allergies in Norway.

Table 3.4Rates (%) of Asthma and allergies among boys and Girls in
Northern Norway in 1985 and 1995 with relation to ethnicity.
Source: Selnes et al (2002) Pediatric Allergy Immunology

	1985	1995	1985	1995
	(n=10 093)	(n=8 676)	(n=10 093)	(n=8 676)
	Boys	5	Girls	
Asthma				
Sami	8,0	17,5	4,0	9,8
Norwegian	6,5	9,8	3,6	6,6
Allergisk conjunctivitis				
Sami	21,7	37,6	17,0	27,8
Norwegian	18,4	24,9	13,7	18,5

n= *number of people*

References [12]
3.7 Hip dysplasia and Bechterew's disease

Summary

High rates of hip dysplasia in the Sami population have been reported over a long period. There is however only limited data to clarify this. Comparative studies on Samis and Norwegians have not been conducted with regard to the rate of hip dysplasia. Research of Sami populations in selected Sami rural districts has shown a high frequency, but representativeness with relation to the population in this data is uncertain.

The same studies have found a heightened incidence of a gene called HLA-B27, which has been tied to increased risk of Bechterew's disease. More research is necessary to determine the risk and rate of Bechterew's disease in the Sami population of Norway.

3.7.1 Introduction

Hip dysplasia is a congenital defect of the hip socket. The hip joint is a ball and socket joint where the upper part of the thighbone (femur) is formed as a ball. This ball should fit into the hip socket in the pelvis. People with hip dysplasia have a socket that is too shallow which leads to the thighbone slipping out more easily. Causes of the disease are unknown but it is believed to be hereditary. Big variation has been found when comparing rates in different ethnic groups.

Bechterew's disease is an inflammation in the spine and large joints which results in stiffness and pain. Causes for the disease are currently unknown but it occurs in families, which indicates a hereditary reason. Ninety percent of those with the disease also carry the HLA-B27 gene. Generally, high rates of this gene occur in arctic populations.

3.7.2 Sources

Recently, a study has been conducted on the rates of hip dysplasia and Bechterew's disease in Sami populations. This study is based on examinations of 348 Samis living in Kautokeino and Karasjok. In this study, Sami heritage was determined for participants with at least two Sami grandparents.

3.7.3 Hip Dysplasia among Samis

Since the first half of the last century, higher rates of hip dysplasia have been reported in the Sami population compared to the reference population. It has been suggested the Sami tradition of letting children lie in a *komse*, a traditional cradle, has been a contributing factor to this high rate.

Table 3.5Rate (%) of Hip Dysplasia among a Sami population (1987)

	Number of	Severe dysplasia	Mild form of dysplasia
	people		
Men	150	14	17
Women	165	21	24
Total	315	17	21

Kilde: Johnsen K et al (2008) International Journal of Circumpolar Health

The rates of hip dysplasia given in table 5 are based on the study carried out in Karasjok and Kautokeino in 1987. In total, the study found that 38% of those who participated had mild or severe hip dysplasia. Women had higher rates than men and the rates of hip dysplasia increased with age.

More population-based research is needed in order to study the rates and possible causes of hip dysplasia in the Sami population.

3.7.4 Bechterew's Disease among Samis

Already in the 1970s, a relatively high rate (26%) of the gene HLA-B27 was reported among Samis in Northern Norway. The rate for the population in Southern Norway was found to be at 10%.

In studies from Northern Norway, where responses were not divided into ethnic groups, the rate of the gene was at 16% while the incidence of Bechterew's Disease was at 1.1-1.4%. Studies of Sami populations in Karasjok and Kautokeino from 1987 found a rate of Bechterew's Disease of 1.8%, with 91% of those having the HLA-B27 gene. According to this study, the total rate or HLA-B27 for the population was 24%. Compared with most of the population-based studies, the incidence of both Bechterew's Disease and HLA-B27 were high. This data, however is based on a small selection (348 people) and this, in addition to differences in diagnostic methodology, could explain the large differences in finding.

More research is needed to obtain reliable figures regarding the rates of Bechterew's Disease and the HLA-B27 gene in the Sami population of Norway.

References [13]

3.8 Diet and Nutrition

Summary

According to new dietary studies, dietary patterns in the population are more strongly related to geography than to Sami/Norwegian ethnicity. In addition, there seems to be a clearer correlation between ethnic affiliation and dietary patterns inland than at the coast.

Research has indicated a significantly lower rate of iron deficiency in the inland Sami population, which may be explained by the higher consumption of reindeer meat. Reindeer meat has been found to have a protective effect, even for the most vulnerable groups such as women of fertile age.

3.8.1 Introduction

Chronic diseases such as cancer, cardiovascular disease and diabetes are the cause of more than half of all deaths in the world. An increase of these diseases has been registered, in addition to increased body weight and obesity. Research has shown that to a large extent, these conditions are diet and nutrition related and therefore can be prevented by making healthier choices.

Research on diet and nutrition is an important tool in assessing the risk for chronic disease in a population.

This chapter presents data on eating habits and the status of dietary iron in the the Sami population.

3.8.2 Source Material

The dietary data referred to in this chapter comes from the population-based SAMINOR study. Beyond this, few diet studies exist for the Sami population and those that do are based on a small sample. In addition to collecting data, the SAMINOR study also analysed blood samples for iron content in order to see whether there were variations in iron levels concerning geography, dietary practices and/or ethnic groups.

Ethnicity in the dietary study from SAMINOR is divided into four categories. "Sami I" were people who had Sami as a mother tongue for three generations. "Sami II" were people with at least two grandparents who spoke Sami. "Sami III" were people with at least one Sami identity marker (language, self-reported Sami ethnicity or family background). "Non-Samis" were all those who did not fit one of the other categories.

Dietary Practice Analysis

Data from the SAMINOR study was used to study dietary practices among the Sami population. The classical way to study nutrition and health has been to analyse certain factors in a diet such as nutrients, specific foods or energy intake and then see how they affects health. In a dietary practice analysis, diet is studied as a whole. In some cases, this method may be more appropriate because it requires a smaller number of questions and the results can be easier to interpret. It is

easier because diet is actually made up of the consumption of many different foods, *not* specific nutrients, and because diet in population studies can be revealed by defined dietary patterns.

The dietary practice analysis in the SAMINOR study grouped participants according similarity of answers to the dietary questions. These dietary groups or dietary patterns were further analysed with regard to ethnicity, geography and health behaviour.

Dietary Patterns

Five different dietary patterns were defined for the diet questions in the SAMINOR study. They were named after what characterized the dietary patterns best: 1) reindeer meat, 2) fish, 3) average, 4) fruits and vegetables and 5) western/traditionally marine.

The 'reindeer meat group' consumed high amounts of reindeer, reindeer meat products, elk, smoked and salted fish as well as boiled coffee. This group was characterized as people with three generation of Sami language (Sami I), being overweight and less physically activity.

'Fish' consisted of people who often consumed all of the marine food products mentioned in the questionnaire. This group was dominated by women, but also by people who reported their health as 'not so good', which may be explained by the fact that the group had the highest average age.

The dietary pattern called 'average' was characterised by an average intake of all the dietary questions except for whole milk, salted and smoked fish as well as coffee, pork sausage and lamb. Men dominated this group.

'Fruits and vegetables' was designated as such due to the high intake of these foods in addition to chicken, pasta, tea and water. This group had a large portion of women and people with a health-conscious lifestyle, as well as people who reported their health to be 'quite good'.

The last dietary category called 'western/traditionally marine'. People in this group reported frequent consumption of so-called western foods such as hamburger, pizza, sausages, casseroles, pork and beef. In addition, this group had the most frequent consumption of traditional foods such as fish liver and roe, whale, seabird eggs and filtered coffee.

Table 3.6Dietary Patterns with relation to different characteristics.Figures given in percent. (2003/2004)

	Dietary groups based on a total of 12,816 people				
	Reindeer meat	Fish	Average	Fruits and vegetables	Western, traditional marine
Sex					
Men	50	42	55	29	55
Women	50	58	45	71	45
Age					
36-49	42	18	37	39	39
50-64	42	45	41	43	44
65-79	16	37	22	18	17
Location					
Coast	17	82	80	77	91
Inland	83	18	20	23	9
Ethnicity ²					
Sami I	72	9	8	7	6
Sami II	12	12	14	12	19
Sami III	5	7	7	6	8
Non-sami	11	72	70	75	67

Source: Brustad et al 2008 Int J Circumpolar Health

While approximately 80% of the sample in the study lived on the coast, a little over 80% of the 'reindeer meat group' lived inland. Affiliation to the different dietary categories was more dependent on geography than ethnicity (Figure 4), except for Sami I where more than 70% of people belonged to the 'reindeer' group.

For coastal populations, ethnicity had little impact on dietary patterns. Inland, diet was found to a large degree to be associated with ethnicity (Figure 4).

² 'Sami I' are people who have Sami as a mother tongue for three generations. 'Sami II' are people with at least two grandparents who speak Sami. 'Sami III' are people with at least one Sami identity marker (language, self-reported Sami ethnicity or family background). 'Non-Sami' refers to all who do not fall into one of the Sami groups.

Figure 3.4 Distribution of Dietary Pattern Groups on the in relation to Ethnicity³. (2003-2004)

Source: Brustad et al 2008 Int J Circumpolar Health





³ 'Sami I' are people who have Sami as a mother tongue for three generations. 'Sami II' are people with at least two grandparents who speak Sami. 'Sami III' are people with at least one Sami identity marker (language, self-reported Sami ethnicity or family background). 'Non-Sami' refers to all who do not fall into one of the Sami groups.

Iron Deficiency and Diet

Internationally, iron deficiency is a significant deficiency disease caused by, among other things, poor nutrition and chronic disease. Iron deficiency can cause a diminished overall condition, especially among women of menstruating age, as well as the aged and children. Sources of dietary iron are animal products but iron is also found in plants, grains and vegetables.

Iron deficiency is the most common dietary deficiency in Norway. Iron deficiency anaemia (low blood count due to too little iron) reduces the body's ability to carry oxygen. It develops slowly and can occur because of an increased loss of iron, often due to bleeding, an increased need for iron, for example during pregnancy, or a low intake of iron.

Early symptoms may be listlessness or fatigue, pallid skin, headaches, tinnitus, dizziness and a decreased capacity for work. Signs of severe iron deficiency are short-windedness, rapid pulse and heart failure.

This chapter refers to measurements of both free iron in the blood and stored iron in the body.

Iron Levels in the Sami Population

Results from the SAMINOR study showed that the average measurement for stored iron in the body was higher among men than among women. The study showed that the portion of the population who spoke Sami for three generations had the highest average iron levels. Iron levels for men fell with increased age after the age of 60 years. Among women, iron levels increased for those in the age group 50-70, after menopause. After 70 years of age, iron levels began to fall also among women.

Regardless of ethnic affiliation, iron deficiency appeared seldom among men who participated in the SAMINOR study. Few participants had iron deficiency, especially in the 'reindeer meat' group. None of the men over the age of 50 had empty iron stores in the body.

Iron deficiency was up to nine times more common among women than men, regardless of ethnic affiliation. Members of the 'reindeer meat' group, also women, had the lowest portion of empty iron stores in the body (Figure 5). When comparing the various dietary pattern groups, no differences in irons levels where shown for participants over the age of 50.

Figure 3.5 Portion of Women with Empty Iron Stores with relation to Dietary Patterns. *Source: Borderstad et al* (2007) *European Journal of Haematology*



Diet and Lifestyle Affect Iron Stores

Iron stores in the body are affected by many different factors such as gender, age, health, and not least, nutrition. Iron content analysis conducted during the SAMINOR study has shown that people living on the coast had lower iron levels than those living in other areas. Iron levels were also higher in the inland Sami population compared to the non-Sami population in the same area. However, no difference in iron levels were found between Samis and the rest of the population living on the coast.

Iron level differences among participants can be explained by many factors. The most important factor which affects iron levels is diet. The inland Sami population ate significantly more reindeer meat than the rest of the participants in the SAMINOR study. Reindeer meat contains a lot of so-called bioavailable iron (3.8mg per 100g of raw meat), meat which is easily absorbed by the body. A diet rich in iron protects again iron deficiency. Coastal populations generally ate less meat and more fish, regardless of ethnic background.

References [14-16]

3.9 Smoking and Alcohol

Summary

Generally, no significant differences in smoking habits have been demonstrated between Sami and Norwegian adults or youth. For those living inland, studies have shown a slightly higher rate of smoking for Samis than non-Samis. Similar findings have not been established for women. Among youth, it appears that Sami youth start smoking earlier than Norwegian youth.

Both Sami men and women have reported a higher rate of total abstinence from alcohol than the non-Sami population. This tendency is especially pronounced among elderly Sami women. Sami youth have also reported a lower alcohol consumption rate that youth of Norwegian descent.

3.9.1 Smoking

Smoking increases the risk of a series of diseases such as lung cancer, cardiovascular disease and chronic lung disease. Statistics Norway (Statistisk sentralbyrå - SSB) carries out annual studies on tobacco use. In 1973, over half of Norwegian adult males smoked while in 2006, only around 21% of the adult male population did so. The portion of daily smokers among women has also decreased from 32% in 1973 to 22% in 2006.

While smoking was previously widespread in all social classes, daily smokers are now strongly overrepresented by people with a lower level of education. When it comes to occasional smoking, the inverse relationship applies.

Earlier population studies have demonstrated a higher rate of daily smokers in Finnmark compared to other counties in Norway. Figures for 2004-2008 show significant differences among the various counties. According to Statistics Norway, the lowest portion of daily smokers was found in Oslo with 19%, while the highest was in Finnmark with 32%.

3.9.2 Alcohol

Alcohol is the most widely used intoxicant in the population and probably the one that results in the highest level of abuse. Additionally, there is an increased risk of accident, injury and death associated with the consumption of alcohol.

The overall alcohol consumption rate in Norway has increased since 1990, from 4.55 litres per inhabitant in 1993 to 6.37 litres in 2005. Over the last 20 years, wine and beer consumption has increased the most. The increase in wine sales is tied to a so-called 'continental' drinking habit where one drinks often but consumes less in each drinking situation. These habits have not replaced Nordic weekend drinking binges, but have come in addition to it.

3.9.3 Source Material

Both the *SAMINOR* and *Ung i Nord* studies have collected information about the use of alcohol and tobacco. Data on smoking and ethnicity based on the Finnmark Surveys have also been published.

Smoking among Samis

Data from the first Finnmark Surveys from 1974/75 showed that fewer Samis than Norwegians born in Finnmark were daily smokers. Samis and Norwegians living in Finnmark, but born outside of the county, had similar rates of daily smoking (Figure 6).

Figure 3.6 Daily Smoking in relation to Ethnicity, based on figures from the Finnmark Survey 1974/75

(Norsk I = people living in the county, but born outside of Finnmark, Norsk II = people born in Finnmark, Finsk = Finns born in Finnmark, Samisk = at least two grandparents with Sami language) *Source: Njølstad I et al (1998) Epidemiology*



Data on smoking habits from the SAMINOR study did not show marked ethnic differences for women, either on the coast or inland (Figures 7 and 8). For men, the pattern was clearer. A higher portion of Sami men smoked more than non-Sami men, especially those living inland (Figure 3.9).

Figure 3.7 Smoking Habits for men living inland in relation to ethnicity, based on data from the SAMINOR study of 2003/04.

(Sami I = three generations Sami language, Sami II = at least one Sami marker such as language or family background.) *Source: Broderstad et al 2007 European Journal of Haematology*



Figure 3.8 Smoking Habits for women living inland in relation to ethnicity, based on data from the SAMINOR study of 2003/04.

(Sami I = three generations Sami language, Sami II = at least one Sami marker such as language or family background.) *Source: Broderstad et al 2007 European Journal of Haematology*



Figure 3.9 Smoking Habits for men living on the coast in relation to ethnicity, based on data from the SAMINOR study of 2003/04.

(Sami I = three generations Sami language, Sami II = at least one Sami marker such as language or family background.) *Source: Broderstad et al 2007 European Journal of Haematology*



Figure 3.10 Smoking Habits for women living on the coast in relation to ethnicity, based on data from the SAMINOR study of 2003/04.

(Sami I = three generations Sami language, Sami II = at least one Sami marker such as language or family background.) *Source: Broderstad et al 2007 European Journal of Haematology*



The youth survey *Ung i Nord* showed that there was no significant ethnic differences in smoking habits of youths attending high school in 1994/95. Thirty-five percent of Sami youth (defined as having at least one Sami marker such as language or family background) smoked more than 15 cigarettes per day versus 30% of Norwegian youth. Twenty-six percent of Sami

youth also responded that they had stopped smoking compared to 22% of Norwegian youth. It appeared that Sami youth began to smoke earlier than Norwegian youth. Otherwise, there were small or no ethnic differences.

In the follow-up study three years later, in 1997/98, no significant ethnic differences were found between the smoking habits of Sami and Norwegian youth. The most important difference was found between boys and girls. Girls smoked more than boys at the start of the study (1994/95). A larger portion of boys smoked more than 15 cigarettes at both the beginning and end of the study.

Alcohol Use

Figures from the *SAMINOR* study show ethnic differences with regard to alcohol consumption. Figures 11, 12, 13, and 14 show that the portion who answered that they were 'total abstainers from alcohol' or 'did not drink during the previous year' was quite a bit higher among Sami men and women. The portion of those who reported drinking more than twice a week was a bit lower among Samis with three generations of Sami language compared to the other groups. The tendency of lower alcohol consumption was more marked among Sami women than men.

Figure 3.11 Alcohol Consumption among men living on the coast with relation to ethnicity. (SAMINOR study 2003-04).

(Sami I = three generations Sami language, Sami II = at least one Sami marker such as language or family background.) Source: *Broderstad et al 2007 European Journal of Haematology*



Figure 3.12 Alcohol Consumption among men living inland with relation to ethnicity. (SAMINOR study 2003-04).

(Sami I = three generations Sami language, Sami II = at least one Sami marker such as language or family background.) Source: *Broderstad et al 2007 European Journal of Haematology*



Figure 3.13 Alcohol Consumption among women living on the coast with relation to ethnicity/ethnic affiliation.

(SAMINOR Study 2003-04). (Sami I = three generations Sami language, Sami II = at least one Sami marker such as language or family background.) Source: *Broderstad et al* 2007 *European Journal of Haematology*



Figure 3.14 Alcohol Consumption among women living inland with relation to ethnicity. (SAMINOR Study 2003-04). (Sami I = three generations Sami

language, Sami II = at least one Sami marker such as language or family background.) Source: *Broderstad et al 2007 European Journal of Haematology*



Figures from the *Ung I Nord* survey have shown that Sami youth (defined as those with at least one grandparent who speaks Sami) drank less than non-Samis when considering both frequency and amount. A larger portion of Sami youth also reported that their parents were total abstainers from alcohol. Thirty-two percent of Sami youth reported that their mother was a total abstainer versus 16% of Norwegian youth. Seventeen percent of Sami youth reported that their father did not drink alcohol versus 8% of non-Sami youth.

Geographical differences in alcohol consumption were also found among the parents of Sami youth. In inner Finnmark, 49% of Sami youth reported that their mother was a total abstainer versus 22% on the coast. The corresponding numbers for fathers were 24% total abstainers in inner Finnmark versus 13% on the coast.

Generally, as is known from several studies, there is a big chance that many of the participants underreport their alcohol consumption and that people who consume large amounts of alcohol are less willing to participate in health research. The results on alcohol consumptions must therefore be interpreted with these limitations in mind. Nevertheless, there is still reason to believe that the figures of lower alcohol consumption among Samis are reliable seen in light of Læstadianism's (conservative Lutheran revival movement) restrictive view on alcohol. It is reasonable to assume that these findings reflect that this Christian movement, which received special acceptance in the Sami population, still influences the population's use of alcohol.

References [11;17;17-19]

3.10 Mental Health

Summary

There are no published population-based studies on the rate of mental illness among the adult Sami population of Norway. Studies on youth generally show no ethnic differences in the rate of mental illness. However, they do show a higher frequency of mental illness among Sami youth from South Sami areas compared to Norwegian youth. Sami mothers reported lower rates of mental problems among their children than the children's teachers did. Norwegian mothers and teachers displayed a greater correspondence in rates of reporting.

Studies on the effect of psychiatric treatment at psychiatric hospitals found no differences for Sami versus Norwegian patients, neither in the types of treatments or nor symptom changes in the course of their hospital stay.

3.10.1 Introduction

It is estimated that approximately half of the Norwegian population will experience a mental illness at some point in their life. Risk factors that increase the chance of mental illness may be hereditary, while crises such as death, accident or a difficult family or work situation can also trigger mental illness. In many cases, the reasons may be uncertain. A number of studies have shown variation in the rates of different mental illnesses between various ethnic groups. In some studies, ethnic minorities have shown worse mental health than the majority population. This has often been explained by socioeconomic differences.

3.10.2 Sources

There are no population-based studies on the rates of mental illness among the adult Sami population in Norway. However, such studies have been carried out on children and youth.

Based on data from the *Ung i Nord* study, rates of mental illness among youth of different ethnicities have been studied. Behaviour and emotional problems among 11 to 12-year-old Sami children born between 1991 and 1994 have been compared with those of Norwegian children. Other studies have looked at the treatment of mental illness in relation to Sami and Norwegian ethnicity.

3.10.3 Mental Health in the Sami Population

Youth

The *Ung i Nord* study found no differences between the rate of self-reported mental illness among Norwegian and Sami youth (defined as having at least one Sami marker such as language, family background or self-reported Sami ethnicity). In this study, youth were asked to answer 112 questions on different types of mental illnesses such as anxiety, depression, psychosomatic afflictions, withdrawal, social problems, attention deficit, thought disorders, aggression and so-called abnormal behaviour. This study found no ethnic differences.

When the data was divided into various geographical areas, it appeared that South Sami youth had a significantly higher rate of mental illness compared to Norwegians from the same area. This study also found that a strong understanding of oneself as Norwegian positively affected the health of boys.

Children

The study on behavioural and emotional problems of children in five Sami municipalities in Norway was based on information received from 71 Sami and 77 Norwegian mothers, as well as the children's teachers. Mothers identified as Sami were those of a monoethnic Sami background, while Norwegian mothers had a monoethnic Norwegian background. Mothers of mixed ethnicity were purposefully excluded. This study found that agreement between the mothers' and teachers' reporting of the children's emotional and behavioural problems was stronger for Norwegian mothers than for Sami mothers. Sami mothers reported lower rates of these types of problems than the teachers did. Since this study is based on a small sample, the results should be interpreted with caution.

Tabell 2.7Mothers' and Teachers' reporting of behavioural or emotional
problems among 11-12 year-old children. Figures given in per

	Sami Children	Norwegian Children
Teachers'		
Assessment		
Boys	24,7	29,1
Girls	17,4	11,4
Mothers'		
Assessment		
Boys	14,0	18,6
Girls	11,8	15,6

cent. (2002-2003) Kilde: Javo C 2009 Nordic Journal of Psychiatry

Psychiatric Treatment

A study conducted about the effect of psychiatric hospital treatment on Sami versus Norwegian patients found no difference in the types of treatment or symptomatic changes in the course of the hospitalization. The study was conducted from 2000 to 2002 on 31 Sami and 37 Norwegian patients. In this study, Sami ethnicity when self-reported in conjunction with questions relating to language and Sami culture.

One study conducted between 1999 and 2001 related to five psychiatric policlinic treatment institutions in Finnmark and their treatment of Sami and Norwegian patients. The study was based on 347 patients and 32 therapies. No ethnic differences in demographic and psychosocial characteristics was found among the patients. No ethnic differences in mental health was found

among these patients either. Further, no ethnic difference was found between those who did not attend, or quit, planned treatment. However, the study found that therapists prescribed more appointments and more socially focused treatments for Sami patients compared to non-Sami patients. The study also showed that an ethnic **mach** between client and therapist was associated with increased use of medication and less use of verbal therapy. The data could indicate that there were ethnic differences in treatment plans and treatment goals.

References [20-22]

3.11 Suicide and Attempted Suicide

Summary

A registry-based follow-up study found a higher frequency of suicide among Samis in Northern Norway than in the rest of the North Norwegian population. The Ung i Nord study, carried out among youth in Northern Norway, found no ethnic differences in self-reported attempted suicide rates. When considering gender, there were significant differences in the rates of attempted suicide in both ethnic groups.

3.11.1 Suicide in Norway

From the end of the 1960s until the middle of the 1980s, there was an increase in the number of suicides in Norway for both men and women. The number of suicides in this period doubled to a rate of 16 per 100,000 inhabitants for both sexes. This corresponds to 650 suicides per year. Later, a rapid decrease was registered, and in the period 1988-1994, the registered mortality rate by suicide was reduced by 25%. Since 1994, the suicide rate in Norway has stayed relatively stable with an average of 12 per 100,000 inhabitants for men and women combined. This corresponds to approximately 550 suicides per year. Generally, there is a high rate of suicide among indigenous peoples in northern areas such as Greenland, Canada and Alaska.

3.11.2 Sources

In a registry-based follow-up study, the 1970 census was linked to the cause of death registry in order to study the rate of suicide mortality among Samis in Northern Norway between 1970 and 1998. In study, a participant was categorized as Sami if a grandparent, parent or the participant him/herself had Sami as a first language or the participant self-identified as Sami.

Questions about suicidal behaviour (thoughts and attempts) among Sami youth in Northern Norway was a part of the *Ung i Nord* study. In this study, the definition of Sami ethnicity was based on whether the youth reported that their parents had a Sami background, one of the grandparent's or parent's language was Sami and/or whether the youth considered him/herself to be Sami.

3.11.3 Suicide among Samis

Between 1978 and 1990, the suicide mortality rate for Samis was 27% higher than that for the rest of the North Norwegian population. There was an especially high risk of suicidal death among Sami youth and young adults (15-24 years) for both men and women. Approximately 30% of all suicides were carried out in this age group, with 3.5 times higher death rates for men than for women. A higher risk of suicidal death was also found among Sami men living in Finnmark, as well as for those living in inner Finnmark. On the other hand, Sami men and women with ties to reindeer herding did *not* have a higher risk of suicidal death than the rest of the North Norwegian population.

The *Ung i Nord* study found no ethnic differences for self-reported attempted suicides. Both ethnic groups displayed significant differences with relation to gender. Fourteen percent of Sami girls reported having tried to commit suicide while 7% of boys reported the same.

Figure 3.15 Attempted Suicide among Sami youth based on data from the Ung i Nord study (1994/1995)

Source: Silviken og Kvernmo (2007) Journal of Adolescence, Curtis et al (2006), INUSSUK, Arktisk forskningsjournal 1, Grønlands Hjemmestyre



References [20;23;24]

3.12 Drug Use (sleep medicine)

Summary

An older study from Finnmark found no ethnic variations in the use of medications.

A population-based study found lower use of sleep medicine in the Sami population than in the Norwegian. The portion participants reporting sleeping problems was also lower in the Sami population.

3.12.1 Introduction

The use of medicine in a population can be an indicator of illness. Studies have also shown that the use of medicine can be explained by different lifestyle factors and use of medical services.

3.12.2 Sources

Medicine use has been studied with respect to Sami ethnicity in two population-based studies in Norway. The first is based on the *SAMINOR* study. The goal with this work was to compare the use of sleep medicines in the Sami population with that of the rest of the population groups in Northern Norway. Another work, based on the Finnmak Survey from 1987-88, studied the use of medicine with relation to ethnicity.

3.12.3 Use of Medicine in the Sami Population

We know little about the use of medicine in the Sami population. The 1987-88 study from Finnmark did not find big variations in the use of medicines in different ethnic groups. This study found that a higher percentage of women used medicine than men, but this difference decreased with age. Participants in this study were defined as Sami if they had two or more grandparents of Sami heritage.

Table 3.8Use of medicine in Finnmark, according to ethnicity (n=11,061). Figures are
given in percent. 1987-1988.

Ethnicity	Men	Women	
Norwegian	43,4	56,9	
Finnish	42,4	58,4	
Sami	43,0	54,9	
Sami/Finnish	49,4	58,9	

Source: Furu K, 1997. Journal of Clinical Epidemiology

⁴ Medicine is defined as a substance made for or given to treat or prevent illness. In order to market a substance as a medicine, the substance must have documented effect, safety and technical quality. (Source: www.lovdata.no)

3.12.4 Sleeping Problems and the Use of Sleep Medicine

According to studies conducted by the Norwegian Institute of Public Health, use of sleep medicine is relatively common in Norway. There is only one study on the use of sleep medicine in relation to Sami ethnicity. This study is based on data from the *SAMINOR* study.

The portion of people reporting sleeping problems was smaller in the Sami population than in the non-Sami one. Use of sleep medicine in the Sami population corresponded to half that used in the Norwegian. The lowest rate of use was found among those with the strongest Sami ties who lived in Finnmark. Regardless of ethnicity, women used twice as much sleep medicine as men. The study concluded that the stronger the Sami identity, the lower the use of sleep medicine. The frequency of sleep problems was perceived to be lower in the Sami population, but it was suggested that this was may be due to a different attitude to sleep as a phenomenon.

Figure 3.16 Portion who use Sleep medicine with regard to Ethnicity. 2003-2004.

Sami = three generations of Sami language, Mixed = at least one Sami identity marker such as language, self-experienced Sami ethnicity or family background. Non-Sami = all who did not have a Sami affiliation. *Source: Bakken K et al* (2006) *International Journal of Circumpolar Health*



Figure 3.17 Sleeping problems in relation to Ethnicity. SAMINOR, 2003-2004.

Sami = three generations of Sami language, Mixed = at least one Sami identity marker such as language, self-experienced Sami ethnicity or family background. Non-Sami = all who did not have a Sami affiliation. *Source: Bakken K et al (2006) International Journal of Circumpolar Health*



Figure 3.18 Use of Sleep Medicine in relation to Sleeping Problems and Ethnicity. SAMINOR, 2003-2004.

Sami = three generations of Sami language, Mixed = at least one Sami identity marker such as language, self-experienced Sami ethnicity or family background. Non-Sami = all who did not have a Sami affiliation. *Source: Bakken K et al (2006) International Journal of Circumpolar Health*



References [25] [26]

3.13 Sami Population's Satisfaction with Medical Services

Summary

Comparative studies of Sami-speaking patients' satisfaction with medical services have shown that a relatively large portion of those who used only Sami at home were dissatisfied with primary care services when compared to Norwegian-speaking patients and to those who spoke both Norwegian and Sami at home. Sami patients admitted to psychiatric institutions were also less satisfied with the treatment than Norwegian patients.

3.13.1 Introduction

According to *NOU 1995*, the plan for health and social services, Samis experience substantial problems when in contact with health and social services. Language barriers make exams, diagnosis, treatment, nursing care and gathering of information difficult.

Insufficient knowledge on Sami culture among health and social services personnel often resulted in unsuccessful follow-up of Sami patients. Most of the information in this report is based on the practical experience of health and social service workers in Sami areas as well as a few qualitative and quantitative user surveys from the 1980s.

3.13.2 Source Material

The *SAMINOR* study collected information about satisfaction with medical services. A published work studies this with relation to language affiliation. Participants' answers were divided according to whether Sami or Norwegian was used at home, and to whether participants lived within or outside *SUF*.

Studies have also been conducted about Sami patients' satisfaction with psychiatric treatment and stay in psychiatric hospitals.

3.13.3 Patient Satisfaction with Health Services

Primary Care Services

Table 9 show satisfaction with health care services in the total sample, based on the *SAMINOR* study. Of Norwegian speakers, 86% answered that they were 'very satisfied/satisfied' with health care services. Seventy-five percent of bilingual speakers were 'very satisfied/satisfied' with the services provided while only 59% of Sami speakers answered the same. The portion of Sami speakers who were 'very dissatisfied' with health care services was 12%, while only 1% of Norwegian speakers answered the same.

This study found geographical differences. Of Sami speakers inside SUF, 32% were 'very dissatisfied/dissatisfied', while outside this geographic area, 13% were 'dissatisfied'.

Table 3.9Health Care Satisfaction based on answers from 15,612 men
and women living in areas where more than 5% of the
population reported Sami ethnicity in the 1970 census. Figures
are given in percent. 2003-2004.

Ethnic	Very	Satisfied	Dissatisfied	Very	Don't
Group	Satisfied			Dissatisfied	Know
	N=2978	N=8726	N=1250	N=391	N=915
Sami	8	51	18	12	11
Bilingual	15	60	12	5	8
Norwegian	23	63	7	1	6

Source: Nystad T et al 2006 Tidsskrift for den Norske Lægeforening

Figure 3.19 Health Care Satisfaction according to home language, within SUF



Source: Nystad T et al 2006 Tidsskrift for den Norske Lægeforening





Psychiatry

Studies of patients in psychiatric hospitals found ethnic variation with regard to treatment satisfaction. Sami patients (identified by Sami psychiatric nurses based on information from patients' self-definitions, language and traditions) experienced contact with therapists as less effective than the therapists thought. For Norwegian patients, there was a clearer agreement between patients' and therapists' experience. Sami patients were generally more dissatisfied with the treatment than the therapists thought. They were also less satisfied than Norwegian patients regarding contact with therapists, treatment information and general quality of care. This study is based on a relatively small group (31 Sami and 37 Norwegian patients) and the results should be interpreted with these limitations in mind.

References [21;27]

3.14 Summary, Challenges and Need for Further Study

Results presented in this report show that no marked differences in health were found between Sami and non-Sami populations, such as reported for other indigenous groups. An extended period of equal rights, educational opportunities and health care services have been used to explanation the lack of variation between the Sami and the non-Sami population's health and living conditions in Norway.

All population-based health studies have varying degrees of methodological weaknesses which can affect the results. These weaknesses can be related to the methodology used to gather and work with the data or the data itself not being representative. The general understanding is that concurrent results from a series of studies, especially with different designs and parameters, form the basis of an argument of scientific bearing.

Research results relating to Sami health, like all other research, must be interpreted in light of the limitations and weaknesses in the research.

The main challenge in Sami health research is finding an appropriate definition of who the Sami population is. In a multicultural society like ours, there is no definitive answer for this challenge. This chapter also reflects the many different ways to divide the population with relation to ethnicity. More research is needed to study how the phenomenon of ethnicity is used in medical research from a Sami-health context.

Continued improvements in research methodology and design are necessary to conduct better population-based health studies for the Sami population. Follow-up studies are the most recognized way to conduct population studies. In these studies, information regarding aspects such as lifestyle, habits and diet are systematically collected from a representative sample of the population over a long period. Information from healthy informants is then compared with information about new incidences of disease among the participants. Such studies are time consuming and expensive. It is nevertheless necessary to conduct these types of studies in order to conduct good health research in the Sami population.

Results from population studies are based on results from the people who choose to participate in the study. Studies have shown that those who do not participate in such studies can differ in many regards from those who do. Limited information about 'no-respondents' make it difficult to representatively study the participants. New studies should therefore strive to include a sample as representative of the Sami population as possible.

Some of the studies referred to in this chapter are based on a small sample. This means that the results from the studies should be interpreted with caution and new studies are needed to collect more reliable data. This is especially applicable to the results on Hip Dysplasia, Bechterew's Disease and mental health among children.

Rates of overweight and obesity were not considered in the chapter due to lack of data, but will have special relevance to public health and therefore deserve increased research. The same applies for type II diabetes, which is considered in the chapter but the results are based on old figures.

Research on the causes and prevention of suicide and sudden death, including accidents among young Sami men, should be prioritized. The hypothesis on possible geographical differences in infant mortality deserves further attention.

Additionally, health services research should also be prioritized. The results given in this chapter suggest interesting variations which should be elaborated further. Such a study would also be worthwhile in offering health care services which serve the Sami population in a more satisfactory manner.

The effect of preventative health work has not been studied in the Sami population. Increased knowledge about this could be meaningful with relation to prevention. This is especially important with regard to widespread diseases such as cancer, cardiovascular disease and diabetes which can be prevented, to a large degree,

The health consequences of increased modernization, changes in lifestyle, diet, and lower physical activity have been the focus of a series of studies of other arctic populations, but not among the Samis in Norway. The development of studies to shed light on these areas are desirable.

It is worthwhile to note that food safety and consumption of environmental poisons when eating traditional foods from nature is an area which should be studied. Risks should be studied and communicated to the population. We can especially point out that there have never been studies on the South Sami population with regard to health outcomes after exposure to radioactive fallout from the Chernobyl disaster.

Generally, there is reason to claim that all problems illuminated in this chapter deserve more research. A portion of these results is based on old data and more studies regarding the same themes would strengthen the quality of the results.

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4 A Gender Perspective on Sami Statistics

This chapter builds on excerpts from a series of articles on Sami society published in *Samiske* tall forteller 1,2 and 3.

The excerpts come from chapters written by Svanhild Andersen, Torunn Pettersen, Magritt Brustad, Øyvind Rustad, Jon Todal and Yngve Johansen.

Summary

We see an uneven gender distribution in STN-areas (Sami Parliament subsidy schemes for business development) in a range of fields. In these areas, there is an excess of women only in the 80 and older age category. Based on data from 2001-2005, the probability of reaching the age of 75 for 15 year olds in STN-areas is about 56% for men and 80% for women. Approximately 5% of the population received disability benefits between 2004 and 2008, slightly more men than women. In 2004, 2.1% of men and 1.2% of women received social security benefits. In reindeer herding and agricultural areas, 80% of men are either siidainnehavere (siida proprietors) or main users, and 97% have their main employment in fisheries. The register of voters has shown a small but clear majority of men in all Sami Parliament votes, and in 2009 only the constituency of 'Sør-Norge' had a majority of women voters. In 2009, there was a marked majority of women voters between the age of 18 and 29. In the 2010/11 school year, almost 10% more girls than boys were learning Sami as a First of Second Language at the primary and lower secondary level. At the high school level, the difference had risen to almost 12%. In STN-areas, 13% more women than men have more than three years of post-secondary education. Boys in STN-areas have a higher high school dropout rate, especially for those in vocational programs, where only about a fourth of students complete their education within five years.

4.1 Introduction

This chapter looks at some of the chapters published in *Samiske tall forteller 1,2 and 3* as well as some more current information. The goal of the chapter is to focus on gender differences in a variety of fields, within the mandate given by the Sami Parliament and the then Ministry of Employment and Inclusion. The chapter is about the following themes: *Population Development*, with excerpts from articles in *Samiske tall forteller 1* written by Svanhild Andersen and Torunn Pettersen and *Samiske tall forteller 3* by Øivind Rustad, *health*, with an excerpt from Magritt Brustad's article in *Samiske tall forteller 2*, *Register of voters* based on Torunn Pettersen's article in *Samiske tall forteller 3*, *disability and social security benefits* by Magritt Brustad in *Samiske tall forteller 2*, *choice of Sami language in primary, lower secondary and upper secondary school* by Jon Todal in *Samiske tall forteller 2 and 3*, and *education* by Yngve Johansen in *Samiske tall forteller 2 and 3*. This chapter was edited by Yngve Johansen and read by the various authors.

4.2 Population Development in STN Areas According to Gender

Summary

The population of STN-areas has decreased by 16% over the last 20 years. There is a majority of men in all age categories between the ages of 10 and 79, while there is a majority of women in age categories over 80. The difference between the number of men and women is greatest in the age group 50-59. Net migration in STN-areas from 2007-2009 was 450 men and 560 women.

4.2.1 Introduction

The population for STN-areas has decreased by 16% over the last 20 years. Over the same period, the population of Norway increased by 15%. This development is especially pronounced in Vest-Finnmark, while not so marked in Indre Finnmark. Migration away from STN-areas, with an insufficient migration to STN-areas, is one of the main reasons for the decrease. This leads to fewer births because young people are moving out and starting a family in other places. After the turn of the millennium, in contrast to the 1990's, there have been more deaths than births in STN-areas. Migration and low birth rates result in an aging population with an increasing average age because not enough younger people are moving into the areas.

4.2.2 Age Composition in STN-Areas According to Gender

Figure 4.1 Population in STN-areas, according to gender and age, 2007



Kilde: Statistisk sentralbyrå

The portion of women in STN-areas is lower than the average for the rest of the country, especially in the 20-29 year old age group. STN-areas also have a lower portion of children in the 0-9 age group and a higher portion of people over the age of 50. There is a majority of men in STN-areas in all age categories from 10-19 to 70-79 years of age. There is a majority of women only in the over-80 age category. The majority of men is greatest in the 50-59 years of age category.

			Greatest Majority	
Greatest Majority of Men STN	V		of Men, Remaining	
			(Norway = 51.0)	
(Norway = 51.0 percent)			percent)	
			(øvrig = 51.8	
(STN = 53.6 percent)			percent)	
			Extract of munici	palities
			outside STN-areas n	orth of
Extract of STN-areas			Saltfjellet	
Måsøy	59,3	1	Hasvik	55,8
Tromsø	58,6	2	Moskenes	54,8
Evenes	56,3	3	Karlsøy	54,2
Loppa	55,6	4	Berg	54,1
Nordkapp	55,3	5	Vardø	53,9
Alta	55,3	6	Ibestad	53,5
Gratangen	54,8	6	Målselv	53,5
Tysfjord	54,7	8	Beiarn	53,2
Gáivuotna/Kåfjord	54,2	8	Sørfold	53,2
Kvænangen	54,1	10	Balsfjord	53,1
Narvik	54,1	11	Røst	52,9
	-	12	Meløy	52,8
Other areas within STN municipalities	N-	13	Torsken	52.6
		14	Bardu	52.5
Lebesby	55.6	15	Steigen	52.4
Nordkapp	53.3	16	Salangen	52.2
Hamarøy	52.5	16	Ballangen	52.2
Narvik	51.5	18	Tranøy	52.0
Måsøv	51.2	18	Dvrøv	52.0
Sørreisa	50.8	-	5.5	
Sør-Varanger	50.2			
Evenes	49.0			

 Table 4.1 Areas with the Greatest Majority of Men 16-67 years of age, 2010

Table 4.1 shows the number of men and women between the ages of 16 and 67. This age group is chosen to reflect the 'adult' population in the various regions. Because women have a higher life expectancy than men, there is an increasing majority of women in the age groups over 67. In the younger age groups, there is a small majority of men because more boys are born than girls.

The table shows a ranked extract of the areas. In STN-areas, between 59 and 52 % were men, while in other areas in the same municipalities, there was a lower portion of men, between 56 and 49%. In five of the remaining areas, the male portion of the population is lower than in all STN-areas. The difference was especially pronounced in Måsøy and Evenes. Måsøy has 59% men in STN-areas versus 51% in the rest of the municipality. Evenes has 56% men in STN-areas and 49% in the rest of the municipality. These two municipalities, which had a majority of men in STN-areas, had some of the lowest populations of men. The municipality of Lebesby constitutes the only exception. The proportion of men to women in this STN-area was lower than in the rest of the municipality, 54% versus 56%.

4.2.3 Migration out of STN-Areas

	Men	Women
2007	130	190
2008	200	180
2009	120	190
Total 2007 - 2009	450	560

Table 4.2 Net Migration from STN-Areas from 2007 to 2009, by Gender

The distribution of men and women varies from year to year. To avoid random variation, numbers for the last three years are combined. Between 2007 and 2009, 4,460 people moved into STN-areas and 5,470 moved out. This resulted in a net population loss of 1,010. Net migration among men was 450 and 560 for women. In other words, more women moved out of STN-areas than men. The difference between genders was especially marked in 2009 where 190 women versus 120 men moved. In 2007, net migration of women was also 190 versus 140 for men. The exception was 2008, where more men left than women, 200 versus 180. Numbers according to citizenship are not shown in the above overview but foreign citizens had almost the same ratios of men and women leaving and settling in the areas. Of 1010 people who left the area, 70 were foreign, while 940 were Norwegians. In this period, the net migration of women has been markedly greater than that of men in Øst-Finnmark, Vest-Finnmark and Nordre Nordland.

4.3 Reindeer Herding, Agriculture and Fisheries in STN-Areas by Gender

Summary

In STN-areas, 80% of men are siida-proprietors in reindeer herding and main users in farming. Ninety-seven percent of those who have their main employment in the fisheries are men. This numbers has been stable over the last six years.

4.3.1 Introduction

This chapter presents data showing the gender distribution in primary industries in Sami communities; limited to reindeer husbandry, agriculture and fisheries. Data is also presented for several periods in STN-areas north of Saltfjellet.

4.3.2 Reindeer Herding by Gender

Table 4.3Siida-innehavere* in Norway, by gender and percent in 2000 and2008

	Men		Women		Total	
	Ν	%	Ν	%	Ν	
2000	478	82	100	18	578	
2005	511	84	98	16	609	
2007	468	85	82	15	550	
2008	483	87	70	13	553	
2009	312	81	71	19	383	

*A *siida* consists of several *siida-andeler* which are defined as 'a family group or individual who is part of a *siida*, and is involved in reindeer herding under the leadership of an individual or jointly with a spouse or common-law partner' (Reindeer Herding Act 2007).

Table 4.4Individuals Involved in Reindeer Herding, by gender and
percent

	Men		Women		Total
	Ν	%	Ν	%	Ν
2005	1 512	51.9	1 402	48.1	2 914
2007	1 463	52	1 352	48	2 815
2009	1 563	51.9	1 449	48.1	3 012

The portion of women among *siida-andel* proprietors appears to have decreased in recent years. In 2000, there were 100 women making up 18% of the 578 *siida-andels* proprietors. In 2008,

the portion of women was 13% (70 of 553)²⁰. In the same year, women owned 24% of the total number of reindeer. There was relatively little difference between the various reindeer pastures: Vest-Finnmark had the largest number of reindeer with women as owners - 27 percent, and Nordland had the lowest with 19 percent.

Gender distribution among the total number of people in *siida-andelene* is more balanced than among siida-andelsinnehaverne. In the period 2005-2009 the gender distribution was 52/48 percent (men/women) in siida-andelene, with a small variation in Finnmark: 52/48, Troms: 57/47 and the rest of the country: $48/52^{21}$.

4.3.3 Agriculture by Gender

Table 4.5 Percentage Distribution of Main Land Users in 1989 and 2007

	1989	2007
Men	81	76
Women	18	20
Non-personal users*	1	4

* Municipalities, counties, institutions

The number of homestead in STN areas has decreased by 62 percent. Most main users are men (81% in 1989 and 76% in 2007). The number of women main users has increased by 2 percentage points in this period, while non-individual users (for example municipalities, counties or institutions) increased by 3%.

The average age for both men and women decreased in the same period, from 51.6 to 49.7 for men and from 54.3 to 48.6 for women.22

²⁰ Gender distribution figures among innehavere av driftsenheter (operational unit proprietors)/siida-andeler for 2000 and 2008 are probably not wholly comparable. There is no category for joint operational units in the Totalregnskapet 2000 as in the comparable accounting for 2008; the category of spouse, which appears first in the report (see p.95 and table 7.2.4 in *Totalregnskapet* 2000 and p. 101 in *Totalregnskapet* 2008), is divided into the categories man and woman in 2000. See for example Ressursregnskaper 2007/08, p. 52 for information regarding measure to strengthen women's participation in reindeer husbandry and youth recruitment. ²¹ Table 47 in statistikkbanken, tema samer. SSB.

²² Table 62 (Jordbruksbdrifter, by main user and average age for main users in STN-areas). Samisk statistikk 2008, SSB.
4.3.4 Fisheries by Gender

	Main Profession			Side Profession				Total				
	N	/Ien	Wo	omen	Μ	en	Wo	men	М	len	Wo	men
	Ν	%	Ν	%	Ν	%	Ν	%	Ν	%	Ν	%
As of 31.12.2004	548	97.7	13	2.3	319	92.7	25	7.3	867	95.8	38	4.2
As of 31.12.2008	516	97.0	16	3.0	235	94.4	14	5.6	751	96.2	30	3.8

Table 4.6 Number of Fishers living in STN-Areas, by Gender andParticipation

Men dominate the fisheries in STN-areas, especially when considering main employment. Around 97% of fishers are men, and this number has been very similar in 2004 and 2008. The number of women who had fisher as a side job has nearly halved in the same period, but also the number of men. This number has decreased significantly in the same period. In 2008, 5.6% of those who had fisher as a side job were women versus 7.3% for men.

4.5 Gender Difference in Health Statistics

4.4.1 Introduction

In this chapter, data from published works regarding medical examinations among the Sami in Norway is presented and discussed. The chapter focuses on health statistics regarding incidence of disease and disease risk factors in the population. The results are presented according to gender as well as Sami ethnicity.

4.4.2 Mortality

Summary

There is a higher incidence of death due to cerebral haemorrhage among Sami women and death due to accidents and suicide among Sami men. Women living in inland Sami areas have had a low and steady mortality rate. There reason to be concerned about the high mortality rate among young men in the Sami areas.

4.4.2.1 Introduction

Mortality rates have been used as a way to measure of a population's living conditions and health. Mortality rates can be presented in various manners. The most common is number of deaths per 1000 or 100,000 inhabitants in different age groups.

In Norway, women still live longer than men, but the differences between the genders in steadily decreasing. From 2009 to 2010, life expectancy at birth increased by 0.1 years for women and 0.3 years for men, to 83.2 and 78.9 years respectively. Over the last 25 years, life expectancy has increased by nearly six years for men and a little over three years for women. The difference between life expectancies for men and women has decreased by a little over 2.5%.

4.4.2.2 Mortality Rates by Gender and Residence

Juxtaposing the mortality rates in the period 1970-1998 and 1970 ethnicity census reports has shown a slightly higher mortality rate for Sami men (6%) and women (10%) than for the regional reference population. Higher death rates due to cerebral haemorrhaging, especially among women, may explain some of these differences. Men had a higher incidence of so-called violent deaths, especially accidents and suicide

Figure 4.2 Probability of reaching the age of 75 for 15 year olds nationally and in STN-areas coast and inland, based on mortality rates from various periods for men and women.

Source: Brustad et al 2009, Scandinavian Journal of Public Health.



Figure 4.2 shows the calculated probability of women and men reaching the age of 75 for 15 year-olds, based on mortality rate patterns in the various periods. The figures distinguish between the rates for those living within and outside STN-areas as well as coast and inland.

The figures also show no significant difference between geographical areas or periods. For men, however, there has been an increase in life expectancy, which can be explained by the decreasing rates of heart and cardiovascular mortality, which have struck men to a great degree

than women. Furthermore, the mortality rate for men in STN-areas has been slightly higher than the national average. This is possibly explained by the high mortality rate due to 'violent death'²³ in STN areas.

Generally, one can say that mortality rates in Sami areas are very similar to mortality rates in the non-Sami portion of the population. This may indicate that mortality rate patterns have evened out between areas with low versus high density of Sami populations. This has been explained by similar living conditions, education and health care, which is in contrast to the situation for other indigenous populations in circumpolar areas.

There is still reason to be concerned about the relatively high mortality rate among young men in Sami areas.

4.4.3 Smoking

Summary

Studies show a higher rate of smoking among Sami men living inland than among non-Samis. Similar patterns have not been found for women.

4.4.3.1 Introduction

Smoking increases the risk of a long list of diseases such as lung cancer, heart and cardiovascular disease and chronic lung disease. The Central Bureau for Statistics (SSB) conducts annual studies on the use of tobacco. In 1973, over half of adult men smoked, while in 2006, about 21% did so. The number of daily smokers among women has also decreased from 32% in 1973 to 22% in 2006.

Nineteen percent people between the ages of 16 and 74 answered that they smoked daily in 2010. The number was the same for men and women. The change last year dovetails with a pattern we have seen over time, a steady decrease in the number of daily smokers. Men's and women's smoking habits were different up until the turn of the millennium, but have since had a common falling curve. Approximately a third of women smoked daily in the last decades before 2000. Among men, however, there has been a downward trend for the whole period since 1973, when over half smoked daily. Earlier population studies have shown a higher incidence of daily smokers in Finnmark compared to other counties in Norway. Figures for 2004-2008 show that the number of daily smokers varies greatly from county to county. According to SSB, the lowest number of daily smokers is in Oslo with 19%, and the highest in Finnmark with 32%.

²³ Violent death is defined as death due to accident, suicide or homicide.

4.4.3.2 Smoking Relative to Gender and Ethnicity

Figure 4.3 Smoking Habits for men and women according to Ethnicity based on Data from the SAMINOR study 2003/04. (Sami I = three generations of Sami language, Sami II = at least one Sami indicator such as language or family background.)



Source: Broderstad et al. 2007 European Journal of Haematology

Generally, great differences in smoking habits have not been demonstrated between Sami and Norwegians, for either adults or youth. For men, studies have shown a slightly higher incidence of smoking among inland Samis than non-Samis. No corresponding trends have been found for women.

4.4.4 Alcohol

Summary

Both Sami men and women have reported a higher rate of total abstinence from alcohol than non-Samis in Norway. This pattern is especially pronounced among elderly Sami women.

4.4.4.1 Introduction

Alcohols is the most widespread stimulant used by the population and in all likelihood the stimulant that involves the greatest amount of abuse. Additionally, the consumption of alcohol contributes to an increased risk of accident, injury and death.

The total use of alcohol in Norway has increased since 1990, from 4.55 litres per capita in 1993 to 6.37 litres in 2005. The consumption of beer and wine has increased the most over the last 20 years. The increase in the sales of wine has been linked to a so-called 'continental' drinking pattern where one drinks often but consumes less per drinking situation. These habits have not replaced, but come in addition to, the Nordic patterns of weekend drunkenness and intoxication.

4.4.4.2 Alcohol Use relative to Gender and Ethnicity

Figure 4.4 Alcohol Use in Men and Women according to Ethnicity (SAMINOR study 2003-04). (Sami I = three generations of Sami language, Sami II = at least one Sami indicator such as language or family background.)



Source: Broderstad et al 2007 European Journal of Haematology

Based on data from the SAMINOR study*, ethnic differences have been shown in the consumption of alcohol. The figures show that the number of those who answered that they 'abstained totally from alcohol' or 'didn't drink over the last year', was quite a bit higher among

Sami men and women. The number of respondents who said they drank more than twice a week was a bit lower among Samis with three generations of Sami language than for the other groups. The trend of lower alcohol consumption was more pronounced among Sami women than men.

*A 2003-2004 Health and living conditions study conducted in areas with mixed Sami and Norwegian communities. The survey was conducted by the Centre for Research on Sami Health, University of Tromsø, in cooperation with the Norwegian Institute of Public Health.

4.4.5 Prescription Drug Use

Summary

Use of soporifics in the Sami population corresponds to half the amount used by the Norwegian population, with Sami men showing 13% less use than Sami women.

4.4.5.1 Introduction

Use of prescription drugs²⁴ in a particular population is, to a certain extent, an indicator of the presence of disease or illness. Research has also shown that use of prescription drugs can be explained by various lifestyle factors and use of medical services.

4.4.5.2 Sleeping Problems and use of Soporifics by Gender and Ethnicity

Table 4.7Use of prescription drugs by ethnicity in Finnmark (n=11061). Figures given
in percent. 1987-1988.

Source: Furu K, 1997. Journal of Clinical Epidemiology

Ethnicity	Men	Women	
Norwegian	43,4	56,9	
Finnish	42,4	58,4	
Sami	43,0	54,9	
Sami/Finnnish	49,4	58,9	

According to research conducted by the Norwegian Institute of Public Health, use of soporifics is relatively common in Norway. Only one study has looked into the use of soporifics among Samis. This study is based on data from the SAMINOR, Health and Living Conditions Survey in areas with mixed Sami and Norwegian communities.

²⁴ Prescription drugs are defined as substances designed or prescribed for the treatment or prevention of disease or illness. In order to market a substance as a medicine, one must document the effect, safety and technical quality of the product. (Source: www.lovdata.no

The number of respondents reporting sleeping problems was lower in the Sami population than in the non-Sami. Use of soporifics in the Sami population corresponded to half the amount used in the Norwegian population. The lowest use was found among those who had the strongest Sami ties who lived in Finnmark.

Regardless of ethnicity, women used twice as much soporifics as men. The study concludes by saying that the stronger the ties to the Sami community, the lower the use of soporifics. The incidence of sleeping problems is considered to be lower in the Sami population.

4.5 Disability and Social Benefits by Gender and Age

Summary

In the period 2004-2008, a little over 5% of the population of STN-areas between 20 and 66 years of age received disability benefits, slightly more men than women. In 2004, 2.1% of men and 1.2% of women in STN-areas received social benefits.

4.5.1 Introduction

Norway has had an increase in the number of people receiving disability pensions. At the end of 2008, there were approximately 340,000 people receiving disability benefits in Norway. That is 70,000 more than in 1999. Some of this increase can be attributed to an aging population, but even with adjustment for age, this is a pronounced increase. After the institution of time limitations for disability benefits in 2004, a relatively strong increase in the number of people receiving disability benefits has been registered. The increase has been greatest among those under the age of 40 (Bjørngaard et al., 2009).

In 2008, 109,300 people received economic social benefits in Norway. The number of those receiving social benefits reached an apex of 165,000 in 1993, and has since decreased. From 2007 to 2008, the decline has diminished.

4.5.2 Disability by Gender and Age

A disability pension is a legally established social security benefit in Norway. The purpose of the pension is to ensure a subsistence income for people whose earning ability has been permanently reduced due to illness, injury or disability (NAV, 2010).

Table 4.8 New recipients (per 1000) of Disability Benefits in STN-areas for
various periods, men and women

			Per				
	1994–1998*		1999–2	2003**	2004-2008***		
Age	Men	Women	Men	Women	Men	Women	
20–30 years	11,7	12,5	10,1	7,7	5,0	8,4	
31-45 years	37,9	44,9	33,1	37,8	18,5	18,6	
46-66 years	109,2	106,0	121,7	106,5	104,7	96,3	
Total 20-66 years	55,9	57,7	63,8	58,6	54,9	51,9	

* The period goes from February 1994 to January 1999.

** The period goes from February 1999 to January 2004.

*** The period goes from February 2004 to December 2008.

Table 4.8 shows new disability benefits recipients in five-year intervals from 1994 up to and including 2008. It appears that outside of STN-areas, especially in the oldest age group, women accounted for a somewhat larger number of new disability cases. This difference appears to have evened out in the last period.

For men in STN-areas, the numbers are higher than outside STN-areas in all the age groups for all periods. In the 45 years and under age group, the number of new recipients between 2004 and 2008 has almost been halved compared to the two previous five-year periods. There has also been a decrease in the 46-66 age category, but not as pronounced.

4.5.3 Disability by Gender and Age

Social benefits are a legally established scheme to ensure that all have sufficient economic resources for subsistence. These benefits are meant to be temporary and should contribute to making the recipient economically self-sufficient (NAV, 2010).

Table 4.9Number of Social Benefits Recipients in Various Periods in
STN-areas, men and women. Numbers given in percent.

		Period							
	January 1992		Januar	y 1999	January 2004				
Age	Men	Women	Men	Women	Men	Women			
20-30 years	2,6	2,1	2,1	2,0	2,6	2,0			
31-45 years	2,3	1,6	2,4	1,2	2,4	1,5			
46-66 years	1,2	0,6	0,9	0,7	1,5	0,5			
Total 20-66 years	2,0	1,4	1,8	1,3	2,1	1,2			

Table 4.9 shows that the number of new receipts of social benefits is markedly higher for those under the age of 30. It is lowest in the oldest age group. The number of recipients has gradually decreased over the last three time intervals shown in the table, for both men and women. This can be partly attributed to the decreasing unemployment rates for the same periods.

4.6 Gender Distribution in the Sami Parliament's Electoral Register

Summary

The registry of voters for all Sami Parliament elections has had a small but stable majority of men. However, in the 2009 election, the constituency of Sør-Norge had a slight majority of women. Also in this election, a majority of women between the ages of 18 and 29 were registered to vote.

5.6.1 Introduction

The Sami Parliament in Norway is a representational political body, elected and represented by Samis. In the parliament's view, it is responsible for all matters that concern Sami people. Samis who have registered in the Sami Parliament's electoral register are entitled to vote and are eligible for election.

Pursuant to the Sami Act §2-6, one must declare that they perceive themselves as Sami and that either they or at least one parent, grandparent or great grandparent uses or has used Sami as a home language (The Sami Act, 1987). Six elections have been held since the establishment of the Sami Parliament in Norway in 1989. Sami Parliament election are conducted at the same time as Norwegian parliamentary elections and election years have been 1989, 1993, 1997, 2001, 2005 and 2009.

5.6.2 Gender Distribution, Total and by Constituency

Reliable numbers for the first three elections are not available, but there has been a slight but stable majority of male voters over the last three elections.

				Total	
				Excess of	Percentage
	Men	Women	Total	Men	Women
2001	5401	4520	9921	881	45,6
2005	6752	5786	12538	966	46,1
2009	7380	6510	13890	870	46,9

Table 4.10Gender Distribution in the Total Register of Voters for the
2001, 2005 and 2009 Elections



Figure 4.5 Gender Distribution by Constituency - 2009 Register of Voters

Figure 4.5 shows that in the 2009 elections, Sør-Norge was the only constituency with a majority of women voters.

4.6.3 Increasing Number of Women among the Younger Voters

It is interesting to note that when considering both age and gender distribution, there appears to be a shift towards more women voters, especially in the younger age groups.



Figure 4.6 Number of Women in Various Age Groups in 2005 and 2009 Register of Voters

Figure 4.6 shows that in 2009, the Sami Parliament's Register of Voters had a marked majority of women in the youngest age segment, defined as the three age groups between 18 and 29 years of age. The other age groups still had a majority of men registered to vote in 2009, but the number of women, with one exception, has increased. The exception for this is women over the age of 60, where the portion of women is still relatively low and where the portion of men increased between the elections in 2005 and 2009.

4.7 Choice of Sami Language in Primary and Lower Secondary as well as Upper Secondary School, by Gender

Summary

Nearly 10% more girls than boys were learning Sami as a first or second language at the primary and lower secondary level in the 2010/11 school year. At the upper secondary level, this difference had increased to 12%.

4.7.1 Introduction

With the introduction of Sami as a Second Language 2 and 3, the number of students learning Sami at the primary and lower secondary level has gone down from 2,672 to 2,245 in the 2010/11 school year. The decrease over the last four years has been 16%. See also chapter 2, *Sami Language at Day Care and School*, in this edition of *Samiske tall forteller*.

4.7.2 Sami Language at the primary and lower Secondary Level, by Gender and Level

Table 4.11Students at the Primary and Lower Secondary Level Studying
North, Lule and South Sami as a First Language or Second
Language 2 or 3, school year 2006/07 and 2010/11, by Gender

	2006/2007					2010/2011				
	Bo	oys	Gi	rls	Total	Bo	ys	Gi	rls	Total
	Ν	%	Ν	%		Ν	%	Ν	%	
North Sami as a First										
Language	505	52	466	48	971	472	51.2	451	48.8	923
North Sami as a Second										
Language 2	291	42.2	398	57.8	689	225	42.3	307	57.7	532
North Sami as a Second										
Language 3	353	38.4	466	61.6	819	234	38.8	369	61.2	603
Lule Sami as a First										
Language	22	71	9	29	31	16	55.2	13	44.8	29
Lule Sami as a Second										
Language 2	15	50	15	50	30	24	54.5	20	45.5	44
Lule Sami as a Second										
Language 3	8	50	8	50	16	9	39.1	14	60.9	23
South Sami as a First										
Language	6	33.3	12	66.7	18	7	36.8	12	63.2	19
South Sami as a Second										
Language 2	37	47.4	41	52.6	78	28	45.2	34	54.8	62
South Sami as a Second										
Language 3	13	65	7	35	20	3	30	7	70	10
Total	1250	46.8	1422	53.2	2672	1018	45.3	1227	54.7	2245

In the 2010/11 school year, nearly 10 percent more girls than boys were studying Sami at the primary and lower secondary school level. This difference has increased from the 2006/07 school year. A small majority of boys chose Sami as a First Language but a larger majority of girls chose Sami as a Second Language 2 or 3.

4.7.3 Sami Language at the Upper Secondary Level by Gender and Grade Level

Table 4.12Choice of Sami as a First or Second Language among Upper
Secondary School Students in the country, by Gender

	2008-2009 School Year			2009/2010 School Year				2010/2011 School Year				
	Bo	oys	Gi	rls	Bo	oys	Gi	rls	Bo	oys	Gi	rls
	Ν	%	N	%	N	%	Ν	%	Ν	%	Ν	%
First	83	43.9	106	56.1	105	48.8	110	51.2	126	50.8	122	49.2
Language												
Second	49	32.2	103	67.8	55	35.7	99	64.3	71	38.4	114	61.6
Language												
Totalt	132	38.7	209	61.3	160	43.3	209	56.7	197	45.5	236	54.5

Table 4.12 shows that more girls than boys choose Sami at the upper secondary level, even when compensating for Sami as a first Language. The difference between the number of boys and girls taking Sami as a second language is still significant, where almost two thirds of students are girls. The reason for this can be that more girls than boys choose general studies, which may indicate that girls are more interested in theoretical fields of study. Generally, girls also show greater interest for languages.

4.8 Education among Women and Men in STN-Areas

Summary

In STN-areas, approximately 13% more women than men have a post-secondary education of three years or more. At the upper secondary level, boys in STN-areas have a higher dropout rate than girls, especially among those pursuing vocational studies where only a little under a fourth of boys complete their education within five years.

4.8.1 Introduction

This chapter examines gender differences in STN-areas in relation to completion of upper secondary schooling, educational level and current level of education for students who have started a foundation class in the years 1994 to 1996.

4.8.2 Completion of Upper Secondary Education by Program

Fifty-five percent of boys from STN-areas who began their vocational studies in 2003, and 20 percent of those in general studies, withdrew from their program within five years. Of the boys from STN-areas who started upper secondary school in 2003, over 40% quit their schooling. Among girls, the number was about 20%.

A little over a quarter of boys and almost half of girls completed their vocational studies within five years. For general studies, the numbers are 70% and 78% respectively.

Table 4.13Students who Started a Foundation Course for the first time in
2003 in STN-Areas and Level of Upper Secondary Education
After Five Years. Program and Gender. Percent.

	School Start 2003							
	Absolute	Percent						
	Number							
Program, gender and geographical area	Total	Completed in the standard amount of time	Took longer than the standard amount of time to complete	Still studying at the upper secondary level	Completed their studies but did not pass	Stopped without completing their studies		
General Studies								
Men STN-areas	96	57.3	12.5	0	0	19.8		
Women STN-areas	108	58.3	19.4	5.6	10.2	6.5		
Vocational Studies								
Men STN-areas	157	11.0	16.0	12.0	6.0	55.0		
Women STN-areas	151	26.0	21.0	13.0	10.0	29.0		

4.8.3 Education Level

The proportion of working-age women (24 to 65 years) with a post-secondary education is relatively high in STN-areas with sparse populations. The total amount is 2 percentage points higher than the average for the rest of the country.

Men in STN-areas clearly have a lower level of education than the rest of the population. The portion of men who have completed an upper secondary education, and who live in densely-populated areas, is a whole 10 percentage points lower than the national average. The difference is smaller in sparsely populated areas, about 2 percentage points.

	Living 1/1-2008 with Education Level 1/10-2007							
	М	en	Women					
Level of Education and	Densely	Spread-out	Densely	Spread-out				
Geography	Populated Area	Community	Populated Area	Community				
Lower Secondary Level								
STN-area	27,9	37,6	23,4	31,9				
Upper Secondary Level								
STN-area	48,7	48,3	39,7	39,6				
University and College								
STN-area	23,4	14,2	36,9	28,5				

Table 4.14Education Level for Men and Women 24 - 65 years of age living
in STN-Areas in 2008. Percent.

SSB's definition of a densely populated area

A collection of residences is registered as a densely populated area when at least 200 people live there, and the distance between the residences does not normally exceed 50 metres. A distance greater than 50 metres is permitted in areas where residences shall not or cannot be built. These areas can be parks, sports grounds, industrial areas or natural obstacles such as rivers or arable land. Clusters of residences that naturally belong to the same densely populated area are included up to a distance of 400 metres from the core of the densely populated area. These are considered to be satellites of the core.

4.8.4 Current Levels of Education in STN-Areas for Students who Started a Foundation Course between 1994 and 1996

In STN areas, 54% of students who started their upper secondary education between 1994 and 1996 completed their studies within five years. The completion rate was 45.5% for men and 62.5% for women.

Figure 4.7 Education Level in STN-areas in 2009 for Men and Women who started Upper Secondary School between 1994 and 1996, those who completed their studies within five years and those who did not. Percent.



The figure shows to what extent completion of upper secondary within five years affects the education level attained later on. Over 60% of those who do not complete their studies within five years still do not have a craft or trade education when they are 30 years of age. Almost 50% of those who complete their upper secondary education within five years have a post-secondary education, compared to only 10% of those who not. Those who have completed their upper secondary education within five years, approximately 12% of both men and women, have a post-secondary education of five years or more. However, approximately 16% more women than men have a shorter post-secondary education. For those who did not complete their upper secondary education within five years, approximately 8% more women than men have a shorter post-secondary education.

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5 Quantitative changes in the status of the Sámi language in Norway

A summary of existing knowledge

Jon Todal, Professor, Dr. Art., Sámi allaskuvla / Sámi University of Applied Sciences, Guovdageaidnu

Statistics are a useful tool when devising policies to boost minority languages. In order to ensure adequate official language planning, it is important to know how many people understand a language, how many speak it, how many read and write it, how old these people are and where they live, how many families pass on the language informally from generation to generation, how many people encounter the language in kindergartens and schools, the degree to which the language is used in the most popular media, and the extent to which the language can be used when accessing public services.

However, obtaining figures on all these factors is not enough in itself. To be able to interpret the figures we need comparable data showing changes *over time*. We should also seek to establish *which direction* things are heading in before taking action.

Most past research into Sámi languages concerns grammar and language history. This research looks at the actual language, more or less independently of social factors. In recent years, however, some research has been conducted which looks at the Sámi languages in a contemporary social perspective. Most of these studies have raised issues concerning language shifts, revitalisation and ethnic identity, and the data sources have usually been in-depth interviews. Figures and statistics are therefore rather scarce elements in Sámi language research. We will be looking more closely at the published quantitative sources and research that do exist.

The reports and articles we will be examining contain more statistics and quantitative information than we will be discussing here. The objective for the selections has been to look for figures that can tell us something about *changes* in the status of the Sámi languages. We will be covering five different areas: (1) sources for the total number of Sámi-speaking people, (2) quantitative research that tells us something about the handing down of Sámi language in the home, (3) statistics on the choice of language in primary and lower secondary schools after 1990, (4) commissioned research on the use of Sámi in public services after the creation of the Sámi language administrative district, and (5) figures on the status of the written Sámi languages.

5.1 The number of Sámi-speaking people in Norway

5.1.1 UNESCO and Ethnologue

Scientific literature on endangered languages often provides figures on the number of speakers of various minority languages and on the proportion of such speakers amongst the entire ethnic group in question. The UNESCO Red Book on Endangered Languages and the website Ethnologue: Languages of the World are frequent sources of these figures. We will now be looking in more detail at what these two important international sources say about the number of Sámi speakers.

UNESCO figures

The UNESCO Red Book on Endangered Languages, now replaced by the website UNESCO Atlas of the World's Languages in Danger, is considered a reliable source of information about endangered languages. Authorities, media and experts often use figures from this source. The information that UNESCO provides about the Sámi languages is therefore important. Table 5.1 below contains data taken from UNESCO on the number of speakers of six Sámi languages.

Sámi language	Total number of speakers
Skolt Sámi	300
North Sámi	30,000
Lule Sámi	2,000
Pite Sámi	50
Ume Sámi	20
South Sámi	500

Table 5.1 Total number of speakers of six Sámi languages according to UNESCO²⁵

The figures include speakers in all countries where the six Sámi languages are spoken. UNESCO refers to Tapani Salminen (a contributor to the UNESCO website) as the source of the figures on North Sámi and Skolt Sámi without giving further detail of where he has obtained the figures from. UNESCO cites the book *The Saami Languages*. *An introduction* by Pekka Sammallahti (Sammallahti 1998) as the source of the figures on Lule Sámi and Ume Sámi speakers. The source of the figure on South Sámi speakers is given as *risten.no*, a website run by the Sámi Parliament in Norway. In the case of Lule Sámi it refers to field work carried out by Joshua Wilbur for the *Saami Documentation Project* in the period 2008–2011.

We can examine the sources given by UNESCO further. Sammallahti is named as the UNESCO source stating that there are 20 speakers of Ume Sámi. However Sammallahti (1998) does not propose such a figure. With regard to the number of Ume Sámi speakers, all he says is that: "Ume, Pite, Akkala and Ter depend mainly on old speakers." (Sammallahti 1998:1).

²⁵ The figures were retrieved on 31.01 2013 from http://www.unesco.org/culture/languages-atlas/

The website *risten.no* is given as the UNESCO source stating that there are 500 South Sámi speakers. When visiting the website we discover that *risten.no* estimates the total number of South Sámi people living in Norway and Sweden to be around 2,000. As regards the number of people who *speak* South Sámi, *risten.no* states:

"It is also difficult to produce an exact figure for the number of South Sámi speakers, but it can be assumed that fewer than half of all South Sámi are proficient in the language."

UNESCO is correct that 500 South Sámi is indeed "fewer than half of" 2,000 South Sámi, but it remains unclear how UNESCO, using *risten.no* as its source, has reached the figure of 500. UNESCO asserts that there are 2,000 speakers of Lule Sámi, giving Sammallahti (1998) as its source. Sammalahti writes that "the number of Lule Saami speakers is between 2,000 and 3,000" (Sammallahti 1998:1). Sammallahti is primarily a linguist, and the book in question concerns grammar. He has not conducted his own investigations into the number of Lule Sámi speakers, nor would one expect him to in order to produce a book on grammar. Sammallahti does not provide sources for his figures or explain in other ways how he arrived at the figure of 2,000–3,000.

Of the sources cited by UNESCO, only Joshua Wilbur has conducted his own investigations. His figures on Pite Sámi speakers are recent (from the period 2008–2011), and they can be verified. On that basis we must conclude that many of the figures used by UNESCO concerning the number of speakers of Sámi languages are highly questionable.

Ethnologue figures

The *Ethnologue*: *Languages of the World* website contains figures on all the world's languages, not just endangered ones. However, this source, too, is often referred to in the context of endangered minority languages.

Ethnologue provides information about Sámi languages in Norway, as shown in Table 5.2 below.

Table 5.2	The number of speakers of four Sámi languages in Norw	ay
	according to <i>Ethnologue</i> ²⁶	

	Ethnicity	Total number of speakers
South Sámi	600	300
Pite Sámi	?	?
Lule Sámi	1,000–2,000	500
North Sámi	30,000-40,000	15,000

The figures in Table 5.2 from *Ethnologue* only cover Norway and are therefore not directly comparable with the UNESCO figures in Table 5.1, which include all four countries.

Ethnologue cites the American linguist Michael Krauss as the source of these figures. Krauss presented the figures in the article *"The indigenous languages of the North: a report on their"*

²⁶ The figures were retrieved on 31.01.2013 from http://www.ethnologue.com/show_country.asp?name=no

present state", which was based on a lecture he gave at a symposium in Japan in 1994, later published in Shoji (1997). In the printed article Krauss provides sources for each figure. In the case of North Sámi and Lule Sámi, the source is personal communication with Olavi Korhonen, and for South Sámi personal communication with Olavi Korhonen and Knut Bergsland. Korhonen was professor of Sámi languages at Umeå University and Bergsland professor of Finno-Ugric languages at the University of Oslo.

We can draw the conclusion that the *Ethnologue* figures are not based on actual counts but on estimates. However, these are estimates created by exceptionally competent people. We can also conclude that estimates from the mid 1990s are still being presented as up-to-date figures in 2013. The figures on the number of speakers of the various Sámi languages in Norway, as available to download from the *Ethnologue* website in January 2013, are therefore highly unreliable.

5.1.2 Norwegian censuses

Over a period of more than a century Norwegian census forms included questions designed to extract information about the use of Sámi and Kven languages. The first census to include such questions was held in 1845. Information about the use of Sámi and Kven languages was subsequently collected from each census up to and including the 1930 census. A census was usually held every ten years, and they were designed and conducted by Statistics Norway.

For every census between 1891 and 1930 Statistics Norway issued a separate pamphlet with figures and analyses on every group they deemed different from the norm. The Sámi people were one such group. The pamphlets with separate statistics on these groups and accompanying commentary provided an insight into how the questions and classifications used in the censuses were designed and how Statistics Norway interpreted the results. Thanks to these pamphlets, it was in principle possible to study changes amongst the groups in question over time. The definitions of the different categories changed during this period, however, and that makes it difficult in practice to directly compare the figures from each census. On the other hand, each pamphlet contains many interesting figures and information about aspects of Sámi language. This provides a quantitative source of data that can be utilised much better than it has been up until now.

The first census after World War II (in 1946) did not pose questions about affiliation with Sámi language and ethnicity. Such questions returned in the 1950 census and the 1970 census, however (but not in 1960). Censuses after 1970 have not contained questions about Sámi language or Sámi ethnicity.

Even after the 1950 and 1970 censuses Statistics Norway published a dedicated pamphlet with an analysis of the figures on Sámi affiliation and language (NOS XI 1956 and Aubert 1978). Figures on Sámi speakers in Norway obtained from the censuses are shown in Table 3 below.

Year	Sámi speakers	Norwegian population
1891	20,786	2,000,917
1900	19,677	2,240,032
1910	18,590	2,391,782
1920	20,735	2,649,775
1930	20,704	2,814,194
1950	8,778	3,156,950
1970	10,535	3,874,133

Table 5.327Number of Sámi speakers in Norway according to censuses
carried out in the period 1891–1970

We see that the number of Sámi speakers according to the censuses remained stable at around 20,000 for most of the 40-year period between 1891 and 1930, and that the number then suddenly halved in the 20-year period between 1930 and 1950.

The data in Table 5.3 raises the question of why the number of Sámi speakers did not increase between 1891 and 1930, when the Norwegian population as a whole rose from 2 million to 2.8 million in the same period. This could be a reflection of a certain degree of linguistic assimilation amongst families, starting as early as the beginning of the 20th century. Another explanation may be the design of the questions and the categories used in the censuses. The registration of Sámi people was based on a highly complex set of criteria relating to heritage and language and on various combinations of these. As mentioned previously, the criteria could vary from census to census. It may therefore be that the figures in the table are not directly comparable, and that this is the reason why they do not mirror the changes in the wider population figures. The difficulties encountered by Statistics Norway in operationalising the criteria for "race" and language at the time are discussed in detail by Einar Lie and Hege Roll Hansen in the book *In Actual Fact. The History of Statistics in Norway* (Lie and Hansen 2001:123–153).

The most conspicuous fact in Table 5.3 is that the number of Sámi speakers was so low in the 1950 census compared with the 1930 census. Data collection methods may have played a part here. The 1930 census was the last to use "objective" criteria for language and heritage. In 1950 the census was based on the respondents' own answers and classifications. The geographical area in which these particular questions were asked was also smaller in 1950 than in 1930. Fewer people were therefore asked about their use of Sámi language in 1950.

Why would the number of Sámi speakers fall when switching from objective criteria to selfreporting in 1950? It may have happened if there was a stigma associated with being a Sámi speaker in 1950, preventing many from reporting that they were Sámi or spoke Sámi. This census took place during the restoration period after World War II, and many linked the Norwegian language to the modernisation process connected with this restoration, while the

²⁷ The figures on Sámi speakers in Table 3 have been obtained from the Official Norwegian Report 1984: 18. *Sámi Legal Rights*. Oslo: Universitetsforlaget pp. 83–87. The figures in the column showing the total population in Norway were obtained from Division Manager Paul Inge Severeide at Statistics Norway in April 2013.

Sámi language was associated with poverty and the past. This was in addition to the patronising attitudes towards the Sámi as a "race" that were commonplace as late as up until World War II. Statistics Norway was itself in doubt about whether the figures on Sámi speakers from the 1950 census could be correct. In its analysis of this census in 1956, the agency touches upon the possibility of respondents having refrained from reporting using Sámi language at home.

In many municipalities there is good reason to question the 1950 figures, including in Kåfjord, Kvænangen and Kistrand, where the number of Sámi speakers appears to have been on the low side. It is likely that some people who should probably have been registered as Sámi speakers have indicated that they speak Norwegian in daily life. (Norway's Official Statistics XI 236 1956:22)

A large proportion of people living in the traditional Sámi areas were multilingual. This could be difficult to deal with for those tasked with counting the number of people belonging to one linguistic group or another. Statistics Norway had a set of (complex) rules for how to categorise the various cases, but how did the census takers deal with multilingualism *in practice*? We can find out more about this by extracting samples from the censuses.

Many historical Norwegian censuses are available in digital format and published online (see *digitalarkivet.no*). This allows us to search the censuses for data samples. The most recent census available digitally is from 1910. I have looked at how the two well known Sámi politicians Daniel Mortensson and Isak Saba were registered in 1910. I have also examined how the census takers recorded language use amongst children at a boarding school in Neiden in Finnmark. A number of different languages were spoken in Neiden, and multilingualism was commonplace (Skolt Sámi, North Sámi, Kven, Norwegian and Russian).

Daniel Mortensson lived not far from Elgå in what is now the municipality of Engerdal in Hedmark. His mother tongue was South Sámi. He trained as a teacher and was an unusually eloquent speaker and writer of the Norwegian language. Mortensson chaired the first Nordic meeting on Sámi policy in 1917. In the census he is not listed as a Sámi speaker. Nor are there any remarks about him in the language column in his census entry. His family were not listed as Sámi speakers in 1910, either, although there is local knowledge confirming that his children did indeed speak Sámi.

While Daniel Mortensson was listed as being neither Sámi-speaking nor Norwegian-speaking in the 1910 census, another noted Sámi politician from this period was registered with an "N" for Norwegian speaker (and <u>only</u> as a Norwegian speaker) in this census. This was the parliamentarian Isak Saba, who in his day wrote the Sámi national anthem *Sámi soga lávlla*. Although Norwegian is listed as his only language, we know from elsewhere that his first language was North Sámi.

A third sample from the 1910 census shows that the children living at the boarding school in Neiden in Sør-Varanger in Finnmark were all listed as Norwegian speakers. This was because they spoke Norwegian while boarding at the school, according to the notes in the comments column. At home they may have been speaking other languages. But these languages were not recorded in the census²⁸.

²⁸ In the article "*Did the Sámi ever live in Tromsø? What censuses do and do not reveal*", Lars Ivar Hansen uses examples from the censuses for the Tromsø region to show how unreliable the older censuses can be if we use them to try to identify Sámi people and Sámi speakers on the basis of the modern-day interpretation of ethnicity and native language. (Hansen 2013).

These samples from 1910 suggest that the number of Sámi speakers was generally too low even in the censuses *prior* to 1950. It could have been the widespread multilingualism that made registration difficult. Statistics Norway addressed this issue in 1956:

Classification according to both language and heritage became increasingly difficult as time passed. The Sámi and Kven populations gradually began to mix with the Norwegian population, and the Sámi and the Kven also mixed with each other. Society has also evolved, with growing numbers of Sámi and Kven people using Norwegian alongside their own language. (Norway's Official Statistics XI 236 1956:20)

The last Norwegian census to include questions about language was conducted in 1970. In 1978 Statistics Norway published its analysis of questions and answers about Sámi identity contained in the census. The analysis was carried out by Vilhelm Aubert. He argued convincingly that (severe) under-reporting of Sámi language and ethnicity was still taking place in the 1970 census, because the respondents themselves reported their Norwegian rather than their Sámi affiliation. The reason for this "erroneous reporting", as he saw it, was that there was a stigma attached to being Sámi in large parts of Northern Norway. In 1970 the question about Sámi identity was asked only in Northern Norway.

Based on the figures from the 1970 census, Aubert estimated that there could be around 40,000 people in Norway "... whose lives are in some way influenced by a Sámi element in their background". He gave a detailed account of how he arrived at this figure, but he also emphasised how dubious the figure actually was.

The data from 1970 is now so old that it cannot readily be used as a resource in official Sámi language planning. However, Aubert's estimate is still relevant for another reason. Many people have since referred to the figure of 40,000 when writing about the Sámi in Norway, and it is still being cited as if it were correct. For a commentary on the subsequent use of Aubert's figure, see Torunn Pettersen's critique "*The Sámi in Norway. 40,000 for 40 years?*" in *Sámi logut muitalit / Sámiske tall forteller 5*.

Questions about language have not formed part of Norwegian censuses after 1970. And no more censuses will be held. From now on they will be generated from administrative and statistical registers. It will therefore become impossible to use censuses in the future to find answers to questions such as how many people understand, read and write Sámi, where these people live, and how old they are.

5.1.3 Figures from other surveys

There may be other ways of estimating the number of Sámi speakers in Norway than using censuses. At the turn of the millennium the then Sámi Language Council commissioned a report on the use of Sámi language in Norway. The council sought to put a number on how many Sámi speakers there were. The final report (Ravna 2000) was based on questionnaires and telephone interviews. A geographical area was identified that included all municipalities in Finnmark county as well as Kvænangen, Nordreisa, Kåfjord, Lyngen, Storfjord, Sørreisa, Bardu, Salangen, Skånland and Lavangen in Troms county, Tjeldsund, Evenes, Tysfjord, Hamarøy, Hattfjelldal and Grane in Nordland county, Røyrvik, Lierne and Snåsa in Nord-Trøndelag county, Røros in Sør-Trøndelag county and Engerdal in Hedmark county.

A total of 11,523 telephone numbers in these municipalities were selected and called. The researchers were unable to establish contact with 1,480 of the numbers, despite placing six calls

in total. Of the remainder, 4,292 did not wish to answer questions about their language. This means that a total of 5,751 people participated and gave their answers to the survey.

The answers show that 4,797 of the 5,751 respondents did not understand Sámi. In-depth interviews about language proficiency were then conducted with the almost 1,000 Sámi speakers taking part in the survey. Amongst the non-Sámi speakers, a random selection of around 1,000 people were interviewed about their attitudes towards language.

Based on the information provided by the survey, Ravna (2000) estimated that more than 16,000 people over the age of 18 understood conversational Sámi in the areas included in the survey. By adding an estimated figure for Sámi speakers under the age of 18 along with an estimated number of people who understand Sámi outside the survey area, Ravna (2000) concluded that 25,000 people in Norway understand conversational Sámi. According to the survey, eight per cent of them only *understood* Sámi but could not speak it. On that basis the report suggested that 23,000 people were able to speak Sámi *at one level or another* in 2000.

There are problems associated with the methodology used in this research. In a separate booklet published as an appendix to Ravna (2000), the sociolinguist Tove Skutnabb-Kangas gives an account of some of these problems (Skutnabb-Kangas 2000). They were particularly problems surrounding the actual selection and, to a certain extent, the classifications. Despite the methodological issues, Ravna (2000) remains the most thorough account in our generation, and Skutnabb-Kangas was largely positive towards the research it contained.

According to its own statutes, the Sámi Language Council was to produce a status report every four years and submit it to the Sámi Parliament. But the council was closed down in 2002, and the Ravna study (2000) was not followed up with comparable studies at a later date. For that reason we know little about changes that have taken place after 2000.

Norway has signed up to the *European Charter for Regional or Minority Languages*, and the Council of Europe looks regularly at how the charter is being observed in the member countries. The Council of Europe has pointed out that the Norwegian government does not have *up-to-date* statistics on the number of Sámi speakers. As a response to this observation, the Norwegian Ministry of Government Administration, Reform and Church Affairs wrote in 2011 that it had commissioned a new report in collaboration with the Ministry of Education and Research to "map language status at an individual level amongst the Sámi population". The department wrote:

The purpose of the survey is to obtain an overview of how many people master each of the Sámi languages both in writing and speech, in which contexts they use the language, and the extent to which Sámi language is used as a language of interaction in kindergartens, schools, workplaces, education, leisure situations, local communities and in voluntary work or politics.

The results of the survey are intended to form a basis for language planning at all levels of society, including at government, regional and municipal levels. The results will be used to identify and implement measures to help preserve and develop the Sámi languages. (Ministry of Government Administration, Reform and Church Affairs 2011)

The planned survey was completed and the report published in 2012 (Solstad 2012). Which changes did they identify over the 12 years that had passed since the Ravna (2000) report was published?

On page 27 Solstad (2012) refers to that very Ravna (2000) report, describing a number of weaknesses relating to the selection methods used in the earlier report. Solstad (2012) also concluded that, on the basis of these weaknesses and "within the mandate of this study", it would be more appropriate to select a different method for identifying informants than that employed by Ravna (2000). This different method was to issue questionnaires to those registered on the electoral roll for the Sámi Parliament in 2012. The justification was that "these are Sámi citizens who identify themselves as Sámi and who may be likely to respond to questionnaires of this type" (Solstad 2012:26)²⁹.

Solstad made a selection of 5,000 informants from the 14,000 or so people registered on the electoral roll for the Sámi Parliament. *Everyone* registered in the Lule Sámi and South Sámi regions received a letter with a questionnaire. A selection was made in the North Sámi region. The proportion of people who responded was close to 40 per cent. The lowest response rate occurred in the South and Lule Sámi areas (Solstad 2012:11).

Solstad (2012) made a number of interesting findings. However, for reasons mentioned previously, this report did not link to previous research, and the results it identified could not be compared with those generated by Ravna (2000). The Solstad (2012) report thus became a status report in its own right about the use of language amongst the 14,000 or so people who in 2012 had voluntarily registered on the Sámi Parliament electoral roll.

Official language planning requires observations to be made over time of changes in the number of language users, just as the Council of Europe pointed out in 2011. But such changes are impossible to identify by comparing the research reports that have been published.

5.1.4 Concluding remarks on the number of Sámi speakers.

Just like everyone else, those working with endangered languages at UNESCO and *Ethnologue* depend on reliable sources in order to create statistics. When such sources are unavailable, they must use the best estimates they can, and that is how the *UNESCO Atlas of the World's Languages in Danger* and *Ethnologue* websites have obtained information for the statistics on Sámi languages. The figures on Sámi languages used by these prestigious sources are therefore neither more nor less reliable than figures from other sources. The problem is that these websites are so prestigious that for the reader their figures may come across as being authoritative, even when they are not.

The information about Sámi language in earlier censuses must be interpreted before it can be presented. But regardless of how we interpret the censuses between 1890 and 1970, they show a language shift from Sámi to Norwegian in many families and villages in Norway in this period. Vilhelm Aubert, who analysed the 1970 census, came to the same conclusion. Subsequent research reports do not dispute this either. This language shift is also corroborated by local anecdotal evidence. However, we do not have accurate figures on how extensive this language shift from Sámi to Norwegian has been. Nor do we know exactly when it began, except that it is likely to have started at different times in different regions.

The most thorough investigation into the total number of Sámi speakers in Norway after the 1970 census is Ravna (2000). This report concluded that at the turn of the millennium there

²⁹ The methods are described and argued much more thoroughly in Solstad (2012) than what is being referred to here.

may have been around 23,000 people in Norway who could speak one of the Sámi languages at one level or another. No research has been carried out since 2000 that can be measured against this figure. We therefore do not know what changes have taken place since then.

Different definitions have often been applied to those being classed as Sámi speakers. The definition used by Ravna (2000) is that a person is a Sámi speaker if he or she is able to follow an everyday conversation in Sámi. This definition encompasses a much larger group than those classified as Sámi speakers in earlier censuses.

It is a problem that no regular and comparable surveys have been carried out to show where the number of Sámi speakers is heading. The Council of Europe has drawn the Norwegian authorities' attention to this as a shortcoming of Norwegian minority policy, and Norway needs to find a way of solving it.

5.2 Sámi language transfer in the home

It is a sign of vitality for a minority language when it is being handed down informally at home between generations. If a language is not being transferred within families, it is under serious threat, and efforts to strengthen the language will have less of an effect than when the language is in daily use amongst families. The issue of language transfer in the home is therefore crucial to all forms of official language planning.

When analysing the census from 1970 (referred to above), Aubert wrote the following about the handing down of Sámi in the home at the time:

From this material one can feasibly deduce that having two Sámi-speaking parents is by and large a necessary, albeit not sufficient, prerequisite for allowing children to grow up with Sámi as their mother tongue. (Aubert 1978:53)

In other words: the situation in Norway in 1970 was such that if only one of the parents was a Sámi speaker, the language would rarely be passed on to the children. If both parents were Sámi speakers, there was a greater chance that they spoke Sámi with the children, but even then it was not certain that they did.

Much time has passed since Aubert wrote this. A key question is whether the pattern of Sámi language transfer between generations has changed in the years that have followed. There is some research available on this issue.

5.2.1 Language transfer of North Sámi in Finnmark 1967–1985

In the 1980s and 1990s Yngve Johansen carried out two extensive (and comparable) surveys amongst lower secondary pupils in Finnmark (Johansen 1986 and Johansen 1999). The surveys looked at physical education, motivation for study, and ethnicity. Language was thus not the *main theme* in either survey, but the forms issued by Johansen to 1,572 lower secondary pupils in Finnmark in 1983 and to 1,491 lower secondary pupils in the county in 1999 also asked questions about language skills and practical use of language with friends. Together with Nils Dannemark, Johansen published an article in 2001 in which he analyses and compares the answers to the language questions in the two surveys. The article was entitled *"Lower"*

secondary pupils and language choices in Finnmark in 1982/83 and 1998/99" (Dannemark and Johansen 2001).³⁰

The response rate for both surveys was around 80 per cent, and the figures should provide sufficient data to say something about changes in language use amongst young people in Finnmark during the 1980s and 1990s.

Figure 1 below contains a comparison of the answers given to questions about the language used at home and with friends in 1998/99 and answers to the same questions given in 1982/83.³¹



Figure 5.1 North Sámi as a first language and everyday language amongst lower secondary pupils in Finnmark in 1982/83 and 1998/99³²

In 1982/83 a total of 9.8 per cent of pupils stated that Sámi was the only language spoken at home. This figure fell to 7.8 per cent in 1998/99. However, if we add together the figures for "Sámi as the only first language" and "Sámi as one of multiple first languages", we find that the first language percentage increases from 10.6 per cent in 1982/83 to 12 per cent in 1998/99. Reported use of Sámi language with friends also rose correspondingly from 1982/83 to 1998/99, according to Dannemark and Johansen (2001).

Language skills and use amongst lower secondary pupils reflect which languages the pupils learnt at home when they were little. Those who attended lower secondary school in the 1982/83 academic year were born in the period 1967–1969, while those in lower secondary in the 1998/99 academic year were born in 1983–1985. Figure 2.1 may indicate that the decline in the use of Sámi language in the home stopped some time in the 1980s. The figures from Dannemark

 ³⁰ See also Dannemark, Nils (2000). "Nuoraidskuvlaoahppit ja giellaválljen Finnmárkkus 1992/83 ja 1998/99".
 In Sámegiela dilli skuvllas ja lagasservodagas. Kárášjohka: Sámediggi, pp. 45–57.

³¹ The figure has been obtained from Dannemark and Johansen (2001:45).

³² Pupils at Guovdageainnu nuoraidskuvla (Kautokeino primary school) are not included in the survey data.

and Johansen (2001) show a percentage *increase* in the reported use of Sámi in this period. The authors sum up the use of Sámi language amongst young people like this:

The figures appear to suggest that there has been a percentage increase. It would seem that more children learn two languages in bilingual families now than in 1982/83. In 1982/83 Norwegian was usually chosen as the only language in Sámi-Norwegian families, while informants in the second survey increasingly report that they are bilingual. A larger percentage of the informants in 1998/99 state that they use Sámi language actively. (Dannemark and Johansen 2001:41)

The increase in the use of Sámi amongst children of lower secondary school age combined with the fact that fewer of them spoke only Sámi at home could suggest that an important factor had changed since the 1970 census. As we have seen, Aubert wrote in 1978 that it would appear that speaking only Sámi at home was a "necessary prerequisite" if the language were to be transferred to the children. The figures proposed by Dannemark and Johansen (2001) could indicate that the Sámi language was more easily transferred within bilingual families in the 1980s than in the 1970s. Perhaps it had become more acceptable by then for each parent to speak their respective language with the children?

However, the difference in the figures from Dannemark and Johansen (2001) is small in percentage terms. The increase in the number of pupils who spoke Sámi at a first language level was 1.4 per cent, and this difference is too small to allow us to conclude whether there was indeed an increase. For that reason we will compare Dannemark and Johansen's data with a number of other quantitative surveys that may also provide information about Sámi language transfer amongst families.

5.2.2 A change in attitudes towards Sámi language transfer

In 1996 the then National Education Office in Nordland, Troms and Finnmark together with the Sámi Education Council took the initiative to conduct a study into the teaching of Sámi as a second language in Norwegian primary and lower secondary schools. The concluding report was published in 1998 and contained a large number of tables describing the language situation amongst the pupils in question (Todal 1998). Questionnaires were sent to *all* pupils studying Sámi as a second language in Norway from Year 4 to Year 9 (compulsory education lasted nine years at the time). Pupils, parents and teachers were all sent questionnaires. The response rate was 69 per cent amongst pupils and parents and 77 per cent amongst teachers.

The study asked parents how proficient they were in the Sámi language and the extent to which they transferred the language to their children at home. 48 per cent of the mothers and 43 per cent of the fathers of primary and lower secondary pupils learning Sámi as a second language stated that they themselves spoke Sámi either "quite well" or "very well". But only 5 per cent of the same mothers and 4 per cent of the same fathers said they spoke "mostly Sámi" or "only Sámi" with their children at home (Todal 1998:62–66). The figures from Todal (1998) apply to North Sámi, Lule Sámi and South Sámi spoken on the Norwegian side of the border.

Around 40 per cent of pupils taking Sámi as a second language in primary or lower secondary school in Norway in 1996 thus had a mother or a father (or both) who claimed to speak Sámi well but who still did not speak the language with their children to any significant extent. These parents must still have wanted their children to learn Sámi, since they voluntarily chose the subject for their children at school. This seemingly inconsistent pattern of behaviour could be explained by the fact that multilingual parents choose a language for their children when the

children are very young. The language practices that were identified in the study of the last five cohorts in primary and lower secondary schools in 1996 therefore reflect choices that were made by the families between 1981 and 1986. The parents' attitudes towards the Sámi language may since have changed.

The figures from Todal (1998) therefore suggest that many Sámi-speaking parents in the 1980s refrained from transferring the Sámi language to their children, but also that some of these parents changed their attitude in the 1990s and chose Sámi as an academic subject for their children in order that they could learn the language.

Based on the figures provided by Todal (1998), it is not possible to say *how many* Sámispeaking parents in Norway this applied to, since we do not know how many Sámi-speaking parents there were in total. The figures only provide information about the group that actively chose Sámi as a second language in school in 1996. The choice of language in school amongst these specific families suggests that there was a change in attitudes in favour of Sámi in the 15year period between 1981 and 1996. Such a potential change in attitudes underpin the trends seen in the figures from Dannemark and Johansen (2001).

5.2.3 Sámi language transfer at the turn of the millennium

We have accounted above for the language survey conducted by Ravna (2000) and initiated by the Sámi Language Council. This survey also collected data on language transfer in the home. Ravna (2000) found that of the Sámi-speaking respondents with children, 34 per cent said their children did not speak Sámi. This was true for parents with children "of all ages". This indicates a language shift from Sámi to Norwegian in a substantial number of homes.

An interesting finding in Ravna (2000) was that circumstances appeared to be changing in the period leading up to the new millennium. Of Sámi-speaking parents with children *under* the age of 18, 42 per cent said their children spoke Sámi "very well". Of those who only had children *over* the age of 18, 28 per cent said their children spoke Sámi "very well" (Ravna 2000:33–36). These figures must be interpreted to mean that in 2000 there was a greater tendency than before amongst Sámi-speaking parents to pass on the language. The children who were under the age of 18 in 2000 were born between 1982 and 2000. The change must have taken place during this period.

The interpretation of the figures from Ravna (2000) depends on how representative the selection is, but as we can see, the tendencies in the figures correspond with those in the data provided by both Dannemark and Johansen (2001) and Todal (1998).

5.2.4 North Sámi language transfer amongst those registered on the Sámi Parliament electoral roll 2012

The researchers behind the Solstad (2012) report, described in more detail above, also asked their informants about language proficiency. This report included people who in 2012 were registered on the electoral roll for the Sámi Parliament. Only those eligible to vote are on the electoral roll, and there were therefore no informants under the age of 18.

Table 5.4 below shows the proportion of Solstad's (2012) informants able to understand North Sámi, listed by six different age groups.

Table 5.4 How well do you understand North Sámi? By percentage and
according to age in 2012³³.

	18+	30+	40 +	50+	60+	70+	Total
Yes, in all situations	41	35	34	43	44	61	41
Yes, a great deal (when it's about familiar topics)	12	18	16	16	15	21	16
Only a little in familiar situations	22	23	22	20	22	10	20
Hardly any, may recognise individual words	25	25	28	21	19	9	22
Total %	100	100	100	100	100	100	100
Numbers	115	198	258	304	255	106	1,236

The table spells out a language shift from North Sámi to Norwegian amongst families. By far the highest percentage of people who understand North Sámi can be found amongst those aged over 70 in 2012 (61 per cent). This percentage is distinctly lower in the next generation, especially amongst those aged 30–50 in 2012. Then there is a higher percentage who understand Sámi "in all situations" amongst those aged between 18 and 30.

Table 5.4 is slightly awkwardly distributed into categories. It can be difficult to know the difference between those who said they understand Sámi "in all situations" and those who responded that they understand "a great deal of Sámi". And what is the difference between those who say they understand "only a little" and those who understand "hardly any"? In order to make the categories clearer, we can reduce them from four to two. In the first category we place those who claim to understand Sámi well, and in the second those who say they understand little or nothing. This generates the result shown in Table 5.5 below:

Table 5.5 How well do you understand North Sámi? By percentage and
according to age in 2012.

	18+	30+	40+	50+	60+	70+
Well or quite well	53	53	50	59	59	82
Little or nothing	47	48	50	41	41	22
Total %	100	101	100	100	100	100
Numbers	115	198	258	304	255	106

Table 5.5 shows that there is still a significant language shift. Those who understand Sámi the best are aged over 70. Amongst them, 82 per cent say they understand Sámi "well". The percentage amongst younger people is lower, and it is at its very lowest in the age group 40-50, where 50 per cent say they understand North Sámi well. This indicates a language shift.

A slightly higher percentage of the under-40s understand Sámi compared with those aged between 40 and 50, but the difference is only 3 per cent. This suggests that the language shift has stopped.

Table 2.6 below shows the percentage distribution of people who said they could *speak* North Sámi in 2012.

³³ The table has been obtained from Solstad (2012:130–132)

Table 5.6 How well do you speak North Sámi? By percentage and accordingto age in 2012.34

	18+	30+	40+	50+	60+	70+	Total
Yes, it comes naturally to me	36	32	28	40	43	63	39
Yes, it's usually fine	7	6	9	10	13	15	10
Only a little in certain situations	23	29	20	21	20	9	21
No, perhaps individual words	34	33	43	29	24	12	30
Total %	100	100	100	100	100	100	100
Numbers	115	198	258	304	255	106	1,236

The figures in Table 5.6 show the same tendencies for speaking proficiency in North Sámi as Table 5.4 did for comprehension. Informants over 70 years of age were far more likely to say they spoke the language. The percentage then dropped for the next age groups in the table, the lowest being amongst those between the ages of 40 and 50. Then there were slightly more people who spoke Sámi amongst the 18–40 age group.

If we reduce the four categories of answers in Table 5.6 to two and label them "speaks North Sámi well or quite well" and "speaks little or no North Sámi", the percentage distribution between the categories will be as displayed in Table 5.7 below.

Table 5.7 How well do you speak North Sámi? By percentage and accordingto age in 2012.

	18+	30+	40+	50+	60+	70+
Well or quite well	43	38	37	50	56	79
Little or nothing	57	62	63	50	44	31
Total %	100	100	100	100	100	100
Total figures	115	198	258	304	255	106

A comparison of Tables 5.6 and 5.7 shows that the tendency is the same, even with fewer and less ambiguous categories. The figures illustrate a language shift from the older generation to the middle generation, and then a tendency towards revitalisation of the language amongst the generation aged 18–30.

Those who were aged between 40 and 50 in 2012 were born in the period 1962–1972, while those aged 18–30 were born between 1982 and 1994. The trend in the figures from Solstad (2012), as shown here in Tables 5.4, 5.5, 5.6 and 5.7, is that language transfer amongst families increased in the 1980s and the early 1990s.

This mirrors the tendencies examined above in Todal (1998), Ravna (2000) and Dannemark and Johansen (2001).

³⁴ The table has been obtained from Solstad (2012:130–132)

5.2.5 Concluding remarks

The figures quoted in this chapter suggest a language shift from Sámi to Norwegian up until the 1970s. In practice this means that a proportion of previously Sámi-speaking families switched from speaking Sámi with their children to speaking Norwegian. We do not have figures on how many families this involved.

When looking at the figures from Todal (1998), Ravna (2000), Dannemark and Johansen (2001) and Solstad (2002) in context, they indicate that a certain shift took place in families in the 1980s, whereby Sámi-speaking parents increasingly began to speak Sámi with their children. This trend has strengthened both the *knowledge* and *use* of the Sámi language.

Although the number of children able to speak Sámi has increased since the early 1980s, the total number of Sámi speakers did not necessarily increase over that same period. In many villages where the language shift was well advanced by around 1980 there were probably more old Sámi speakers dying than there were young Sámi speakers growing up. In this respect there have been two simultaneous and converse trends in the period after 1980. We could describe the situation as a race between the two trends. The result of this race is what will help us determine the number of people using Sámi as an active everyday language.

5.3 Sámi language as a subject in primary and lower secondary education 1990–2012

Schools are important institutions as regards language dissemination, language development and the efforts to give a language prestige. Most language minorities are therefore anxious to promote the use of their language in schools.

Sámi was used as a teaching language in both the 18th and 19th centuries. But tuition in Sámi gradually came to a halt as a consequence of the assimilation policies of the late 19th century. It only resumed in 1967, when a few parents in Inner Finnmark chose to have their children taught North Sámi reading and writing. The Sámi school in Snåsa began to teach South Sámi in 1968.

The new national curriculum of 1987 gave Sámi tuition a more formal status, including subject curricula for Sámi both as a first and second language and with an express aim of functional bilingualism for both pathways (Ministry of Church Affairs and Education 1987:148–180, 1988:7–8).

5.3.1 Sources of language statistics in compulsory education

There are reliable figures from 1990 and up until the present day on the number of pupils choosing Sámi as a first or second language in compulsory education in Norway. In his doctoral thesis *Jos fal gáhttet gollegielat* Jon Todal gave a detailed summary of pupils choosing to receive tuition in the Sámi language in primary and lower secondary school for every academic year in the 1990s. The figures used in his thesis were obtained from the annual reports published by the then Sámi Education Council and from letters from local councils. The data was also partly modified on the basis of local knowledge. The summary contained figures at a municipal

level and also specified which curriculum (First Language; Second Language; Sámi Language and Culture) the pupils had chosen in the different municipalities (Todal 2002:87–101).

The statistics from the 1990s have since been maintained, albeit in a less detailed format. The first edition of the *Sámi logut muitalit / Sámiske tall forteller* report was published in 2008. It has subsequently been updated and commented on annually in the form of articles. The figures used in the commentaries on language in schools have been produced by the Norwegian Directorate for Education and Training, which receives annual reports from local councils.

Using the figures from Todal (2002) and from *Sámi logut muitalit / Sámiske tall forteller1–5*, we can draw up a chart as shown in Table 5.6 below. The figures in the far-right column (the total number of primary / lower secondary pupils in Norway) have been obtained from personal communication with Division Manager Paul Inge Severeide from the Division for Population Statistics at Statistics Norway.

Academic	First	Second	Total number of	Total number of
year	language	language	pupils receiving	pupils in Norway
			Sámi tuition	
1990/91	593	621	1,214	473,078
1991/92	626	736	1,362	467,501
1992/93	695	800	1,495	462,360
1993/94	743	937	1,680	468,061
1994/95	789	909	1,698	471,846
1995/96	791	964	1,755	478,540
1997/98	897	1,218	2,115	560,849*
1999/00	971	1,376	2,347	570,803
2005/06	998	2,057	3,055	622,031
2006/07	1,020	1,652	2,672	621,013
2007/08	1,027	1,515	2,542	618,589
2008/09	1,043	1,474	2,517	616,139
2009/10	1,010	1,336	2,346	615,927
2010/11	971	1,274	2,245	615,973
2011/12	940	1,213	2,153	614,413

Table 5.8The number of pupils receiving tuition in Sámi language in
compulsory education in Norway 1990/91–2011/2012

*The 1997 education reform increased compulsory education from nine years to ten years. This means that the figures from after 1997 include one cohort more than the figures from before 1997.

In the table the figures on pupils pursuing the previous curriculum "Sámi Language and Culture" have been included in the figure for "Sámi as a Second Language" up until 2006 when the former subject was discontinued.

The figures for the 1996/97 and 1998/99 academic years are incomplete, and the figures for the 2000/01 and 2004/05 academic years are not comparable with other figures in the table. This is the reason why Table 6 does not contain figures for these academic years.

Not all the figures on Sámi as a Second Language for the period before 2000 correspond with the figures on Sámi as a Second Language in Todal (2002). The reason is that Todal (2002) looks individually at every curriculum that has been in use and that was not Sámi as a First

Language. In Table 2.6 above, every subject that was not Sámi as a First Language in the period 1990/91 to 1999/00 has been consolidated and labelled "Sámi as a Second Language".

It would have been interesting to look at changes in the number of pupils studying Sámi compared with the number of potential Sámi students. However, this is not possible as we do not know how many people are entitled to Sámi tuition in Norway.

5.3.2 Changes in pupil numbers

Total number of Sámi pupils

When comparing the first year in the table (1990/91) with the last (2011/12), we see an overall increase of 912 Sámi pupils in compulsory education, equivalent to 75 per cent.

It is not the case that there has been a steady increase. Before 2005/06 the number rose year on year, and that year the number of pupils was 1,843 higher than in 1990/91 (that is +151 per cent over 15 years). The number of Sámi pupils fell every year after 2005/06, and half of the new pupil population had disappeared by 2011/12. Figures had fallen to around the same level as in 1997/98.

The table also shows that the changes in the number of first language pupils are not consistent with the changes in the number of second language pupils.

Number of pupils studying Sámi as a First Language

The number of pupils taking Sámi as a First Language was 58 per cent higher in 2011/12 than in 1990/91. This increase has been steadier than the increase in the total number of Sámi pupils. We can see from the table that the number of first language pupils rose steadily and peaked at 1,043 in the 2008/09 academic year before falling slightly in subsequent years.

The increase in the number of pupils with Sámi as a First Language throughout the 1990s and up until 2008/09 can perhaps be partly explained by the fact that there were more pupils with first language competence in Sámi in 2008/09 than there were eighteen years previously. The results from Todal (1998), Ravna (2000), Dannemark and Johansen (2001) and Solstad (2012), all addressed above, support this hypothesis.

However, it is probably also true that some pupils in the 1990s who in practice had first language competence in Sámi still chose Norwegian as their first language at school. This may have become less common in later years, and this shift may have led to an increase in the number of Sámi as a First Language pupils during the 2000s, even though the number of children with practical first language competence in the language did not increase as a result.

Number of pupils studying Sámi as a Second Language

From the table we can see that the number of pupils taking Sámi as a Second Language almost doubled between 1990/91 and 2011/12. There are still significant fluctuations within that period, from a peak of 2,057 pupils in the 2005/06 academic year down to 1,213 pupils in the 2011/12 academic year.

Possible reasons for the considerable decline in the years after 2005/06 are addressed in Todal (2011). The article discusses reasons such as a general decrease in the number of children in the traditional Sámi regions in the period in question, the discontinuation of the Sámi Language and Culture curriculum after the 2006 school reform, practical difficulties incorporating Sámi as a Second Language in areas outside the Sámi language administrative district, and the use of incorrect bilingual teaching models in schools providing tuition in Sámi as a Second Language both inside and outside the Sámi language administrative district.

5.1.3 Concluding remarks on the number of Sámi pupils

The choice of language at school is a key indicator of the position of the Sámi language in society. Unlike other areas of society, there are reliable figures on Sámi language in a school context. These figures show that there has been a sharp increase after 1990 in the number of pupils receiving Sámi tuition in primary and lower secondary school in Norway. This is true for both Sámi as a First Language and Sámi as a Second Language, although the number of pupils studying Sámi suddenly began to fall in 2006. The decline was great in the years that followed, even though the figure in 2011 still remained higher than in 1990.

The steady increase and subsequent stability in the number of pupils studying Sámi as a Second Language can have a multitude of explanations. One could be that informal Sámi language transfer at home has been rejuvenated over the last twenty-five years. Several research projects support the notion that such language transfer has indeed increased (see also Chapter 2 above).

5.4 A few figures on written North Sámi today

Very few Sámi speakers over the age of fifty were taught written Sámi at school (see the introduction to Chapter 2.3 above for more information). People can of course learn to read and write Sámi without having been taught the language at school, and that is probably what many of them have done. It is easier to learn how to read a language than how to write it.

Things have been easier for those who learnt the written language at school. We will now look at reading and writing skills in North Sámi on the Norwegian side of the border in 2012.

5.4.1 Reading and writing North Sámi

The Solstad (2012) report contains a table displaying North Sámi reading and writing skills amongst six different age groups. The informants have been selected from the Sámi Parliament electoral roll.

Table 5.7 below shows how well the different age groups claimed to be able to *read* North Sámi in 2012.

Table 5.935How proficient are the North Sámi at *reading* Sámi? By
percentage and according to age.

	18+	30+	40 +	50+	60 +	70+	Total
Yes, I'm able to read all kinds of texts	34	31	26	27	20	21	26
Yes, as long as the text is about	14	16	16	18	18	25	17
everyday topics							
Yes, when the text is very basic	23	24	17	21	22	23	21
No, I'm unable to read Sámi	30	30	41	33	40	32	35
Total %	100	100	100	100	100	100	100
Numbers	115	198	258	304	255	106	1,236

The table shows that in 2012 there were more people in the youngest age groups able to read "all kinds of texts" than in the oldest age groups. From the table we can see that 21 per cent of those aged over 70 said they could easily read all kinds of texts, while 34 per cent of those under 30 said the same. However, this interpretation of the table gives a misleading impression of the actual differences between the oldest and youngest informants.

Since the percentage of people who *spoke* Sámi in 2012 was much higher amongst the over-70s than the under-30s (see Table 5.5 above), the percentage of people who read Sámi with ease was therefore higher amongst the youngest Sámi *speakers* than amongst the oldest Sámi *speakers*. 36 per cent of young people in this selection (Table 5.5) spoke Sámi with ease, while 34 per cent could read it with ease (Table 5.7). This means that almost all North Sámi speakers under the age of 30 read Sámi with ease.

Of those over 70 years of age, 63 per cent spoke the language with ease (Table 5.5), while only 21 per cent could read it with ease (Table 5.7). This highlights a significant discrepancy in Sámi reading proficiency between Sámi *speakers* in the oldest and the youngest age groups. Table 5.10 below shows how well the different age groups claimed to be able to *speak* North Sámi in 2012.

Table 5.10³⁶ How proficient are the North Sámi at *writing* Sámi? Bypercentage and according to age.

	18+	30+	40 +	50+	60+	70+	Total
Yes, it comes naturally to me	25	23	15	16	11	8	16
Yes, but I have to stop and think	15	16	18	17	13	15	16
Only a little, such as simple messages and	24	25	16	20	20	24	21
expressions							
No, I'm unable to write Sámi	36	36	51	47	47	53	47
Total %	100	100	100	100	100	100	100
Numbers	115	198	258	304	255	106	1,236

This table shows even greater disparity between the oldest and youngest age groups than was the case with reading. While 63 per cent of the oldest informants spoke Sámi with ease (Table 5.5), only 8 per cent wrote the language with ease (Table 5.8). 36 per cent of the youngest

³⁵ The table has been obtained from Solstad (2012:132)

³⁶ The table has been obtained from Solstad (2012:132)
informants spoke Sámi with ease (Table 5.5), while 25 per cent could write it with ease (Table 5.8).

The trends that emerge when examining Tables 5.5, 5.6, 5.7 and 5.8 in the context of each other can only be interpreted as a very positive consequence of Sámi language provision and tuition in primary and lower secondary education. The oldest informants were never given instruction in how to write Sámi at school, while the youngest received such tuition throughout their schooling.

5.4.2 North Sámi newspapers

There is a correlation between the number of people who can read Sámi with ease and the potential circulation of Sámi language newspapers. In *Sámi logut muitalit/Sámiske tall forteller* 3 Johan Ailo Kalstad wrote an article entitled "*Sámi media – popularity, distribution and framework conditions*" (Kalstad 2010). In the article Kalstad defines "Sámi media" as something more than just "Sámi language media". But he also created a table to illustrate subscription trends for newspapers in the North Sámi language in particular.

The two Sámi language newspapers $A \tilde{s} \tilde{s} u$ and $Min A \tilde{s} \tilde{s} u$ were in 2008 merged into one paper, $A \tilde{s} \tilde{s} u$ and $Min A \tilde{s} u$ and Min A

Table 5.11 below shows changes in circulation figures for these newspapers in the period 2000–2009.

Table 5.11 Circulation figures for newspapers in the North Sámi language 2000–2009³⁷

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Áššu	969	1,003	1,129	1,117	1,084	1,021	975	1,008	-	-
Min áigi	964	1,142	1,197	1,072	1,211	1,179	1,177	1,104	-	-
Ávvir									1,204	1,204
Total	1,933	2,145	2,326	2,189	2,295	2,200	2,152	2,112	1,204	1,204

We can see that $Min \ Aigi$ alone had a higher circulation in 2004 than the merged newspaper Avvir had in 2009.

Kalstad offers several hypotheses as to why circulation figures changed in this way, but none of them has anything to do with language. And it is indeed difficult to infer any linguistic reasons for the changes. On the contrary, we have seen above how Sámi reading proficiency amongst North Sámi speakers is improving.

But the figures raise questions about how many potential subscribers a North Sámi language newspaper could potentially attract. What would the maximum number be? We know that the number of readers is always higher than the number of subscribers. And in this case we also know that a large number of *potential* Sámi-speaking subscribers and readers are "not able to read all kinds of texts in Sámi". This is particularly true for many people who were aged over 50 in 2012 and who never learnt written Sámi at school. Sámi language radio broadcasts therefore reach out to many more people than a printed Sámi language medium would do.

³⁷ The table has been obtained from Kalstad (2011:36)

There is a lack of research into how the written Sámi languages work in local communities. We also know little about the use of Sámi in social media. One interesting question would be whether the threshold for reading and writing Sámi is lower there than in "old media".

5.4.3 Concluding remarks

Statistics from Solstad (2012) suggest a significant positive effect of Sámi tuition in compulsory education. Improving mother tongue literacy amongst Sámi speakers is evidently helping to boost the Sámi language in general.

More research is needed on the practical application of Sámi as a language of reading and writing amongst young people. Such research is not merely of linguistic interest; academics specialising in both education and the media will also be able to provide valuable approaches.

5.5 Sámi language in public services

Municipalities and other administrative bodies were not obliged to use Sámi until the language rules set out in the Sámi Act came into force in 1992. This does not mean that Sámi was not used in the public services sector in the past, but the systematic and statutory application of the language was something entirely new.

As a continuation of the language rules contained in the Sámi Act, a separate geographical administrative district for the Sámi language was established in 1992. In this district Sámi and Norwegian would be put on an equal footing in the public services sector, and Sámi was also granted especially robust legal protection. In 2013 the Sámi language administrative district (hereafter referred to as the administrative district) encompassed the ten municipalities of Kautokeino, Karasjok, Tana, Nesseby and Porsanger in Finnmark county, Kåfjord and Lavangen in Troms county, Tysfjord in Nordland county, and Snåsa and Røyrvik in Nord-Trøndelag county. The original administrative district comprised only the first six municipalities on this list. The four municipalities of Lavangen, Tysfjord, Snåsa and Røyrvik were included later after they requested it. In practice this means that these local councils resolved to apply to the government to be included.

In addition to the ten primary municipalities listed above, Norway's four northernmost county councils also have particular obligations as regards the Sámi language, and they are often deemed to be part of the administrative district. *Government* agencies, too, have certain obligations when communicating with the administrative district in particular.

People living in the administrative district are entitled to use Sámi when corresponding with public agencies and institutions. The Education Act, Kindergarten Act and the Place Names Act all set out certain requirements for municipalities in the administrative district. For example, everyone of compulsory school age living in the administrative district is automatically entitled to Sámi tuition – regardless of home language or ethnicity.

The administrative district is a tool designed to make it easier for the authorities to meet the obligations that Norway has under national legislation and international law in respect of the Sámi language. This arrangement means public initiatives better meet their target groups, because a very large proportion of Sámi speakers in Norway are likely to live within this geographical area.

After the administrative district was established in 1992 the Sámi parliament and Norwegian government have had to monitor the outcomes of the introduction of Sámi as an administrative language. In order to study the progress, they have commissioned research over the years with a quantitative approach to the issue. We will now be looking at the results of this research.

5.5.1 Research into Sámi language in public services in the 1990s

In 1996 the Sámi Language Council had a report produced entitled: Language revitalisation and Sámi-Norwegian bilingualism in public agencies. A study into the use of Sámi as an administrative language in municipalities in the Sámi language administrative district (Øzerk and Eira 1996). They collected information about language skills amongst municipal officials in the administrative district as well as information about the actual use of Sámi and Norwegian in the same administrations. Only six municipalities were part of the administrative district at the time.

Øzerk and Eira (1996) divided municipal staff into four categories, where category 1 was the strongest in terms of bilingualism. In this category they placed people who could understand, read, speak and write both Sámi and Norwegian. Employees in category 1 were capable of dealing with cases in both languages and at all levels. Category 4 was the weakest in terms of bilingualism. This category included staff who were monolingual Norwegian speakers and who were wholly reliant on interpreters and translators in situations where Sámi was being used, be it verbally or in writing. The majority of municipal staff in the administrative district belonged to categories 2 and 3, somewhere on the scale between the two extremes described above. There were significant differences between municipalities, however.

The largest percentage of category 1 staff was found amongst municipal officials in Nesseby, where 31 per cent of employees were in the strongest bilingual category. The municipality of Kåfjord had the lowest share, with only 5 per cent of employees in this category. Only 13 per cent of officials in Karasjok belonged to category 4, which was the weakest (monolingual) category, while as many as 78 per cent of staff in Kåfjord fell into this category.

The report also measured the actual use of Sámi in the municipal administrations. Kautokeino came out top, with the most frequent use of Sámi in meetings, letters, minutes etc. All in all, the figures from Øzerk and Eira confirm that there were considerable differences in language proficiency and language practices from municipality to municipality. These differences reflect circumstances outside the municipal administrations, since there were major differences between municipalities as to the position of Sámi as an everyday language amongst the population.

Øzerk and Eira (1996) advised local councils to make an effort to take employees in categories 2, 3 and 4 up one category. The easiest challenge would be to elevate category 2 staff to category 1. This could also have a major positive effect on the use of written Sámi in the municipalities. The system adopted by Øzerk and Eira (1996) with four categories according to passive language skills and active language proficiency was a simple one, and it would have provided a good basis for the continued work to boost the use of Sámi in the municipalities. The system gave the Sámi Language Council and Sámi Parliament a tool with which to perform quantitative measurements of future progress or decline in the use of Sámi in the various municipal administrations.

The Sámi Language Council continued to use this tool and publish data on progress in its annual reports until it was assimilated into the Sámi Parliament in 2002 and became the Sámi Parliament's Language Board.

5.5.2 Research into Sámi language in public services after 2000

Four years after the report from Øzerk and Eira (1996) two new reports were published that addressed the use of Sámi in the public services sector: A survey into the use of the Sámi language, commissioned by the Sámi Language Council (Ravna 2000) and Bilingual public services provision. User survey in the administrative district for the language rules of the Sámi Act (Skålnes and Gaski 2000).

Ravna (2000) does not adopt the system and categories used by Øzerk and Eira (1996) and does not use geographical categories to allow the reader to compare the survey with the previous report. However, the newer report contains a number of interesting facts about the situation in the municipalities in the period around 2000.

Skålnes and Gaski (2000) actively used both Øzerk and Eira (1996) and the annual reports from the Sámi Language Council to give a status report. The mandate of Skålnes and Gaski (2000) differed from the other two research projects. They were tasked with studying the administrative district through the eyes of the *users* and with establishing whether Sámi-speaking users were satisfied with the provision of bilingual public services. Although they identified variations within the administrative district, they concluded that the implementation of the language rules contained in the Sámi Act was working and that users were generally satisfied with the improved opportunities for using their mother tongue when accessing public services. The users were more dissatisfied with issues not relating to language use, such as long waiting times, for example. One conspicuous finding was that the opportunities for using Sámi when accessing public services in 2000 were fewest in arenas where the users most expected to be able to speak their mother tongue, namely at the doctor's and when dealing with social services.

The report from Skålnes and Gaski (2000) has not been followed up to identify any subsequent changes in the eyes of the users.

In the years that followed the closure of the Sámi Language Council the newly established Sámi Parliament's Language Board produced at least two brief reports that partly discussed the use of Sámi in the public services sector (The Sámi Parliament's Language Board 2004 and 2008). They, too, contain a reasonable amount of useful information, although they did not look at trends over time.

In 2012 the Ministry of Government Administration, Reform and Church Affairs funded a report entitled *Mapping Sámi perspectives in the local government sector* (Angel et al. 2012), and in the same year the Sámi Parliament financed the report *A Sámi language survey* (Solstad et al. 2012). Both these reports from 2012 addressed the use of Sámi by the municipal administrations and provided new and important knowledge about the present situation. However, they did not seek to link to existing research in a way that allows us to examine tendencies over time.

On that basis it would appear that the Sámi Language Council was more systematic and resolute in its approach to Sámi status planning than the Sámi Parliament and the Ministry have been since the Sámi Language Council closed down in 2002. The contents of commissioned research reports after 2002 have been divergent, and key aspects of the status planning have not been followed up.

5.5.3 Concluding remarks

The conclusion to this review of investigations and research reports into Sámi language use in public services from 1996 to 2012 would be that the data cannot be used to identify tendencies in the use of Sámi by municipal administrations in the Sámi language administrative district in the period. Although the reports are both interesting and solid as isolated pieces of research, they only provide empirical evidence for a certain point in time, each with their own underlying approaches, their own questions, their own topics, their own category definitions, and their own methods for selecting informants. It is therefore impossible to compare the findings and subsequently impossible to establish how things have changed.

On the basis of the reports we have examined here, it would appear that the erstwhile Sámi Language Council was more systematic and resolute in its approach to this aspect of Sámi status planning than the Sámi Parliament and the Ministry have been since the Sámi Language Council closed down in 2002. The contents of commissioned research reports after 2002 have been divergent, and key aspects of the status planning have not been followed up.

5.6 Summary and suggested action

5.6.1 Summary

Identifying the exact number of Sámi speakers is a big, daunting and costly task - a task that has yet to be completed. We can therefore not be certain about possible changes in the number of Sámi speakers, either.

What we do know is that over a long period of time a language shift must have taken place from Sámi to Norwegian in many families and villages, maybe especially during the first thirty years after World War II. There is much to suggest, however, that both attitudes and practices turned in the favour of Sámi at some point during the 1980s. This is a trend that we should have liked to know more about.

We have reliable figures on the choice of Sámi language in compulsory education, and we can therefore safely say that the biggest problem in schools today is the drop-out rates from tuition in Sámi as a Second Language. Sámi logut muitalit / Sámiske tall forteller identified this issue as early as in its first edition in 2008 in an article entitled "Sámi language in compulsory education – steady growth and sudden decline". The article "Severe decline for Sámi as a Second Language" in Sámi logut muitalit / Sámiske tall forteller 4 in 2011 pointed out that perhaps we did not primarily lack knowledge about the situation or about which steps could be taken. What is needed is action rather than further studies.

There is little quantitative research on the role of the written Sámi language in modern Sámi society. We need to know more. The use of language in social media is particularly important to young people. But the use of Sámi language in social media is something we do not have quantitative data on.

The use of Sámi language in the public services sector is poorly documented, despite there being numerous research reports on the topic. This does not mean that the individual reports are of a poor quality; rather that one report does not correlate with the next. The Norwegian government and Sámi Parliament should review the reports they have in their possession before commissioning further research in order to pursue key aspects in a way that identifies any *changes* over time. Only then is it possible to take concrete action.

5.6.2 Suggested action

- 1. Further work is required to obtain the best possible up-to-date figures on how many people are able to understand, speak, read and write Sámi. Changes must be monitored.
- 2. Up-to-date figures on the Sámi language must be published internationally.
- 3. Efforts must be made to obtain the best possible overview of Sámi language transfer in the home. Changes should be monitored and language transfer encouraged.
- 4. The position, and actual use, of the Sámi language in social media should be investigated.
- 5. A system must be created to measure and monitor progress or decline in the use of Sámi in the public services sector.
- 6. On the basis of factors borne out in official school statistics for some time, concrete measures must be taken to stop the decline in the number of primary and lower secondary pupils taking Sámi as a Second Language and to recruit new pupils (see also articles in *Sámiske tall forteller 1, 2, 3, 4* and 5 addressing this very issue).

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6 Sustainable Reindeer Herding?

Jan Åge Riseth, Senior Research Scientist, Ph. D., Norut Tromsø

Summary

The sustainability of reindeer herding has been a relevant discussion over the last 20 years in terms of both international policy as well as reindeer herding policy. The Reindeer Herding Act states that reindeer herding is to be ecologically, economically and culturally sustainable. Currently, this is only defined concretely in terms of ecological sustainability, through a 2008 advisory from the Ministry of Agriculture and Food. For a more fundamental starting point, I will use the approach of international common resource research.

This chapter gives an industrial economics overview of reindeer herding in Norway with respect to physical geography and legal history. It presents a complex picture from south to northeast. Semi-domestic reindeer herds in central Sør-Norge has a long history influenced by South Sami herders. These enterprises have the highest productivity of all reindeer enterprises in Norway, with the highest slaughter yields, high productivity and stable and good finances.

South Sami reindeer herding south of Stjørdalen has had a very difficult history because of political setbacks with especially severe consequences. Reindeer herders in Trollheimen lost all their rights with the decisions upheld by the Supreme Court as late as 1981. The Ministry of Agriculture and the Norwegian Parliament preserved the future of reindeer herding in this area through a new law in 1984. Samis who earn a living through reindeer herding in the Røros area have been exposed to high pressure from the expanding agricultural community and authorities. It was worse around the turn of the last century, when unreasonable compensation for alleged damage to farms ruined many Sami reindeer herders. After the war, and especially from the 1970s, Sami reindeer herders in this area have created a new and more productive reindeer herding industry, but have still needed to fight for their rights against both farmers and the legal system, which have been influenced by old attitudes. Reindeer owners finally won full acceptance of their rights in a 2001 Supreme Court decision but, especially in the last 10 years, have sustained a decrease in productivity because of increased predation.

Reindeer herding in Nord-Trøndelag has also taken part in the productivity revolution of the 1980s but since the early 1990, has more and more felt the consequences of the new policies regarding predation. The percentage loss has gradually increased and both slaughter yield and productivity have diminished from a high to a middle level. Reindeer herding areas in Nordland and Troms have both been affected by border clashes between Norway and Sweden in 1751, which led to Norway receiving an excess of summer pasture and Sweden receiving an excess of winter pasture. Nationalistic ideologies from the middle and end of the 1800s led to stronger control of reindeer herding to promote agricultural expansion and, in 1923, to the exclusion of Swedish reindeer Samis from, among other areas, the islands in Troms. Norway and Sweden

are currently without a valid convention and questions can be raised about the validity of Norway's one-sided extension of the 1972 convention in 2005. The last convention negotiations were very difficult but a Sami working group has recently presented recommendations for a new convention.

Large portions of reindeer herding in Finnmark are in a precarious position. The exception is Polmak/Varanger which has sustained a productivity revolution and has had good profits. Over the last 30 years, the number of reindeer in Karasjok and the 10 inner districts of Kautokeino has fluctuated greatly, but is still higher than before. Use of pasture in Finnmark is therefore much more intensive than before. The authorities' monitoring program documents that lichen regrowth in Finnmark is much better than expected. However, increases in reindeer numbers in the 2000s have none the less resulted in a pasture situation again in rapid decline.

After demands from NRL (Norske Reindriftsamers Landforbund - Sami Reindeer Herders Association of Norway), investigation and dialogue, a new Reindeer Herding Act was enacted in 2007. In addition to sustainability, this act focuses on particular reindeer herding institutions and processes, but has an exemption clause which gives central authorities the power to overrule reindeer husbandry agencies. The authorities have now used this to initiate compulsory processes to reduce reindeer numbers. I fear that these measures will function as a derailment and stop, rather than promote, the industry's essential processes.

The results of common resource research are clear; resource users themselves should be responsible for solving their own problems. The government's role should be to support processes that build institutions and solve problems.

I recommend that:

- government authorities develop a policy to strengthen the protection of the reindeer herding industry and prioritize the positive contributions this industry has made to sustaining an open landscape and biodiversity
- the consultation scheme be used more actively to develop a binding dialogue with Sami reindeer herders, the NRL and the Sami Parliament
- government authorities give reindeer herding in Finnmark and other reindeer herding organizations peace to determine rules of use and subsequent reduction of reindeer numbers
- the Sami working group's propositions for a new reindeer pasture convention with Sweden be ratified and implemented as soon as possible
- authorities formulate a predation policy which more clearly considers reindeer herding and other pasture users

6.1 Introduction

The Expert Analysis Group for Sami Statistics invited me to write a chapter on reindeer herding statistics. The challenge was to first find a subject which would be considered important and interesting by business, Sami organizations and Sami and Norwegian authorities. Secondly, sufficient data had to be available to write about the subject. The answer was to write about sustainability as this is the official goal for reindeer herders as formulated in the Reindeer Herding Act of 2007, but also because it is an objective that has played a prominent role in international environmental and development policy over the last quarter century. The subject is especially interesting since a government declaration in 2013 signalled the government's goal of a new parliamentary report about sustainability in reindeer herding. Existing industry statistics through Ressursregnskap and Totalregnskap, published yearly by Reindriftsforvaltningen³⁸, give a good foundation from which to assess many aspects of sustainability in today's reindeer herding industry.

It is important to point out that sustainability as an overriding political objective for reindeer herding and not just a given. In the last 100 years, Sami reindeer herders have experienced dramatic changes in national Sami and reindeer policy. The expressed goals of the Lapp Codicil (1751) was the 'Lapp nation's conservation'. The system it established involved the recognition of Sami self-determination within national frameworks. During the last half of the 1800s, this completely turned around. The political practice included border closures³⁹, district divisions with shared responsibility and monitoring of land use⁴⁰, domestic reindeer prohibition⁴¹, controlling lappefogder⁴² and a restitution tyranny that in some districts sent most Sami reindeer herders into poverty (Fjellheim 2012). The first Norwegian-Swedish reindeer grazing convention was entered into in 1919 and resulted in comprehensive restrictions on Swedish herders grazing in Norway. For example, they were excluded from the islands in Troms. The political goal for reindeer herding at the time could be characterized as a decommissioning goal and was formulated as such in an adjustment to the Reindeer Herding Act:

Saalenge Flytlappernes Næring nyder Lovgivningens Beskyttelse, har den Følgelig Krav paa at bydes saadanne Vilkaar, at den kan bestaa. Men i og med dens Stilling som en historisk Overlevering, der ikke i ringe Grad virker som en Hemsko paa Udviklingen af bedre og formaalstjeneligere Samfundsinteresser, er Grænserne for dens Krav givne. Og disse Grænser maa etter Forholdets Natur blive vikende (Indredepartementet 1904).

This objective established that reindeer herders were *permitted* to use the land but had to *yield* to other interests, especially agriculture. This was the basis for the first national reindeer herding act which was passed in 1933 and in force until 1978. The preceding law, the Common Lapp Law of 1883 and the first Norwegian-Swedish reindeer grazing convention put aside the Lapp Codicil and created a new 'constitution' for relations between reindeer Samis and government authorities, and consequently also between Reindeer Samis and their neighbours, especially famers. Much of reindeer Samis' later political history is about the struggle to come out of the

³⁸ Since 1980, *Reindriftsadministasjonen*, until last year *Reindriftsforvaltningen*, after the new year *Statens reindriftsforvalning*, since 1.7.2014 *Landbruksdirektoratet*, *Reindriftsavdelingen*.

³⁹ Norway-Russia 1826, Norway-Finland 1852 and Sweden-Finland 1889.

⁴⁰ Felleslappeloven of 1883 which applied to Sweden and Norway, south of Finnmark.

⁴¹ In municipalities in Sør-Norge not included in the then established district divisions.

⁴² Tax collectors from the 1890s south of Finnmark, in Finnmark from 1935.

constricted and repressive institutions which were established at the turn of the last century. This has proven to be very difficult. Both geographical frameworks for reindeer husbandry and basic principles in the legislation are still basically unchanged. It is also apparent that much of the progress made is being threatened with setbacks.

As a reaction to strong pressure from agricultural expansion and government regulations, Sami reindeer herders organized. They had their first national meeting in Trondheim in 1917, but 30 years went by before they established a permanent nationwide organization: the National Federation of Norwegian Reindeer Samis (Norske Reindriftssamers Landsforbund - NRL). The first practical result of the struggle to organize came at the end of the 1960s and involved reindeer husbandry being accepted as an agricultural industry. Parallel to the state establishing a vocational training school, research station and advising services, the Supreme Court concluded in 1968 that reindeer husbandry, because of long-standing traditions, had legal protection against expropriation, in line with real estate. Further dialogue lay the groundwork for NRL and the Ministry of Agriculture signing the General Agreement on Reindeer Herding in 1976. A new reindeer herding law in 1978 strengthened this reform. The most important political objectives in these documents were economic and cultural. The economic goals centred on obtaining the highest possible income and meat production as well as protecting natural resources. The cultural objective focused on preserving reindeer herding as an important factor in Sami culture. This dual reform, with a new law and general agreement, constituted the final break from the decommissioning goals.

Partly in parallel with this, a broader ethno-political movement grew around the National Federation of Norwegian Samis (established in 1968). Around 1980, extensive demonstrations developed and actions against the expansion of the Alta-Kautokeino water system turned from an environmental issue to an indigenous people's issue, not least because of two young Sami hunger strikers in front of the Norwegian Parliament. This lay the groundwork for a new Sami policy which included constitutional amendments (1988), the establishment of the Sami Parliament (1989) and the recognition of Samis as indigenous peoples (1990). Until the passing of the Finnmark law, the process also led to an agreement between the authorities and the Sami Parliament in 2005 – an agreement which, among other things, gave the reindeer herding industry consultation rights regarding political changes and land encroachment. This also had consequences for reindeer herding legislation. The committee responsible for the legislation consisted of a majority of Sami reindeer herders and had a leader who enjoyed broad support among them. The new law, passed in 2007, focused on reindeer herders' particular regulatory needs and the traditional siida institutions, which were overlooked in the Reindeer Herding Act of 1978. These now received a central place in the act, while reindeer grazing districts received responsibility for regulation of reindeer herd size and pasture use. With this, reindeer herding came one step further and succeeded in acquiring an empowering Reindeer Herding Act.

In this chapter, I will first look at the concept of sustainability and analyse how it is defined and understood. I will then present criteria for how these can be evaluated. Further, I will use these criteria and available data to analyse the situation of reindeer herding in Norway. Finally, I will summarize and then evaluate future opportunities and threats.

6.2 Conditions for Sustainability

The concept of sustainability became universally known after the World Commission on Environment and Development used it. The commission was created by the United Nations (UN) to propose development strategies that could contribute to solving world environmental and poverty related issues. It described how environmental, economic and social development were closely tied together. The main message in the report was that the international community should organize and do what is necessary to ensure sustainable development. This means *to ensure that people's needs are covered without weakening the foundation for future generations to cover their needs*.

This notion was met with rapid support in the environmental movement as well as international and national politics. The large international environmental conference, which the UN arranged in Rio de Janeiro, Brazil in 1992, contributed significantly to this. At this conference, with most world leaders in attendance, several important conventions (the Convention on Climate Change, the convention on Biological Diversity and Agenda 21) were passed. In Norway, the idea of sustainability started to be used in relation to reindeer herding policy already with the 1992 parliamentary report *En bærekraftig reindrift* (Sustainable Reindeer Husbandry). The report's starting point was that the objectives for the industry could be expressed by three goals:

- A (1) production goal, expressed as grazing resources will be utilized as much as possible for food production without deteriorating the natural foundation.
- A (2) income goal, expressed as herders will have income and living conditions in line with other occupational groups, and that these incomes will be distributed in a way that ensures economically sustainable household units. This involves an indirect efficiency demand of the reindeer herding industry.
- A (3) cultural goal, expressed as reindeer herding is of crucial significance in the development of Sami culture. This has be interpreted to mean that Sami culture can best be preserved by having the largest possible reindeer herding population, i.e. that as many Samis as possible be permitted to herd reindeer.

These three goals were translated to the concepts of ecological, economic and cultural sustainability. These are also the terms we find in today's Reindeer Herding Act (2007). Section 1 of the act (the objectives) states:

For Sami reindeer pasture areas, the law will lay the groundwork for an ecologically, economically and culturally sustainable reindeer herding industry based on Sami culture, tradition and practice for the benefit of the reindeer herding population and rest of the community. To reach these goals, the law will set the grounds for an appropriate organization and administration of reindeer herding. Reindeer herding shall be preserved as an important foundation of Sami culture and society...

Outside Sami reindeer pasture areas, the law will arrange conditions for an ecologically and economically sustainable use of reindeer grazing resources based on local culture and tradition in the areas with legal authorization for reindeer herding according to §8.

The intentions are clear. Reindeer herding shall be *ecologically, economically and culturally sustainable*. To go from intentions to political practice, one has to answer questions such as:

- Which factors affect sustainability, and how do they work together?
- How can we assess or measure whether, and to what degree, reindeer herding is sustainable, or possibly, in which direction sustainability is developing?

These are questions without an answer key, but I have found two starting points. At a primary level, there are useful approaches available from international common property resources research (Ostrom 1990, Ostrom et al. 1994). At a more concrete level, LMD (2008) has developed their own indicators which give a good starting point to assess ecological sustainability. No specific criteria exist for the other sustainability dimensions, so we are left to make discretionary evaluations.

6.2.1 Sustainability Analysis

Based on approaches used in common resources studies, Riseth and Vatn (2009) have developed a framework for analysing the sustainability of reindeer herding, see figure 1. They used this framework to analyse why reindeer husbandry in West Finnmark and the Trøndelag area, despite a uniform national policy, developed in very different directions (Riseth, 2009). Danielsen and Riseth (2010) have also used the same framework to analyse conditions for reindeer herding in Trollheimen. The framework builds on the following premise: the sustainability of grazing land depends on how well the production and institutional systems work together. The administrative strategies of each reindeer herder or siida (reindeer pastoral district) develops in balance with management needs (created by the production system) and management accountability to the actual⁴³ government systems. Implied is that non-sustainable adaptation will most likely arise when management capacity is too small in relation to needs. The most important elements in the production system are natural resources, reindeer owners and technology, while the main elements in the management authority are internal (Sami) institutions and the greater community's institutions (political, legislative and market). The most important administrative strategies include production methods (technology and herd structure), use of grazing land and grazing density (number of reindeer per unit area). Reindeer owner's choice of administrative strategies lead to grazing adaptations. How sustainable this adaptation is can be evaluated by looking at criteria for different aspects of this adaptation: ecological, economic and cultural.

⁴³ I use the word actual to emphasize the parts of government (regulation system) which are truly in power, that is the rules and regulations usually obeyed, which are important. Rules not in practice have limited significance.



Figure 6.1 Production and Institutional System (from Riseth and Vatn, 2009:91)



Institutional System: Management capacity

A framework is not a detailed model. It will be more correct to say that this is an analysis scheme, which indicates how important factors can work together or influence each other. An example can illustrate how the framework can be used in an analysis.

A technological revolution in reindeer herding started at the end of the 1960s. This developed with the introduction and spread of snowmobiles as well as the increased use of cars, ATVs and, in some cases, helicopter. In the course of a couple of decades, total dependence on human and animal muscle power changed to total dependence on engine power and fossil fuels. At the same time, relations to the surroundings changed and increased options to control the herd with less human resources involved a dramatic increase in costs. How were these costs to be covered? More reindeer? Higher productivity per reindeer? Other income? Different answers lay the foundation for different administration strategies. In the study mentioned, the framework

was used to identify complex explanations involving natural resources and historical factors on the institutional side (Riseth and Vatn, 2009).

6.2.2 Evaluation of Sustainability

Common criteria exist to evaluate ecological sustainability (see textbox 2). To understand the logic of these criteria, it is necessary to know the theoretical background for them.

Figure 6.2 Productivity and Reindeer Numbers (Kosmo and Lenvik 1985:24)



Reindeer Number within the area

The theory is known as the *Røros Model* (Lenvik 1989) and in principle, is about double optimization (see figure 4.2). First, pasture cover is optimized. Then, the herd structure is optimized by a high portion of female reindeer and calf slaughter. This way, productivity can be doubled in relation to an adaptation of high pasture cover and traditional herd structure based on bull reindeer or várit⁴⁴ as slaughter animals.

Corresponding criteria for economic and cultural sustainability do not exist. The Office of the Auditor General (2012) has criticized the Ministry of Agriculture and Food (Landbruks- og matdepartementet – LMD) for not having determined such criteria for the other subsidiary goals, and therefore considers the department as 'lacking important prerequisites to inform about goal attainment and consequently, relevant management information' (Riksrevisjonen 2012:10). Since such criteria do not exist for the other sub goals, I will use a more general approach, that of the framework in figure 1 and the design principles I present in textbox 1.

⁴⁴ One and a half year old bull.

Ecological sustainably is fundamental to nature-based entities. In order to be economically sustainable, reindeer herding must also be ecologically sustainable. Productivity, loss level, costs, distribution and subsidization are the most important factors for economic sustainability. I will touch on these points, but will highlight ecological sustainability and connect the discussion of economic conditions to assessing ecological sustainability.

Cultural sustainability is maybe the dimension most difficult to operationalize, but I argue that this dimension includes at least a connection to local Sami tradition, respect for and valuation of Sami reindeer herders' hereditary knowledge and problem solving strategies as well as the conservation of reindeer herding to the extent that it sets the groudwork for a living, local, Sami community. In this way, the increased autonomy presumed in the Reindeer Herding Act of 2007 will be an integral element of attending to this dimension.

In addition to this, I will explain how the three dimensions of sustainability also depend on a stable and predictable management system, the institutional arrangement, not least in order to take care of the above-mentioned aspects of autonomy. I will therefore present the so-called design principles for robust common resource institutions (see textbox 1) and use them as my starting point.

6.2.2.1 Design Principles

A central finding in common research resource is the identification of design principles for robust, long-lasting common resource institutions. These principles are given in textbox 1. The principles were developed through a large number of empirical studies on management of common resources, conducted over various parts of the world. The studies included grazing systems, irrigation, forestry, local fisheries. etc. Common for these studies was that each of them included a significant number of users and that the systems were self-regulating. Research shows that there is wide range of rules used in proven sustainable systems.

There were no specific rules which could be said to be more successful

Textbox 1.

Design Principles

- Resources must be clearly determined
- Rules of use must match local needs and requirements
- People affected by the rules should normally be able to participate in their adjustments
- The authorities must respect the local community's (resource users') right to develop their own rules
- A self- monitoring system must be established to oversee members' conduct (as resource users)
- A graduated sanctions system must be established (for rule violations)
- Community members must have access to reasonable conflict resolution mechanisms
- For multilevel systems where resource use and supply, monitoring and sanctions, conflict resolution and other management activities are organized on several levels, one must have rules for all levels (Ostrom 1990:90-92, my translation with supplementary comments in parentheses).

than others. However, it was possible to identify general principles underlying the robust institutions.

The eight identified principles (factors) were those found in most of the robust institutions, while missing from non-successful systems. The principles have inspired a large number of further studies and are considered to be especially well suited to studies of smaller homogenous systems. I want to point out that principles (3), (4), (5) and (7) especially contribute to concretizing the *self-governing dimension* in local resource administration, which is also one of the most important elements in the Reindeer Herding Act of 2007.

Next, I will present the established criteria for ecological sustainability.

6.2.2.2 Sustainability Indicators

On the implementation of the new Reindeer Herding Act of June 15, 2007, LMD appointed a working group in January 2008. It was composed of representatives from the reindeer herding industry, research and administration, and developed suggestions for criteria to be used in the process of determining ecologically sustainable reindeer numbers. The working group received the following mandate:

According to the new act, reindeer husbandry is now given the responsibility of setting upper limits on reindeer numbers in connection to the formulation of district rules of use. Rules of use shall ensure an ecologically sustainable utilization of grazing resources. District management shall independently develop herding and grazing assessments which will form the basis of the stipulated reindeer numbers. The district management's decisions will be sent for final validation and approval to *Reindriftsstyret*. The working group is requested to come with suggestions on criteria which will contribute to a good and effective resource administration. The criteria should function as a guiding elements list and a corrective for district leaders and authorities to use to determine reindeer numbers. It must be specified that the criteria shall not be a new method for the government to determine reindeer numbers.

The working group's main conclusion was that *a reindeer's condition was the best indicator of whether reindeer numbers matched the resource base available*. They therefore suggested criteria tied to reindeer condition in order to specify what indicates an ecologically suitable reindeer number for the districts.

Another recommendation was that the industry's more qualitative evaluations of reindeer conditions be used as supplementary indicators.

After a hearing process, an advisory position was developed to be used by the industry and authorities in connection with determining the reindeer numbers for each of the districts. Because of the working group's report, the guide 'Advisory for the determination of ecologically sustainable reindeer numbers' was published in 2008 (LMD, 2008). Factors to consider when determining an ecologically sustainable reindeer herd size are given in textbox 2.

The argumentations for herd size and management's assessment of herd size should further look at weights and production over the last five years, and expected development from the herd size that is being suggested. Once the herd size is determined, developments should be followed up for three years, and yearly variation should be documented in the district's annual report so that administrative bodies can keep up with how the district contributes to maintaining or reaching ecologically sustainable resource administration.

6.3 Current Situation

To understand the reindeer herding industry's adaptation conditions, we need a basic overview of the industry's physical geography. After this introduction, I will present economic data for each region as a starting point for the sustainability analysis.

6.3.1 Physical Geography

Climate and geology create the physical geography that forms the basis for a reindeer's relationship to the landscape and, in turn, determine the migration patterns that reindeer herders must follow, especially those for winter and summer pasture.

Textbox 2

Sustainability Indicators

- Area of the various seasonal grazing grounds.
- An account of the state of grazing land and operational conditions.
- Average slaughter weight for the various age and sex categories. Live weights can be used when necessary.
- Meat yields, kg meat produced per reindeer in the spring herd.
- Stability in supply of calves, portion of calves at the beginning of autumn.
- Previous experience with reindeer numbers which have shown to give good weights, meat yields and supply of calves can be used when necessary.
- Other expert reindeer evaluations of expected conditions and situations in the herd.

The following norms should also be reached in an ecologically sustainable reindeer population:

• Average slaughter weight for calf: 17-19 kg

bull: 25-27 kg

cow: 27-29 kg

- Average meat yield: 8-9 kg per reindeer in the herd
- Annual variation in calf percentage in autumn:

Figure 6.3 Management, Reindeer Numbers and Pasture Cover in Fennoskandia (Pape & Löffler 2012)



To understand the industry's overriding logic, it is necessary to see it in an all-Sami and Fenno-Scandinavian perspective. Historically and ecologically, natural summer grazing land lies on the coast of Troms and Finnmark, also for Swedish and Finnish herders. The original patterns were modified because of border closings and reindeer grazing conventions. For example, areas now used as summer grazing land are previous autumn grazing areas.

The main features of today's management patterns in Fennoscandia are shown in figure three. As shown in the figure, Norway has an industry based on longer seasonal migrations and relatively stationary all-year operations. We can note that all the arrows illustrating the direction of spring migration point to the mountains. Most of these mountains form Skandene (also called Kjølen), the mountain range that became the basis for the border between Norway and Sweden, and is the source of the name Scandinavia. The mountain range goes further out towards the sea in Troms and in Finnmark. Migrations towards the mountain range come from both the east and the west. From Frosen to Troms, we have industries directed to the coast, based on winter grazing land not permanently covered in snow or frozen. We can also note that reindeer herding in Finnmark, as in most of Sweden and Hedmark/Sør-Trøndelag, is completely nomadic with longer migrations and continental⁴⁵ winter grazing lands. Most of all-year reindeer herding in Norway is based on relative nearness to the sea, in areas where alternation between climate zones gives access to alternative winter grazing land, while the southern industry in Hedmark resembles woodland reindeer herding in Sweden and Finland.

⁴⁵ With dry and cold winters.

6.3.2. Economic Overview

This overview is based on the two yearly publications of *Reindriftsforvaltningen* (Reindeer Herding Administration): *Ressursregnskap for reindriftsnæringen* and *Totalregnskap for reindriftsnæringen*. *Ressursregnskap* is a yearly report on the state of resources in the industry and builds on reindeer owners' own registered information. *Totalregnskap* is a yearly report on the economic situation in the industry and is published by the Økonomisk utvalg (economic committee) as the basis for the industry's negotiations. Presentation of the industry's economic situation is based on central data in mostly tabular form. The statistics represented are not complete, partly because data is not registered and partly because existing date is not comparable. I follow the official regional divisions and will start in the south.

Figure 6.3 Reindeer Herding in Sør-Norge and Trøndelag



(Økonomisk utvalg 2013:151).46

⁴⁶ The author thanks *Landbruksdirektoratet*, the Norwegian Agriculture Agency, for permission to use the figures from *Ressusregnskapet* and *Totalregnskapet*.

6.3.2.1 Semi-domesticated Reindeer in Sør-Norge

A semi-domesticated reindeer herding industry operates in south Norwegian mountain villages. It has a long history, documented as far back as the 1780s (Bitustøy 2013). There are now only four districts, with Jotynheimen as the central area, but earlier, the districts the industry was operated over large parts of the central south Norwegian massifs.

«The most important period for semi-domestic reindeer herding was the period after 1880 and in many areas, t.d. Hardangervidda, until the middle of the 1950s, in Setesdal as late as 1979 and Hol I Hallingdal until 1982' (op. cit.:60).

The business is practiced mainly on state land, in some areas also on common and private property. Formally, the business is based on concessions from LMD in accordance with the Reindeer Herding Act.

Table 6.1 Reindeer Numbers, Herd Structure and loss. Semi-domesticated Reindeer. (Reindriftsadministrasjonen 1981–1991, Reindriftsforvaltningen 2001–2014)

	1981	1991	2001	2005	2010	2013
Reindeer numbers	9129	9736	12269	12159	10465	10856
Cows (%)	70	71	72	74	74	77
Calf supply(%) ¹	-	91	86	88	81	90
Percentage loss - adults	-	-	-	2	4	1
Percentage loss - calves ²	-	-	4	-	10	5

¹ calves in autums (after loss), ² of born calves

Table 6.1 shows that semi-domesticated reindeer herding districts have very stable reindeer numbers and a high female reindeer percentage. As long as the females are heavy enough⁴⁷, the herd structure is very productive. Relatively many female reindeer means that many calves are born. Loss of calves is also very low, and that means a very high portion of female reindeer have calves ved foten om høsten.

Table 6.2Slaughter Yield, Productivity and Slaughter Weight. Semi-
domesticated Reindeer.

(Reindriftsadministrasjonen 1981–1991, Reindriftsforvaltningen 2001–2014)

	1981	1991	2001	2005	2010	2013				
Slaughter percentage	50	63	61	62	58	58				
Yield per live reindeer	-	-	17,0	17,1	16,3	18,0				
Production per live reindeer	-	-	-	17,1	15,7	18,6				
Average Slaughter Weight, kg	Average Slaughter Weight, kg									
$-\cos(>2 \text{ years})$	-	-	37,7	37,0	37,0	40,0				
– bull 1–2 yers	-	-	39,5	37,0	37,0	43,4				
- calf	-	20	23,4	24,4	24,4	26,1				

⁴⁷ Given a live weight of over 70 kg (slaughter weight of 35 kg), all female reindeer will normally have calves (Lenvik 1989).

Some semi-domesticated reindeer districts in Norway clearly stand out with the highest productivity. The slaughter percentage is extremely high and slaughter weights are significantly higher than the criteria given in textbox 2. We further see that the losses are very low. Figures 6.5 and 6.6 give an overview of incomes over the last decade.

Figure 6.5 Income from Semi-domesticated Reindeer Herding 2003-2013 (Økonomisk utvalg 2013:135)⁴⁸



Figure 6.5 shows that meat income dominates while government subsidies also constitute a stable and significant portion.

Figure 6.6 Income, Costs and Profits for Semi-domesticated Reindeer Herding 2003–2013 (Økonomisk utvalg 2013:136)



Figure 6.6 shows significant, and slightly increasing, profits throughout the period.

⁴⁸ The box marked 'Brudd inntekter' (breach proceeds) in this figure and a range of others from *Totalregnskapet* is the result of a reference from the \emptyset konomist utvalg (2013:8-9). It explains that because of errors in reporting from slaughterhouses in the 2006-2009 period, meat proceeds for this period was not filled out in a way that was comparable to proceeds from the following years.

6.3.2.2 Sør-Trøndelag/Hedmark Reindeer Herding Area

Sør-Trøndelag/Hedmark reindeer herding area include three reindeer grazing districts within the established reindeer herding area. Two of these have a common winter grazing district, in the region along the border from Femunden to Stjørdalen, and the third, Trollheimen, has a special legal basis, further west.

Table 6.3 People, Reindeer Numbers, Herd Structure and Loss. Sør Trøndeleg/Hedmark, Bisking i Structure and Loss.

Trøndelag/Hedmark. (Reindriftsadministrasjonen 1981–1991, Reindriftsforvaltningen 2001–2014)

	Limit	1981	1991	2001	2005	2010	2013
Siidaandeler	-	28	33	30	30	30	30
People	-	97	125	150	151	154	150
Reindeer Numbers	13600	13345	14616	13015	13429	13805	12977
Females (%)	-	69	74	78			77
Calf supply (%)	-	-	79	80	76	76	75
Percentage loss - adults	-	I	-	5	7	6	5
Percentage loss - calves	-	-	-	14	-	21	20

Table 6.3 shows that the area has stable reindeer numbers, a high portion of female reindeer and a relatively high supply of calves, slightly decreasing over time. This is related to the increasing loss of calves. The level of loss in this area is clearly higher than in semi-domesticated reindeer herding districts.

Table 6.4 Slaughter Yield, Productivity and Slaughter Weights. Sør

Trøndelag/Hedmark. (Reindriftsadministrasjonen 1981–1991, Reindriftsforvaltningen 2001–2014)

	1981	1991	2001	2005	2010	2013
Slaughter percentage	53	63	58	53	45	52
Slaughter yield, kg per live reindeer	-	-	15,0	12,7	11,7	13,5
Production, kg per live reindeer	-	13,6	14,3	12,9	11,9	12,0
Average Slaughter Weight, kg						
– female (> 2 years)	-	-	33,6	31,8	34,8	33,0
– bull 1–2 years	-	-	33,6	32,0	34,2	33,9
- calf	-	20,2	22,1	21,5	22,1	21,2

Sør-Trøndelag/Hedmark has high productivity, but it is lower than in that of semi-domesticated reindeer herding districts. Productivity is decreasing somewhat over time as a consequence of increasing loss of calves. The slaughter percentage is also high. Moreover, slaughter weights are much higher than the criteria summarized in textbox 2. Figures 6.7 and 6.8 give an overview of income over the last ten years.

Figure 6.7 Income in Sør-Trøndelag/Hedmark 2003–2013

(Økonomisk utvalg 2013:132).



Figure 6.8 Income, Costs and Profits in Sør-Trøndelag/Hedmark 2003– 2013 (Økonomisk utvalg 2013:133)



Figures 6.7 and 6.8 show that income in the area is high, but government subsidies and compensation constitute a higher portion of it than in semi-domestic reindeer herding districts. Profits are high and stable.

6.3.2.3 Nord-Trøndelag Reindeer Herding Area

The Nord-Trøndelag reindeer herding area includes six reindeer grazing districts. Four of these lie along the border⁴⁹, between Stjørdalen and Nordlad, and stretch towards Trondheimsfjorden and Namsen. The last two lie on the coast at Fosen and further out in Namdalen.

	Limit	1981	1991	2001	2005	2010	2013
Siidaandeler	-	42	38	38	37	39	39
People	-	131	169	181	174	190	177
Reindeer numbers	15900	10170	12475	13060	11976	13281	14074
Females (%)		62	75	79	77	75	76
Calf supply (%)	-	-	93	61	60	52	46
Percentage loss adults	-	-	-	12	13	10	10
Percentage loss calves ¹	-	-	-	35	-	44	50

Table 6.5	Nord-Trøndelag. People, Reindeer Numbers, Herd Structure and Loss
	(Reindriftsadministrasjonen 1981–1991, Reindriftsforvaltningen 2001–2014)

¹Missing some figures because data is not comparable.

As shown in table 6.5, the area is somewhat larger than Sør-Trøndelag/Hedmark in terms of number of people. The herd structure is extremely productive but, over the last two decades, the area has experienced a dramatic decrease in calf supply because of increased losses. \emptyset konomisk utvalg (2014) states that this area receives compensation for the greater portion of its losses due to predation. In other words, Nord-Trøndelag has the best-documented losses due to predation in the country.

Table 6.6 Slaughter Yield, Productivity and Slaughter Weight. Nord-

Trøndelag (Reindriftsadministrasjonen 1981–1991, Reindriftsforvaltningen 2001–2014).

	1981	1991	2001	2005	2010	2013
Slaughter percentage	45	60	42	40	31	25
Slaughter yield, kg per live reindeer	-	-	10,4	9,5	7,5	7,2
Production, kg per live reindeer	-	15,8	9,6	7,9	7,9	7,7
Average Slaughter Weight, kg						
– females (> 2 years)	-	-	32,5	31,9	33,7	32,1
– bulls 1–2 years	-	-	30,2	30,3	31,2	29,4
- calves	21,4	21,8	20,3	20,0	20,7	19,2

According to table 4.6, Nord-Trøndelag has high to very high slaughter weights, for the most part well over indicator weights in textbox 2. Slaughter yield and production, after being very high earlier on, have come down to an average level. This has a clear connection to the increasing and large losses.

⁴⁹ The low coastal mountains in Nord-Trøndelag have given large parts of the area a relatively sub-oceanic climate, which can mean rain or mild weather in the winter.

Figure 6.9 Income in Nord-Trøndelag 2003–2013

(Økonomisk utvalg 2013:129).



Figure 6.9 shows that compensation comprises an increasing portion of income in Nord-Trøndelag. Meat income has been decreasing to the point where compensation constitutes the largest percentage income over the last five years. To a large degree, the compensation replaces income lost to reduced slaughter.

Figure 6.10 Income, Costs and Profits in Nord-Trøndelag 2003–2013 (Økonomisk utvalg 2013:130)



Figure 6.10 depicts the high incomes and large profits in the area.

6.3.2.4 Nordland Reindeer Herding Area

The Nordland reindeer herding area has 12 reindeer grazing districts which include the whole county, north to Vestfjorden and Ofoten (see figure 6.11).

Figure 6.11 Nordland Reindeer Herding Area. Reindeer Grazing Districts and Convention Areas

(Statens reindriftsforvaltning 2014: attachment not page numbered)



As commented for figure 6.3, reindeer migrate toward the coastal mountain range for summer grazing from both sides of the border (Norway and Sweden). Historically, this trans-border reindeer herding had been extensive. Since the end of the 1800s, Norwegian foreign policy has been to limit Swedish Sami reindeer herding in Norway as much as possible, primarily through the Norwegian-Swedish reindeer grazing land conventions of 1919 and 1972. Figure 6.11 shows the current convention areas for Swedish herders (marked in hatched lines).

Despite limitations throughout the 1900s, this industry is still several times bigger in terms of number of reindeer than the Norwegian Samis' full-year herding industry (see figure 6.12).

Figure 6.12Reindeer Numbers for Nordland and Troms by County.
Swedish reindeer in Nordland indicates reindeer numbers in
Sami villages which have grazing rights on the Norwegian side
of the border (convention areas) (Tømmervik og Riseth 2011:17)



The following presents statistics for Norwegian Sami reindeer herding in the area. The Nordland grazing area has twelve⁵⁰ reindeer grazing districts.

Table 6.7 Nordland. People, Reindeer Numbers, Herd Structure and Loss

(Reindriftsadministrasjonen 1981–1991, Reindriftsforvaltningen 2001–2014)

	Limit	1981	1991	2001	2005	2010	2013
Siidaandeler	-	46	44	43	43	44	39
People	-	133	164	199	215	227	234
Reindeer Numbers	18200	8925	11580	11433	13774	15667	14318
Females (%)	-	53	66	69	63	67	70
Calf supply (%)	-	-	66	49	60	46	40
Percentage loss adults	-	-	-	12	12	13	15
Percentage loss calves ¹	-	-	-	46	-	47	59

⁵⁰ A number of these formally comprise of several districts operated together as a unit.

Table 6.7 shows that the area is at the same level in terms of number of siidaandeler as Nord-Trøndelag, but that the area has a larger number of people. Reindeer numbers are stable. Herd structure is somewhat less productive than in Nord-Trøndelag, but the supply of calves is low and decreasing because losses are high and increasing.

Table 6.8	Slaughter	Yield,	Productivity	and	Slaughter	Weights.	Nordland
-----------	-----------	--------	--------------	-----	-----------	----------	----------

	1981	1991	2001	2005	2010	2013
Slaughter Percentage	14	34	21	19	14	1.

_

_

_

_

10.2

6.3

6.9

36,6

36,3

22,4

8.5

7.2

34,4

32,2

21,1

_

_

_

_

_

13

4.1

3.0

35,1

33,0

21,1

3.6

4.3

35,7

32,9

21,6

(Reindriftsadministrasjonen 1981–1991, Reindriftsforvaltningen 2001–2014)

Table 6.8 shows that percentage slaughter is relatively low and decreasing. Productivity is decreasing and has become very low. This is due to high losses, especially of calves. Animals killed in traffic (especially on Nordlandsbanen) constitute a significant portion of these losses. Slaughter weights, however, are very high, clearly above the norms in textbox 2. This conforms to reindeer in these areas developing a more robust body size and higher tolerance for difficult winters (Tveraa et al. 2007).

Figure 6.13 Income in Nordland 2003–2013

Slaughter yield, kg per live reindeer

Production, kg per live reindeer

Average slaughter weight, kg

- females (> 2 years)

– bulls 1–2 years

- calves

(Økonomisk utvalg 2013:126)



Figure 6.13 shows the same pattern as in Nord-Trøndelag: reduced meat income and increased disbursement of compensation. Over the last few years, compensation has become substantially higher than meat income.

Figure 6.14 Income, Costs and Profits in Nordland 2003–2013

(Økonomisk utvalg 2013:127)



Figure 6.14 shows that the area has increasingly higher costs. \emptyset konomisk utvalg (2014) points out that the costs are significantly higher than meat income. The increased costs result in decreasing profits.

6.3.2.5 Troms Reindeer Herding Area

The area for reindeer herding in Troms includes most of Troms, northward to Lyngen as well as parts of Nordland, north of Vestfjorden and west to Hinnøya (see figure 6.15).

Figure 6.15 Reindeer Herding in Troms. Grazing Districts and Convention

Areas (Statens reindriftsforvaltning 2014: attachment not page numbered)



Swedish Sami reindeer herders' convention areas lie in inner Troms with the central point in Bardu and Målselv. There are many geographical and historical similarities between this area and grazing land in Nordland. As figure 6.12 shows, both areas have a surplus of summer grazing resources and continue to have extensive summer grazing of Swedish Samis' reindeer. Prior to the first Norwegian-Swedish reindeer grazing convention in 1923, Swedish Samis practiced reindeer herding on most of the islands.

Troms reindeer grazing area has 14⁵¹ districts with North Sami reindeer. Three districts are convention areas for Swedish Samis and one district is unused. Three of the districts have winter grazing in Vest-Finnmark and are included in statistics for the area.

	1981	1991	2001	2005	2010	2013
Siidaandeler	66	44	48	50	47	48
People	192	164	183	160	166	170
Reindeer Numbers	15421	11267	7939	11260	12820	12955
Females (%)	-	75	66	63	68	68
Calf supply (%)	-	59	39	53	42	38
Percentage loss – adults	-	-	22	12	13	15
Percentage loss - calves	-	-	51	-	52	56

 Table 6.9
 Troms. People, Reindeer Numbers, Herd Structure and Loss (Reindriftsadministrasjonen 1981–1991, Reindriftsforvaltningen 2001–2014)

Table 6.9 shows that the portion of female reindeer is somewhat lower than in Nordland, while calf supply is low and fluctuating.

Table 6.10 Slaughter Yield, Productivity and Slaughter Weight. Nordland

(Reindriftsadministrasjonen 1981–1991, Reindriftsforvaltningen 2001–2014)

	1981	1991	2001	2005	2010	2013
Slaughter percent	14	19	8	15	14	12
Slaughter yield, kg per live reindeer	-	-	2,4	4,7	3,8	3,1
Production, kg per live reindeer	-	5,4	0,0	6,9	3,9	2,7
Average Slaughter Weight, kg						
– females (> 2 years)	-	-	41,4	35,2	34,6	36,4
– bulls 1–2 years	-	-	35,3	33,3	30,1	35,9
- calves	-	22,1	22,9	22,4	21,7	22,1

The slaughter percentage is extremely low. *Ressursregnskapet* explains it as such: "This is the result of a challenging winter grazing situation and loss to predation" (Statens reindriftsforvaltning 2014:28). Production is low and variable but the average slaughter weight is high.

⁵¹ A portion of these formally comprise of several districts operated together as a unit.

Figure 6.16 Income in Troms 2003–2013

(Økonomisk utvalg 2013:123)



We notice in figure 6.16 that income from compensation is clearly higher than meat income, but rather variable.

Figure 6.17 Income, Costs and Profits in Troms 2003–2013

(Økonomiskutvalg 2013:124)



Figures 6.16 and 6.17 show that, as in Nordland, costs in Troms are significantly higher than meat income.

6.3.2.6 Reindeer Herding in Vest-Finnmark

Because of size and scale, Finnmark was gradually divided into sub regions. Such divisions have however only been used in the last few years so older statistics are less complete.



Figure 6.18 Overview of regions in Finnmark

(Økonomisk utvalg 2013:151)

Figure 6.18 shows that each of the sub regions in Finnmark are significantly larger than the areas further south. The Vest-Finnmark reindeer grazing region has 25 summer grazing districts which are divided into three zones, eastern, central and western, with 7, 12 and 6 districts respectively. Each of the zones has one spring/autumn and winter grazing district. Figure 6.19 shows the development of reindeer numbers for each of the three zones in Vest-Finnmark.

Figure 6.19 Reindeer Numbers. Zones in Vest-Finnmark



Figure 6.19 shows that the development of reindeer numbers is approximately the same for all three zones.

Figure 6.20 shows another division. The ten inner districts⁵² are the summer grazing districts in direct contact with autumn grazing areas. They therefore allow early residence because they are the closest. Reports from the administration also confirm how a number of siidas have taken advantage of this location (Riseth 2000, 2009). The 15 outer districts⁵³ lie on islands or further out on peninsulas and are consequently furthest away.

Figure 6.20 Reindeer Numbers in Inner and Outer Districts in Vest-

Finnmark

(own compilation based on data from Ressursregnskap)



Figure 6.20 shows that the outer districts are losing the internal competition in reindeer herding in Vest-Finnmark. As we see in the figure, the differences between the two groups was probably 5000 reindeer in 1948. Within 65 years, however, reindeer numbers have more than doubled for the outer districts while quadrupling for the inner districts. The 15 outer districts are also the source of the dramatic variation in reindeer numbers in Vest-Finnmark.

How this turns manifests itself on the ground proceeds from figure 6.21.

⁵² Seainnus/ Návggastat, Lákkonjárga, Joahkonjárga, Spalca, Orda, Beaskádas, Ábborašša, Fávrossorda, Cohkolat og Beahcegealli.

⁵³ Sállan, Fála, Gearretnjárga, Fiettar, Oarje-Sievju, Nuorta-Sievju, Stierdna, Cuokcavuotna, Seakkesnjarga ja Silda, Silvvetnjarga, Ráidna, Ittunjarga, Ivgoláhku, Skárfvaggi og Árdni/Gávvir.
Figure 6.21 Gradual Overgrazing of Spring/Autumn and Winter Pasture in Kautokeino and Karasjok

(Riseth og Vatn 2009:99 citing Johansen og Karlsen 2002)



The figure shows that overgrazing started in the northwest, in parts of spring and autumn grazing land and continued inland towards winter grazing land. The pattern was the same in Karasjok, but started later. As illustrated in figure 6.20, reindeer numbers reached a low point in 2001, but have since reached the same level as in 1990, around 2010. In the first part of the 2000s, while reindeer numbers were still low, a remarkably rapid regrowth of lichen took place:

"The investigations in 2005 showed that lichen cover had had a significant and rapid increase (up to 8.6-fold per year). Mean relative growth rate of lichen biomass was 0.083 _ 0.011 per year in open plots, which is considered very rapid recovery compared to previous studies. Lichen recovery was significantly faster on leeward ridges than on exposed ridges, and fencing alone did not have any significant effects on lichen recovery, but in interaction with time, fencing contributed to increasing recovery rates. The lichen heath recovery was reciprocally correlated with reindeer density. In addition, lichen recovery was probably facilitated by recent climate changes, viz. shallower snow depths which made leeward tundra and forest floor vegetation accessible for reindeer, and increased summer precipitation rates which improved growth rates. The results from this study show that in a very short time there was a transition from an overexploited depauperate vegetation and barren ground state to a flourishing lichen-dominated vegetation state, suggesting that the injuries were repairable. The vegetation transitions which have taken place in the study area are considered to be reversible with fewer persistent effects" (Tømmervik mfl. 2012:3).

Regrowth was therefore much more vigorous than expected. Both in public and political debates frequent dramatic statements have appeared about the catastrophic conditions on *Finnmarksvidda* (the Finnmark plain). Experts have also laid the foundation for oversimplified news items:

Sami reindeer herding damages the biological diversity of Finnmarksvidda. The problem is the size of reindeer herds. Winter grazing areas in all of inner Finnmark are nearly ruined. The only option to save Finnmarksvidda is to stop reindeer herding for 50 to 100 years. But that is probably not politically possible.⁵⁴

This was also used in the Odelsting debate of the Reindeer Herding Act on May 31, 2007. A speaker from *Fremskrittspartiet* (the Progress Party) took up the question of whether the state was tough enough to adopt measures to reduce reindeer numbers to those stated above, with reference to this being said by "one of the country's foremost experts"⁵⁵. Further investigation shows something completely different but, as the article's authors also point out, this improvement is not considered permanent. Later studies have also confirmed that as reindeer numbers increase, grazing land will decrease once more (Hans Tømmervik, et al). These studies however are not yet published. I will come back to other aspects of this development pattern later, in the summary for all of Finnmark, but will first present industry statistics.

 Table 6.11
 Vest-Finnmark. People, Reindeer Numbers, Herd Structure

	Limit	1981	1991	2001	2005	2010	2013				
Siidaandeler	-	243	288	236	227	209	209				
People	-	1207	1402	1310	1297	1410	1467				
Reindeer Numbers	78150	71333	91178	57318	90983	97013	105092				
Herd Structure – perce	ntage fema	ales									
Eastern zone	-	-	-	-	-	72	76				
Central zone	-	-	-	-	-	74	74				
Western zone	-	-	-	-	-	75	73				
Vest-Finnmark	-	-	68	72	66	74	74				
Calf Supply (%)											
Eastern zone	-	-	-	-	-	60	36				
Central zone	-	-	-	-	-	48	45				
Western zone	-	-	-	-	-	56	39				
Vest-Finnmark	-	-	75	28	64	54	40				
Percentage Loss - adul	ts										
Eastern zone	-	-	-	-	-	8	10				
Central zone	-	-	-	-	-	8	8				
Western zone	-	-	-	-	-	8	9				
Vest-Finnmark	-	-	-	18	10	8	9				
Percentage Loss - calv	Percentage Loss - calves										
Eastern zone	-	-	-	-	-	33	55				
Central zone	-	-	-	-	-	44	48				
Western zone	-	-	-	-	-	48	54				
Vest-Finnmark	-	19	-	66	-	39	52				

and Loss (Reindriftsadministrasjonen 1981–1991, Reindriftsforvaltningen 2001–2014)

⁵⁴ http://www.apollon.uio.no/artikler/2007/reindrift.html

⁵⁵ As far as I know, the professor in question has not personally worked with reindeer pasture.

Table 6.11 shows that Vest-Finnmark has gradually acquired a high percentage of female reindeer but that the supply of calves, roughly speaking, has fluctuated in relation to fluctuations in reindeer numbers and is now very poor.

Table 6.12	Slaughter	Yield,	Productivity	and	Slaughter	Weights.	Vest-Finnmark
	(Reindriftsad	ministrasj	onen 1981–1991,	Reindr	iftsforvaltning	en 2001–2014))

	1981	1991	2001	2005	2010	2013				
Slaughter percentage										
Eastern zone	-	-	-	-	33	21				
Central zone	-	-	-	-	30	26				
Western zone	-	-	-	-	34	18				
Vest-Finnmark	24	29	15	35	32	22				
Slaughter yield, kg per live reindeer										
Eastern zone	-	-	-	-	7,2	4,4				
Central zone	-	-	-	-	6,6	5,3				
Western zone	-	-	-	-	7,1	3,9				
Vest-Finnmark	-	-	4,2	8,0	6,9	4,6				
Production, kg per live	reindeer									
Eastern zone	-	-	-	-	7,7	3,2				
Central zone	-	-	-	-	6,9	5,1				
Western zone	-	-	-	-	7,4	4,3				
Vest-Finnmark	-	6,7	1,2	8,0	7,3	4,2				
Average slaughter wieg	ght, kg									
female (>2 years)										
Eastern zone	-	-	-	-	28,3	27,4				
Central zone	-	-	-	-	26,2	24,1				
Western zone	-	-	-	-	27,6	26,5				
Vest-Finnmark	-		29,1	25,8	27,0	25,6				
– bull 1–2 years (várit)										
Eastern zone	-	-	-	-	26,0	22,7				
Central zone	-	-	-	-	23,6	23,3				
Western zone	-	-	-	-	25,5	22,7				
Vest-Finnmark	-		24,7	25,0	24,7	22,9				
– calf										
Eastern zone	-	-	-	-	18,1	17,1				
Central zone	-	-	-	-	16,8	15,7				
Western zone	-	-	-	-	16,9	16,5				
Vest-Finnmark	-	17,8	17,7	16,5	17,3	16,3				

Table 6.12 shows that even though slaughter percentage varies (and they are low throughout) and production has decreased over the last few years, it is still lower than production. This is related to increasing pasture cover. This is confirmed by slaughter weights which are also decreasing and (with little exception) are clearly under the preferred numbers and lower than in all the areas south of Finnmark.

Figure 6.22 Income in Vest-Finnmark 2003–2013

(Økonomisk utvalg 2013:120)



Figure 6.22 shows that incomes are relatively unstable and have decreased over time. State subsidies have decreased in the period because of more rigorous requirements to receiving subsidies.

Figure 6.23 Income, Costs and Profits in Vest-Finnmark 2003–2013

(Økonomisk utvalg 2013:121)



Figure 6.23 shows that profits are minimal and decreasing over time. In figures 6.21 and 6.22, we see that costs are higher than meat income.

6.3.2.7 Øst-Finnmark Reindeer Herding Area

In table 6.13, Øst-Finnmark is divided into three areas, with Karasjok divided by the Porsanger fjord into two zones. See also figure 6.18.

Table 6.13 Øst-Finnmark. People, Reindeer Numbers, Herd Structure and

Loss (Reindriftsadministrasjonen 1981–1991, Reindriftsforvaltningen 2001–2014)

	1981	1991	2001	2005	2010	2013			
Siidaandeler	203	213	219	188	179	168			
People	777	739	749	858	955	903			
Reindeer Numbers	56064	68797	46014	77616	87067	74454			
Herd Structure – percentage female									
Polmak/Varanger	-	-	74	76	79	84			
Karasjok – eastern zone	-	-			76	84			
Karasjok – western zone	-	-	71	63	70	72			
Øst-Finnmark	57	72	72	67	75	79			
Calf Supply (%)									
Polmak/Varanger	-	-	52	74	56	75			
Karasjok – eastern zone	-	-			56	30			
Karasjok – western zone	-	-	34	72	49	39			
Øst-Finnmark		78	41	72	54	49			
Percentage Loss - adults									
Polmak/Varanger	-	-	8	7	8	10			
Karasjok – eastern zone	-	-			8	20			
Karasjok – western zone	-	-	14	7	8	9			
Øst-Finnmark			12	7	8	12			
Percentage Loss - calves									
Polmak/Varanger	-	-	38	-	20	17			
Karasjok – eastern zone	-	-		-	30	58			
Karasjok – western zone	-	-	60	-	43	52			
Øst-Finnmark	_		51	-	31	40			

Polmak/Varanger stands out with an extremely productive herd structure, good calf supply and limited losses. Karasjok also has a relatively high percentage of female reindeer but, as in Kautokeino, we see that loss and calf supply vary with reindeer numbers. Numbers for the last few years are very weak.

Table 6.14Slaughter Yield, Productivity and Slaughter Weights. Øst-
Finnmark

	1981	1991	2001	2005	2010	2013			
Slaughter Percentage									
Polmak/Varanger	-	-	34	55	49	65			
Karasjok – eastern zone	-	-			36	27			
Karasjok – western zone	-	-	13	30	24	20			
Øst-Finnmark	22	44	21	39	35	37			
Slaughter Yield, kg per liv	e reindeer								
Polmak/Varanger	-	-	8,4	12,1	10,6	13,1			
Karasjok – eastern zone	-	-			7,5	5,9			
Karasjok – western zone	-	-	3,7	7,6	5,5	4,5			
Øst-Finnmark	-		5,5	9,1	7,7	7,7			
Produksjon, kg per live reindeer									
Polmak/Varanger	-	-	7,2	12,4	9,3	8,8			
Karasjok – eastern zone	-	-			7,2	-0,3			
Karasjok – western zone	-	-	2,8	9,7	5,2	4,5			
Øst-Finnmark	-	9,8	4,5	9,1	7,1	4,4			
Average Slaughter Weight	, kg								
– female (>2 years)									
Polmak/Varanger	-	-	31,2	29,8	30,5	28,3			
Karasjok – eastern zone	-	-			29,0	29,8			
Karasjok – western zone	-	-	30,5	27,2	25,8	26,2			
Øst-Finnmark	-	-	31,2	28,0	28,1	28,1			
– ox 1–2 years (várit)									
Polmak/Varanger	-	-	28,2	32,1	30,9	26,2			
Karasjok – eastern zone	-	-			27,3	26,1			
Karasjok – western zone	-	-	27,7	29,5	25,4	23,5			
Øst-Finnmark	-	-	28,2	30,0	26,9	25,1			
-calf									
Polmak/Varanger	-	-	18,9	19,4	19,6	17,8			
Karasjok – eastern zone	-	-			17,6	16,9			
Karasjok – western zone	-	-	17,8	18,4	16,3	15,7			
Øst-Finnmark	-	18.0	18.9	19.0	18.4	17.4			

(Reindriftsadministrasjonen 1981–1991, Reindriftsforvaltningen 2001–2014)

In table 4.14, Polmak/Varanger stands out with very high and high slaughter yield per living reindeer, and a production and slaughter weight in accordance to the standards. Karasjok has low slaughter percentages and a production which varies with reindeer numbers. We will note that the numbers were usefull in 2005, after many years with more limited reindeer numbers. Slaughter weights are also, for the most part, under the standards.

The next two figures present the economic situation for Karasjok.

Figure 6.25 Income in Karasjok 2003–2013

(Økonomisk utvalg 2013:117)



Meat income in Karasjok has been variable and is also reduced because of lower slaughter weights. This leads to reduced state subsidies.

Figure 6.26 Income, Costs and Profits in Karasjok 2003-2013



(Økonomisk utvalg 2013:118)

The combination of reduced income and gradually increasing costs leads to reduced profits. The following two figures present the economic situation for Varanger/Polmak.

Figure 6.27 Income in Polmak/Varanger 2003–2013

(Økonomisk utvalg 2013:114)



Figure 6.27 shows evenly increasing meat incomes for Polmak/Varanger.

Figure 6.28 Income, Costs and Profits in Polmak/Varanger 2003–2013 (Økonomisk utvalg 2013:115)



A comparison of figures 4.27 and 4.28 shows that Varanger/Polmak has a significantly better financial situation than the other areas in Finnmark.

6.3.2.8 Finnmark Summary

As mentioned, Finnmark clearly has the best natural conditions for reindeer herding in Norway. Poor bedrock with good lichen pasture, and a dry and cold winter climate with little snow, provide stable and secure winter grazing inland. Nutritious bedrock in the mountain areas on islands and peninsulas provide lush summer grazing land.

Paradoxically, over the last forty years, this has spawned a considerable problem. In the 1960s, there was a clear surplus of winter pasture on the Finnmark plain. Large areas along the Finnish border were unused, and there was good space between the winter siidas (see also figure 6.21 and further developments until the turn of the millennia).

Figure 6.29 shows regional reindeer numbers for Finnmark for the post war period. We see that even though reindeer numbers in Polmak/Varanger have varied significantly, the fluctuations are much more dramatic in Karasjok and Kautokeino. In both, reindeer numbers have doubled in the course of a 25-year period and reached historic peak levels around 1990. Then, the numbers quickly decreased and halve in the course of a 10 to 12-year period. Reindeer herds have since grown quickly and approached the same peak levels.

Figure 6.29 Spring Herd Reindeer Numbers 1946–2012. Varanger/Polmak,



Karasjok og Kautokeino (Own compilation based on data from ressursregnskap.)

The noteworthy thing about the development patterns in Karasjok and Kautokeino, and therefore on the Finnmark plain, is not that reindeer numbers are going up and down in long cycles, but (1) the unusally large variation, and (2) the low point in 2001⁵⁶ which is actually higher than earlier peak values.⁵⁷ *This indicates that reindeer stability on the Finnmark plain now varies around double the levels of before.* To compare, the highest reindeer numbers in Polmak/Varanger⁵⁸ are not much higher than the highest numbers in the 1950s⁵⁹ (Tømmervik et al. 2009). *A historical change has therefore taken place, involving more intensive use of*

⁵⁶ Karasjok 28600, Kautokeino 62061

⁵⁷ Karasjok 27596 in 1972, Kautokeino 55455 in 1965

⁵⁸ 28078 in 2011, 27608 in 1989

⁵⁹ 24000 in 1956

pasture land. The obvious explanation for this is the technological revolution that began in the 1960s, with muscle power – from reindeer and people – replaced by engine power from snowmobiles and helicopters. Simultaneously as motor vehicles allowed for both increased mobility and increased control of reindeer herds, they led to a cost explosion (Tømmervik et al. 2009, Riseth 2000, 2009).

The same revolution permeated all of reindeer herding in the course of a couple of decades, but remarkably enough it has not acquired corresponding consequences for grazing adaptations in other parts of Norway. Polmak/Varanger and South Sami areas represent the clearest contrasts to Karasjok and Kautokeino. There, limitations on reindeer numbers and modified herd structures formed the basis for stable finances, despite losses due to predation dating from the 1990s. It is clear that reindeer owners in these areas have chosen other strategies to meet the new cost pressures. The contrasts appear as we have seen earlier, in the condition of grazing land, slaughter weights, production, losses and finances. As reindeer numbers have increased, slaughter weights have decreased in both Kautokieno and Karasjok, and in the last few years are under the prescribed levels for sustainability. The losses, especially of calves, have also been high for the last few years. Reindeer density in various part of Finnmark are presented in figure 6.30.

Figure 6.30 Reindeer Density in Finnmark

(Statens reindriftsforvaltning 2014:18)



Figure 6.30 confirms that the reindeer density in Polmak/Varanger is more stable than in the other subregions.

The pressure on reindeer pasture in Finnmark is big, especially in areas used by several reindeer grazing districts while migrating between winter and summer grazing lands. In figure 6.20, I have shown that in Vest-Finnmark, the inland districts, which are the closest to winter grazing areas, have the highest reindeer density and the lowest slaughter weights. Coastal districts have lower reindeer density and higher slaughter weights. I have not been able to uncover a similar pattern for Karasjok.

As previously shown, however, slaughter weights in Varanger/Polmak have held within the standards and production has been at a reasonably high level.

6.3.2.9 Overall Summary

This section summarizes the most important points in the regional reviews above.

Figure 6.31 Development of Reindeer Numbers – Areas South of Finnmark (Statens reindriftsforvaltning 2014:20)



Figure 6.31 shows that the reindeer numbers in Sør-Trøndelag/Hedmark are fairly stable while somewhat fluctuating in Nord-Trøndelag. They fluctuate quite a bit in Troms and Nordland.

Figure 6.32 Average Meat Income per Reindeer. Production per Reindeer

(Økonomisk utvalg 2013:22)



Figure 6.32 shows that there are major differences in productivity and meat income per reindeer in Norway. Semi-domesticated reindeer herds are in an exceptional position. Polmak/Varanger

and Sør-Trøndelag/Hedmark are also at a high level. Further, Nord-Trøndelag numbers lie below standard. Troms, Nordland and Karasjok are even lower, while the rest of the zones in Finnmark are very much lower.



Figure 6.33 Average Meat Income per Siidaandel. Average Number of Reindeer per Siidaandel (Økonomisk utvalg 2013:21)

Figure 6.33 shows that meat income per siidaandel is high only in Polmak/Varanger and Sør-Trøndelag/Hedmark. We see that some of the Finnmark zones are close to the national average because of a relatively high number of reindeer in sidaandelen.

Figure 6.34 Income and Costs per Reindeer (Økonomisk utvalg 2013:54)



Figure 6.34 shows that only semi-domesticated reindeer herds, in Polmak/Varanger and Sør-Trøndelag/Hedmark, cover, or are close to covering, their costs with meat income, and that compensation plays a very important role in Nord-Tøndelag, Nordland and Troms.



Figure 6.35 Total Income and Costs per Siidaandel (Økonomisk utvalg 2013:56)

Figure 6.35 shows that most Finnmark zones have a small profit or a negative result per siidaandel, while Polmak/Varanger and areas south of Finnmark have a medium or large profit.

After this discussion, I will attempt to compare the results with theoretical approaches and incorporate ecological and historical factors to explain the findings.

6.4 Analysis and Evaluation

As figure 1 illustrates, sustainability in reindeer husbandry is dependent on both critical individual factors and the balance between the production and institutional systems. On the side of the production system, natural resources, primarily grazing capacity, are central. On the institutional side, one is dependent on both internal and external institutions and the balance between them.

6.4.1 Areas South of Finnmark

Semi-domesticated reindeer herding districts in Sør-Trøndelag have a relatively secure winter grazing situation, while Nord-Trøndelag is more influenced by the coastal climate. As the data shows, reindeer herding in the southernmost areas are, at the outset, well suited to the production with both optimized reindeer numbers and herd structure, cf. Figure 6.2. Semi-domesticated reindeer herding districts represent lengthy traditions in mountain villages in southern Norway. Many of the groups have had Sami herders as master teachers and acquired important inspiration from Sami culture (Bitustøyl 2013). Section 8 of the Reindeer Herding

Act allows for semi-domesticated reindeer districts as long as they do not conflict with wild reindeer areas. Semi-domesticated reindeer groups achieve high productivity and experience low losses.

Reindeer herding in Trollheimen is at peak levels within Sami reindeer herding. It is very productive with high slaughter weights. Within Sami reindeer herding areas, Sør-Trøndelag/Hedmark, along with Riast/Hylling, were the driving forces behind the productivity revolution in the industry around 1980 (Riseth 2000, 2009). This area, as we see in the discussion, still has good results but now has reduced productivity compared to earlier periods because of increased loss due to predation.

South Sami reindeer herding, south of Stjørdalen has had an especially difficult history. The political setbacks at the end of the 1800s had severe consequences here. For parts of this region, this was because use of land was not as continuous as in many other areas. However, the most important reason was that farming communities were expanding up towards the mountain, and that the 1800s was an especially nationalistic era where farmer conditions has big political support.

Samis in Trollhemen were especially hard hit when Trollheimen did not become a reindeergrazing district according to the *felleslappeloven* and subsequently hit by a ban on semidomesticated reindeer around the turn of the last century. Trollheim Samis therefore had the longest period and highest level of uncertainty. In the 1970s, owners interested in wild reindeer sued the local industry regarding grazing land. The Supreme Court pronounced judgement in 1981 and said that reindeer owners in Trollheimen did not have the individual right to practice reindeer herding on foreign soil. In 1984, the government announced a separate law (the Trollheimen Law) which was passed by parliament. The Ministry of Agriculture then started to grant licenses for reindeer herding. Even though this solved the problem of legitimacy, based on expert assessment, the formal framework for this reindeer herding industry is still too narrow and not secure enough. Reindeer herding in Trollheimen is well run and should have the opportunity to expand to include a higher number of reindeer than determined by the collective agreement of the last 30 years (Danielsen and Riseth 2010).

Felleslappeloven and investigation from the so called "Fjeldfinnkommisjoner" (Berg 1990), supported by "scientific" theories which made Samis into late immigrants in these areas (Jünge 2005), made it very difficult for reindeer herders within reindeer grazing districts to defend their interests against farmers who were expanding and constructing homesteads on reindeer herding's most intensively used summer areas (melketrøer). This led to the industry's decline around the last century (Fjellheim 2012). Reorganization and reorientation of reindeer herding in the Røros area, after the war until the 1980s, led to large production-related and economic progress from around the 1980s. South Samis were also leading the Norske Reindriftsamers Landsforbund (NRL – the National Federation of Norwegian Reindeer Samis) in this decisive époque, setting the foundations for the new reindeer herding policies with both the General Agreement on Reindeer Husbandry (1976) and the new Reindeer Herding Act (1978). This meant that they acquired a reindeer herding policy which fit their operational plans (Riseth 2000, 2009).

Especially throughout the 1990s, we see that even though reindeer herding policies, as sector policies, were successful in South Sami areas, the protection of reindeer herding areas were still too weak. In the Røros region, landowners started a succession of lawsuits in the 1980s and 1990s. The reindeer industry lost many of these with the Supreme Court deciding against it

citing arguments that undermined the industry's legal status within reindeer grazing districts. One change in the Reindeer Herding Act in 1996 strengthened the industry's position somewhat, but more important was a plenary judgement in the Supreme Court (Selbudommen). It established that the industry's rights should be evaluated based on its own conditions. The pressure from the recreational community is significant and is increasing with time, especially in areas close to cities (Lie et al. 2006).

Until the beginning of the 1990s, the Nord-Trøndelag reindeer grazing area also had very favourable productivity numbers. Because of increasing numbers of predatory animals, the districts are now experiencing high to quite high losses. This means that production has decreased from very high to middling range.

Norway's implementation of the Bern Convention on the protection of wild animals and plants happened also without the industry's influence. Increasing numbers of predators has brought about significant loss to predation. This has affected Nord-Trøndelag the most and led to a marked decrease in productivity over the last two decades. Predatory animal statistics are not so simple to compile and documentation requirements are also difficult to fulfil, but the industry's expert assessments indicate that reindeer herding may be in danger of collapsing in some districts because too many production animals are being lost (Danell 2010).

Nordland and Troms constitute the central area in the region with an unfavourable winter climate (Tveraa et al. 2007). Slaughter weight data in the industry overview confirms the summary of Tveraa et al. that reindeer in these areas develop more robust body size and higher tolerance of difficult winters. The discussion also shows that both areas have reduced calf growth and productivity as a consequence of increased predation.

Both areas also have a surplus of bare or snow free areas (Reinbeitekommisjon 1967, Reinbeitekommisjon 2001). The industry overview shows that at least one district in not being used for herding. The current situation for cross border herding between Norway and Sweden has been unclear for many years. The Norwegian-Swedish reindeer grazing convention of 1972 expired in 2002 and was routinely extended by five years pending negotiations. In 2001, an expert committee presented their recommendations for a new convention that laid the groundwork for ecologically, economically and culturally sustainable cross-border reindeer herding. The commission's starting point was that in the case of intersecting interests across borders, Sami reindeer herders themselves should enter into local agreements, while the states should contribute with legislation that makes this possible (Pavall 2007). After this, two rounds of hearings and negotiations between the states have been carried out; the last concluded in 2009. The convention recommendations has been very difficult.

Pending a new convention, Norway adopted a new law in 2005 which entailed the unilateral extension of the 1972 convention, while Sweden has maintained that without a convention, the *Lappekodisillen* applies. Absence of a valid convention has therefore acquired different consequences for Norwegian and Swedish reindeer herders. Swedish reindeer herders deny the legitimacy of the 2005 Norwegian law and have taken up residence in Troms, contrary to this law. Norwegian authorities have carried out forced expulsions, even from areas not used by Norwegian reindeer herders (Lenvikhalvøya). It could seem that Swedish authorities support "their" Samis by citing legitimacy of the Lappekodisillen, but Sweden's main negotiator from 2003 to 2005, Lars Norberg, has revealed a less flattering picture. In the convention negotiations in 2004, Swedish reindeer herders were asked for their opinion for he firs time. The question

was whether they would accept further extensions of the 1972 convention. The answer was a unanimous no.

After Sweden said no to an extension, Norberg presented a strategy so that Sweden could demand that Swedish reindeer herders got back the areas they lost in 1972. A short time after this, the experienced diplomat was released from his duties (Norberg 2007). In September 2012, the Sami Parliaments in Norway and Sweden, along with *Svenska Samernas Ridsforbund* and *Norske Reindriftssamers Landsforbund*, received the task of developing a new Norwegian-Swedish reindeer grazing convention which would accommodate all partners' rights and interests. A transnational Sami working group, led by the Sami Parliament of Norway, presented the proposal new version in March, 2014⁶⁰. It is now up to the two states to make sure that 42 reindeer grazing districts and Sami communities finally get proper cross border access.

6.4.2 Finnmark

As of 2013, Finnmark comprises as much as 73% of all semi-domesticated reindeer herds owned by Norwegian citizens and has received the most public attention, including government attention.

As also shown in the last section, the state's policies regarding regulation of reindeer numbers in Karasjok and Kautokeino have failed completely. The reasons for this are complex. A basic problem is that there was no overall analysis of the special adaptations this type of reindeer herding required when the reforms from the end of the 1970s were put into effect. In practice, measures were taken which were essentially developed in dialogue with the South Sami reindeer industry, which happens on a much smaller scale and has another political history (Riseth 2000, 2009). The situation in Varanger/Polmak resembles the South Sami situation both in terms of fewer reindeer owners and in terms of the earlier development strategies focusing on calf slaughter and economic profits.

An institutional analysis emphasizes that the changes from the 1960s and 70s, both the technological revolution and the greater integration into wider society, created management needs that the industry's own institutions were not strong enough to look after. Summer pasture limitations, and an open landscape with few natural borders and a large number of reindeer households and siidas, also made these areas extra vulnerable to expansion (Riseth & Vatn 2009).

When it comes to Karasjok and Kautokeino, the grant schemes stimulated an investment in increased reindeer numbers (Riseth 2000, 2009, Hausner et al. 2012). Local and industry administrators, both made up of majority reindeer owners, set such high limits on reindeer numbers that the Reindeer Herding Act did not at all contribute to restricting the size of herds on the Finnmark plain in the 1980s. This is also part of the reason many large reindeer owners and siidas do not want restrictions (Karlstad 1998). The eventual halving of reindeer numbers in the 1990s was mainly the result of some very difficult winters.

The parliamentary report *En bærekraftig reindrift* (St. meld 28, 1991-1992) evaluated reindeer herding policies and set the stage for increased autonomy in the industry. At the end of the

⁶⁰ <u>http://www.regjeringen.no/nb/dep/lmd/aktuelt/nyheter/2014/mars-14/Norsk-svensk-reinbeitekonvensjon.html?id=753732</u>

1990s, NRL demanded that a new reindeer herding law be drawn up in keeping with the industry's own needs. The authorities complied with this demand. The committee investigating the new law consisted of a majority of Sami reindeer herders and had a leader who was widely supported by them. The investigation (NOU 2001:35) gave siidas, overlooked by the Reindeer Herding Act of 1978, a central place. As a starting point, the reindeer grazing districts got responsibility to regulate reindeer numbers by making *rules of use*. This agrees with modern common resources research, which (cf. textbox 1) advises the highest possible level of autonomy and limited government intervention. Further, there was comprehensive contact and dialogue between the department, the Sami Parliament and NRL in the period between fact-finding and the bill's passage in 2007. There seems to have been a reasonable amount of general agreement that the new reindeer herding act was serviceable (Gundersen & Riseth, 2013).

The new growth in reindeer numbers, however, added fuel to old frustrations for central authorities, especially the expert committee in the national parliament. Reindeer numbers in Finnmark have been pointed to in repeated parliamentary debates ever since the 1980s. Two cabinet ministers, Sponheim (in 2005) and Brekk (in 2011), went to the media with talk of compulsory measures to reduce reindeer numbers. In all likelihood, they needed to protect themselves against criticism from parliament. Nevertheless, the Office of the Auditor General drew up a report which led to central authorities changing their political line from dialogue to confrontation. The Office of the Auditor General has released two reports on sustainable reindeer herding in Finnmark. The first (from 2003) is about the management of the new reindeer herding act, while the second (Riksrevisjonen 2012) came after the new law was put into effect, after a rapid increase in reindeer numbers throughout the 2000s and insufficient follow-up of new decisions on maximum reindeer numbers. Following the parliament's handling of the report in January, 2013, the department gained the responsibility of requiring Reindriftsstyret to impose proportional reductions of reindeer numbers on a series of districts and siidas which had not aleady developed statutory reduction plans. This has been faithfully followed up by the department and Statens reindriftsforvaltning.

I will use the last report of the Office of the Auditor General as a starting point here. The main findings in this report are as follows:

- 1) The goal of ecologically sustainable reindeer herding is still not realised. Large parts of *Finnmarksvidda* are overgrazed because of too many reindeer.
- 2) There are still some significant weaknesses in the Ministry of Agriculture and Food's management of the goal of sustainable reindeer herding, even though administration has improved. The sub goal of ecological sustainability is operationalised, while the sub goals of economic and cultural sustainability are not sufficiently operationalised.
- 3) Weaknesses have been uncovered in the use of the Reindeer Herding Act and Reindeer Herding Agreement to ensure sustainable reindeer herding.

(Riksrevisjonen 2012:9)

In its remarks, the audit first goes over the scale of overgrazing. Later, it points out that the average slaughter weighs and meat yields are not within the limits of ecological sustainability, and points out that reindeer numbers must be reduced by 20%. The audit considers the parliament's goals as not being realized and points out that the economic situation for reindeer owners in Finnmark has worsened. Further, the audit says that it is not "possible to evaluate

whether reindeer herding is economically and culturally sustainable because the goals are not sufficiently operationalized".

In its comments about the weaknesses in management, the audit point to missing explanations on how international obligations shall be taken care of, and how consultation agreements can be better used. It also states that it is unfortunate that the department has not made sure to realize *Reindriftssytrets* decision on maximum reindeer numbers.

Regardig the Reindriftsavtalen, the audit point to insufficient information on grant schemes' effects on reaching goals of sustainable reindeer herding. The Office of the Auditor General thinks that the process to pass rules of use, which should clarify use of grazing land and determine upper limit on reindeer numbers, has taken too long, and also stresses the importance of specifying rules of use for maximum number of reindeer in winter grazing districts. In addition, it points out that the department must take clearer responsibility for developing and implementing reduction plans.

The auditor general's recommendations were also in line with the comments, and, as mentioned, the ministry and parliament have followed up the case according to the auditor general's report.

My comments to the auditor general's assessment and the government's follow-up are manysided. There is no doubt that the auditor general's description of the grazing situation and industry economics are correct. It is of course also very unfortunate that the authorities have not been able to follow up their own decisions and that decisions about upper limits on reindeer numbers in the most vulnerable areas, winter grazing lands, have not been decided. My agreement, however, stops here.

I claim that (1) the assessments and recommendations of the Office of the Auditor General are *inconsistent*, and that (2) both the audit's recommendations and the central authorities' followup are conspicuously permeated by an *instrumental thinking*. I will comment on this in detail.

First, the Office of the Auditor General is inconsistent when (a) criticizing the authorities for not having operationalized sub goals on economic and cultural sustainability, and therefore lacking the necessary control information, and then (b) recommending more effective administration and putting more power in accomplishing these decision. How is this to be understood? As long as the goal of ecological sustainability is superior to the goals of economic and cultural sustainability, why is it so important to have control information with relation to these criteria?

Secondly, it is conspicuous that the Office of the Auditor General sets up, and the ministry and parliament adopts without further ado, a change to a one-sided top down administration system:

"According to the Reindeer Herding Act, reindeer grazing districts, through rules of use, shall clarify use of grazing land and specify the upper limits of reindeer numbers. Rules of use are a prerequisite to reaching the goal of an ecologically sustainable reindeer herding industry. Despite the urgency in passing rules of use regarding maximum reindeer numbers to achieve an ecologically sustainable level, the process has taken four and a half years. The Office of the Auditor General deems this too long" (Riksrevisjonen 2012:9).

The authorities are then impatient because the processes between the industry and authorities are moving too slowly. This is not new. This was also a common theme in parliamentary debates on the reindeer herding act, and a repetition of earlier parliamentary debates all the way back to the 1980s (Gundersen and Riseth 2013). It may seem that the reason one is deciding now, is that one has bigger confidence in the authority of the new law than in the law of 1978.

Seen in a wider perspective, it is common for central authorities to be characterized as ruling from above. The conspicuous aspect here is that the central authorities have suddenly become impatient. Since the 1980s, these same authorities have failed to adopt resolutions and administer from above. In 2007, having passed a new reindeer herding act which, through districts and siidas, gives increased authority to the reindeer herding industry itself, the same authorities are impatient to let the new institutions become operational before intervening and overriding the whole process. One can rhetorically ask: what are four and a half years compared to over 30 years without positive results?

Even if there is a unanimous parliament behind this, I am worried about how the government's new attempt at control affects a possible solution. In the worst case, it can contribute to ruining and delaying it. Proportional reduction (with, if necessary, compulsory implementation) will clearly strike youth (with few reindeer) and others who have adapted by reducing, mostly, while the larger owners will once again emerge relatively unscathed. In other words, there is indication that the measures will have little legitimacy within the industry and that they would actually intensify internal conflicts rather than solve them. The most important is maybe that *an immediate reduction in reindeer numbers will be of little help as long as stable solutions, which hinder reindeer numbers from growing again, are not established. At a minimum, this will require internal agreement between the parties involved.*

Moreover, there is every reason to expect that with the great pressure on grazing land that there is now, nature itself, sooner or later, will make arrange a reduction, as happened in the 1990s. Due to both animal protection and economic considerations, affected reindeer owners should take responsibility for slaughtering before this happens.

We can nonetheless note that so far, reindeer owners in Kautokeino and Karasjok, or not enough of them, have not yet managed, or wished to, cooperate so that they maintain the industry's sustainability. Even though the high number of reindeer is a significant problem, I will point out that the authorities are ignoring one of the most important lessons from common resources research: *Successful resource administration is dependent on resource users themselves, in this case Sami reindeer herders, being responsible for solving their own problems. As mentioned, this was also the main intension of the new law.*

Research on common resources (see textbox 1) concludes that institutional systems where users have control over rules and conflict solving mechanisms should be established. These systems are the ones that become robust and can function for many generations. (Ostrom 1990). It is clear that there is a significant imbalance in the interaction between the production system and the institutional system in Kautokeino and Karasjok (see figure 1). There is a need to strengthen the capacity for institutional change. The Reindeer Herding Act of 2007 is fundamental to this.

6.5 Summary and Conclusion

In the introduction, I pointed out that sustainability is a very relevant theme for both international environmental policy and reindeer herding policy for over 20 years. I also emphasized that, seen in a historical light, sustainability as a goal in reindeer herding policy is not a given.

The Reindeer Herding Act of 2007 sets the ground for an ecologically, economically and culturally sustainable reindeer herding industry. I have pointed out that in order to assess whether these intensions are actually realized, one must be able to say which factors affect sustainability and how they work together. We must also be able to assess or measure how good sustainability is, or how it is developing.

At a primary level, I have used my own framework based on approaches from common resources research. This considers the interaction between the production and institutional systems to be crucial for sustainability. I have further drawn in the so-called design principles for robust common resources institutions and said that they should be able to give directives on how socio-ecological systems based on common resources can be administered in a sustainable manner.

6.5.1 Sustainability in Several Dimension

The Reindeer Herding Act of 2007 does not elaborate on what the various concepts of sustainability mean and the relationships between them. As mentioned above, ecological sustainability is fundamental for a natural resource based industry. Ecological sustainability therefore, centres around taking the best possible care of the natural foundation. Economics is often defined as stewardship of scarce resources. Cultural sustainability, in the Reindeer Herding Act as well as in §110a of the Constitution of Norway, refers to international law and to Norway's obligation to Samis as indigenous peoples.

For the time being, ecological sustainability has been put into operation only through the LMD establishment of indicators of ecologically sustainable reindeer numbers (2008). These criteria do not include the industry's contribution to biological diversity or how external threats to the industry, such as loss of grazing land, affect sustainability. Protection of resources, in a broader sense than protection of pastureland, is not included in the criteria.

Reindeer herding production theory (Lenvik 1989, Kosmo and Lenvik 1985) establishes a connection between ecology and economy. They established criteria for sustainability that as a first step optimize pasture cover. The second step, optimization of herd structure, is an element of economic sustainability, in the form of productivity. Other important elements in economic sustainability are levels of loss and cost, but one must also consider other economic factors.

Cultural sustainability is about the reindeer herding industry's value above the production of reindeer products for its own consumption and goods which can be traded for profit. As mentioned, it must include a connection to Sami and local mountain village traditions, respect for and valuation of Sami reindeer herders' inherited knowledge and problem solving strategies,

as well as maintenance of the reindeer herding industry to the extent that it gives grounds for an active local Sami community.

For the present, no political discussions have addressed what kind of balance there should be between these dimensions. Reindeer herding can, for example, be ecologically sustainable and have a few elements that are economically sustainable, while cultural sustainability can be weak because little consideration is given to inherited traditions, or the reindeer herding community is too small or attachment to Sami society too weak.

6.5.2 Evaluation

Seen in a larger context, reindeer herding's natural foundation is threatened by encroachment which represents the fragmentation and disruption of both grazing land and areas of operations. Because of politics regarding the north and authorities' support of the mining industry, there is reason to expect increasing pressure on land used by the reindeer herding industry in the future. This affects all reindeer herding in Norway. I therefore consider it worrisome that the authorities have discontinued area controls. The industry now lacks a regional political sector organ. Connection to both the county authority and the Sami Parliament is consequently obviously weakened (Riseth 2014).

Ongoing climate changes cause many challenges for the reindeer herding industry (Riseth et al 2009), not least of which is the expansion of forest areas in, for example, *Finnmarksvidda*, contributing to significant reduction of winter grazing capacity (Karlsen et al 2012). In bare ground (snow free) areas, reindeer herding will be an important contributor to curbing incrustation by maintaining sufficient pressure on grazing land. Herder et al (2004) showed that a reindeer density higher than 3-4 reindeer/km² holds back willow thicket in northern Finland. This study was carried out in areas with poor vegetation. On richer bedrock, significantly higher reindeer numbers were possible (Olofsson & Oksanen 2005, Riseth & Oksanen 2007, Tømmervik et al 2010) before biological diversity was reduced. At the same time, reindeer grazing is important for the survival of many vulnerable mountain plants (Olofsson & Oksanen 2005).

Considering the primary threats that I have outlined above, reindeer herding's overgrazing of lichen in Karasjok and Kautokeino is a limited problem. There is also reason to remember the unexpected positive results of the monitoring program for these lichen pastures: *Regrowth was much faster than earlier studies indicated* (Tømmervik et al 2012). Nonetheless, there is reason to emphasize that *large portions of reindeer herding in Karasjok and Kautokeino are neither ecologically nor economically sustainable*. The greatly reduced lichen pastures also lead (as in Finland) to additional feedings, sometimes using silos, which has received media attention as an incipient environmental problem. In addition, it is a big extra cost, and it brings reindeer herding out of the advantageous adaptation of only being dependent on natural pastures.

I have also presented a worry that the authorities' eagerness to manage can cause a derailment from the necessary processes of determining and reducing reindeer numbers. The spotlight should instead be directed to finding trustworthy methods of reduction where all involved can be positively affected. Moreover, one should further study winter grazing areas.

Nordland and Troms have three big problems. The first is difficult winters. One thing that can be done here is to get increased access to secure winter grazing in Sweden through the Norwegian-Swedish reindeer grazing convention. The second problem is too little utilization

of summer grazing resources. This can also be solved through increasing Swedish reindeer herders' use of summer areas, also through the Norwegian-Swedish reindeer grazing convention. It is therefore very important that the authorities follow up the work of the Sami working group, led by the Sami Parliament in Norway, and ratify the convention that the Sami partners agreed on.

The third problem is the increase in the number of predators. This problem is even greater in Nord-Trøndelag than in Nordland and Troms, and is also a clear problem in Sør-Trøndelag/Hedmark. It is necessary to significantly reduce the number of predatory animals in order to regain sustainability possible in these areas.

Reindeer herding in Trollheimen needs a more liberal framework (Danielsen and Riseth 2010). Data has not brought forth any sustainability problems in the semi-domesticated reindeer herding industry.

6.5.3 Conclusion and Recommendations

I consider the reindeer herding industry's sustainability problems to be due mostly to external conditions such as increased pressure on herding areas and a predatory animal policy that does not consider nature based industries. Large parts of the industry in Kautokeino and Karasjok are in ecological and economic imbalance, but adjustment of reindeer numbers cannot happen in an adequate and effective way without the authorities respecting Sami reindeer herders' culture and self-determination as per Norway's international commitments. Closing down regional administrations happened despite obvious protest from both NRL and the Sami Parliament.

To strengthen sustainability in reindeer herding, I recommend the following:

- Authorities must use the upcoming parliamentary report on sustainability in reindeer herding to develop a policy for strengthening the protection of the industry's range of operations. Authorities must also emphasize reindeer herding's contribution to sustaining an open landscape and biodiversity.
- 2) The consultation agreement that was established in 2005 must be used more actively to develop a binding dialogue between Sami reindeer herders, NRL and the Sami Parliament. This will be more in accordance with the government's international obligations.
- 3) The authorities must give reindeer herding in Finnmark and industry organs peace to determine rules of use and subsequent reduction of reindeer numbers. Dialogue promotes mutual trust and it develops good attitudes.
- 4) The new reindeer grazing convention with Sweden, proposed by the Sami working group led by the Sami Parliament in Norway, must be ratified and implemented as soon as possible.
- 5) The authorities must develop a predatory animal policy which takes clearer consideration of the reindeer herding industry and other pastureland users.

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7 Sami Language in Primary and Secondary Education

Torkel Rasmussen, Associate Professor, Sami University College, Kautokeino

Summary

Since the 2005/06 school year, fewer and fewer students are taking Sami as a Second Language at the primary and lower secondary level. The article shows that the decrease appears to have stopped and that the number of students has stabilised, albeit at a lower level than before. The decline in student numbers for South Sami as a second language, however, is still worrisome. There is also a decline in the number of students learning Sami as a first language. Special attention is focused on the differences between the number of students who learn Sami as a mother tongue and the number of students who have Sami as the language of instruction. More and more students at the primary and lower secondary level are choosing to take Sami as a first language without having any other subject taught in Sami.

The availability of instructional material to teach subjects other than Sami language in Sami has improved over the las four years. Nevertheless, the situation is still critical for Lule and South Sami where students still lack teaching material in most of the subjects at the primary and lower secondary level.

A review of the Office of the County Governor's inspection reports on Sami education shows that all of the inspections in Nordland and Oslo/Akershus found breaches of the law. In Finnmark, the reports are uniformly positive. A review of Sami education in other counties has not been undertaken.

7.1 Sami Language at School

This article focuses on Sami language education in Norway at the primary and secondary level over the last five years, from the 2010/11 to 2014/15 school years. In addition, a longer retrospect is used to show developing trends.

The Education Act and the National Curriculum for Knowledge Promotion in Primary and Secondary Education and Training regulate the use of Sami language in education. For this reason, 2.2 gives a short review of the main sections on Sami language in the law and curriculum.

Three Sami languages are taught and used for instruction at the primary and lower secondary level: North, Lule and South Sami. These languages can also be learned and used at the upper

secondary level. Section 3 of this article gives a unified account of the total number of students who have instruction in one of the Sami languages at the primary and lower secondary level. Section 4 presents figures for instruction in Sami at the upper secondary level, while section 5 considers the situation of teaching material for instruction of Sami and the various alternatives for Sami as a second language.

The Office of the County Governor conducts inspections of instruction *of* and *in* Sami at the primary, lower secondary and upper secondary levels. Section 6 will focus on the inspections conducted over the last four years.

7.2 Legislation and Curriculums

7.2.1 Legislation for Primary and Lower Secondary School Education

In the Education Act, §6-2 Sami Education at Primary and Lower Secondary School establishes the right of students in Sami districts to be educated in Sami. Outside of Sami districts, students have the same rights as long as the parents of at least ten students demand it. Once instruction has started, it cannot be halted as long as there are at least six students left in the group.

According to the Education Act §6-1, a Sami district is defined as an administrative area for Sami language (*Forvaltningsområdet for samisk språk*⁶¹) and other municipalities or parts of municipalities that the government has decided to call a Sami district. No areas outside of administrative areas for Sami language have been classified as Sami districts. Since the provisions set out in the Education Act, as of today, only apply to administrative areas for Sami language, the term *Sami administrative area* will be used in the rest of the article.

Municipalities within Sami language administrative areas can decide that all students in primary and lower secondary schools will receive instruction of Sami. Three municipalities have made such a resolution, which remains in force today: Nesseby, Karasjok and Kautokeino. In these municipalities, a variety of Sami is an obligatory subject for students at primary and lower secondary schools.

Outside Sami administrative areas, Sami students in primary and secondary school have the right to an education in Sami (Education Act §6-2, paragraph 5). This means that Sami children have an individual right to instruction of a Sami language, but not the right to have Sami as the language of instruction. According to the law's §6-1, a Sami is defined as a 'person who can be enrolled in the electoral register, and the child of one who can be enrolled'. The law also sets out that 'the department can demand alternative forms for such instruction when the teaching personnel at the school cannot offer the instruction'. This has allowed for the use of distance learning in Sami education where the teacher and student are not physically located in the same classroom, but communicate with the help of computers.

⁶¹ Sami administrative areas consist of the municipalities of Nesseby, Tana, Karasjok, Porsanger, Kautokeino, Kåfjord, Lavangen, Tysfjord, Røyvik and Snåsa.

7.2.2 Legislation for Upper Secondary Education

The Education Act §6-3 establishes that Samis in high school have the right to instruction of Sami. This right is applicable to the whole country and does not disappear even if the school is not able to find a teacher to teach the subject. In the same way as for Sami education at the primary and lower secondary level, 'the department can set out regulations on alternative forms of instruction when instruction cannot be offered by the teaching personnel at the school'. High schools have therefore an obligation to arrange instruction of Sami through, for example, distance learning.

High school students do not have the right to instruction in Sami. However, the Ministry of Education and Research can order individual schools to offer instruction of or in Sami in particular subjects within certain programs or groups. Most high schools are owned by county authorities and §6-3 of the Education Act gives county authorities the ability to offer instruction in Sami. Additionally, there are two national Sami high schools in Karasjok and Kautokeino.

7.2.3 Curriculums

Public school instruction follows either *The Curriculum for Knowledge Promotion in Primary and Secondary Education and Training* (LK06) or *The Sami Curriculum for Knowledge Promotion in Primary and Secondary Education and Training* (LK06-S). All public primary and lower secondary schools in Sami language administrative areas follow LK06-S. The curriculum has developed three alternative Sami language educational plans at the primary and lower secondary school level (Udir 2013-1: 2013-2): Sami as a First Language, Sami as a Second Language 2 and Sami as a Second Language 3. Most students who have Sami as a First Language at this level also have Sami as the language of instruction in other subjects. At the high school level, a fourth alternative is available: Sami as a Second Language 4. This alternative is designed for students who have not had instruction of Sami at the primary and lower secondary school level. In the curriculum, the goal of Sami as a First Language is expressed as follows:

Sami as a First Language shall develop a student's language skills based on their abilities and (pre)conditions. Oral proficiency as well as competence in reading and writing are goals in themselves and form the necessary basis for learning and comprehension in all subjects in all grades. The subject should motivate the desire to read and write, and contribute to the development of good learning strategies. (Udir 2013-1).

Sami as a Second Language is meant for students who do not have Sami as a mother tongue and have not learned Sami before starting school. Sami as a Second Language 2 has a more ambitious goal than Sami as a Second Language 3, but both have the same number of class hours. According to the curriculum, Sami as a Second Language 2 is:

...the alternative that gives the best foreign language skills at the end of schooling, and choosing this alternative at primary and lower secondary school will contribute to laying the groundwork for a student's functional bilingualism. (Udir 2013-2)

Sami as a Second Language 3 is intended for beginner students who do not know any Sami when they start instruction. These students will benefit from having more class hours to learn the language. Students who start with Sami late in primary school or not until lower secondary school also follow this alternative. Bilingualism is not necessarily the goal. *Sami as a Second*

Language 4 is meant for high school students who have never had instruction of Sami. This is the first year this course has been taught. (Udir 2013-2; 2015-1)

7.3 Sami Language at Primary and Lower Secondary School

Data for this chapter comes from the primary and lower secondary school information system on the internet (*Grunnskolens informasjonssystem* - GSI 2014), as well as the Norwegian Directorate for Education and Training (Udir 2015-1). In addition, some of the figures come from earlier editions of *Samiske tall forteller* (Todal 2011; 2012).

7.3.1 Total Number of Students Learning Sami

	2005/06	2010/11	2011/12	2012/13	2013/14	2014/15
In total	3055	2245	2153	2126	2126	2116
North Sami	2844	2058	1987	1933	1947	1943
Lule Sami	88	96	72	98	93	99
South Sami	123	91	94	95	86	74

Table 7.1 Total Number of Students Learning Sami

Table 7.1 shows that the number of students learning Sami has decreased by 10 from last year. The number of students who have received instruction of Lule Sami has increased by six or 6.5%. For South Sami, there has been a decrease of 12 students or 14%. There is a considerable decrease in the total number of students who receive instruction of Sami after the 2005/06 school year, which was the last year in which the old curriculum was used. As this has been thoroughly discussed by Todal (2011; 2012), we will focus on developments over the last five years. Since the 2010/11 school year, there has been a decrease of 129 students or 5.7%. Considering that the total number of students in primary and lower secondary school level in Northern Norway has also gone down by 5.3%, it is possible to say that the situation for Sami education has stabilised (GSI 2014), but at a lower level than before. The data also shows that the decline concerns North Sami and South Sami, while instruction of Lule Sami has increased by three students or 3.1% in the five year period. The decline in instruction of South Sami is 17 students or 18.7%. This is characterised as a considerable decrease.

7.3.2 Total Number of Students with Sami as the Language of Instruction

Data in the table below shows the total number of students receiving their education at the primary and lower secondary level in South, Lule or North Sami. Data for individual Sami languages is not available.

Table 7.2 Total Number of Students in Primary and Lower SecondarySchool with Sami as the Language of Instruction

	2005/06	2010/11	2011/12	2012/13	2013/14	2014/15
In total	977	893	855	873	822	812

Table 7.2 shows that 812 students at the primary and lower secondary school level had Sami as the language of instruction in the 2014/15 school year. This is decrease of 10 students or 1.2% from the previous year. Over the last five years, the total number of students has gone down from 893 to 812. This is a decrease of 81 students or 9.1%. The decrease from the 2005/06 school year to now was of 165 students or 16.9%. In the 2003/04 school year, there were 1057 primary and lower secondary school students in Norway receiving their education in Sami. This was the highest number ever. There has been a decrease of 245 students or 23.2% from the 2003/04 school year to 2014/15. This is characterised as a marked decrease. Some of this decrease can be attributed to falling birth rates in some central Sami areas. The data clearly shows that fewer children are now receiving their education in Sami than at the beginning of the 2000s. This situation is unfavourable to the development of the Sami language and should be examined more closely.

7.3.3 Total Number of Students taking Sami as a First Language

At the primary and lower secondary level in Norway, instruction is available in South, Lule and North Sami.

Table 7.3 Total Number of Primary and Lower Secondary School Studentstaking Sami as a First Language

	2005/06	2010/11	2011/12	2012/13	2013/14	2014/15
In total	998	971	940	930	916	915
North Sami	953	923	895	879	877	878
Lule Sami	29	29	25	30	19	22
South Sami	16	19	20	21	20	15

Table 7.3 shows that 915 students are taking Sami as a First Language at the primary and lower secondary level. This is a decrease of 1 student or 1.1% from the previous year. Of these students, 878 receive instruction in North Sami as a First Language, 22 students have Lule Sami as a First Language and 15 have South Sami as a First Language.

The number of students for North Sami as a First Language has gone down from both the 2005/06 and the 2010/11 school years. There was a decrease of 83 students or 8.3% from 2005/06 and of 66 students or 6.8% from 2010/11. The number of students taking Lule Sami as a First Language has been a little bit under 30 for the period in question but fell to 19 last year, and then increased to 22 this year. The number of students with South Sami as a First Language was at around 20, but sank to 15 this year. This is a decrease of 25%.

7.3.4 Sami as the Language of Instruction and Sami as a First Language

Most of the students taking Sami as a First Language also have Sami as the language of instruction. However, there is not a complete match between the number of students who take Sami as a First Language and those who have Sami as the language of instruction.

Table 7.4 Total Number of Primary and Lower Secondary Students with Sami as a First Language and Sami as the Language of Instruction

	2005/06	2010/11	2011/12	2012/13	2013/14	2014/15
Sami as a first language	998	971	940	930	916	915
Sami as lang. of instruction	977	893	855	873	822	812
Difference	21	78	85	57	94	103

Table 7.4 shows that in the 2014/15 school year, there were 103 students who took Sami as a First Language without having Sami as the language of instruction. This difference has increased from 21 in the 2005/06 school year. This number has varied over the last five years but has always been markedly higher than for the 2005/06 school year.

The reason for the discrepancy between the number of students studying Sami as a Frist Language and the number of students receiving instruction in Sami is uncertain. It may be because instruction in Sami is not available in the students' home municipality or nearest school. It may also be that parents have decided not to have Sami as the language of instruction, even if it is available. This topic should be examined more closely.

7.3.5 Number of Students taking Sami as a Second Language

It is possible to learn South, Lule and North Sami as a second language at the primary and lower secondary school level in Norway.

Table 7.5	Number	of Prin	nary and	l Lower	Secondary	Students	taking	Sami
	as a Seco	ond Lan	guage					

	2005/06	2010/11	2011/12	2012/13	2013/14	2014/15
In total	2057	1274	1213	1196	1210	1201
North Sami	1891	1135	1092	1054	1070	1065
Lule Sami	59	67	47	68	74	77
South Sami	107	72	74	74	66	59

Table 7.5 shows a marked decrease from 2005/06 to now in the number of students who are learning Sami as a second language at the primary and lower secondary school level. The reasons for this decrease are discussed in *Samiske tall forteller 4* and 5 (Todal 2011; 2012: 110-11). Todal points to the new curriculums that came after the Knowledge Promotion Reform and examines whether the reform could have influenced parents' decisions about choice of language at school. Table 7.5 also illustrates that the number of children who learn Sami as a second language at primary and lower secondary school has been relatively stable over the last four years. There was only a slight decrease of nine students or 0.7% from last year and this may indicate that the decline in numbers has ceased.

7.3.6 The Distribution of Students taking Sami as a Second Language 2 and Second Language 3

As mentioned earlier, it is possible to choose between two varieties of Sami as a second language at the primary and lower secondary level. Sami as a Second Language 2 has higher competence aims than Sami as a Second Language 3. One can therefore assume that students taking Sami as a Second Language 2 will become more proficient in the language than students taking Sami as a Second Language 3. It is thus interesting to look at the distribution of students in these two subjects.

	2010/11	2011/12	2012/13	2013/14	2014/15
Second Language in Total	1285	1213	1196	1210	1201
Second Language 2	645	598	567	617	717
Second Language 3	640	615	629	593	484

Table 7.6Number of Primary and Lower Secondary Students taking
Sami as a Second Language 2 and 3

Table 7.6 shows that over the last three years, more students who chose to take Sami as a Second Language have chosen Sami as a Second Language 2 over Sami as a Second Language 3. In the 2010/11 school year, the number of students enrolled in the two subjects were almost identical. In the 2014/15 school year, 59.7% have chosen Sami as a Second Language 2 while 40.3% have chosen Sami as a Second Language 3. This is a positive development as more students are learning the language at a level with the aim of giving them a higher degree of competency.

7.3.7 Number of Students in Sami Administrative Areas

In *Samiske tall forteller 5*, Professor Jon Todal offers a number of figures concerning students in Sami Administrative Areas for the 2011/12 school year. Below, Todal's figures are compared with figures for the 2014/15 school year to show developments over the last three years. The figures are for the total number of students who are taking Sami either as a first or second language. We look at the numbers in these areas in particular because it allows us to study what portion of the total student population is learning Sami. Since each and every student in these areas can choose to have instruction in Sami, we know the total number of students who can choose to have Sami. Outside of these areas, the right to instruction in Sami is tied to certain criteria, and we do not know how many fulfil these criteria (Todal 2012: 111-12).

	Number of Students in the Municipality 2011/12	Number of Students in the Municipality 2014/15	Change in the Number of Students from 2011/12 to 2014/15	Change in the Number of Students from 2011/12 to 2014/15
In total	2310	2268	-42	-1,8
Porsanger	460	412	-48	-10,4
Karasjok	366	327	-39	-10,7
Kautokeino	338	359	21	6,2
Tana	307	276	-31	-10,1
Snåsa	250	210	-40	-16,0
Tysfjord	203	211	8	3,9
Kåfjord	192	219	27	14,1
Lavangen	119	118	-1	-0,8
Nesseby	75	78	3	4,0
Røyrvik	(55)	58	3	5,5

Table 7.7Change in the Number of Students for Sami Administrative Areas
from the 2011/12 to the 2014/15 School Year

Table 7.7 shows that the number of students in Sami Administrative Areas decreased by 42 students from 2011/12 to 2014/15. This is a decline of 1.8%. On January 1, 2013, however, an additional municipality, Røyrvik in North Trønderlag, was designated as a Sami Administrative Area. The true decline in student numbers is therefore 100 students or 4.3%.

The table shows significant differences in the development of student numbers in the different municipalities. Kåfjord and Kautokeino have had the greatest increase with 27 and 21 students respectively, or 14.1 and 6.2 percent. The most substantial decline of 16 percent has occurred in Snåsa. It is also worthwhile to note the decline in student numbers of 10 percent in Karasjok, Porsanger and Tana. These municipalities have a relatively high number of students who receive instruction of Sami.

Table 7.8 Comparison of the Number of Students in Sami AdministrativeAreas with and without instruction of Sami as a First or SecondLanguage

	Students in all Sami Administrative Areas	Students without Sami Instruction	Students with Sami Instruction	Students with Sami as a First Language	Students with Sami as a Second Language
Students 2011/12	2310	1092	1218	783	435
Students 2014/15	2268	1088	1180	741*	439*
Change 2011/12 to 2014/15	-42	- 4	- 38	- 42	+ 4

*The exact numbers are a bit higher because figures from two municipalities are so low that the Norwegian Directorate for Education and Training has not released them.

Table 7.8 shows that 1,218 students in Sami Administrative Areas had instruction of Sami in the 2011/12 school year. They constituted 57% of all the students in Norway who receive Sami instruction. This year, 1180 students in Sami Administrative Areas receive instruction of Sami. This works out to 55.8% of all the students in Norway learning Sami, showing a decrease of 1.2 percentage points.

The number of students in Sami Administrative Areas learning Sami as a first language went down by 42 or 5.4%. The number of students learning Sami as a second language went up by four. This is an increase of 0.9%.

In 2011/12, 53% of students in Sami Administrative Areas received instruction of Sami at the primary and lower secondary school. This year, 52% of students took Sami, the overwhelming majority of which took Sami as a first language. The trend this year is the same as for 2011/12. Roughly every third student in Sami Administrative Areas is taking Sami as a first language.

Table 7.9	Students per Municipality for the 2011/12 and 2014/15 school
	year, Students with Sami Instruction, and changes in the same
	period

	Students in the Municipalities 2011/12	Students with Sami Instruction 2011/12	Students in the Municipalities 2014/15	Students with Sami Instruction 2014/15	Change from 2011/12 to 2014/15
Porsanger	460	123	412	119	-4
Karasjok	366	366	327	327	-39
Kautokeino	338	338	359	359	21
Tana	307	155	276	137	-18
Snåsa	250	29	210	11	-18
Tysfjord	203	49	211	73	24
Kåfjord	192	73	219	85	12
Lavangen	119	12	118	•	
Nesseby	75	•	78		
Røyrvik	55		58		

Table 7.9 shows trends for students receiving instruction of Sami in various municipalities in Sami Administrative Areas. The 2011/12 numbers for Røyrvik are not known. Sami is an obligatory subject for all students in Karasjok, Kautokeino and Nesseby so changes in these municipalities naturally correspond to changes in the number of students. Tysfjord and Kåfjord have shown a marked increase in the number of students learning Sami, with 49 and 16.4 percent respectively.

Snåsa has experienced a significant decrease of 18 students or 62%. This is due in part to the fact that several of the students who received instruction through distance learning from Åarjel-saemiej School in Snåsa are now receiving instruction of Sami from a local teacher at their home school. Additionally, distance-learning students are now registered as students at their home school and not as students at Snåsa. In the past, these students were registered at the school that offered distance learning (Nilsson Valkeapää 2015). Tana has had a decrease of 18 students who receive instruction of Sami. This is a decline of 11.6%. Both Snåsa and Tana have

experienced a large decrease in the number of students at the primary and lower secondary level but conclusions cannot be drawn between these two situations.

	Students with instruction of Sami as % of all students		Students with Sami as a first language as % of all students		Students with Sami as a second language as % of all students	
	2011/2012	2014/15	2011/2012	2014/15	2011/2012	2014/15
Total	53	52,2	34	32,9	19	19,4
Porsanger	26	28,9	7	5,1	19	23,8
Karasjok	100	100,0	76	76,1	24	23,9
Kautokeino	100	100,0	93	90,5	7	9,5
Tana	51	49,6	31	31,5	20	18,1
Snåsa	12	5,2				
Tysfjord	24	34,6	10	10,4	14	24,2
Kåfjord	39	38,8	5	5,9	34	32,9
Lavangen	10					
Nesseby		94,9	23	30,8		64,1
Røyrvik			0	0		

Table 7.10Distribution of Students with Sami Instruction for the 2011/12
and 2014/15 School Years, in Percent

Table 7.10 shows that over the last four years, most of the municipalities have experienced only small changes in the number of students learning Sami. Nevertheless, Tysfjord has had a clear increase. In 2011/12, 24% of the students received instruction of Sami. This year, the portion is 34.6%. The increase is due to more students taking Sami as a second language, the portion of which has increased from 14% to 24.2%. In Nesseby, the increase has been from 23% to 30.8%. Snåsa has had a decrease in the number of students learning Sami, from 12% to 5.2%.

7.4 Sami Language at the Upper Secondary Level

Sami students at the upper secondary level have the right to learn Sami. When talking about Sami education at this level, it is not possible to refer to the same geographical divisions as for the primary and lower secondary school level. This is because many municipalities do not have upper secondary schools so students attend high school outside the home communities.

Figures for the 2010/11 and 2011/12 school years come from *Samiske tall forteller 5* (Todal 2012: 114-16). Figures for the 2012/13 and 2014/15 school years come from the Norwegian Directorate for Education and Training (Udir 2015-1) as well as from the Directorate's overview over subjects chosen by high school students (Udir 2013-3; 2014; 2015-2).
	2010/11	2011/12	2012/13	2013/14	2014/15
Whole country	433	473	416	452	449
Finnmark	341	384	332	356	357
Troms	49	54	53	42	48
Nordland	27	16	18	37	24
Nord-Trøndelag	9	7	•	8	11
Rest of the country	7	12	13*	9	9

Table 7.11 Number of Upper Secondary Students Learning Sami

* The figures for Nord-Trøndelag are included in the figures for the rest of the country.

Table 7.11 shows that the number of students learning Sami varies from year to year but no clear trend emerges. At the same time, we do not see the decrease in the number of students learning Sami that we see at the primary and lower secondary level. On the contrary, the number of students has increased by 16 or 3.7% over the five-year period. The table also shows that the vast majority of high school students learning Sami, 79.5%, attend school in Finnmark.

Table 7.12Distribution of Upper Secondary Students Learning Sami as a
First and/or Second Language

	2010/2011	2011/12	2012/13	2013/14	2014/15
Total	433	473	416	452	449
First Language	248	267	236	243	205
Second Language	185	206	180	209	244

Table 7.12 shows that there has been a shift from last year to this. The number of students learning Sami as a First Language has gone down by 38 or 15.6%. At the same time, the number of students learning Sami as a Second Language has increased by 35 or 16.7%. There was a tendency before 2014/15 of more high school students taking Sami as a first language than as a second. It is without a doubt encouraging if more students who have had Sami as a Second Language at the primary and lower secondary level decide to continue their studies at the high school level. It is equally positive if students who have not had instruction in Sami before choose to start at high school. On the other hand, this is a negative tendency if students are choosing Sami as a Second Language even if they have had Sami as a First Language earlier in their education (NRK 2015). This is something that should be investigated further.

7.4.1 Sami as a First Language at the Upper Secondary Level

The number of high school students taking Sami over the last five years is shown below, by county.

	2010/2011	2011/12	2012/13	2013/14	2014/15
Whole Country	248	267	236	243	205
Finnmark	216	249	212	199	187
Troms	12	11	18	21	18
Nordland	18			18	
Nord-Trøndelag					
Rest of the Country		7	6		8

Table 7.13Number of Students Learning Sami as a First Language at the
Upper Secondary Level

Table 7.13 shows that the number of high school students receiving instruction in Sami as a First Language had been relatively stable the first four year of the last five. The number goes down by 38 students or 15.6% in the last year. This is characterised as a significant decrease. It is worth noting that there were 18 students learning Sami as a First Language in Nordland in 2010/11 and 2013/14, while in the other years the number was five or less.

Table 7.14Number of Upper Secondary Students Learning Sami as a First
Language, Divided into those Learning North Sami and those
Learning Lule or South Sami

	2010/2011	2011/12	2012/13	2013/14	2014/15
Whole Country	248	267	236	243	205
North Sami	*	*	229	226	195
Lule Sami/ South Sami	*	*	7	17	10

* Figures for 2010/11 and 2011/12 are not available.

Table 7.14 shows that the vast majority of students learning Sami as a First Language have chosen North Sami. In the 2014/15 school year, 195 students or 95% of high school students were taking North Sami as a First Language. The number of students learning Lule or South Sami varies from seven to 17 or 3-7% over the last three years. Separate figures for the number of students taking North and Lule or South Sami are not available for the 2010/11 and 2011/12 school years.

7.4.2 Sami as a Second Language at the Upper Secondary Level

Instruction of Sami as a Second Language at the high school level is shown here by county, for the last five years.

Table 7.15	Number of Students taking Sami as a Second Language in each
	County

	2010/2011	2011/12	2012/13	2013/14	2014/15
Whole country	185	206	180	209	244
Finnmark	125	135	120	157	178
Troms	37	43	35	24	36
Nordland	9	16		16	
Nord-Trøndelag	9	7			
Rest of the Country	5	5	25	12	30

When the number of students in a county is not shown, it is combined with the number of students in the counties further south. The figures for the rest of the country, therefore, include the students from Nordland and Trøndelag not shown separately.

Table 7.15 shows a clear increase in the number of students taking Sami as a Second Language at the high school level. Last year, the increase was by 35 students or 16.7%. The increase in Finnmark was by 23 students or 14.6%.

Despite this increase, the numbers indicate that a good number of students who have taken Sami as a Second Language at the primary and lower secondary level have not continued to do so at the high school level. Most students attend three years of high school after finishing their lower secondary education. On average, there are 120 students per grade level learning Sami as a Second Language at the lower secondary level. At the high school level, however, there are on average only 81.3 students per grade level. This is a significant difference.

Moreover, roughly a third of students learning Sami as a Second Language at the high school level take Sami as a Second Language 4, which is a class for beginner students who do not know any Sami from before. This means that there is a high dropout rate in the subject between lower and upper secondary school. This situation should be studied further.

Table 7.16 Number of Students with Sami as a Second Language, shown by language

	2010/2011	2011/12	2012/13	2013/14	2014/15
Whole Country	185	206	180	209	244
North Sami	*	*	155	184	217
Lule Sami	*	*	9	10	12
South Sami	*	*	16	15	15

* Figures for 2010/11 and 2011/12 are not available.

Table 7.16 shows that the large majority of students learning Sami as a Second Language have chosen North Sami. There were 244 students or 89% taking the class in the 2014/15 school

year. The number of students learning Lule Sami as a Second Language is 12 or 5%, while the number for South Sami as a Second Language is 15 or 6%.

The increasing number of students applies especially for North Sami, which went from 155 to 217 students, a rise of 40%. Lule Sami has also experienced a slight increase while the numbers for South Sami have been quite stable. Separate figures for each of the languages are not available for the 2010/11 and 2011/12 school year.

The increase over the last year in the number of students learning Sami as a Second Language is possibly attributable to the introduction of the new class *Sami as a Second Language 4*. This class is for students with no prior experience with Sami. As no students chose the class in 2013/14, this course was first taught in the fall of 2014. This year, 100 students are taking Sami as a Second Language 2, while 74 are taking Sami as a Second Language 3 and an additional 74, Sami as a Second Language 4. In the previous school year, there were about the same number of students taking Sami as a Second Language 2 as there was taking Sami as a Second Language 3 (Udir 2014: 27; 2015-1: 27; 2015-2: 27).

7.4.3 Sami as the Language of Instruction

As mentioned in section 7.2.2, § 6-3 of the Education Act allows the ministry to instruct individual schools to offer Sami as the language of instruction at the upper secondary level. Counties, under their own initiative, can also offer Sami as the language of instruction in their schools. Despite this option, no county schools currently use Sami as the language of instruction. While two national Sami upper secondary schools offer part of the study programs in Sami, it has not been possible to get an overview of exactly how much of the schooling is carried out in the language. In its annual report to the Norwegian Directorate for Education and Training, the Sami Upper Secondary School in Karasjok writes that, at a minimum, the school wants to offer identity-forming core subjects in Sami. Teaching in Sami means that all instruction and guidance of students is carried out in Sami and that students can write exercises and tests in Sami. In the 2013/14 and 2014/15 school years, Sami was used 50 class hours (of 45 minutes) per week. The rest of the class hours were conducted in Norwegian or Norwegian/Sami. All instruction in media and communication, which requires Sami as a First Language, is carried out in Sami. In the General Studies Program, Sami was used to teach Social Studies, Natural Sciences and History in 2013/14 and Natural Sciences, History and Religion in 2014/15 (Sami videregående skole i Karasjok 2014).

7.5 Situation of Instructional Material

This chapter looks at the situation of instructional material for the teaching of North, Lule and South Sami as well as for that of Sami as a Second Language. Teaching aids are important tools in ensuring that students develop basic skills and attain the competence goals relevant to their study program. In 2010 and 2014, The Sami Parliament compiled information about the state of instructional material and teaching aids for Sami. This information is used here to describe the situation and developments over the last few years (Sametinget et al. 2010: 19-24; Sametinget 2015). The Sami Parliament's overview is divided by language and explains the situation for each subject and grade level using the following categories:

- 1. Needs as outlined in the curriculum for *Kunnskapsløftet samisk* (Knowledge Promotion Reform Sami) are covered textbooks and digital resources are available, the majority of competence objectives are covered
- 2. Part of the required qualifications as outlined in the *Kunnskapsløftet samisk* are covered textbooks/booklets/digital resources are available
- 3. Textbooks are available covering almost all of the previous curriculum
- 4. Very little coverage of competence aims or no teaching aids at all

7.5.1 Instruction in North Sami

Table 7.17The State of Teaching Aids for North Sami at the Primary and
Lower Secondary Level in 2010 and 2014 – Coverage by
Subject and Grade

			Almost	Very	
		Partly	Covered	Little/Almost	
	Covered	Covered	(old curriculum)	No coverage	Total:
Primary 2010	13	26	31	21	91
Primary 2014	36	22	7	26	91
Lower Secondary 2010	3	13	11	15	42
Lower Secondary 2014	21	3	9	9	42

Table 7.17 shows a significant shortage of teaching material in 2010. Of 91 investigated subjects/grades at the primary level, there was very little or no material for 21 subjects/grades. Thirty-one subjects/grades were covered according to the requirements of the previous curriculum. Thirteen subjects/grades were covered and 26 were partially covered. There has been a positive development from 2010 to 2014 at both the primary and lower secondary level. However, teaching aids are still needed for 26 subjects/grades at the primary school level and for 15 of 42 subjects/grades at the lower secondary level. In 2014, subjects that needed teaching aids at the primary level were English for grades 5-7, Norwegian for Sami 1, Geography 1-4, History 1-4, Gym 1-7 and Math and Health 5-7. Subjects still requiring teaching aids at the lower secondary level are Norwegian for Sami 1, English and Gym.

7.5.2 Instruction in Lule Sami

Table 7.18The State of Teaching Aids for Lule Sami at the Primary and
Lower Secondary Level in 2010 and 2014 – Coverage by
Subject and Grade

			Almost	Very	
		Partly	Covered	Little/Almost	
	Covered	Covered	(old curriculum)	No coverage	Total:
Primary 2010	4	41	3	43	91
Primary 2014	21	9	6	55	91
Lower Secondary 2010	0	3	5	34	42
Lower Secondary 2014	3	3	0	36	42

Table 7.18 shows a significant shortage of teaching material for Lule Sami in both 2010 and 2014. Of the 91 subjects/grades investigated at the primary level in 2010, very little or no material existed for 43 of them. In the same period, three subjects/grades were almost covered by material for the previous curriculum, four subjects/grades were covered and 41 were partly covered. At the primary level, we see a positive development from 2010 to 2014, where 21 subjects/grades are covered while 9 are partly covered. But now, 55 subjects/grades have very little to no teaching material. At the lower secondary level, there were no teaching aids for 36 of 42 subjects/grades in 2014.

7.5.3 Instruction in South Sami

Table 7.19The State of Teaching Aids for South Sami at the Primary and
Lower Secondary Level in 2010 and 2014 – Coverage by
Subject and Grade

			Almost	Very	
		Partly	Covered	Little/Almost	
	Covered	Covered	(old curriculum)	No coverage	Total:
Primary 2010	4	23	3	61	91
Primary 2014	24	4	0	63	91
Lower Secondary 2010	0	0	0	42	42
Lower Secondary 2014	0	3	0	39	42

Table 7.19 shows a significant shortage of teaching aids for South Sami in both 2010 and 2014. Of the 91 subjects/grades investigated at the primary level in 2010, there was very little or no material for 61 of them. Four grades/subjects were covered and 23 partially so. There were no teaching aids at the lower secondary level. There has been a positive development at the primary level from 2010 to 2014. Twenty-four subjects/grades are covered and four are partially covered. Teaching materials are still needed for 63 subjects/grades. At the lower secondary level, 39 of 42 subjects/grades need teaching aids.

7.5.4 Instruction of Sami as a Second Language

Table 7.20Teaching Aids for Sami as a Second Language at the Primary
and Lower Secondary Level in 2010 and 2014 – Number of
Grade Levels Covered

		Partly	Almost Covered	Very Little/Almost	
	Covered	Covered	(old curriculum)	No coverage	Total:
North Sami 2010	0	0	8	2	10
North Sami 2014	7	3	0	0	10
Lule Sami 2010	0	6	0	4	10
Lule Sami 2014	10	0	0	0	10
South Sami 2010	2	0	8	0	10
South Sami 2014	10	0	0	0	10

Table 7.20 shows that after the 2010 curriculum reform, there was a significant shortage of teaching material for North, Lule and South Sami as a Second Language. In eight grade levels, North and South Sami was taught with material developed for an older curriculum. Additionally, there was very little to no teaching aids available for two grade levels. Six grade levels of Lule Sami as a Second Language 2 were are partially covered. Four grade levels had very little or no teaching material available.

In 2014, the situation was very much improved. Teaching material is available for all 10 grades of Lule and South Sami as a Second Language 2. For North Sami, grades 1-7 are covered. In grades 8-10, newly developed or newly reprinted or revised editions of textbooks, booklets and digital material cover parts of the competence aims. In addition, there are textbooks which cover almost all of the requirements of the earlier curriculums.

The Sami Parliament's matrix shows that teaching material for Sami as a Second Language 3 is almost covered at the primary and secondary school level. The exceptions are Lule Sami as a Second Language 3, grade 10 and South Sami as a Second Language 3, grades 8-10. Competence aims in these subjects are partially covered by newly developed material or newly reprinted or revised editions of textbooks, booklets or digital material.

7.5.5 The Sami Parliament's View

This overview shows that there is a significant gap between the Sami Parliament's fundamental view on Sami language teaching aids and reality. The Sami Parliament's position (2014-1: 5) is that Sami students have the same rights to teaching aids in their native language as other students in the Norwegian school system. This right is not being fulfilled, as there is a shortage of Sami language material in many subjects.

In its analysis of the Education Act in June 2014, the Sami Parliament pointed out that Sami students' right to teaching material in their language of instruction is not ensured by law in accordance with the pertinent regulations. The Education Act protects by law the right to have teaching material in both of the written forms of Norwegian. Moreover, the regulations of the law further clarify and strengthen this right. For this reason, the Sami Parliament has requested a revision of both the Education and Private Education Acts to strengthen Sami students' rights

to instruction in and of Sami on the basis of cultural values, including special rights to Sami teaching aids for all subjects throughout primary and lower secondary school (Sametinget 2014-1: 5; 2014-2: 120.)

7.6 Inspection of Sami Education

Sami students' educational rights have been a prioritized area of inspection at all school levels since 2009. The Ministry of Education and Research assigned the Norwegian Directorate for Education and Training the task of:

'inspecting, with follow-up carried out by the counties and municipalities, Sami students' rights in accordance with the Education Act, also including access to teaching aid' (Kunnskapsdepartementet 2009: 31).

In practice, the Offices of the County Governor are responsible for conducting inspections of Sami education in their respective counties.

Table 7.21County Governor's Inspection of Sami Education from 2012 to2015

	2012	2013	2014	2015
Oslo and Akershus	5	0	0	0
Sør-Trøndelag	0	0	0	1
Nordland	0	4	0	0
Finnmark	0	2	1	1
Total	5	6	1	2

Table 7.21 shows that the County Governor's Office conducted 14 inspections of Sami education from 2012 to June, 2015. These inspections were held in Oslo and Akershus, Sør-Trøndelag, Nordland and Finnmark. Thirteen inspections were of primary and lower secondary schools and one was of an upper secondary school.

Information was requested from day cares and educational institutions in Oslo and Akershus, as well as in the five northernmost counties. Inspection reports for the northern counties are public and accessible on the County Governor's website. Inspection reports from Oslo and Akershus were sent from the Office of the County Governor in Oslo/Akershus. The County Governor in Sør-Trøndelag conducted an inspection of Sami education in the municipality of Namdalseid. The report, dated June 9, 2015, was not yet public at the time of writing.

7.6.1 Content of the Inspections

The primary goal of the inspections is to ensure that Sami students receive the education they have a right to under the Education Act. Sami students should have the opportunity to attain

proficiency in Sami. The inspections verify that local governments act in accordance to the law and perhaps contribute so that the situation in the community conforms to the requirements of the legislation. The requirements that are checked during the inspection are chosen based on which provisions are most central for Sami students to receive instruction of and in Sami. Choice of provisions to be checked in the inspection were based on experience gained in the pilot inspection conducted in Nordland in the autumn of 2009 (Fylkesmannen i Oslo og Akershus 2012-3: 3).

Inspection reports contain a chapter explaining what is being investigated. Below is a summary of the main points from an inspection of the municipality of Rana in Nordland. This gives an idea of what was examined in all the municipalities (Fylkesmannen i Nordland 2014-1). In addition, the inspection report from Kautokeino is used (Fylkesmannen i Finnmark 2015) to show what has been examined in a Sami Administrative Area. Four particular areas have been examined in the inspections.

1. Tenable System – Education Act §13-10 paragraph 2

According to the Education Act §13-10 paragraph two, a municipality has the primary responsibility to ensure that the administration at each and every school complies with the demands and obligations of the law as well as offers the services and activities prescribed by it. To comply with the demands of a tenable system, the school owner must be able to document that routines are in place to:

- ensure that all in the organization with tasks connected to Sami students' rights have adequate knowledge about the content and demands in the relevant provisions of the law
- ensure that the municipality receives adequate information about what is happening in the field of Sami education
- assess the provided information in relation to the demands of the law
- to put in place necessary measures if it is discovered that what is being done does not conform to the law

2. Sami Education at Primary and Lower Secondary School – Education Act §6-2

Inspections were conducted in four municipalities in the county of Nordland. These municipalities are not Sami Administrative Areas and so are not considered as Sami districts pursuant to the Education Act. This means that the County Governor's assessments were limited to the statutory provisions of the Education Act §6-2 which concerns rights outside of Sami districts. At the primary and lower secondary level, these students have the right to instruction of Sami. This means that these municipalities have to provide Sami language classes regardless of group size.

The school owner must have a system that ensures that instruction of Sami conforms to the Sami Curriculum for Knowledge Promotion in Primary and Secondary Education and Training (LK06–S), cf. Education Act §6-4 and regulations of the Education Act §§1-1 and 1-11. Sami education must follow the allotted subjects and class hours at all times, cf. Education Act §2-2. Subjects and class hours are obligatory parts of the curriculum and cannot be deviated from, cf. Education Act §§ 2-1 and 2-3.

The County Governor in Finnmark has held two inspections of Sami education in municipalities that lie within Sami Administrative Areas and therefore considered as Sami districts, Kautokeino and Porsanger (Fylkesmannen i Finnmark 2014; 2015). In these municipalities,

according to the Education Act §6-2, students at the primary and lower secondary level have the right to instruction of and in Sami. Moreover, the municipality of Kautokeino has decided to exercise its authority to include instruction of Sami as an obligatory part of the curriculum at this level.

3. Necessary Equipment, Inventory and Teaching Aids – Education Act §9-3

According to the Education Act §9-3, the school owner must ensure that schools have access to necessary equipment, inventory and teaching aids. Further, it states that teaching aids shall be suitable for use in instruction. In connection to Sami education, this entails, among other things, the obligation to have teaching aids in line with the relevant curriculums and equipment that enables instruction or distance education.

4. Alternative Models of Sami Education – Education Act Regulations §7-1

In the case of a school not having suitable teaching personnel, a student with the right to education in Sami is required to receive this education in an alternative form. These alternatives could include distance education, intensive courses and language camps. If distance education is used, the school owner is responsible to ensure that instruction conforms to the regulations. Each student's rights are to be protected and routines to assist with distance learning, such as proving proper technical support, must be in place.

7.6.2 Inspections in Oslo and Akershus

The County Governor in Oslo and Akershus conducted five inspections of Sami education in 2012. Inspections were carried out in the municipalities of Oppegård, Oslo, Rælingen, Skedsmo and Ås (Fylkesmannen i Oslo og Akershus 2012-1; 2012-2; 2012-3; 2012-4; 2012-5). All five inspections resulted in an order of rectification. The inspection reports are summarized in a memorandum from the Norwegian Directorate for Education and Training to the Ministry of Education and Research (Udir 2013-4: 19-20). Most infractions concerned the requirement to develop written protocols to ensure that:

- the municipality receives adequate information about what is happening in the field of Sami education
- protocols are in place to ensure that information is assessed in accordance to the requirements of the law
- necessary measures are in place if it is discovered that what is being done does not conform to the law
- authority delegated to the principal is included in the delegation manual
- the municipality's system to ensure that students with the right to instruction of Sami receive the required classroom hours, that the municipality ensures that students/parents or guardians are able to choose between Sami as a first or second language
- the municipality must ensure that schools using Skype/internet for distance education have stable technical solutions.

Several violations regarding the performance of audits were also uncovered. These concerned:

- the requirement to have protocols to ensure that all who have tasks connected to Sami students' rights have adequate knowledge about the content and demands in the relevant provisions of the law (dissemination of information to relevant personnel)
- the requirement to document parents' consent for exemption from other subjects for students at primary school
- the requirement of the municipality to ensure that students who have the right to instruction of and in Sami can choose between North, South and Lule Sami.

Since only one County Governor conducted an inspection in 2012, the Norwegian Directorate for Education and Training draws no general conclusions about Sami education from the inspections in Oslo and Akershus. In conclusion, the Directorate writes that: 'from the instructions given, it has emerged that school owners should, to a greater degree, ensure that adequate equipment and teaching material is available to students who have the right to Sami education' (Udir 2013: 25).

7.6.3 Inspections in Nordland

Four inspections of Sami education have been conducted in the county of Nordland. All started in 2013 and ended in 2014. Inspections were carried out in Rana, Narvik, Evenes and Saltdal (Fylkesmannen i Nordland 2014-1; 2014-2; 2014-3; 2014-4).

Results of the Inspections in Nordland

The County Governor in Nordland uncovered infractions in all of the four municipalities involved in the inspections. The fewest infractions occurred in Evenes, which had not ensured Sami students' right to the obligatory subjects and class hours as well as minimum yearly school hours.

The other municipalities did not have an adequate system to uncover, assess and follow up on whether the requirements of the Education Act were being met. Additionally, the municipality of Narvik did not ensure Sami students' rights concerning obligatory subjects and class hours as well as minimum yearly school hours. Finally, there was no written agreement with the organization providing distance education clarifying who was responsible to cover the curriculum, assessment, teacher competence, organization of study and reporting to the school owner.

The municipality of Saltdal did not comply with the Education Act §6-2 with regard to the right to choose between North, Lule or South Sami and the right to instruction of Sami was not honoured to the extent prescribe by law.

The municipalities were given a deadline to rectify a number of shortcomings and deficiencies. The requirement was to establish and implement a tenable, written system suitable to assess whether requirements of the Education Act were being fulfilled, and in this regard, make sure that:

- the requirement to have protocols to ensure that all who have tasks connected to Sami students' rights have adequate knowledge about the content and demands in the relevant provisions of the law (dissemination of information to relevant personnel)
- the municipality receives adequate information about what is happening in the field of Sami education
- protocols are in place to make sure the exchange of information is assessed according to the requirements of the law
- necessary protocols are in place if it is discovered that what is being done does not conform to the law.

The municipalities must also ensure that the right to Sami education at the primary and lower secondary level is honoured, and in this regard, make sure to establish protocols:

- to ensure that yearly directives about subject and class hour distribution are disseminated and followed
- to ensure that Sami students receive the required number of class hours as well as draw up and implement routines to verify that this is being done
- to ensure that the content of the courses conforms to the curriculum at all times

• to ensure guardians' and/or students' right to choose between North, Lule or South Sami In addition, the municipalities must ensure that the right to alternative education in Sami is protected, and in this regard, see to it that routines are established to ensure parental input when alternative education is going to be used.

7.6.4 Inspections in Finnmark

Five inspections of Sami education have been conducted in the county of Finnmark: primary and lower secondary schools in Alta, Alta Upper Secondary School, Lakselv School in the municipality of Porsanger and Kautokeino Primary and Lower Secondary Schools (Fylkesmannen i Finnmark 2013-1; 2013-2; 2014; 2015). The inspections in Finnmark follow the same template as those further south but stand out in that no breaches of the law were found.

Lower Secondary Schools in the Municipality of Alta

The County Governor's evaluation of the lower secondary schools in Alta was completely positive. The report concludes by saying that 'the municipality of Alta has a tenable system to assess and follow up on whether the Education Act's requirements for Sami education are being attended to'. No infractions were uncovered and no instructions were given.

The County Governor concludes that the municipality of Alta's system of quality assessment consists of good routines with regard to structure and process. Structural quality is characterised by motivated and qualified teachers with competence in Sami. The municipality has local instruction at the schools. This applies to lower secondary students in Alta who would like to learn Sami. The municipality further states that they have received requests for alternative education and that they have offered multimedia distance learning. The County Governor observes that the municipality has a system to accommodate alternative education models and that they have different solutions to make sure individual students receive alternative education.

Other aspects that have led to the positive assessment are that the municipality has information protocols to inform guardians/students about the right to Sami education. The municipality distributes a letter to parents and guardians at the beginning of each school year. In addition,

the Alta municipal council has decided to offer education of and in Sami to students at Komsa School. A third example is the establishment of a municipality-wide Sami teachers' network. Teachers meet during the regular workday and have marked off time to conduct regular monthly meetings. The network has developed a plan for the schools to use in Sami education. According to the County Governor's inspection report, the school owner has allocated time and resources to impressive and important work.

Lakselv School – The Municipality of Porsanger

The County Governor has conducted an inspection of Sami education at Lakselv School in the municipality of Porsanger. The municipality lies in a Sami Administrative Area and is considered to be a Sami district in accordance with the Education Act. Lower secondary schools in the municipality are therefore bound to offer education of and in Sami (Education Act §6-2).

The assessments in the inspection report are based on the minimum requirements for municipalities with students in a Sami district. 1. The Sami curriculum must be followed. 2. Subject and class hours distribution are binding. 3. The school offers Sami as a first or second language.

The assessments in the inspection report are all positive. 'Documentation shows that education is offered of and/or in Sami at all grade levels and the school has protocols for transition between primary and lower secondary school that ensure students' right to language choice and alternative." The County Governor means that Lakselv school offers Sami as a first or second language to students at school. In its documentation, the school has shown examples of half-year plans and year plans where competence aims from the Sami curriculum guide and form the basis for the content of the course. Submitted documentation shows that the school uses approved textbooks and/or other teaching aids pursuant to LK06-S. Students receive an education of and/or in Sami in accordance with the Sami curriculum and are assessed against competence aims in the various subjects. Students are divided into separate Sami classes at the primary and lower secondary levels and follow the applicable subject and class hour distribution.

Documentation shows that teachers at Lakselv School have the required relevant and approved competence. The Country Governor contends that the municipality of Porsanger ensures that the requirements of the law are met. The school has approved teaching material and aids and fulfils §9-3 of the Education Act regarding 'equipment' which states: 'Schools shall have access to necessary equipment, inventory and teaching aids'.

The County Governor refers to § 13-10 of the Education Act about systems. The municipality of Porsanger shall have a system to assess whether the requirements and regulations of the law are being fulfilled. The system shall uncover, assess and implement necessary measures. System requirements involve the obligation of routines for communication and cooperation between the school owner and schools in the organization. Routines refer to what is to be done, who should do it, how it should be done and when. In light of documentation from the municipality, the County Governor is of the opinion that the municipality of Porsanger has a tenable system, robust enough to uncover breaches of the law.

The County Governor concludes that the municipality of Porsanger and Lakselv School have demonstrated that they arrange for students to receive Sami education and that no violations of the law have been uncovered.

Kautokeino Primary School and Kautokeino Lower Secondary School

The County Governor conducted and inspection of Sami education at Kautokeino Primary School and Kautokeino Lower Secondary School in the municipality of Kautokeino in 2015. The municipality lies in a Sami Administrative Area and is considered to be a Sami district pursuant to the Education Act. Primary and lower secondary schools in the municipality are therefore required to offer education both of and in Sami (Education Act §6-2). Assessments in the inspection report are uniformly positive. Documentation shows that instruction is offered both of and in Sami, as well as both of and in Norwegian at all grade levels in primary and lower secondary school. The schools have routines in place regarding the transition from primary to lower secondary school to ensure that students' rights to language choice and alternatives are fulfilled. In their documentation, the schools have shown half-year and full-year plans where competence aims from the Sami curriculum guide and form the basis for the content of the courses. This is the situation for Sami as a First and Second Language. Both schools have submitted documentation for local curriculums for Sami as a First Language.

Submitted documentation shows that the schools use approved textbooks and/or other teaching aids pursuant to LK06-S. Students receive an education of and/or in Sami in accordance with the Sami curriculum and are assessed against competence aims in the various subjects. Therefore, the County Governor concludes that students follow the Sami curriculum at schools in the municipality of Kautokeino, and that there is sufficient documentation that shows the schools are following the applicable subject and class hour distribution.

Documentation shows that teachers at Kautokeino Primary School and Kautokeino Lower Secondary School have the required competence and, in light of this, the Country Governor considers the municipality of Kautokeino as ensuring that the requirements of the law are met. The school has access to approved teaching material and aids.

The County Governor also assesses the fulfilment of Education Act §13-10. This section requires systems to be in place regarding routines for communication and cooperation between the school owner and the schools within the organization. Routines refer to what is to be done, who should do it, how it should be done and when. Based on the documentation submitted by the municipality, the County Governor is of the opinion that the municipality of Kautokeino has a tenable system robust enough to uncover breaches of the law.

Alta Upper Secondary School

In the period 2012 to June 2015, there has been one inspection of Sami education at the upper secondary level in Norway. This was conducted at Alta Upper Secondary School, which is owned by the county of Finnmark. The inspection was conducted via a check on documentation and interviews with key figures and students.

The legal basis for the inspection is distinguished from the other inspections because it focused on §6-3 of the Education Act which states that Sami students at the upper secondary level have the right to instruction of Sami. The Ministry can instruct the provision of alternative forms for this education when instruction cannot be offered by the teaching staff at the school.

The County Governor concluded that Alta Upper Secondary School fulfils this section of the act and has good routines to implement instruction of Sami.

7.7 Challenges and Recommendations

This article has shown that there are a number of challenges confronting Sami education at the primary, lower secondary and upper secondary level. The number of students learning Sami as a First Language is decreasing at all levels of both primary and secondary education. This decrease has been occurring for such an extended period at the primary and lower secondary level that it can be called a trend. It is too early to draw any conclusions about the upper secondary level.

Students taking Sami as a First Language at the primary and lower secondary level usually have Sami as the language of instruction in other subjects as well. The number of students taking Sami as a First Language without having Sami as the language of instruction in other subjects has however increased. At this time, it is not possible to explain the increase; further study is necessary.

The number of students learning Sami as a Second Language appears to have stabilised at a lower level than before. Increasing this student number should be a goal to help strengthen the revitalisation of Sami languages.

At the upper secondary level, the number of students learning Sami as a Second Language has increased. This is a positive development. Further study should be conducted to find out whether students who have had Sami as a Second Language at the primary and lower secondary level are choosing to cease their studies of the subject. This appears to be the situation and possible reasons for this should be studied further.

The situation for Sami education may be related to two other circumstances matters mentioned in this chapter: the situation of teaching aids for instruction of and in Sami and the County Governor's inspection of Sami education. Even though the situation for teaching aids at the primary and lower secondary level has improved over the last four years, there is still a great shortage in some cases. Inspections in Oslo and Akershus and in Nordland showed breaches of the law and that Sami students' rights to an education in Sami was not being honoured. Inspections in Finnmark showed that the three inspected municipalities and the one upper secondary school performed their responsibilities in a satisfactory manner. An interesting finding was that no inspections were conducted in other counties over the last four years.

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8 Sami Student-Teacher Ratio

Kevin Johansen, MSSc. UiT/Universidad de Granada. Senior Advisor at the Office of the County Governor in Nordland

Summary:

There is little quantitative knowledge about the Sami student-teacher ratio in Norway. Many hold that there is a considerable shortage of Sami teachers and others have claimed that Sami teachers lack formal teaching accreditation. This article surveys the number of South, Lule and North Sami teachers there are in Norway at the primary, lower secondary and upper secondary school levels.

The article also registers the formal competency of each Sami teacher in both pedagogy and Sami language. The survey shows that many Sami teachers lack formal pedagogical qualifications when compared to other teachers in Norway. At the same time, we see that formal competence in the language is at a very high level.

The student-teacher ratio for Lule Sami is high. It is at the same level as for the rest of Nordland and actually higher than that in Bodø. This shows that there is a clear shortage of teachers with competence in Lule Sami.

The lower student-teacher ratio for North and South Sami makes the situation not as precarious in the short term. However, the average age of Sami teachers point to a significant number of them retiring in the next ten years, and the number of applicants to Sami teacher training has been extremely low. Therefore, if recruitment to Sami teacher education does not significantly increase, we risk having much fewer Sami teachers in 10-20 years than today.

8.1 Introduction

Sami education at school and day care is one of the most important initiatives to ensure more Sami speakers in Norway in the future. To achieve this goal, it is crucial to have an adequate teaching work force in Sami so that school owners can offer Sami education to all who have a right to it. Teachers should have competence in pedagogy as well as Sami language at the same level as those teaching other languages at school.

Few surveys have been conducted to find out the number of Sami speaking teachers in Norway. Knowledge about the number of teachers, their competence and the predicted need for Sami speaking teachers in the years to come are essential in order to decide which measures to take so that Sami students' rights to a Sami education are fulfilled.

This article includes every Sami schoolteacher in Norway and his/her competencies in pedagogy and language. In other words, this article gives an overview over all Sami teachers in Norway, in each of the three languages. For Lule and South Sami, we have included teachers who teach Sami as well as accredited teachers who speak Sami but do not currently teach the subject. We did this in order to predict the number of teachers who might be leaving the work force in the near future. Lastly, we have prepared a prognosis on how many Sami teachers we will need to educate in the years to come, as well as made recommendations on necessary measures to ensure adequate recruitment of Sami teachers.

8.1.1 Limitations

The article focuses on teachers *of* Sami, meaning those who teach Sami according to the curriculums in first or second language at the primary and lower secondary level. We do not look at day care teachers nor secondary school teachers with a master's degree, assistant professors or professors at the college or university level. The reason for this limitation is that it is at the primary and lower secondary levels that the right to a Sami education is established and local governments are completely dependent on having an adequate number of Sami teachers to fulfil their legal obligations.

8.2 A Historical Perspective on Teacher Training

Today's Sami teachers have followed various educational paths. Originally, the term *teacher* only referred to those teaching at the primary and lower secondary level (and at former elementary school equivalents such as *folkeskole*, etc.), while those who taught at the gymnasium and upper secondary school levels were called *lektor* or *overlærere* (head teachers). The term *adjunkt* was used for those whose level of education was something in between (Wikipedia.org).

The first teacher training courses were conducted already at the end of the 1700's. These courses increased in scope after the law regarding *allmueskolen* was passed in 1860. The first public course in teacher education, a two-year *seminar*, was established in Trondenes in 1826. The first law about teacher education came in 1890. In 1902, teacher education became a three-year program and in 1938, a four-year program. Then, in 1973, the general teacher-training program (*allmennlærerutdanninga*) reverted to being a three-year program, and in 1992, a four-year program once more (Store Norske leksikon).

Sami teachers today have consequently followed different educational paths. We can assume that the oldest Sami teachers are *allmennlærere* (general teachers) in accordance with the education program that was established in 1973. More recent teacher education programs include *grunnskolelærerutdanning* divided into grades 1-7 and 5-10, *lektorutdanning*, *praktisk-pedagogisk utdanning* (PPU) and *faglærer*, which is a one year pedagogical training program for teaching specific subjects at the primary, lower and upper secondary school levels. From 2017, *grunnskolelærerutdanning* became a five-year master's program. Pilot programs have already been established at certain educational institutions.¹ There will be stricter requirements

on quality and competency for teacher training institutions. Several institutions today do not yet comply with the Norwegian Agency for Quality Assurance in Education's (NOKUT) requirements for teacher training that will go into effect in 2017 (Valle and Nilsen 2016).

In 1999, Professor Jens-Ivar Nergård led a committee that developed an official Norwegian report (NOU) on Sami education, *Samisk lærerutdanning – mellom ulike kunnskapstradisjoner* (Sami Teacher Training – between Various Knowledge Traditions). The committee recommended the development of a separate framework plan for Sami teacher training.

8.3 Pedagogical Competence

In this article, we do not distinguish between the different educational programs but collect them all under the term *pedagogical training*. The Sami Parliament has appointed Sami experts to the framework plan committee for all the current teacher-training programs. Recently, a new framework plan for a five-year Sami teacher-training program at the master's level was developed.

8.4 Competence in Sami

The second focus of this article is to survey the extent of formal language competence among Sami teachers. Today, a minimum of 30 credits in Sami (the equivalent of a half-year program) are necessary to teach at the primary school level and 60 credits (the equivalent of a one-year program) at the lower and upper secondary level. Consequently, formal qualifications are required in Sami, in the same way that one could not teach Norwegian simply because one spoke the language. Formal requirements are now changing so that competency requirements do not just apply to newly employed teachers but to all who teach subjects such as Sami, Norwegian, Math and English, cf. Education Act §10-2 and Education Act Regulations chapter 14.

Formerly, it was sufficient to be a general teacher to teach all subjects at the primary and lower secondary level. This meant that one could be a Sami teacher without speaking a word of Sami. Until 2025, it will be possible to receive an exemption from this requirement so that those who were hired before the new law came into effect, have time to acquire the necessary formal accreditation now needed to teach. This exemption is not part of the Education Act but is allowed under the *Lærerløft*, a reform to ensure that students learn more (regjeringen.no).

Sami distance learning teachers have an extra competence requirement related to distance education didactics and use of technical tools for teaching. These requirements are embodied in the *Rammeverk for samisk fjernundervisning* (Framework for Sami Distance Education) and all distance learning teachers must acquire these competencies by 2020 (utdanningsdirektoratet.no).

¹ Feature article April 21, 2016 in Avisa Nordland: Det er viktig at det gis lærerutdanning i Nordland by Professor Anne Marit Valle and Docent Nils Ole Nilsen.

8.5 Responsibility for Sami in Teacher Training Programs

Several institutions are responsible for ensuring the education of Sami language teachers. Sami University College is extremely important with its Sami teacher training program. Without their program, it would be difficult for school owners to offer quality Sami education to students with the right to it.

UiT The Arctic University of Norway (UiT) has also become an important player in educating Sami teachers. Nord University, an amalgam of the University of Nordland, Nesna University College and Nord-Trøndelag University College, now has responsibility for both Lule and South Sami teacher training (the earlier institutions University of Nordland and Nord-Trøndelag University College had national responsibility for Lule and South Sami respectively). Looking briefly at, for example, the history of Lule Sami teacher education, the first language course was offered at the former Bodø Teacher University College in the 1980's, while the first 30-credit program started in the fall of 1989.

8.5.1 Today's Sami Teacher Education²

Sami University College offers a general teacher-training program and a one-year undergraduate teacher-training program (PPU). UiT offers North Sami as a foreign language in their teacher-training program for grades 5-10 and a master's program for those with Sami as a mother tongue. Nord University offers a primary and lower secondary teacher-training program for grades 1-7 and 5-10 as well as PPU which can be combined with Lule or South Sami.

The number of applicants to Sami teacher-training programs are sometimes quite low. In the 2015-2016 school year, UiT had no applicants for its five-year teacher-training program combined with a master's in Sami (Altaposten, 24.2.16). Sami University College has also struggled with very low numbers in its Sami teacher-training programs over the last few years. Language courses for Lule and South Sami are not integrated with teacher-training programs so data cannot be collected from public statistics providers like *dbh.no*.

8.5.2 Extent of Sami Teacher-Training Programs

It is difficult to ascertain exactly how many North Sami speakers who have completed a teachertraining program are still of working age. As mentioned above, we estimate that most Sami speaking teachers still working have completed the three-year general teacher-training program that was introduced in 1973. Separate Sami teacher-training programs were established much later, and Sami University College was, as mentioned, established in 1989. A number of Sami speakers completed a teacher-training program long before that time however, and some combined the program with Sami language courses at, for example, the University of Oslo when those courses were available.

In addition to those who have recently graduated from teacher-training programs at Sami University College and UiT, candidates may have also completed teacher-training courses at other institutions as described above. It has been difficult to collect data and calculate the size of this group. Therefore, statistics for North Sami are based on how many work as teachers at the primary and lower secondary level today and how many have completed teacher-training

programs at Sami University College and UiT, not the total number of teachers originally educated at the 20 institutions which offer teacher training in Norway.

The number of Lule and South Sami teachers is somewhat lower, and the author is well acquainted with the teaching milieu for these languages. We know exactly how many Lule and South Sami speakers have graduated teacher-training programs and how many work as teachers.

8.4.3 Gender Distribution

Teaching is a female dominated profession. The lower the grade level, the fewer the number of men taking the educational program and teaching. Nationally, 80% of grade 1-7 teachers are women with a bit lower percentage rate for grades 5-10. ³ The gender distribution for Sami teachers is even more lopsided. 8.5.4 Education of Sami Teachers

Table 8.1Overview of Candidates who have Completed Teacher Training
Programs at Sami University College in the last 21 years.

Year		1995	1996	1997	1998	1999	2000	200	1	2002	2003	2004	4 2005
Teacher '	Training⁴	6	5	6	6	9	23	1	5	7	3		0 0
	• •• -	• • • • •						-	• •				• • • •
2006	2007	2008	200	9 2	2010	2011	201	2	20	13	2014		2015
8	0	4	5	5	2	1	2	6		6		1	19 ⁵

Figure 8.1 Completed Teacher Training at the Sami University College



² Day-care teacher-training programs are not discussed here.

³ Lærerutdanningene. Statistiske oversikter og utviklingstrekk, NIFU-rapport 31, 2014.

Figure 8.1 shows that there are large fluctuations in the number of candidates who have completed Sami teacher-training programs.

UiT does not yet have any candidates who have completed their Sami teacher-training program because the program has not been offered for a sufficient number of years.

Nord University has existed for under one year, and the earlier institutions, University of Nordland, Nesna University College and Nord-Trøndelag University College, have all had teacher-training programs, but not specific to Sami. The number of educated Lule and South Sami teachers will emerge when we look at the different language groups.

8.5.5 Number of Students

In the 2015-2016 school year, 2,164 students had Sami instruction at the primary and lower secondary school level in Norway. Of these, 1,935 had North Sami as a First or Second Language. One hundred and thirteen students had Lule Sami and 116 had South Sami as a First or Second Language. In total, 86 municipalities, four independent schools and three state schools offer instruction in Sami in Norway⁶. This is 21% of Norway's municipalities, and the number of municipalities with students who take Sami has increased continuously.

8.5.6 Teaching Force

In this section, we look at the number of teachers who teach Sami at the primary and lower secondary level, as well as at the upper secondary school level. While a number of teachers work part-time, we do not distinguish between them and those who work full-time. This means that the number of work years is a bit lower than the number of teaching positions. We will also look at how many of the teachers have a pedagogical education and how many lack accreditation.⁷

We will describe teacher competence in Sami, emphasizing how many teachers have continuing education in the language. Continuing education gives formal credit points as opposed to supplementary training which does not so we will focus on that. We know that Sami teachers' competence is in demand in many quarters, and if we are to predict how many Sami teachers we will need in the future, we must also have an estimate of how many leave the profession.

8.5.7 Sources of Error

The statistics commented on in this article have not been published before. The author contacted over 80 municipalities and educational institutions in order to collect data. The number of

⁴ This number includes general teacher-training programs, primary and lower secondary teacher- training programs grades 1-7 and the one-year undergraduate teacher training programs for those who already have a vocational or general academic educational background (PPU).

⁵ Of the 19 who completed teacher training programs at the Sami University College in 2015, 18 were PPU students.

people who have a degree in teaching Sami is sure. This number is based on public statistics from *dbh*, a database for statistics on higher education.

We also know how many municipalities offer Sami classes. This data comes from the three northernmost County Governors. The County Governors in Troms and Nordland have the responsibility of allotting Sami class hours to their respective municipalities while the County Governor in Finnmark allots class hours to the municipality of Finnmark and to the rest of the municipalities outside of northern Norway.

However, there is no reliable way to calculate how many have teacher education from other institutions and Sami courses from one of the institutions named above. For example, a teacher may have taken teacher education in Stavanger and a language course in Tromsø. The author has a full overview for Lule and South Sami because of his personal knowledge of most of the Sami teachers.

The North Sami teacher milieu is much larger and the exact numbers are impossible to ascertain. Therefore, for North Sami, we will look only at those who currently work as teachers and describe their pedagogical and language competence. Percentagewise, it is possible to assume that the number of those who leave the profession is at around the same level as for Lule and South Sami. In addition, there are a number of North Sami-speaking teachers who teach only other subjects. This especially applies to the municipalilties of Kautokeino and Karasjok which have 60 Sami speaking teachers who do not teach Sami.

⁶ Students in public schools and private schools follow different legislation in many areas. The Education Act applies to public schools, but the Private School Act applies to private schools. If a private school has not applied for approval to teach the Sami curriculum, students attending the school do not technically have the right to a Sami education.

⁷ The teacher-education programs included here are described above.

8.6 South Sami

Education in South Sami is mainly offered by six schools: Sameskolen for Midt-Norge, Sameskolen i Snåsa, Brekken oppvekst- og lokalsenter, Røyvik skole, Røros Upper Secondary School (Aajege) and Grong Upper Secondary School. Most of these schools have local instruction, distance learning, language gatherings and mobile teachers. Additionally, two schools have local South Sami teachers.

At the primary and lower secondary school level, 22 teachers teach Sami language. Sixteen of these have a pedagogical education while another sixteen have continuing education in Sami.

Beyond these numbers, there are three South Sami speakers who have teacher training but who do not work as teachers today. The average age for South Sami teachers at the primary and lower secondary school level is 44 years.

Table 8.2 South Sami Teachers at Primary and Lower Secondary School

Total Number	22
With Pedagogical Competence	16
Further Education in Sami	16

Figure 8.2 Portion South Sami Teachers in Primary and Lower Secondary School with and without a Pedagogical Education



Eight teachers teach South Sami at the upper secondary school level. All have a pedagogical education as well as continuing education in South Sami. In other words, South Sami teachers at the upper secondary level are highly qualified.

The average age of South Sami teachers is 45 years. Few South Sami teachers are going to retire in the next couple of years, but many will retire in the next ten. We will come back to recruitment needs later in this article.

8.7 Lule Sami

Currently, there are eight Lule Sami teachers at the primary and lower secondary school level. Six have a pedagogical education and six have continuing education in Sami language.

Figure 5.3 Distribution of Lule Sami Teachers with and without a Pedagogical Education, Primary and Lower Secondary School



The average age of Lule Sami teachers in primary and lower secondary school is 49 years. There are some newly qualified teachers, but many are over the age of 60. There will therefore be a substantial need for Lule Sami teacher recruitment in coming years.

At the upper secondary level, there are seven Lule Sami language teachers. Three of these are qualified and six have continuing education in Lule Sami.

The average age of Lule Sami teachers in upper secondary schools is 39.25 years. This is significantly lower than for those at primary and lower secondary school and can be explained by the fact that fewer of them are formally qualified teachers.

There are ten Lule Sami speakers who are qualified to teach but do not currently do so. This means that there are more teachers that are qualified not teaching Sami than those who do. We will come back to this later in the article.

8.8 North Sami

In primary and lower secondary school, 189 teacher teach North Sami. Of these, 91% are qualified, while 124 (65%) have continuing education in Sami. In Sami administrative areas, most teachers are both qualified and have continuing education in Sami.

Figure 8.4 Portion of Qualified North Sami Teachers, Primary and Lower Secondary School



Figure 8.4 illustrates the portion of qualified North Sami teachers at the primary and lower secondary school level.

Table 8.3 Age Distribution of North Sami Teachers, Primary and LowerSecondary School

Age	20-30 years	30–40 years	40-50 years	50-60 years	60-70 years
Percentage	6 %	20 %	29 %	30 %	15 %

Figure 8.5 Age Distribution of North Sami Teachers, Primary and Lower Secondary School



This table shows that there are relatively few young teachers and that 74% of teachers are over the age of 40. One can conclude that few newly qualified North Sami teachers have been educated in the last few years, and that there will be a lag in the recruitment of Sami-speaking teachers.

There are forty-four North Sami teachers at the upper secondary school level. Of these, 38 are qualified while 33 have continuing education in Sami.

Figure 8.6 Portion of Qualified North Sami teachers, Upper Secondary School



Figure 8.6 shows the portion of qualified North Sami upper secondary school teachers.

Age	20-30 years	30–40 years	40-50 years	50-60 years	60–70 years
Percentage	24 %	17 %	12 %	40 %	7 %

Table 8.4 Age Distribution of North Sami Teachers, Upper Secondary School

Figure 8.7 Age Distribution of North Sami Teachers, Upper Secondary School



At the upper secondary level, we see a much greater number of younger teachers. Over 40% are under 40 years of age, which means that a large portion of teachers probably has many decades left in the profession. At the same time, almost half of the teachers are over the age of 50. This indicates that there will nevertheless be a significant need to recruit new North Sami teachers at the upper secondary level as well. As we see from the figures above, North Sami has the highest portion of qualified teachers. This can be due to various reasons. First, there are many more North Sami speakers in Norway so it is easier to recruit North Sami teachers. Furthermore, North Sami has had a separate teaching program while potential Lule and South Sami teachers have had study Sami in addition to completing a teaching program.

8.9 Big Differences between Municipalities

The various municipalities display a clear difference regarding access to Sami education. Not surprisingly, there are more Sami teachers in Sami administrative areas, and that is natural because that is where there is a greater demand for teachers. It appears that these areas also have fewer challenges in recruiting new teachers than other municipalities. This applies especially to the North Sami area.

The municipalities of Kautokeino and Karasjok have the highest number of Sami teachers, with at least 35 teachers in each. As mentioned earlier, these municipalities also have a number of Sami speaking teachers who do not teach Sami but other subjects. At the other end, there are

16 municipalities which only have one Sami teacher. This is surprising. Sami education would be less vulnerable if most municipalities had more than one Sami teacher.

The further a municipality is from a Sami administrative area, the greater the challenges it faces in recruiting teachers. At the same time, there are communities outside of these areas which have succeeded in recruiting teachers because they have a clear strategy and use various incentives.⁸ Research shows that municipalities which include Sami teachers with other teaching staff at school, keep their Sami teachers more than municipalities in which Sami teachers work on their own.

8.10 Student-Teacher Ratio

Many experts contend that there is a correlation between student-teacher ratio and quality of education. This means that the quality of education increases if more teachers are hired. Reality, however, can be more complicated. Despite Norway having a relatively low student-teacher ratio, it does not show excellent PISA results.

Here, we have also seen that Northern Norway has a higher student-teacher ratio than the national average. In a recent study requested by the Ministry of Education and Research, the Centre for Economic Research at the Norwegian University of Science and Technology (NTNU) looked at the quality of upper secondary schools. The study measured seven indicators such as school points from primary and lower secondary school (*ranking points awarded to students applying to higher levels of education*), graduation rates, grades, etc. Northern Norway scores lower for educational quality than the rest of the country.⁹

Nevertheless, the student-teacher ratio says a lot about the resource situation at school, and without resources, it will be difficult to attain good learning outcomes. Many municipalities, especially outside of Sami administrative areas, say that they struggle with finding Sami teachers.

NOU 2000: 3 Samisk lærerutdanning states:

«...Sami schools must use teachers who lack a formal pedagogical education. The persistence of such situations represent a harmful circle for Sami schools. The attrition rate among qualified teachers may increase because of the additional load of guiding and advising unqualified teachers." (p. 149)

As seen in this article, Sami schools have a larger portion of unqualified teachers. Nonetheless, one can say that this is less of a problem than before; the number of unqualified teachers is low, especially in North Sami areas. However, there is reason to fear that the portion of unqualified teachers will again increase if not more Sami teachers are educated at a higher rate than have been in recent years.

⁸ It is positive that municipalities work to recruit teachers. At the same time, at least in the short run, there is a *zero-sum game* where this leads to other municipalities losing teachers.

⁹ Skolekvalitet I videregående opplæring, SØF-rapport 01/16.

Table 8.5Student-Teacher Ratios in Norway and Selected Counties,
Primary and Lower Secondary School¹⁰

County	Number of students per teacher
Finnmark	12,0
Troms	14,6
Nordland	14,2
National Average	16,8

The table shows that Northern Norway has a lower student-teacher ratio than the national average, with Finnmark having the lowest. In Finnmark, student-teacher ratio is 28.6% lower than in the rest of the country.

Table 8.6 Number of Sami Students, Primary and Lower Secondary School 2015-2016

Language Group	Number of Students
North Sami	1935
Lule Sami	113
South Sami	116
Total	2164

The table shows the number of students in primary and lower secondary schools in Norway. It includes students who take Sami as a first as well as a second language. Similar statistics are not available for upper secondary schools.

Table 8.7 Student-Teacher Ratio for Sami Students, Primary and Lower Secondary School

Language Group	Number of Students per Teacher
North Sami	10,2
Lule Sami	14,1
South Sami	5,3
Total	9,9

Table 8.7 shows that there are much fewer students per teacher in South Sami areas than in Lule and North Sami areas. To a large extent, the reason for this is that communities are very spread out in South Sami areas, and many more students receive their Sami education through distance learning. Sami distance education is largely taught one-on-one with the student and teacher communicating through programs such as Skype. In addition, more Sami teachers in South Sami areas work part-time, combining teaching with other Sami language work.

Lule Sami has a student-teacher ratio identical to that in the county of Nordland. North Sami lies right in the middle between South and Lule Sami percentwise and a bit under Finnmark's average.

¹⁰This is calculated from so-called "group size 2", which is most representative of real size. This measures ordinary instruction without special education or special language instruction (not Sami).





Figure 8.9 Student Distribution for Distance Learning and local Instruction, Lule Sami



Figures 8.8 and 8.9 show the difference between distance learning in Lule and South Sami education. As we see, very few students have distance education in Lule Sami while for many of the years, a large majority of South Sami students received their education through distance learning. This is reflected in the student-teacher ratio for the two language groups.

Table 8.8 Total Number of Sami Teachers

Language	South Sami	Lule Sami	North Sami	Total
Primary and Lower Secondary	22	8	18911	219
Upper Secondary	8	7	44	59
				Grand total:
Total	30	15	233	278

Table 5.8 shows that the total number of teachers who teach Sami is 278. Of these, 84% teach North Sami. Five percent teach Lule Sami and 11% teach South Sami.

Seventy-nine percent of teachers teach at the primary and lower secondary school level.

8.11 Recruitment Needs

To specify the exact recruitment needs for Sami teachers in the next 10-20 years is an impossible task. An estimate will have to take into account a number of uncertain factors such as trends in the number of students, teacher attrition before retirement age, teacher education, and organization of Sami education in the future. Nevertheless, it is possible to make predictions based on what we see in student numbers and rate of urbanization among Samis today. We also know that *Lærerløftet* (continuing education for teachers) and the framework for Sami distance education will increase the need for the pedagogical education of Sami teachers and continuing education in Sami language. We have also established the rate of attrition among teachers in Lule and South Sami areas and this signals the need to educate even more teachers than the nominal need would indicate. We also have shown the age distribution among Sami teachers.

Why is recruitment of Sami teachers important?

The Act relating to primary and secondary education and training (Education Act) §6-2 states:

"All primary and lower secondary school students in Sami districts have the right to an education of and in Sami.

Outside Sami districts, 10 or more students in the same municipality who wish to have an education of and in Sami have the right to such an education as long as there are at least six students left in the group."

§6-3 states:

"Samis at the upper secondary school have the right to an education of Sami. The Ministry can give instructions on alternative forms of education when the education cannot be offered by the teaching personnel at the school."

¹¹ As mentioned earlier, a significant number of Sami-speaking teachers in some Sami administrative areas teach subjects other than Sami.

As we see, all Sami students have an individual right to an education of Sami, and those who live in Sami districts, also have the right to an education *in* Sami. To ensure that school owners can offer this legally required education to qualifying students, and as such fulfill their legal

obligation to Sami students, it is necessary to ensure sufficient recruitment of Sami-speaking teachers.

Looking away from the strictly legal perspective, there are several others arguments to support Sami education. Todal and Øzerk point out that it is important for pedagogical, psychological and historical reasons (Todal and Øzerk 1996 p. 17 ff.¹²). A bilingual education, for example, secures students' cognitive language skills, a positive self-image and cultural development.

It has been challenging to recruit Sami-speaking candidates to teacher-training programs. Sami University College has had no applicants to its Sami teacher-training programs for several admission cycles.¹³ UiT has offered a five-year Sami teacher training at the master's level for three years. They have had no applicants to the program either.¹⁴ If recruitment to Sami teacher-training programs is not strengthened, Sami students' right to a Sami education will be threatened. Under recommendations at the end of the article, we point to measures that can be taken to strengthen Sami teacher training.

There are not enough Sami-speaking teachers to offer a Sami teacher-training program in Lule and South Sami areas, and there would probably be too few applicants to such programs. The framework plans for Sami teacher training has not been especially good at accommodating a potential Lule and South Sami teacher-training program. However, a new framework plan has now been developed for a five-year Sami teacher-training program and it is formulated in a way that is flexible enough to allow for the establishment of a Lule and South Sami teacher-training program:

"The main language used in primary and lower secondary Sami teacher training is Sami. Exceptions can be made for practical or other important reasons."

This is the wording of the proposed framework¹⁵. This means that in the future, a significant portion of Sami teachers would be able to take their education at other educational institutions. It is therefore positive that the Sami Parliament has had the opportunity to propose Sami representatives to various national committees making the framework plans for teacher training.

From the data we have seen in this article, we can conclude that there is a considerable shortage of Sami teachers in Norway. As the situation stands today, it is actually amazing that all students who wish to have instruction in Sami, as far as we know, receive it in their municipality or through distance learning. There has been a clear lag in recruitment of new Sami teachers. If nothing changes, the shortage of teachers will increase in the years to come. The situation is worst for Lule Sami, where the shortage is already hazardous and can be assumed to getting worse. Part of the reason for this is the high attrition rate of teachers in Lule Sami areas.

¹⁴Hanne Larsen: «Ingen vill satse på samisk», i Altaposten 24.2.2016.

¹²Todal, Jon and Kamil Øzerk: Vegar tile in tospråkleg skule. Om utdanning av samiskspråklege medarbeidarar i finnmarksskulane. SH-rapport nr. 3 1996.

¹³Marie Elise Nystad og Liv Inger Somby: «Ingen samisk læreutdanning i høst», NRK 4.7.2011, og Monica Falao Pettersen og Berit Solveig Gaup: «Hvorfor vil færre og færre studere her?», NRK 13.3.2016.

If this shortage were the case for another subject at school, large national measures would probably be taken to ensure that recruitment of teachers was strengthened. Today, there is no national strategy to increase recruitment of Sami-speaking teachers. This means that chance

and luck decide if there are enough teachers to fulfill Sami students' rights to an education in Sami. It is not likely that authorities will be able to fulfill Sami students' rights to an education in Sami if recruitment of Sami speaking teachers does not significantly increase.

In absolute numbers, in order to maintain the same number of teachers as there are now, 1.5 South Sami teachers would have to be educated each year for the next 10-20 years. For Lule Sami areas, one teacher would have to be educated every other year. However, the shortage of Lule Sami teachers is already precarious so really there would probably have to be about the same number of teachers educated as for South Sami. This is also due to the above-mentioned attrition rate of Lule Sami teachers. For North Sami, 90 primary and lower secondary teachers would have to be educated over the next 20 years. Approximately 25 upper secondary North Sami teachers would have to be educated to maintain current numbers.

It is important to point out that these predictions are based on stable Sami student numbers. It is very possible that the number of Sami students will increase in the years to come, which will lead to a corresponding increase in need of Sami teachers. Additionally, the Education Act may change. Some municipalities and counties are also considering giving all students access to Sami education and the Sami language committee suggests that Sami education be granted if three students outside a Sami administrative area request it. All this could also lead to an increased need of Sami-speaking teachers.¹⁶

8.12 Vision of Lule and South Sami Teacher Education

The basis for a possible Lule and South Sami teacher education program is proposed above. For many years, people have called for a separate teacher-training program, especially for South Sami. This has not yet been possible for various reasons. The merging of the University of Nordland and Nesna and Nord-Trøndelag University Colleges has strengthened the pedagogical milieu in these regions and the new institution has been awarded national responsibility for both Lule and South Sami teacher training.

The wording of the new framework plan for the five-year Sami primary and lower secondary teacher training program allows for the establishment of a separate Lule and South Sami program at Nord University. Such a program could start by offering course work in Norwegian and then 30-60 credits in Lule or South Sami, depending on whether one wanted to teach at the primary or lower secondary level. In addition, the program could include courses on Sami culture as well as emphasize Sami pedagogy and didactics.

 ¹⁵Proposal for Regulations of Sami framework plan for primary and secondary school education grades 1-7.
 ¹⁶NOU 2016:18

Sami-speaking teachers have competencies that are in high demand in many arenas outside of the educational system. Sami teacher training lasts five years and when we check the number of Sami speakers in teacher-training programs today, we see that we have nowhere near the number of students needed to cover even out current needs. Therefore, along with prioritizing recruitment of Sami-speaking candidates for teacher education, we must also provide the opportunity for other qualified teachers to acquire sufficient competency in Sami in order to be able to teach it.

There is little doubt in that such a program would strengthen Lule and South Sami education both qualitatively and quantitatively. Yearly admissions would be difficult, but one can imagine

a three-year cycle where Sami language availability will be synchronized with teacher training to ensure standard progression. We come back to this in section 5.14.

8.13 Conclusion

In this article, we have looked at the student-teacher ratio for Sami education and surveyed the pedagogical and linguistic qualifications of Sami teachers. We have also made predictions about student-teacher ratios for the coming years and discussed measures to strengthen and develop Sami education.

Overall, the student-teacher ratio is lower in Sami education than in other subjects in Norway, but there is significant variation between the Sami language groups. A large majority of Sami teachers are highly qualified both in terms of pedagogy and language skills, but there are still lower pedagogical qualifications among Sami teachers compared to those who teach other subjects. A significant portion of Sami teachers has continuing education in Sami. In the short run, we cannot say that the average age of teachers is dangerously high, but at the same time, the level of recruitment to teaching programs has been far too low for too long. Without improvement, there will be a dangerous shortage of Sami teachers which will, in turn, lead to difficulties in honouring Sami students' rights to Sami instruction.

8.14 Recommendations

- Higher levels of applicants to Sami teacher training programs should be initiated
- Universities and university colleges should be better rewarded for graduation of Sami speaking teachers
- The opportunity of accredited teachers to acquire qualifications to teach Sami should be strengthened
- More favourable stipend schemes should be assessed for Sami-speaking education students
- Nord University should establish a Lule and South Sami teacher-training program

Sami distance education teachers should receive the opportunity to upgrade their skills in multiparty learning so that all Sami students receive Sami education even if there is a shortage of Sami teachers. School owners and County Governors should develop strategic plans to ensure that all Sami teachers fulfill formal competency requirement within 2025 (within 2020 for distance learning teachers - the Framework plan for Sami distance education).

Sami teaching aids must become easily available so that Sami teachers have the resources to offer the best possible language education.

The possibility of having two curriculums in Sami as a First Language should be assessed. Today's curriculum does not necessarily suit all students and the establishment of different curriculums for students living within and outside Sami administrative areas should be explored.
The reimbursement scheme for Sami education should increase to a level that reflects the actual expenditures of the education. Then municipalities will be able to make long-term plans the education of Sami teachers in the municipality.

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9 Self-Reported Experience of Discrimination against Samis in Norway

Ketil Lenert Hansen, PhD, Associate Professor, Regional Centre for Child and Youth Mental Health and Child Welfare North (RKBU North), UiT The Arctic University of Norway, Tromsø.

Summary

New research shows that many Samis report experiencing various forms of discrimination. The aim of this chapter is to give updated information on the challenges of discrimination Samis face in Norway. We will survey the occurrence of self-reported incidents of discrimination among adult Samis between the age of 18 and 69 years, study where discrimination happens, identify who discriminates and how an individual might respond to being discriminated against.

The figures are based on qualitative data collected in 2012 from 11,600 individuals (both Sami and majority Norwegians), from 25 municipalities in the five northernmost counties in Norway. The study is part of a health and living conditions investigation in areas with Sami and Norwegian communities, called the SAMINOR 2 survey, which was a questionnaire sent out to municipalities in Northern Norway and Trøndelag.

In the sample, approximately one in five experienced discrimination. About a third of those who had been discriminated against, say that the incident happened in the last two years. Samis experience discrimination much more frequently than majority Norwegians. Samis with strong Sami ties report the highest incidence of discrimination, both in the last two years and earlier.

The most common form of discrimination reported by Samis was ethnic discrimination, followed by discrimination based on gender and geographical affiliation. Sami women reported the highest rates of gender discrimination.

Samis experience discrimination in several arenas. The most common is at school, work and in the local community. Additionally, many Samis report discrimination in public, on the internet and at stores or restaurants. Samis, to a greater extent than majority Norwegians, have and still experience discrimination from fellow students, teachers and other employees at school, work colleagues, public sector employees, other ethnic groups (majority population), strangers and other Samis. Even though many Samis experience discrimination, few file reports with The Equality and Anti-Discrimination Ombudsman (LDO- Likestillings- og diskrimineringsombudet).

9.1 Introduction

The Sami population is in a unique position compared to other minorities in Norway. On the one hand, they have a long history as a discriminated minority, especially when the Norwegian state had a Norwegianization policy aimed at assimilating Samis into the Norwegian majority culture (Minde, 2005). Conversely, Samis today hold the status of indigenous people with strong legal standing in Norway (Midtbøen, 2015).

Nonetheless, the Samis' legal status does not protect them from facing discrimination. Adult Samis much more frequently report being discriminated against than majority Norwegians (K.L. Hansen, Melhus, Hogmo & Lund, 2008). In addition, discrimination is associated with poor somatic and mental health (K. L. Hansen, 2015; K. L. Hansen, Melhus & Lund, 2010; K. L. Hansen & Sørlie, 2012).

Sami policies from the middle of the 1800s until after the Second World War in Norway were based on assimilation. For Samis, this meant that their cultural traditions and language were to be replaced with the corresponding majority culture and language (Josefsen, 2006; Minde, 2005). These policies had an ideological foundation in Social Darwinism, nationalism and security policy (Jensen, 2005). Within the educational system, this was expressed by policies such as instruction only in Norwegian, and the use of the Norwegian cultural identity as the basis of interaction between Samis and ethnic Norwegians (Høgmo, 1986). However, after the Second World War, the Norwegian government changed the direction of its policies on Sami minorities. This change became clear in connection with the steering of Samis' legal rights at the end of the 1980s and beginning of the 1990s (ILO-169 and wording in paragraph 108 of the constitution), and the creation of the Sami Parliament.

Even though Norwegianization policies are a part of Norwegian history and former policy, their negative effects are long lasting. It will take time to change the general framework of Norwegian policies, legislation and organization, not to mention myths and attitudes, so that Sami culture, language, traditions and needs are sufficiently considered in fields such as education, work and public service.

Little research has been done on the long-term effects of the Norwegianization process and structural discrimination. Certainly, Norwegianization has had many victims. Colonialization has stolen many Samis' language, culture, and self-esteem and has been the cause of personal trauma (Nergård, 2011). Many researchers and politicians have spoken up to form a truth and reconciliation commission about the political and cultural injustices that Samis have experienced. Norwegianization and discrimination on the grounds of ethnicity has led to significant consequences in the living conditions, quality of life and health of many Sami families and individuals in a range of local communities in Norway, likely more than previously thought. We need to know more about how this has affected and still affects the Sami population.

9.1.1 Chapter Objectives

Updated information on the status of discrimination against Samis is needed to promote equality and hinder ethnic discrimination. This information can also be used to develop effective measures to prevent discrimination. The aim of this chapter is to give updated information on the challenges of discrimination Samis in Norway face. Which challenges do Samis face at work, school, in the local community and public sector? Do they face the same challenges with equality and discrimination as majority Norwegians? Alternatively, do Samis and non-Samis face different challenges?

9.1.2 The Concept of Discrimination

This article focuses on personal experiences with discrimination of Samis in Norway. In this article, discrimination is defined as occurring "when a person or group of people is treated less favourably than others because of, for example, ethnicity, religion, beliefs, disability, age or sexual orientation". 'Discrimination' is a form of unequal treatment which is unfairly justified and is not related to positive discrimination or affirmative action.

Discrimination can be defined as acts and practices which lead to injustice and inequality in power, resources and opportunities across people and groups in society and serves to support systems of privilege and repressive structures (Ferdinand, Paradies & Kelaher, 2015). Discrimination can manifest itself from subtle forms of exclusion and verbal statements to physical acts of violence. Current data suggests that discrimination is an increasing social issues in many countries (Paradies et al., 2015).

In this study, we have taken a broad approach to self-reported experience of discrimination and included ethnicity, gender, age and geographic affiliation, as well as discrimination based on illness, learning disabilities, religion or faith, physical disability, nationality, sexual orientation and others.

Discrimination can occur at school, work, in the local society, the public sector, other public settings such as shops and restaurants or in the family. The type of discrimination and setting in which it occurs can overlap and mutually reinforce. Samis may therefore face several types of discrimination in several settings at the same time. Discrimination can occur on three levels: *internalized at an individual level* (for example incorporation racist attitudes, beliefs or ideologies in an individual), *interpersonal* (face to face in interactions between individuals), and at the *structural* level (inherent discriminatory effects of social structures) (K. L. Hansen, 2015). In this chapter, we mainly study self-reported interpersonal discrimination (face-to-face interactions) among adult Samis and non-Samis.

9.1.3 About the Study

The figures are based on data collected in 2012 from 11,600 individuals between the ages of 18 and 69 years (both Sami and majority Norwegian), from 25 municipalities in the five northernmost counties in Norway. The study is a part of SAMINOR 2-survey, which was a questionnaire sent out to municipalities with Sami and Norwegian communities in Northern Norway and Trøndelag. See map 9.1 for research area. The research is described earlier in another publication (Brustad, Hansen, Broderstad, Hansen & Melhus, 2014). *Datatilsynet* (The Data Inspectorate) and *REK nord* (The Regional Committees for Medical and Health Research Ethics, North) have approved the study.

Map 9.1 Municipalities Involved in the Study



9.1.4 Sample Characteristics

Demographic characteristics of the sample are presented in table 9.1. The majority in the sample were women. The average age was 50 years old, and the majority of participants had an average income, an education at the college or lower university degree level and lived in *Distrikts-Norge* (rural Norway). The study is therefore most representative of individuals with these characteristics. A third of participants had a Sami affiliation.

	Total Number	%
Gender		
Men	5149	44,4
Women	6451	55,6
Age (in years) ^a		49,9 ±13,7
18–29	1484	12,8
30–49	4289	37,0
50–59	2933	25,3
60–69	2894	24,9
Household Income		
Low	1633	14,1
Medium	4245	36,6
High	3667	31,6
Very high	1612	13,9
Not answered	443	3,8
Education (in years)		
<7	301	2,6
7–9	1456	12,6
10–12	3090	26,6
13–16	3941	34,0
>16	2599	22,4
Not answered	213	1,8
Residence		
Sami minority area	9179	79,2
Sami majority area	2417	20,8
Not answered	4	0,0
Ethnicity 1		
Sami	3928	34,1
Non-Sami	7577	65,8
Not answered	95	0,1
Ethnicity 2 ^b		
Strong Sami ties	1372	11,9
Self-reported Sami	1459	12,7
Sami family background	1097	9,5
Non-Sami	7577	65,8
Not answered	95	0,1

Tabell 9.1 Sample Characteristics (N = 11 600)

^a Average value \pm standard deviation.

^b See section on 9.1.5 for explanation of categories.

9.1.5 Definition of Ethnicity

Ethnicity refers to a group of individuals with a common identity related to a common origin, perceived by others to be a distinguishable by a common language, culture, history and so on. The term entails both subjective and objective aspects. Sami as an indigenous group is included in the term *ethnicity*.

Since there is no Sami registry in Norway, and since this information cannot be collected in a census, the survey included 11 different questions about ethnicity in order to define who was Sami and who not. In addition, this survey wanted to make a differentiated ethnicity variable that could categorize *Saminess*.

Figur 9.1 The figure comes from the questionnaire used by the SAMINOR 2 study. It shows how the questions on ethnicity were posed.

Hvilket hjemmespråk har/hadde du, dine foreldre og beste- foreldre? (sett ett eller flere kryss)					
Morfar: Mormor: Farfar: Farmor: Far: Mor: Jeg selv:	Norsk	Samisk	Kvensk	Annet, k	peskriv
Hva er din, din fars og din mors etniske bakgrunn?					
Norsk Samisk Kvensk Annet, beskriv Min etniske bakgrunn er:					
Hva regner du deg selv som? (sett ett eller flere kryss)					
上			orsk Sam] 🗌	isk Kvensk	Annet, beskriv

The first question group concerns which home language you, your parents and your grandparents have/had. The next question concerns your father's, mother's and your ethnic background. The last question is: What do you consider yourself to be? For all of these questions, the answer alternatives were 'Norwegian', 'Sami', 'Kven', or 'other'. Respondents could cross off one or more of the categories for each of the questions.

From these 11 questions, it is possible to make various categories of ethnicity. In this case, we chose to categorize as Sami any participant who crossed off one of the boxes marked Sami. The others were categorized as non-Sami. (For the most part, these participants crossed off Norwegian ethnicity with some also crossing off Kven or other ethnicity.)

We further constructed three categories of Sami ethnicity:

- (i) Strong Sami ties
- (ii) Self-reported Sami
- (iii) Sami family background

Category 1: 'Strong Sami ties' was made up of people who answered YES to all of the three following questions: 'I use Sami as my home language', 'my ethnic background is Sami' and 'I consider myself to be Sami'. This group is marked in green as category 1 in figure 9.2.

Category 2: 'Self-reported Sami' were those who answered YES to one or two (but not all three) of the questions mentioned above in category 1. This group is shown in figure 9.2 all within the circles, except for the innermost circle which is category 1.

Category 3: 'Sami family background' was defined as those who reported Sami family background with either language or ethnicity for parents or grandparents, but did not define themselves as Samis. More concretely, these respondents reported Sami as a home language either for their parents or grandparents and/or that their parents had a Sami ethnic background, but they did not view their own ethnicity as Sami, or did not feel themselves to be Sami, and did not speak Sami at home. This group is marked as the white areas inside the quadrangle in the figure.

The categories are mutually exclusive and show a graduated ethnicity variable, where category 1 shows most Sami markers and a strong connection to a Sami background, Sami self-perception and home language. There are 1,372 respondents in this category. Category 2 is the largest category in terms of number of respondents (N=1,459). In this category, most have said that they have both a Sami background and perceive themselves as Sami (55%), but only 8% in this category have Sami as a home language. In category 3, 1,097 reported a Sami family background without perceiving themselves as Sami, defining their own background as Sami or speaking Sami. Figure 9.2 shows a graphic representation of the different ethnicity categories.

Figur 9.2 Graphic Representation of Ethnicity Categories



Sami family background without self-defined Sami connection, 1097 people

Explanation of figure 9.2:

Circle 1 (circle outlined in blue): personally experienced Sami: Refers to those who have answered that they consider themselves as Sami, 2,323 people.

1* 118 people reported that they perceive themselves as Sami, without saying that they have a Sami background and Sami as a home language Circle 2 (circle outlined in red): Sami background. 2,645 people.

2* 420 people (on the extreme left in the figure, red) say they have a Sami background, but report not perceiving themselves as Sami or speaking Sami at home.

Circle 3 (outlined in green): I have/had Sami as a home language. 1,488 people.

3* 42 people have Sami as a home language without reporting a Sami background or perceiving themselves as Sami.

Frame: All who crossed off one or another Sami connection are represented within the frame. In total, 3,928 people.

Categorization of Ethnicity

Category 1: 'Strong Sami Connection' is comprised of people who answered YES to all three of the following questions: 'I use Sami as a home language', 'My ethnic background is Sami' and 'I consider myself to be Sami'. (Consequently are within all three circles: $1 \land 2 \land 3$). 1,372 people.

Category 2: 'Self-Reported Sami' are those who answered YES for Sami in one or two (but not all three) questions mentioned above in category 1. This group is all within the circle, except the inner circle which is category 1. 1,459 people.

Category 3: Sami Family Background without declaring themselves as Sami' was defined as those who reported a Sami family background, either language or ethnicity of the parents or grandparents, but do not define themselves as Sami (with personally experienced Sami, their own background is Sami or they used/use Sami at home)

Graphically represented by all between the circles and frame (white colour). 1,097 people.

 $1 \land 2 \land 3$ =Category 1.

1\2: Those who reported their ethnicity as Sami and consider themselves to be Sami. 805 people.

2/3: Those who say that they have a Sami background and had Sami as a home language, but don't consider themselves to be Sami. 48 people.

1\3: Those who consider themselves to be Sami, had Sami as a home language, but don not say that their background is Sami. 26 people.

9.1.6 Sami Area

We defined the municipalities of Kautokeino, Karasjok, Nesseby, Tana and Porsanger as *Sami majority areas*. In these areas, over 50% of the population reported a Sami connection. The municipalities of Røros, Snåsa, Røyrvik, Namsskogan, Narvik, Alta, Grane, Hattfjelldahl, Tysfjord, Evenes, Skånlang, Lavangen, Lyngen, Storfjord, Kåfjord, Kvænangen, Loppa, Kvalsund, Lebesby and Sør-Varanger were defined as *Sami minority areas*. The reason for this was that in these areas, Sami occupy in a minority position vis-à-vis the majority population.

9.2 Characteristics of those who Experience Discrimination

In our sample, approximately one in five (21.5%) have experienced discrimination. Approximately a third of those who have experienced discrimination, say the discrimination occurred the last two years. Age, ethnicity, education, income and residence were all factors tied to discrimination. Samis, people between the age of 30 and 49, with 13-16 years of education, a household income between 301,000 and 600,000 NOK and/or living in Sami minority areas reported they highest number of incidents (figure 9.3).



Figur 9.3 Characteristics of those who Reported Discrimination

9.2.1 Samis Experience Most Discrimination

Half of Samis (50%) with a strong Sami connection reported having been discriminated against, 34.3% reported that the offence has happened before and 16.5% said that the event happened in the last two years. In addition, self-reported Samis (32.8% in total, 24.5% before and 8.4% in the last two years) reported a high degree of discrimination. In comparison, 14.3% of non-Samis reported discrimination, 9.9% before and 4.4% in the last two years (in the period 2010-2012). Samis with Sami family background reported the highest rate of discrimination that occurred earlier, but did not have the same number as non-Samis for violations in the last two

years (table 9.2). This shows that Samis with a strong Sami connection report approximately four times as much discrimination as ethnic Norwegians (table 9.2).

Table 9.2Occurrence of Discrimination (total, before and in the last two
years) among Samis and non-Samis

	Self-Reported Discrimination			
Ethnicity	Total ^{*1} % (antall)	Before % (antall)	Last two years % (antall)	
Strong Sami connection	50,8 (697)	34,3 (470)	16,5 (227)	
Self-reported Sami	32,8 (479)	24,5 (375)	8,4 (122)	
Sami family background	19,8 (217)	14,9 (164)	4,8 (53)	
Non-Sami	14,3 (1085)	9,9 (748)	4,4 (337)	

*1 Reported discrimination either in the last two years, before (earlier than in the last two years) or in other questions about discrimination (unspecified point in time). Total number of those discriminated against = 2,478 (18 cases where we lack information on ethnicity). 739 reported incidents of discrimination in the last two years (5 cases missing information on ethnicity). 1,739 reported cases of discrimination before (last two years) (13 cases of lack of information on ethnicity).

Table 9.3 Incidents of Discrimination among Samis and non-SamisDistributed by Gender and Residence

Ethnicity/C	Gender/Place of Residence	Total ^{*1}	Before	Last two years
Sami Majority Area		% (n)	% (n)	% (n)
Men	Strong Sami connection	50,5 (220)	36,9 (161)	13,5 (59)
	Self-reported Sami	35,2 (77)	25,6 (56)	9,6 (21)
	Sami family background	24,2 (23)	20,0 (19)	4,2 (4)
	Non-Sami	23,2 (64)	15,9 (44)	7,2 (20)
Women	Strong Sami connection	47,6 (297)	31,4 (196)	16,2 (101)
	Self-reported Sami	32,5 (87)	20,5 (55)	11,9 (32)
	Sami family background	26,4 (28)	22,6 (24)	3,8 (4)
	Non-Sami	28,0 (104)	18,0 (67)	9,9 (37)
Sami Minority Area				
Men	Strong Sami Connection	58,3 (84)	37,5 (54)	20,8 (30)
	Self-reported Sami	31,1 (141)	26,2 (119)	4,8 (22)
	Sami family background	19,5 (76)	14,6 (57)	4,9 (19)
	Non-Sami	12,9 (399)	9,1 (281)	3,8 (118)
Women	Strong Sami Connection	56,9 (95)	34,7 (58)	22,2 (37)
	Self-reported Sami	33,6 (174)	24,5 (127)	9,1 (47)
	Sami family background	17,8 (90)	12,6 (64)	5,1 (26)
	Non-Sami	13,5 (517)	9,2 (355)	4,2 (162)

*1 Reported discrimination either in the last two years, before (before the last two years) or on another question about discrimination (unspecified point in time). When we stratified according to gender and residence, we obtained two missing values for discrimination, so that we had 2,476 cases in total; 1,737 before and 739 in the last two years.

Sami men and women with strong Sami ties report a high degree of discrimination in both Sami majority and Sami minority areas. Reports are a somewhat higher in Sami minority areas, but only by a significant amount for Sami women with strong Sami ties. The majority population (non-Samis) report higher rates of discrimination in Sami majority areas than outside of these areas (table 7.3).

9.2.2 Types of Discrimination

The most common form of discrimination reported by both Sami men and women with strong Sami ties (men: 33.3%, women: 31.9%) and those who self-reported Sami identity (men: 15.0%, women: 17.0%), was ethnic discrimination, followed by discrimination based on gender and place of residence. Women reported a significantly higher rate of gender based discrimination than men, and Sami men and women (with strong Sami ties) reported more than non-Samis (Sami men: 6.7%; Sami women: 11.9% versus Norwegian men: 1,2% and Norwegian women: 2.9%). Samis also reported more discrimination on the grounds of geographical affiliation than non-Samis. Sami men and women reported somewhat higher rates of discrimination on the basis of learning difficulties than non-Samis. Sami women reported somewhat higher rates of discrimination based on illness than non-Samis (1.6-2.8% versus 1.2%) (See figures 9.4 and 9.5).

There was no meaningful difference in reporting of discrimination due to religion, disability and sexual orientation. In the Sami population, approximately one percent were discriminated against because of sexual orientation, while the number for religion and disability was close to two percent among Samis.

Another reason for discrimination was nationality. The figures show no difference between Samis and non-Samis.

Samis reported also a significantly higher rate of other types of discrimination than non-Samis. These were not collected in the ten categories mentioned above (figures 9.4 and 7.5). Participants has the opportunity to specify other types of discrimination. Many reported discrimination connected to work, their Sami identity (because they didn't speak Sami, were not good enough Samis in others' eyes, or for other questions related to their Sami provenance), and other pointed out that it was because of their homosexuality.

Figure 9.4 Types of Discrimination Experienced by Samis and non-Samis (men)



Explanation of figure: Sami 1 = Strong Sami ties, Sami 2 = self-reported Sami, Sami 3 = Sami family background. Non-Sami = Norwegian. The table is based on the whole sample (N=11,600).

Figur 9.5 Types of Discrimination Experienced by Samis and non-Samis (women)



Explanation of figure: Sami 1 = Strong Sami ties, Sami 2 = self-reported Sami, Sami 3 = Sami family background. Non-Sami = Norwegian. The table is based on the whole sample (N=11,600).

In total, 66% reported having experienced one form of discrimination, 24% stated that they had experienced two types of discrimination and 7% said that they had experienced three types of discrimination. There was no ethnic difference between Samis and non-Samis with respect to how many types of discrimination they had experienced.

9.2.2.1 Comments

Through the ratification of the UN's Convention on the Elimination of All Forms of Racial Discrimination (August 6, 1970), Norway has pledged to prohibit discrimination based on race, skin colour, heritage or national and ethnic origin. The convention was incorporated into Norwegian law through the Anti-Discrimination Act (law June 3, 2005 no. 33) (Nystuen, 1991). The Anti-Discrimination Act prohibits direct and indirect discrimination based on ethnicity, nationality, heritage, skin colour, language, religion or philosophy of life. The Act's purpose is to promote equality, ensure equal opportunity and rights and prevent discrimination. The act is applicable to all sectors of society, with the exception of family life and other personal relationships (Lovdata, 2013).

Many Samis experience ethnic discrimination in Norway and many experience this in typically Norwegian-dominated areas (table 9.3). This is in line with earlier research about personal experiences with discrimination of Samis in Norway (Ketil Lenert Hansen, 2011). Ethnic discrimination is the most common form of discrimination Samis experience. Figures show that approximately one in three Samis with strong ties to the community has experienced discrimination because of his/her Sami origin, compared to under three percent of majority Norwegians. This shows that Samis experience ten times more ethnic discrimination than non-Samis. Our data from 2003/2004 agrees with these numbers, which indicates that Samis still experience a high degree of ethnic discrimination in Norwegian society today.

Gender discrimination has been highly prioritized in Norway with the implementation of legislation in 1978. Nonetheless, gender based discrimination is the second most commonly reported form of discrimination reported by Sami men and women. There is no study in Norway about gender discrimination in the general population (Skjeie, 2012). We know little about gender discrimination in the Sami population. Sami women report the highest incidence of gender based discrimination. We can imagine that the fight for equality in Sami society has had to yield to the fight for recognition as an indigenous population, and that the question of equality has not been prioritized until the beginning of this century (Josefsen, 2004). We need more information about why Samis (especially Sami women) report higher rates of gender-based discrimination than the majority population.

Many Samis also say that they feel discriminated against because of their place of residence. This can be the result of geographical or institutional variations which make the situation different for all Samis. For example, Josefsen (2006) points out that government authorities have geographically differentiated which rights particular Samis have (Josefsen, 2006). Our data supports this and shows that Samis who live in typically Sami minority areas report higher degree of discrimination than those who live in areas defined as Sami areas, and have strong protection of Sami institutions, language, values and culture (K. L. Hansen, 2012).

Samis also reported higher levels of age discrimination than majority Norwegians (3.4% versus 1.3%). The difference was not very big, but nonetheless significant statistically. In Norway, the debate on age discrimination has been associated with work. Protection against age

discrimination applies only to work but there is a debate on whether age discrimination should apply to all sectors of society.

When it comes to discrimination based on sexual orientation, 0.7-1.2% of the Sami population have experienced this, versus 0.4% of the majority population. The difference between Samis and non-Samis is not statistically significant. However, in the open-ended questions, quite a few Samis answered that they have experienced discrimination based on their homosexuality. Recently, there has been a spotlight on taboos in Sami society, and homosexuality has been one of these themes. In the debate, many claimed that it is more difficult to be a homosexual Sami than a homosexual Norwegian because of the double stigma that comes from being a minority and a homosexual. (NRK Sápmi, 2016). Homosexuality has been extremely taboo and shameful in the traditional Sami society (NRK Sápmi, 2013).

9.2.3 Where does Discrimination Happen?

Samis experience discrimination in many arenas. The most common arenas are school, work and local community. Around one in five Samis with strong Sami ties has experienced discrimination at school or in connection with education, compared with around 4% of non-Samis. Samis also report more discrimination at work and in the local community than Norwegians do. Further, many Samis report incidents in public, on the internet and in stores or restaurants. More Sami men than women with strong ties report incidents in stores and restaurants (9.3% versus 5.2%). Digital discrimination was also reported far more frequently among Samis with strong Sami ties than non-Samis. Samis experienced more discrimination in a family setting, volunteer work and while receiving medical treatmen than non-Samis. However, it must be pointed out that there were few who answered that they had experienced discrimination in these last three areas. Few reported incidents of discrimination while seeking work, buying a home, in the rental market or applying for a loan (less than 3%) (both among Samis and non-Samis). One can therefore say that discrimination in these areas is a minimal problem in Norway. However, Samis experienced far more frequent discrimination on other areas than the 12 mentioned. There is no big difference between men and women regarding where discrimination happens (figures 9.6 and 9.7).



Figure 9.6 Where does discrimination of Sami and non-Sami men happen?

Explanation of figure: Sami 1 = Strong Sami ties, Sami 2 = self-reported Sami, Sami 3 = Sami family background. Non-Sami = Norwegian. The table is based on the whole sample (N=11,600)).





Explanation of figure: Sami 1 = Strong Sami ties, Sami 2 = self-reported Sami, Sami 3 = Sami family background. Non-Sami = Norwegian. The table is based on the whole sample (N=11,600).

9.2.3.1 Comments

NOU 2015: 2 - Å høre til – Virkemidler for et trygt psykososialt skolemiljø (Belonging -Measures for a safe psychosocial school environment), presents data from *Elevundersøkelsen* 2014/2015 (Student Survey 2014/2015) and *Folkehelseinstituttet* (The Norwegian Institute of Public Health) that shows the portion of students who are insulted and bullied in Sami areas is higher than in the rest of the country (Djupedal, 2015). The fact that our survey show that school is the social arena where most Samis experience discrimination supprts these recent findings. This raises a serious question about whether the requirements of paragraph 9a of Education Act 9a (Lovdata, 2015) of a good psychosocial environment at school, free of bullying is being fulfilled in Norway for Sami children and youth. Even though we work hard to prevent bullying at schools in Norway, with several anti-bullying campaigns (Olweus, 2009; Roland, 2014) going on over the last three decades, none have focused on the prevention against indigenous peoples and minorities (Minton, 2014). These anti-bullying programs have not been adapted to Sami culture and identity. Cultural sensitivity is an important element which should be prioritized in future anti-bullying campaigns and interventions against discrimination at school.

The workplace was the most common arena where non-Samis experienced discrimination and the second most common arena for Samis (after the educational sector). In total, 7.5% of the sample experienced discrimination or insults at work – 11.5% of the Sami population (all three Sami groups as a whole) and 5.6% of the non-Sami population (regardless of gender). Earlier studies in Norway have shown that the incidence of bullying at work was around 2-14% (Nielsen et al., 2009). Our numbers lie within this span and show that discrimination at work is an even greater problem for Samis than non-Samis. Employers should work actively, purposefully and systematically to promote equality and prevent discrimination within their establishments.

Samis experience further discrimination in the local community, in public and at stores or restaurants, far more frequently than non-Samis. These findings suggest that Samis face more prejudice, discriminatory remarks and insults in the public sphere than majority Norwegians. This can again limit their opportunities of democratic participation in the welfare society in terms of equal access to social and public services and goods.

9.2.4 Discrimination and Social Media

Digital bullying has increased in Norway between 2000 and 2010 (Roland, 2014). A 2008 study conducted by Læringsmiljøsenteret (The Centre for Learning Environment) in Stavanger concludes that traditional bullying affects approximately twice the number of people as digital bullying (Auestad, 2011). International studies have found a weak tendency for girls to be exposed to digital bullying more frequently than boys (Parker-Jenkins, 2011). This study used the term discrimination 'on the internet' for digital bullying. Samis self-report a significantly higher number of incidents of digital discrimination than non-Samis. Younger Sami respondents (aged 18-29) frequently reported experiencing digital bullying. More than one in five Sami youth aged 18-29 with strong Sami ties reported experiencing discrimination on the internet. Among non-Samis, we found no gender differences, but among Samis we found that digital discrimination was reported more frequently by women than men, regardless of age (data not shown in tables).

We know little about digital attacks or hate speech experienced by Samis in Norway, as these have not yet been researched or studied in a qualitative approach. We know from media (TV,

radio, newspaper and internet), that many Samis experience offensive comments, hate speech and prejudice, as well as stereotypical portrayals of Sami culture and identity in comment fields on the internet and on various websites (Ketil Lenert Hansen, 2012).

9.2.5 Who Discriminates?

Samis with strong Sami ties and self-reported Samis have experienced much more discrimination from fellow students, teachers and other employees at school, other ethnic groups (majority population), strangers and other Samis than majority Norwegians. In addition, many Samis report offences from public servants and work colleagues. Non-Samis report most discrimination by work colleagues, fellow students and public servants (see figure 9.8 and 9.9).



Figure 9.8 Who discriminates against Samis and non-Samis (men)?

Explanation of figure: Sami 1 = Strong Sami ties, Sami 2 = self-reported Sami, Sami 3 = Sami family background. Non-Sami = Norwegian. The table is based on the whole sample (N=11,600).



Figure 9.9 Who discriminates agains Samis and non-Samis (women)?

Explanation of figure: Sami 1 = Strong Sami ties, Sami 2 = self-reported Sami, Sami 3 = Sami family background. Non-Sami = Norwegian. The table is based on the whole sample (N=11,600).

9.2.5.1 Comments

Since many in the survey report discrimination at school, it is not surprising that fellow students were the most common bullies reported. More surprising was that so many Samis reported offensive comments by teachers or other employees at school.

Being different is a call to discrimination and bullying and as a minority, Samis are vulnerable (Høgmo, 1998). Many Samis experience discrimination by majority Norwegians and strangers. These offences happen in various arenas of society. After fellow students, the most common bullies that Samis face are public servants and colleagues.

Many Samis experience discrimination by other Samis. This must be seen in connection to Norwegianization and the resulting shame associated with being Sami. Shame over Sami culture is maybe one of the most difficult and important barriers to revitalization and decolonisation of individuals, families and local communities (Nergård, 2011). Many Samis have lived through the assimilation of their identity and language over the last three generations (Høgmo, 1986) and this has led to a denial and suppression of Sami identity and culture (Høgmo, 2011). Høgmo has pointed out that the strongest Sami discrimination occurs in Norwegianized Sami-Norwegian communities, and that people with Sami backgrounds are often the ones carrying out the discrimination. He points out that this is a reaction to the attitude in the majority society: derogatory comments about Samis take attention away from one's own Sami background (Høgmo, 2005). These complex social and psychological factors can help explain why so many Samis in this study experience offences from their own Sami group.

9.2.6 Resilience against Discrimination

Research shows that self-reported experience of discrimination is associated with mental and physical health problems (K. L. Hansen, 2015; K. L. Hansen & Sørlie, 2012). A fifth of the sample reported that discrimination affected them a lot (table 9.10) and we know from earlier studies that this group is potentially exposed to health problems (Paradies et al., 2015).



Figure 9.10 How affected by discrimination are you?

Figure 9.11 Did you do something to end the discrimination?



We also know that those who did something to end the discrimination emerge with better health than those who do not. In our sample, 38% said that they did something to stop the discrimination. One can suppose that this group is most resilient to the negative health consequences that discrimination can inflict (figure 9.11).

9.2.7 Few Samis Report Discrimination to the Equality and

Anti-Discrimination Ombudsman

Even though many Samis experience discrimination, few have contacted the The Equality and Anti-Discrimination Ombudsman (LDO- *Likestillings- og diskrimineringsombudet*). In our sample, only 1.8% (45 people) who reported having experienced discrimination had contacted LDO. There can be many reasons that Samis do not contact LDO for help. One of these can be tied to Sami norms and traditions where one should appear strong and not ask for help outside of the family when one is faced with hardship (Bongo, 2012; Kuokkanen, 2015). Cultural and linguistic barriers may also be reasons for Samis not to seek help regarding personal experiences with discrimination.

9.2.8 Multiple Discrimination

Samis experience discrimination in several arenas or settings much more frequently than the majority Norwegian population. This means that Samis more often than non-Samis report that discrimination occurs in more areas of society at the same time, for example in an educational context and/or work environment, local community, public sector, in stores/restaurants and/or on the internet. The fact that Samis experience discrimination (most often because of their ethnic background) in several areas of society at the same time, and from both known and unknown people, can be understood in relation to the concept of cumulative discrimination. This term refers to discrimination that accumulates across spheres or arenas. Cumulative discrimination in one part of society can contribute to reduced opportunities in other areas (Arnfinn & Hilde, 2016). For example, discrimination at school can affect results at school and in the long run, opportunities in the labour market. These processes are seldom illuminated by research because they often focus on single arenas such as school or work and therefore miss connections between them.

9.3 Challenges and Recommendations

Many Samis experience various forms of discrimination in Norwegian society. We know that the most common form of discrimination is ethnic discrimination and that they face these offences in various arenas of society: in educational contexts, work, in contact with public services, in stores, restaurants and increasingly in social media, which in the last three years has developed into a new arena for discrimination of Samis.

Discrimination against Samis is a social problem. It has been documented through research over the last ten years (Ketil Lenert Hansen, 2011). Nevertheless, there is little systematic research exploring equality and the discrimination challenges that Samis experience in Norway, for example at school, work, local community and in social media. There are many more reports about immigrants (Midtbøen, 2015). Norwegian authorities should establish a system to monitor the extent of discrimination the Norwegian indigenous population encounters in the different social arenas, especially at school, work and local community. In this chapter, we have looked at some of the challenges of equality and discrimination that Samis encounter in Norwegian society. There are still large gaps in knowledge about discrimination and bullying of Samis which future research should shed light on, especially on areas that concern Sami children and youth.

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