



Scenary from Southern Saami Area, Røros, Norway  
Photo © Johnny-Leo L. Jernsletten

# Reindeer Husbandry in Norway

## Introduction

This chapter will focus on the reindeer husbandry in Norway. Reindeer are herded over an area of approximately 140.000 square kilometres, or about 40% of Norway. All reindeer herding activity in Norway is regulated by the “Norwegian Reindeer Herding Act”. The paragraph securing reindeer herding as an exclusive right for the Saami people in Norway is of profound importance. This means that only Saami - and Saami of reindeer herding families - are entitled to practise reindeer husbandry. There is one exception from this rule, and that is a limited reindeer herding activity outside the main saami pasture area, which consists of about 10.000 animals where both Saami and Norwegians are engaged in reindeer herding. This is named “Concession Areas”.

The part “External Conditions” in this chapter differs in structure from the same parts in the other chapters. This is because the parts “Loss of Pastures”, “Small Game Hunting” and “Market and Value Added

Production” contains a general discussion about the conditions in Norway, Sweden and Finland. The basic challenges with loss of pasture, small game hunting, market and requirements for abattoir are almost identical between these countries, and to avoid a repetition of the argument, the general presentation is done in this chapter. Special challenges or conditions in the different countries will be discussed during the presentation of each country.

## Collected Data

The background information for the “Economy in reindeer husbandry” is based on the yearly reports produced by the Norwegian Reindeer Husbandry Administration. Data are collected once a year through the official reindeer owners report, from the reindeer owners’ tax form and reports given by the slaughtering houses etc.

There is extensive variation between the different reindeer pasture areas, and even between different husbandry units inside one district. These differences are not reflected in the figures which focus on a national level. When the differences between pasture areas are important for the presentation they will be annotated.

## National Management of Reindeer Husbandry

### Organisation

The management system is divided into several administrative levels. The following text is a short presentation of the reindeer herding areas in Norway and the management system of the Norwegian authorities. The system is similar to the other Nordic countries, but there are some distinctive characteristics.

#### Reindeer Pasture Areas

Norway consist of 6 “Reindeer Pasture Areas” - East Finnmark, West Finnmark, Troms, Nordland, North Trøndelag and South Trøndelag/Hedmark.

The main reindeer pasture areas are divided into 90 “Reindeer Pasture Districts” with 78 summer- and year around districts and 12 autumn-, winter- and “convention” districts. In addition there are several “Con-

cession Areas” outside the main pasture areas, where both Saami and Norwegians are reindeer owners.

#### State Management System

The official presentation of the reindeer husbandry management system in Norway could be described schematically according to Figure 20.

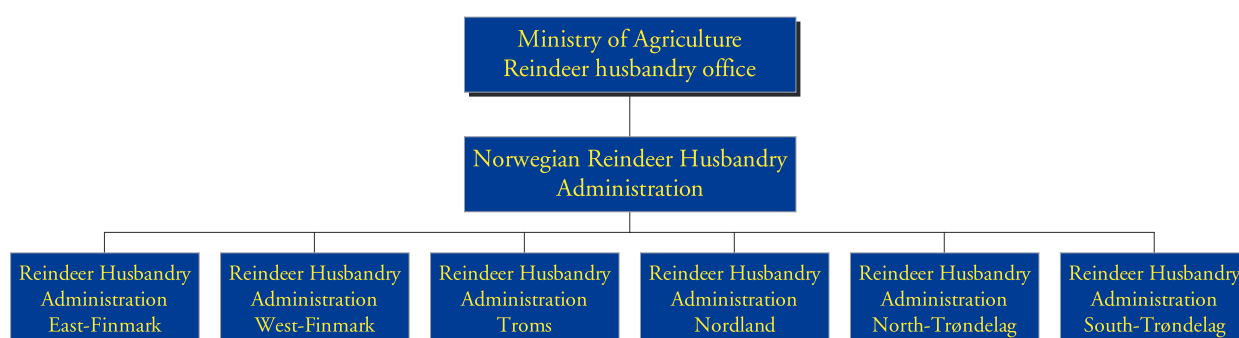
The highest level is The Royal Ministry of Agriculture. Inside the Ministry the Reindeer husbandry office is responsible for the day-to-day activity and is executive officer for the government. Most of the decisions concerning the reindeer husbandry is delegated to “The Norwegian Reindeer Husbandry Board”, but the Ministry of Agriculture is responsible for the following:

- The division of pasture areas
- The question concerning the entitlement to reindeer husbandry
- The permission to practise reindeer husbandry outside the main reindeer pasture area
- The approval of fences and installation

#### The Norwegian Reindeer Husbandry Board

The Norwegian Reindeer Husbandry Board consist of 7 members. 4 members are appointed by the Ministry of Agriculture and 3 members are appointed by the Saami Parliament. The board has the national responsibility for the management of reindeer husbandry, and it is both an advisory- and a management board.

Figure 1: National Management of the Norwegian Reindeer Husbandry



Some of the main responsibilities of the board are:

- The division of pasture areas into districts
- The number of reindeer in each district
- Grazing time and grazing areas
- Forced measures when agreements are broken
- The permission to build huts for reindeer herders
- Sale of unmarked animals
- Yearly report about Norwegian reindeer husbandry
- Approval of concession for reindeer husbandry outside the reindeer pasture area

### *Area Board*

As mentioned above, Norway consists of 6 pasture areas. Each of the pasture areas is managed by an area board of 5 or 7 members elected by the Saami Parliament and the County Council (Fylkestinget). The appointed period is 4 years.

Every reindeer area has one office subject to the Norwegian Reindeer Husbandry Administration (see below) and the reindeer agronomist functions as secretary for the area board.

The board is a body entitled to comment on all major plans developed by the different municipalities or local governments, i.e. area development plans. This could be plans concerning building of new roads, infrastructure or industry that could be in conflict with reindeer husbandry.

Some of the responsibilities of the area board are:

- contribute to fulfilling the national goals of reindeer husbandry
- decide on grazing time and divide the different grazing areas into grazing zones connected to all the Siidas in the area
- consider new applications for establishment of reindeer husbandry
- consider applications from the reindeer owners to move the herd from one district to another inside the reindeer area

### *District Committee*

Each of the districts inside one area is managed by a district committee of 3 members elected from the

members of the district for a 2 years period. The committee represents the district and is heading the day-to-day activity.

Some of the responsibilities of the district committee are:

- To organise and secure that every animal is marked with the earmark of its owner
- To organise separation of different herds
- To organise a reindeer counting
- To control the different earmarks
- Removal of animals from illegal grazing area
- Development of a district management plan

### *The Norwegian Reindeer Husbandry Administration*

The Norwegian reindeer husbandry Administration is part of the Ministry of Agriculture. It is the Ministry expert body and the main office is located to Alta in Finnmark County with offices in all 6 reindeer pasture areas - East Finnmark (Karasjok), West-Finnmark (Kautokeino), Troms (Rundhaug), Nordland (Fauske), North-Trøndelag (Levanger) and South-Trøndelag (Røros).

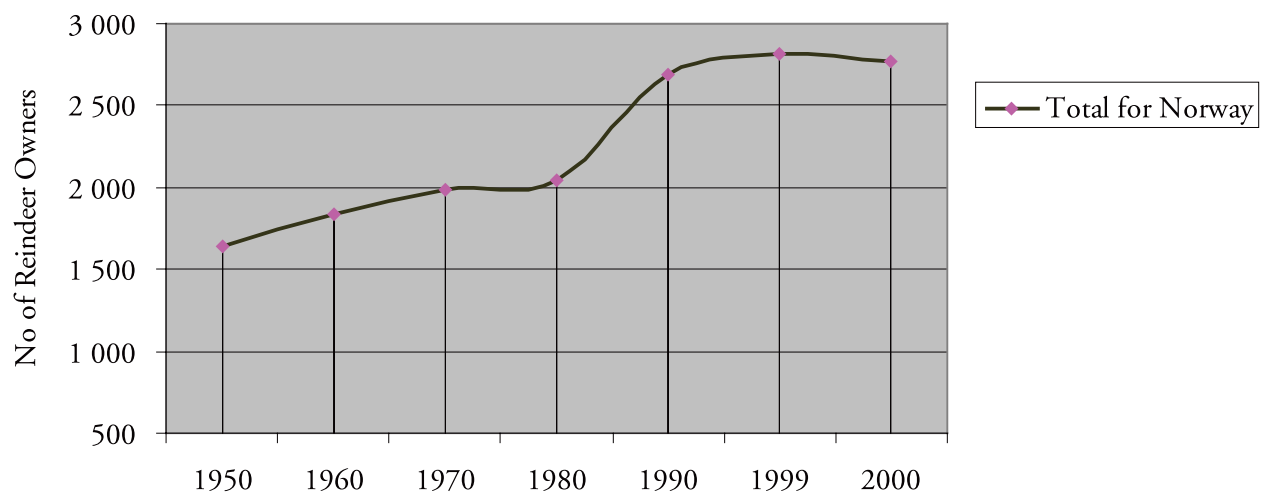
The main tasks for the Norwegian Reindeer Husbandry Administration is:

- Secretariat for:
  - The Norwegian Reindeer Husbandry Board
  - The Reindeer Development Fund
  - The Economic Committee
  - Area boards
  - Area earmark committee
- Implementation of central management policy determined by the Reindeer Husbandry Agreement and the Reindeer Husbandry Act
- Resource management and control
- Reindeer pasture management - protection of reindeer pasture
- Advisory and information service for reindeer herders and others
- Maintenance of reindeer fences on the border between Norway and Sweden, Finland and Russia.

## Husbandry Units (Reindeer Owners) and Earmarks

According to the Norwegian management system the “husbandry unit” (driftsenhet) is the basis of the reindeer husbandry organisation. This is a form of “licence” given to an individual from the area board where the new unit wants to establish itself. The licence entitles

Figure 2: The Development in Number of Reindeer Owners in Norway, 1950 - 2000



a person to start with reindeer husbandry inside one designated area, and the area board decides which district the new unit will belong to.

In legal terms a unit consist of one herd managed by one person, or the spouses together, if both persons have their own earmarks in the herd. If both persons have a husbandry unit before they are married, they can keep their units also after the marriage. This means that legally it is one unit, but in the official statistics it is recorded as two separated units. The change in the registration system is part of the explanation to the dramatic increase in reindeer owners at the beginning of the 1980's. Figure 2 shows the development of reindeer owners in Norway in the period 1950-2000.

### Siida

The concept of “husbandry unit” reflects the Norwegian management system of the reindeer husbandry,

but the Saami themselves have traditionally organised the reindeer husbandry through the “Siida-system”. The “Siida” is an ancient Saami community system within a designated area. It could also be defined as a working partnership where the members had individual rights to resources but helped each other with the management of the herds, the hunting and fishing. The community could consist of several families and their reindeer herds. The siida was not just a working partnership, but also a central basis for the traditional use of the grazing areas.

As we will see later on in this chapter, a commission working with a review of the Law on Reindeer Husbandry of 9th June 1978, wanted to remove the term “husbandry unit” and re-establish the concept of the “Siida” with the following argument:

“The committee recommends that the current arrangement that uses husbandry units should cease, and be replaced with a siida share, see also

article 9.3 below and draft law §§4-2 – 4-4. In the opinion of the committee there are several weak points in the current system of husbandry units. Among other things the husbandry units system is isolated from the working co-operation that makes up the siida.”

Several of the reindeer owners interviewed mentioned the use of “husbandry unit” as a way of creating distance to the old Saami siida system. It is not the practical problems connected to the use, but it is more seen as a symbolic violence towards the industry. The use of this concept from the Norwegian authorities indicates how far away they are from the reindeer reality, and it underlines the distance between the authorities and the reindeer owners.

## Economy in Norwegian Reindeer Husbandry

### Introduction

This part of the chapter will give a short introduction to the economy connected to reindeer husbandry. The goal for the economic part of the chapter is to try to give a general picture of the economic situation in the industry today. The general questions asked in the beginning of the project were these: How important is the income from the industry for the family? What kind of incomes are important to the industry? What are the costs connected to the industry?

Figure 3: Total Number of Reindeer in Norway 1992 - 2001

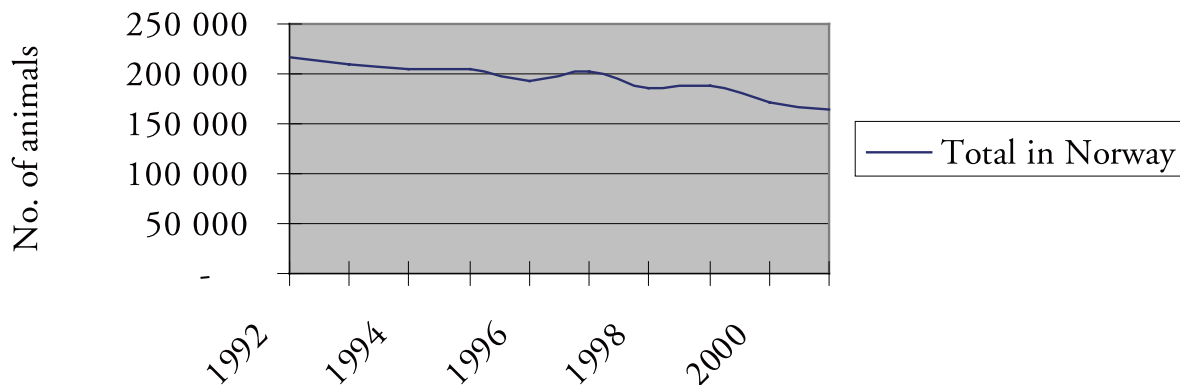
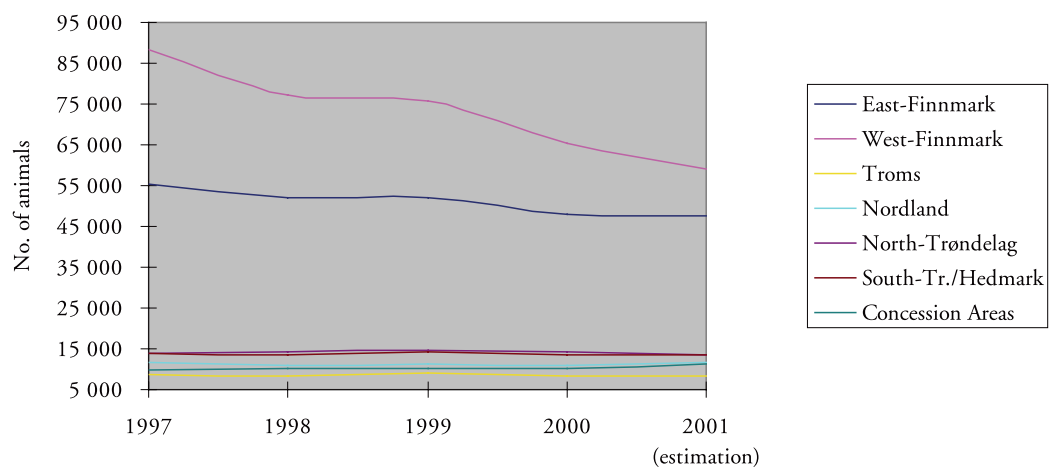


Figure 4: Number of Reindeer in Norway Divided in all Reindeer Areas, 1997 - 2001



## Size of the herds

To be able to answer the questions mention in the introduction it is important first to look at the development of the total number of reindeer in Norway during the last 10 years. The number of animals reflects some of the basis for the economic situation in each country. Figure 12 and figure 13 give an overview of the development in number of reindeer in Norway 1992-2001.

As the figure indicates, the number of reindeer in Norway has decreased from around 218.000 reindeer in 1992 and down to 165.000 in 2001. But the reduction is not equally shared between all the pasture areas. A closer look into the statistics where the number of reindeer is divided between the six pasture areas, is shown in Figure 4.

According to this figure the main reduction is related to two pasture areas - East and West-Finnmark. The largest reduction is in West-Finnmark, where the reduction over the last three years is 33%.

What is the reasons for this trend? The explanation to this is complex, but some important factors could be mentioned. The reduction of reindeer, especially in Finnmark, is closely connected to the national

management working plan for a reduction of reindeer in Finnmark county. It has been a public debate about the number of reindeer in Finnmark since the late 1980's, and the government's view has been that there are too many reindeer, and in order to save the pastures, the number of animals must down. It has been a long process and the Norwegian Reindeer Husbandry Board has in January 2002 put a new plan for the reductions into action with the highest allowable number of reindeer in each district in west-Finnmark. According to the plan, the decrease in number of animals will be fulfilled in April 2005. A second explanation for such a decrease in the number of animals is a growing number of predators, and we will return to this point later in the chapter. A third explanation to this could be several severe winters in Finnmark that have made the grazing conditions very difficult for the animals.

## Distribution of Income in the Family

Reindeer husbandry has been an important part of the Saami history. Although only a small percentage of the Saami population today is involved in reindeer

Figure 5: Distribution of Income to an Average Husbandry Unit in Different Reindeer Areas, 2000

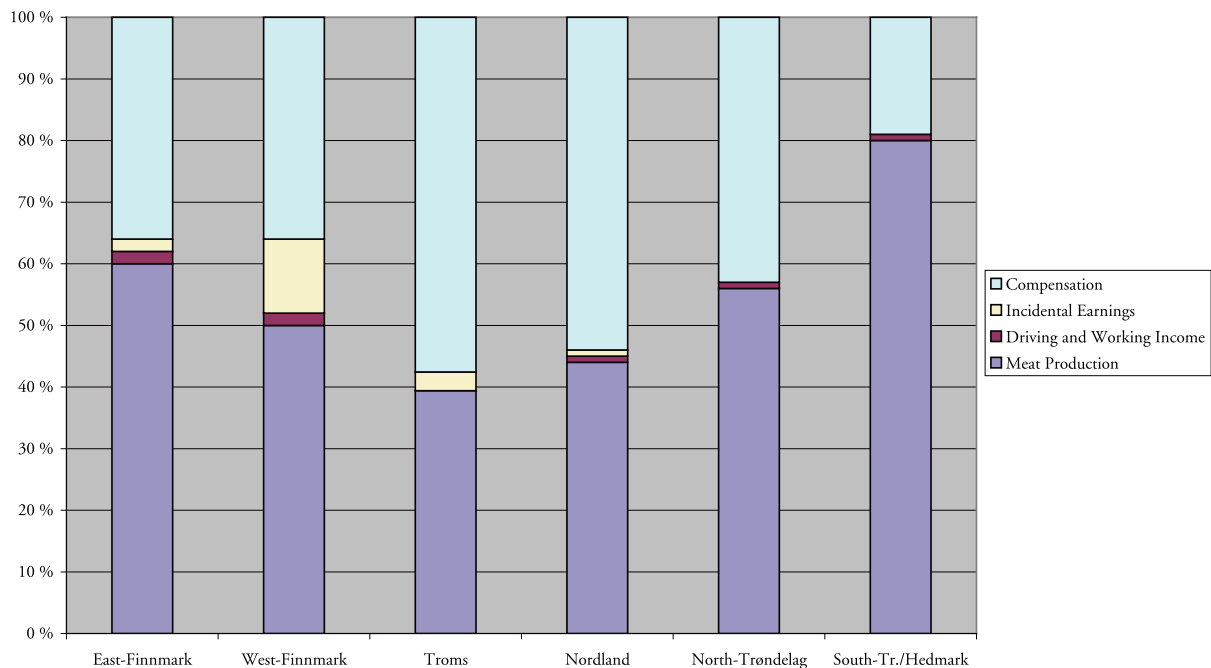
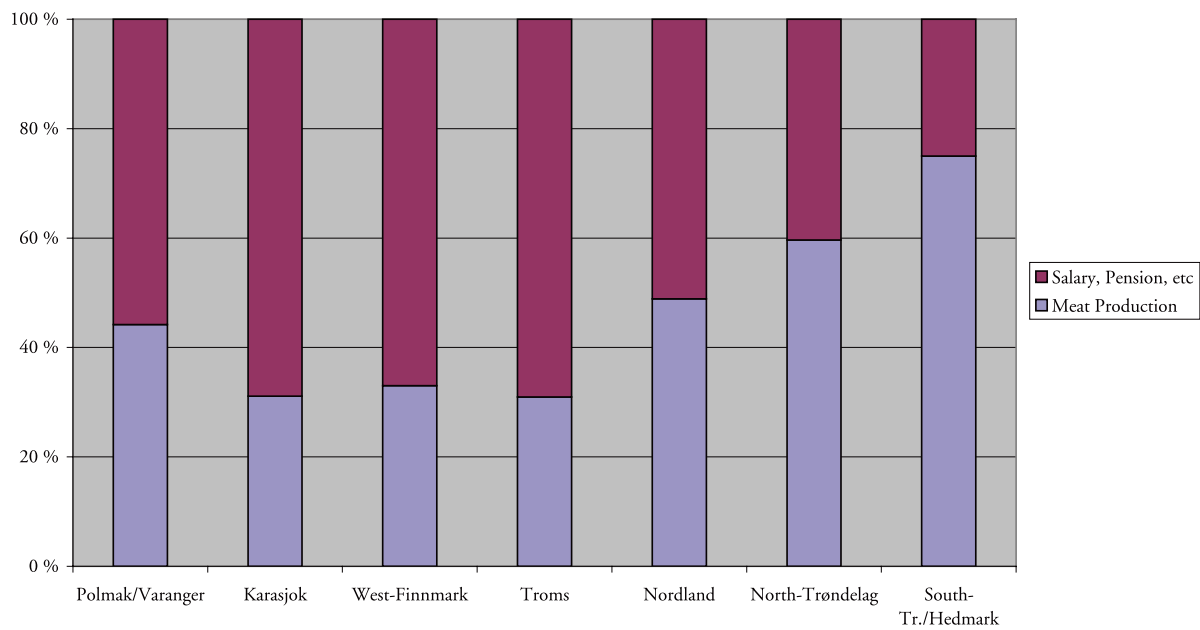




Figure 6: Distribution of Income, Meat Production and Salary, 2000



husbandry, it is still important for the Saami society as one of the common symbols of the culture. The importance of reindeer is reflected in their central role in many stories and fairy-tales, activities connected to reindeer herding is part of the childrens play, hides, furs and horns are used in handicrafts and clothing etc.

But how important is the reindeer as an economic income for the reindeer families today? If we focus on a national level, the answer would be that income from meat production is important for each husbandry unit. Figure 24 shows the average distribution of income for a Saami reindeer husbandry unit in different reindeer areas.



Reindeer in Cold Storage at Stensaas, Røros, Norway

Photo © Johnny-Leo L. Jernsletten

The figure 5 gives a good indication on the distribution of income inside one average husbandry unit in different areas of Norway. We can see that meat production brings more than 50% of the income to the owners in East- and West-Finmark, North-Trøndelag and South-Trøndelag and Hedmark. It is only in Troms and Nordland that the meat production makes up less than 50% of the income for the owner.

Most reindeer families have several incomes. If we look upon the distribution of income between reindeer meat and other incomes - like salary, pen-

sion etc., the picture will change. Figure 6 shows the distribution of an average income in a reindeer family in Norway.

The figure shows that only in Nordland, North-Trøndelag and South-Trøndelag/Hedmark income from meat production make up more than 50% of the families' total income. In all other areas the income from meat production counts for less than 50%, and even down to 30% of the families' income. If we add subsidies and compensation for loss of animals the picture will change. In this case the income from the

Figure 7: Value of Meat Production in Norway, 1996 - 2000

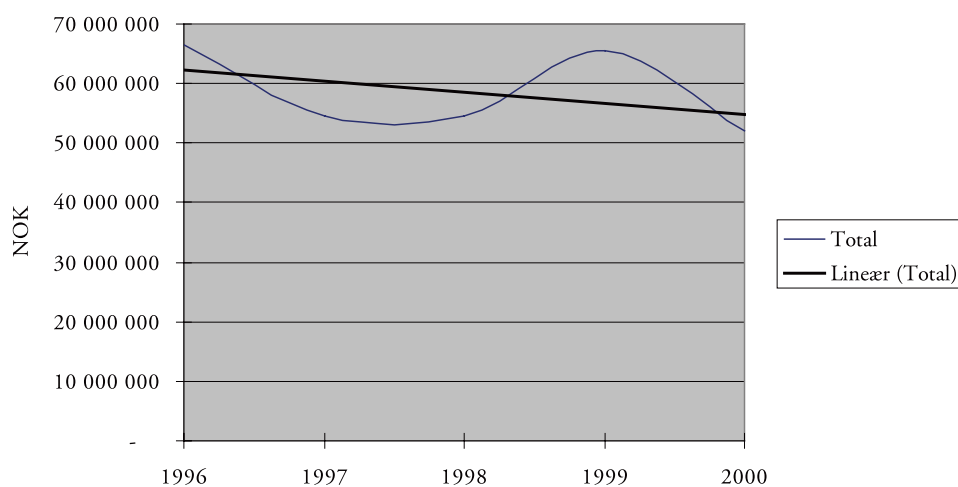


Figure 8: Value of the Meat Production, All Reindeer Areas, 1996 - 2000

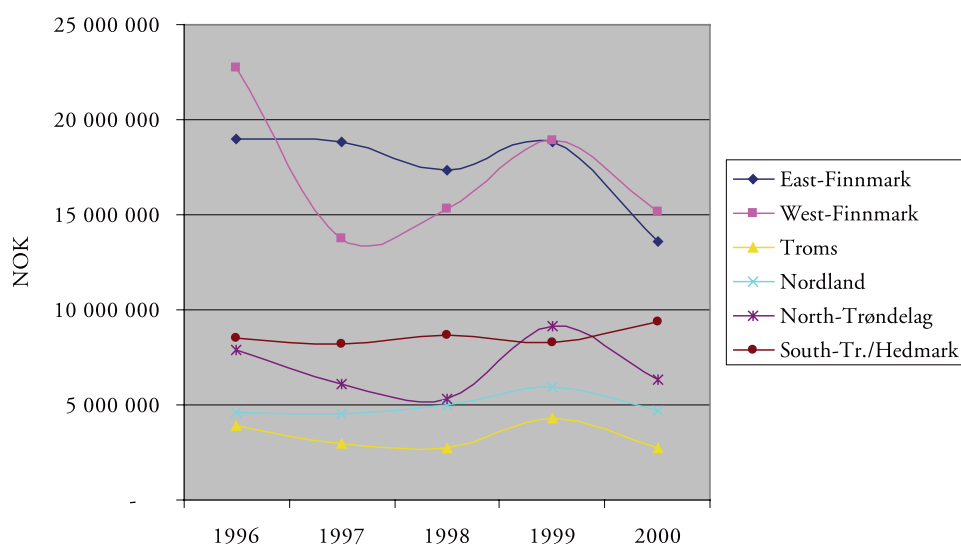
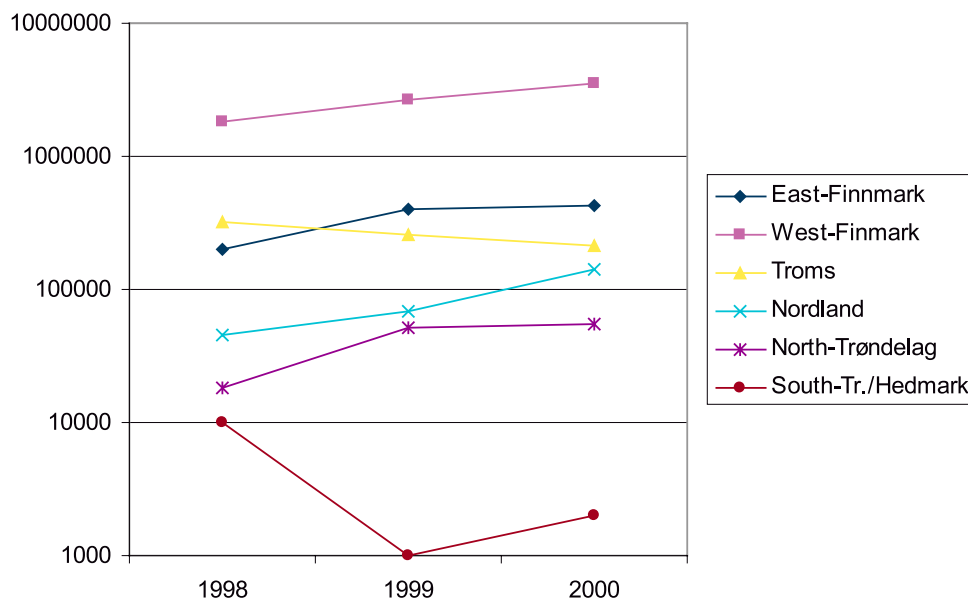




Figure 9: Income from Handycraft/Duodji 1998 - 2000



industry is in average more than the income from outside the industry. It is worth noticing that the figures will be affected by the level of wages or other income of the spouses as well as the general profitability in the reindeer industry.

## Income connected to Reindeer Husbandry Units

With a closer look at the distribution of income in an average husbandry unit and in a reindeer family in Norway, the general impression is that income from outside the industry is important. In the following we will take a closer look on what kinds of incomes the husbandry unit has during a year.

### Meat Production

Meat production is the most important income for the owner of a herd. The quantity and quality of the meat is an important indication on how the business is going and how the economy will be. But at the same time, it could be an indicator on your "reindeer luck".

The number of reindeer and the production of meat are related. When we experience a decrease in the total number of reindeer, it is not surprising that the total value of meat production also shows a falling trend. Figure 7 shows the development in meat production in Norway between 1996 and 2000. The

figure clearly indicates a downward trend from 68 millions in 1996 down to 52 millions in 2000.

This is the general picture in Norway if we collect information from all reindeer areas and put them together. If we look into the different areas, the picture will be as shown in Figure 8.

All pasture areas in Norway, except Finnmark show a stable situation in this period. Finnmark has a decrease in the meat production and the change is from 22 millions in 1996 and down to 14 millions in 2000. It is difficult to give an exact explanation to this reduction, but several severe winters (especially in 1997), a high grazing pressure over several years, and an increase in the number of predators, are all important factors.

### Handycraft/Duodji and fishing/berrypicking

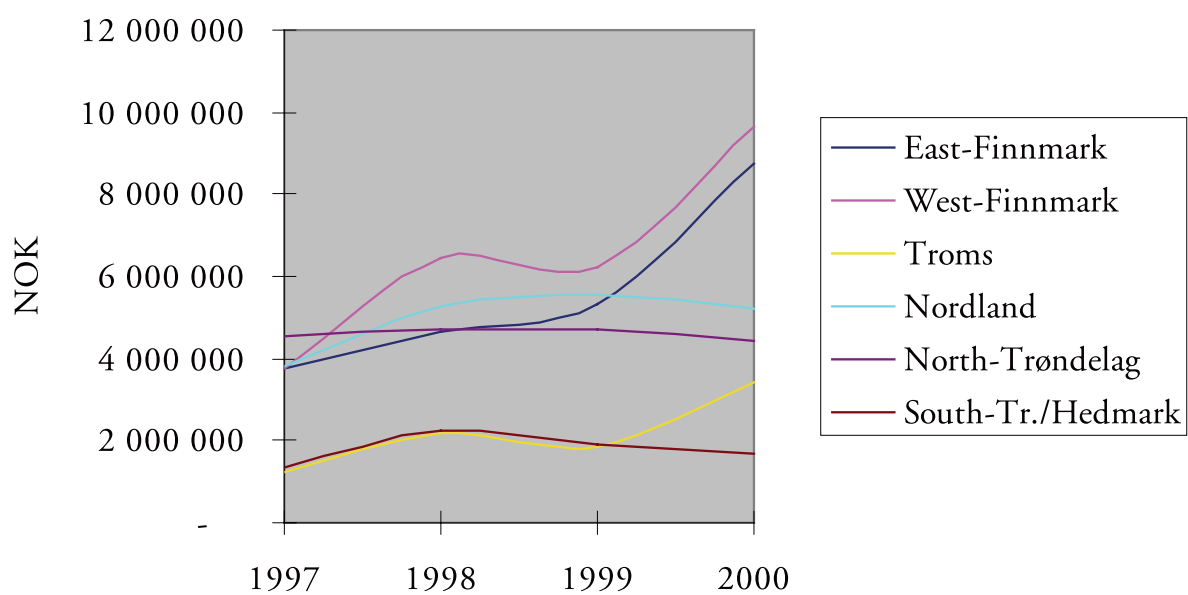
Additional earning through handicraft and fishing/hunting is not a very important income to the average husbandry unit in Norway. The situation in West-Finnmark, however, is different. Here the average income from additional earning is 12% of the total income to an average unit. This is also the area where the economic impacts from tourist is largest in Finnmark County. In all other areas additional earnings are almost absent.

It is important to note that the scale of the figure 9 is logarithmic with the biggest increase at the top of the scale. This gives West-Finnmark a considerable increase in income compared to i.e Karasjok despite



Photo © Johnny-Leo L. Jernsletten

Figure 10: Compensation for Loss of Reindeer - All Pasture Areas 1997 - 2000



that the visual appearance could give another impression. If we break the figure down to husbandry units the difference in income is even more noticeable: an average income from additional earnings for a husbandry unit in West-Finnmark is according to this figure NOK 15.000,-, but the income for a husbandry unit in North-Trøndelag is NOK 1.500,- ten times less.

### Compensations

In the Norwegian system the compensations are granted for: a) loss of reindeer to predators, severe grazing conditions and reindeer killed by train and b) loss of pastures.

Figure 10 gives an impression of the dimension of the compensation paid out to the reindeer husbandry due to the impact of predators, loss connected to severe grazing conditions (hard winters etc) and reindeer killed by train. Three pasture areas - Nordland, North-Trøndelag and South-Trøndelag/Hedmark - show no growth in the compensations, while East and West-Finnmark and Troms have a clear growth in the compensations for loss of reindeer.

According to the Norwegian Reindeer Husbandry Administration, 96% of the losses of reindeer is connected to predators, and 4% to severe grazing conditions and trains.

Almost all compensation is paid from the "Directorate for Nature Management" which is in charge of compensation due to loss of reindeer to predators. Only a small part of the compensations comes from the "Norwegian State Railway" i.e. reindeer killed by train.

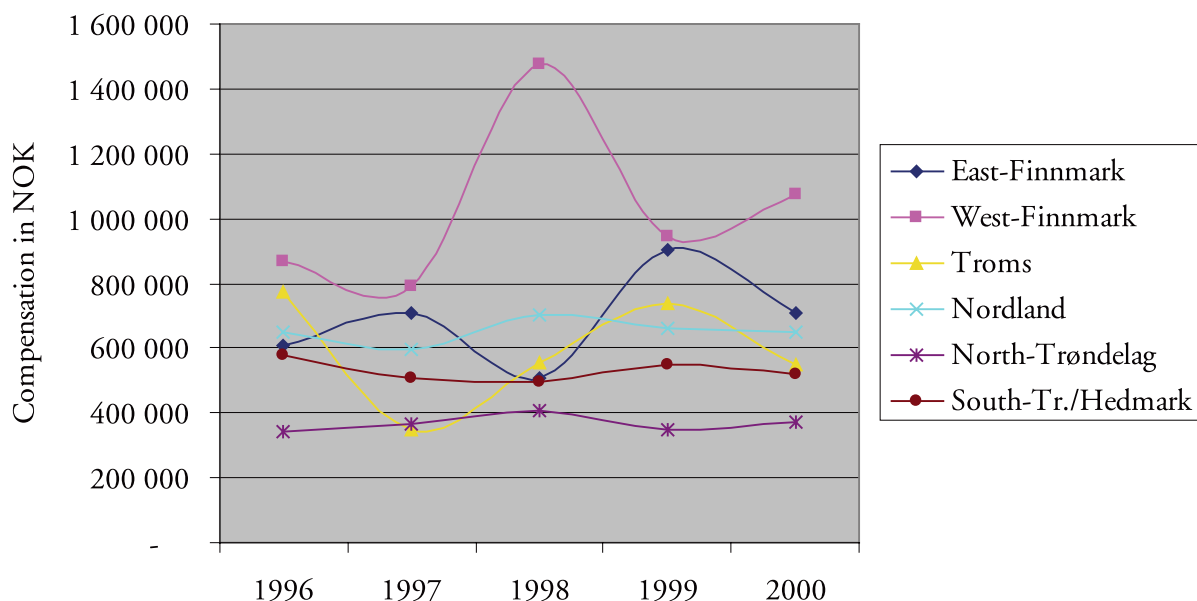
The increase in compensation between 1999 and 2000 is on 25%, but it is important to note that the reasons for this is a) increase in number of reindeer compensated for and b) increase in the level of compensation for each reindeer.

### Loss of pastures

The different reindeer districts are entitled to compensation for loss of pastures. This compensation can be for development of new infrastructure, like a new road, construction of hydro-power dams, different kinds of constructions, power lines etc. The compensations can be a one time compensation, or it can be a yearly compensation to the district. Figure 11 shows the development in the compensation for loss of pastures between 1996 and 2000.

The level of the compensation for loss of pastures is stable and there is no negative development according to the official statistic. This figure gives a different picture of the situation compared with all the

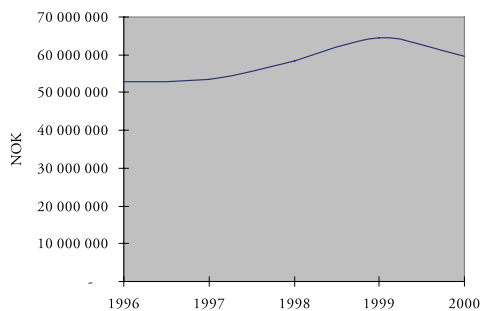
Figure 11: Compensation for Loss of Pasture 1996 - 2000



interviews made in the project. As we will see later in the chapter, loss of pastures is one of the most serious threats towards the industry.

One explanation to this figure can be the way the compensations are designed, and what kind of loss

**Figure 12: Total Cost in Norwegian Reindeer Husbandry, 1996 - 2000**



the compensation will cover. An illustration to this point is the case of compensation for the building of a power line through one reindeer district. The district got compensation for loss of pasture, but the loss was calculated as the space under each pillar. This space calculated together did not give much compensation, but the power line made a huge impact on how the animals are using the grazing area.

## Cost connected to Reindeer Husbandry

We have looked upon different sources of income in the reindeer husbandry in Norway, and we will now change the focus towards the costs connected to the industry. First of all it is important to underline that the statistics which all the figures are based upon, give an average impression where the internal variation is not shown. But they will give us indications and trends in the development of the industry.

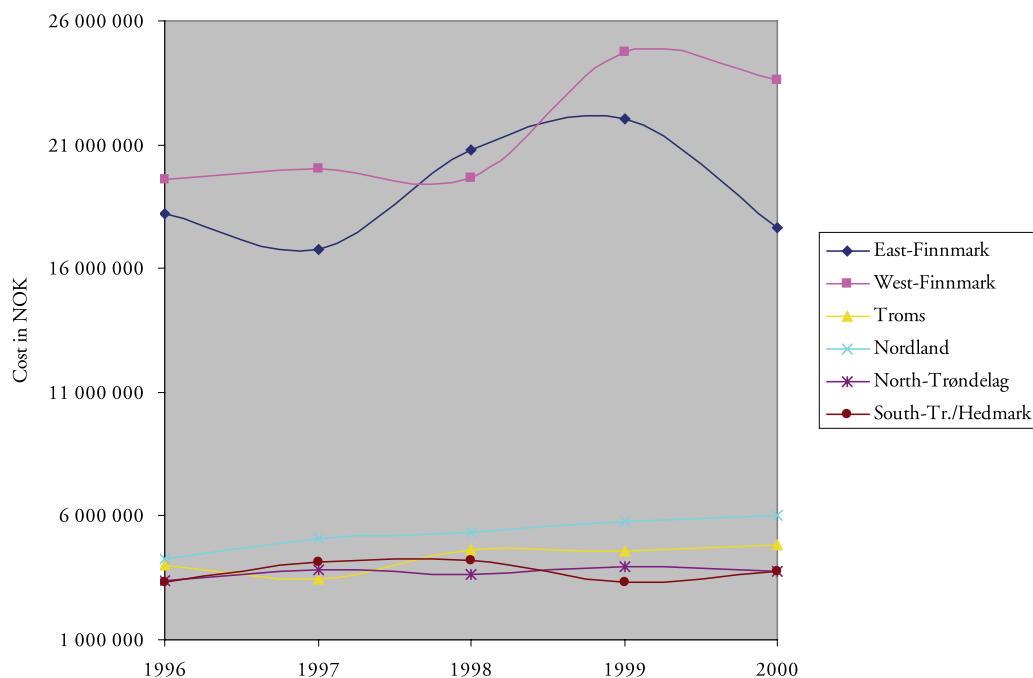
Figure 12 shows the development in the total costs in reindeer husbandry in Norway in the period 1996-2000. As the figure indicates, there was a top in the costs around 1999, and in 2000 the trend is a decrease in the total costs. From 1999 to 2000 the decrease was 7.54%.

What is the situation for the different reindeer areas in Norway. Are there significant differences between the areas? Figure 13 uses the same statistic information as figure 12, but broken down into the different pasture areas.

This figure shows that East-Finnmark has the largest decrease in costs between 1999 and 2000, on 19,2%. North-Trøndelag has a decrease on 5% followed by West-Finnmark on 4,7%. The other areas have a slight increase in the cost at the same period.

The costs included in the figure is the total cost for the reindeer husbandry units. This means costs con-

**Figure 13: Cost Divided in All Pasture Areas, 1996 - 2000**



nected with the management of the husbandry unit - transport, artificial feeding, traveling, equipment, mechanical equipment, power and heating, telephone, insurance, dogs etc. In an effort to try to establish an understanding of the economic situation in the industry, it is important to know the distribution of the costs. To make the presentation a little easier to read, we have put together some examples in Figure 14.

The figure gives an interesting and important impression of the situation - over 50% of the costs are related to mechanical equipments - and it applies to all reindeer areas. If we include the entries "Equipment", "Transport", and "Construction" the costs reach up to 80-90% of the total costs.

The figure shows the total income and the total costs in all areas for an average reindeer husbandry unit in 2000. The income includes driving and labour income, additional earnings, compensations, and the national subsidies for the unit. The difference between income and cost makes the living for the reindeer owner. The figure clearly demonstrate that almost all the reindeer units in Norway have an income far below the average income in Norway. This is of course not a pleasant situation for the industry.

## External Conditions

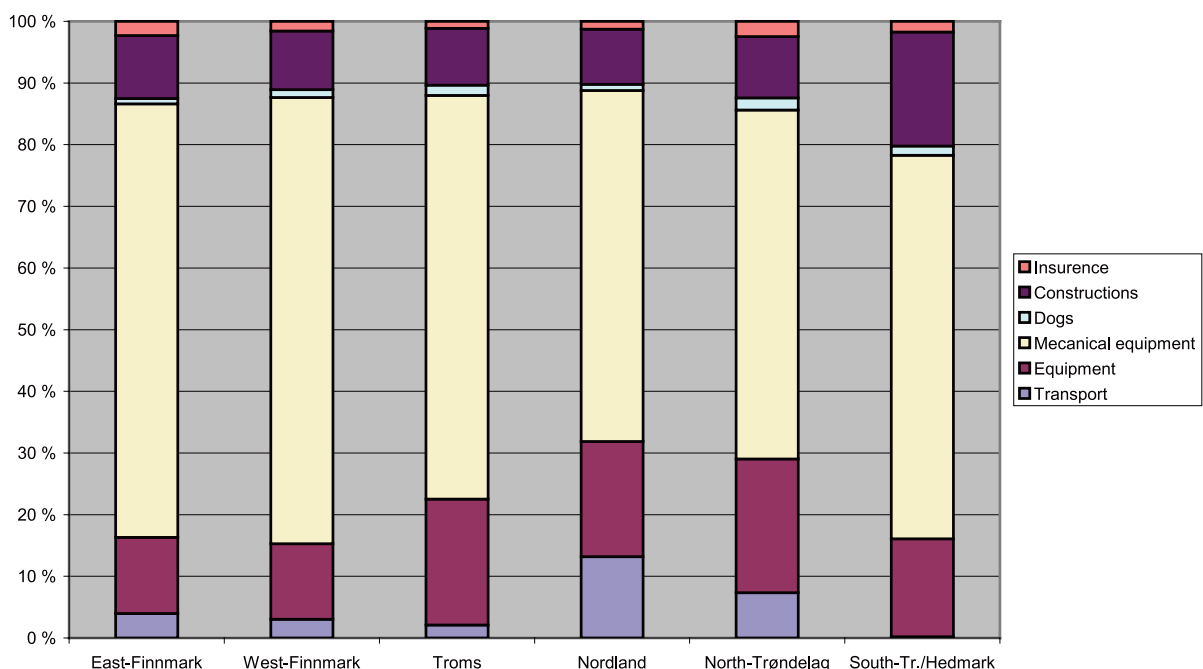
### Introduction

This part of the chapter will focus on the external conditions that affect reindeer husbandry. We know that the quality of the pastures and the number of reindeer is important, and we also know that a healthy economy with a low input from the government is important for a sustainable reindeer husbandry. But how do the activities in the society affect on the reindeer industry?

For practising reindeer husbandry there is a need for quite extensive and diverse pastures. As mentioned in "Introduction" around 40% of the land area in Norway is used as reindeer pasture. An industry with such an extension must necessarily come into conflicts with other industries, the question is how such conflicts are handled by the parties involved.

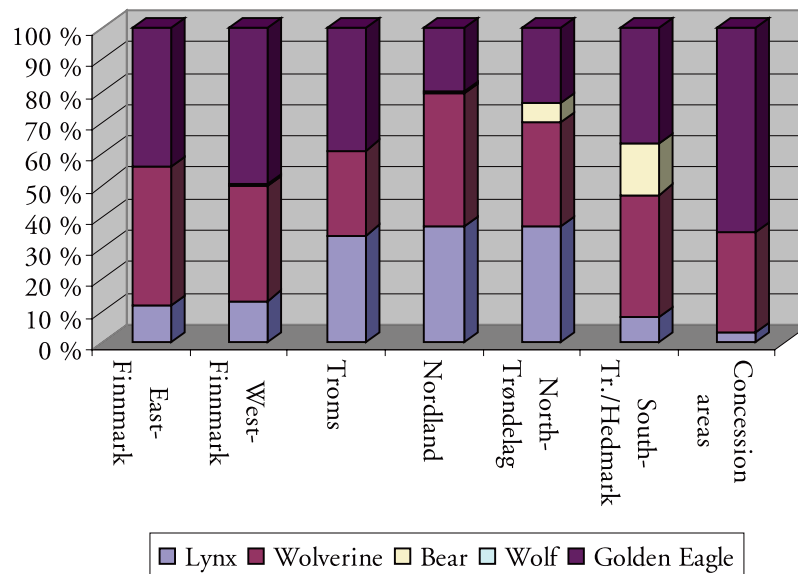
There is not much statistical data available on conflicts with other industries, and to be able to get information about this, our project has conducted a series of interviews with reindeer owners, bureaucrats

Figure 14: Different Costs in Reindeer Husbandry, 2000



and researchers on this theme. Our primary goal has been to try to understand the situation of the reindeer owners and the kind of problems they emphasize. The

Figure 15: Claimed Losses to Different Predators, 2000 - 2001



following text is based on the results from the interviews. It is also a reflection of the ongoing debates both in the herding communities and inside the universities.

## Predators

In all the interviews people were asked to name three main problems for his/her area that they would like to

Figure 16: Claimed Losses of Reindeer, Divided Between Different Causes, 2000 - 2001

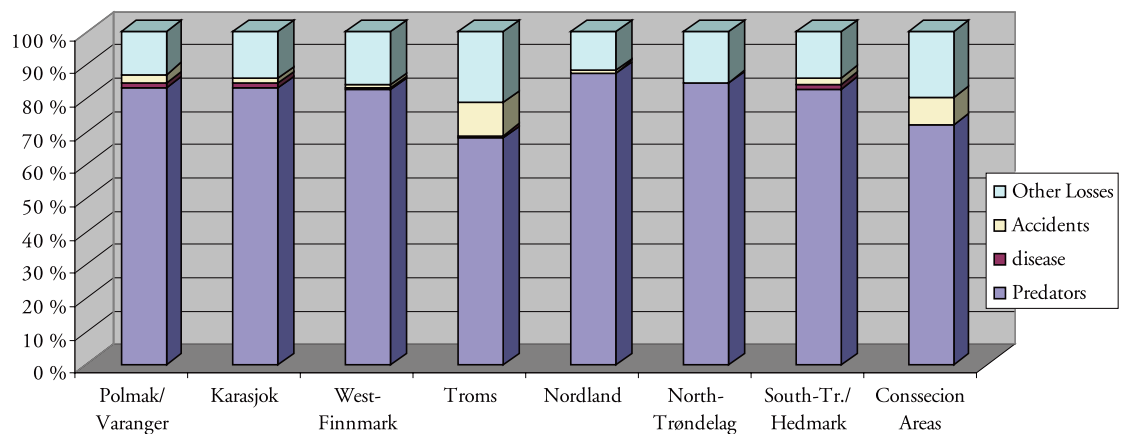


Figure 17: Total Claimed Losses to Predators, 1997 - 2001

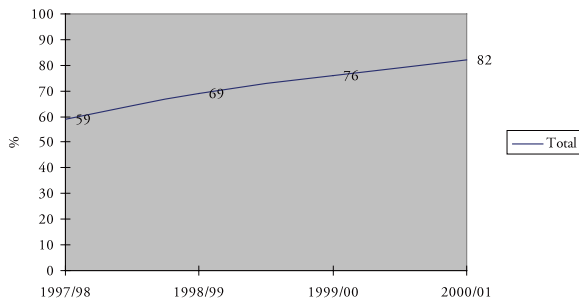


Figure 19: Difference Between Paid Compensations and Total Claimed Losses, 1996 - 2000

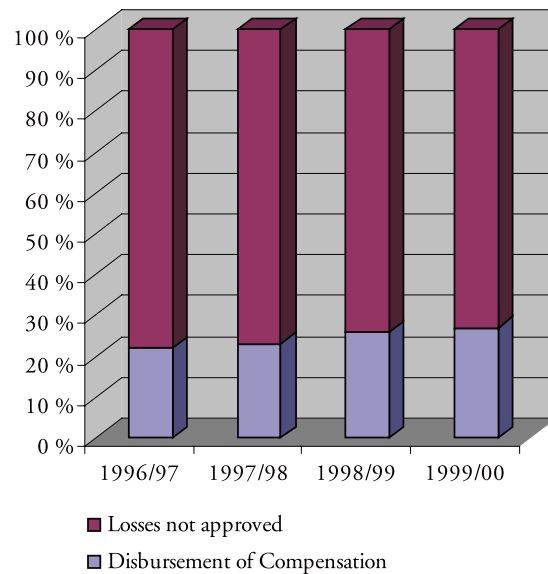
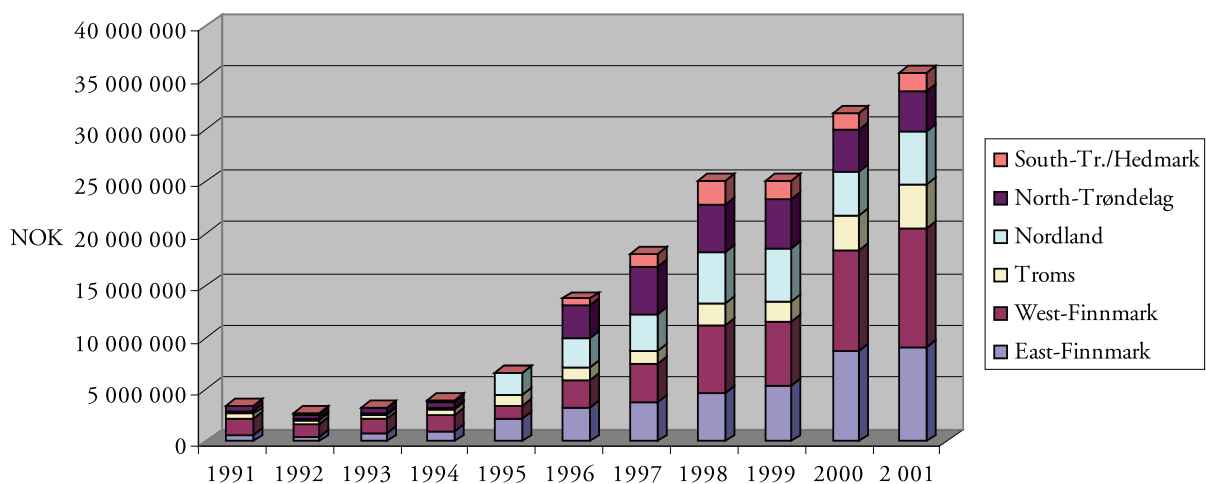


Figure 18: Compensation for Losses of Reindeer to Predators, 1991 - 2001



get solved. Almost every reindeer owner named predators as one of these three problems. This goes for all interviews in all the countries within this project.

The responses from the Saami reindeer owners in Norway were the same. The general impression is that predators are a major concern in reindeer husbandry in Norway, and according to the reindeer owners opinion the problem is increasing. Is this view supported by the official statistics in Norway?

Before we look into the official statistics concerning predators, one important point about the background material of the figures should be mentioned. The fig-

ures are based on the reports from each reindeer owner where they state how many reindeer they have lost to predators. This figure is named "claimed losses to predators", but the number of animals confirmed by the authorities is much lower, and this is also reflected in the statistics. An average of 80% of the claimed losses each year is not approved by the government. Thus, according to the reindeer owners, they do not receive compensation for the actual losses. With the data available, it is difficult to know the exact number of reindeer killed by predators, but the point we want to make is that the discrepancy between the claimed





Mountain Road Between Røros and Trondheim, Norway

Photo © Johnny-Leo L. Jernsletten

losses and the number compensated for, is compellingly large. The differences can be seen as an indication that there is a mistrust between the government and the reindeer owners, concerning the number of reindeer killed by predators. It also indicates that the system of approval of claimed losses is not well suited for handling the conflicts between predators and reindeer herds.

Figure 15 gives an overview of the impacts of different predators on reindeer herds in Norway according to the claimed losses.

The figure shows that wolverine and golden eagle are the predators with most extensive impact on the herds in all areas. Lynx is ranked as third with the largest impact in Troms, Nordland and North-Trøndelag.

Predators are not the only reasons for loss of reindeer. Losses can be divided into four different categories:

- Predators
- Illness/diseases
- Accidents

- Other losses (severe grazing condition, unborn calves etc)

Figure 16 gives an indication of the ratio between different categories of claimed losses. The figure clearly shows that the main reason given for loss of reindeer is due to predators. This is also confirmed by the results from a research programme carried out by NINA in 1994/95 on predators in the county of North-Trøndelag, which shows that in a normal year predators were responsible for 64-75% of the total losses, which corresponds to a 12-13% loss of the total number of reindeer in this pasture area.

The figures in the sub-chapter on economy indicated a growth in the amount of the compensation granted for loss of reindeer to predators. Figure 17 shows the development of the claimed losses to predators in the period 1997-2001 compared with the total loss of reindeer. There is variation between the areas, but the general impression is a steady increase in losses to predators for all areas from 59% in 1997 to 82% in 2001. This trend is reflected in figure 18 which shows the actual paid compensations for losses to predators between 1992 and 2000.



Winter Landscape at -42 Degree Celcius, Northern Sápmi.

Photo © Johnny-Leo L. Jernsletten

## Loss of Pasture in Norway, Sweden and Finland

Reindeer are the only animal which can utilize the lichen resources on the outlying field. In addition, it is the only animal that could utilize lichen as a food resource. To secure sufficient food supply for the reindeer the industry is dependent on access to huge and undisturbed land/grazing areas. A pasture area is not a homogeneous landscape, but consist of many important features and characteristics changing in accordance to season and activity performed. Each husbandry unit needs a summer pasture with access to green grass and different herb plants. The summer pasture is a key factor for the growth of the animals. Good summer pasture gives a head start to survive a severe winter. The herd also needs good winter pasture, characterised with little snow cover and good access to lichen. During spring time - normally in May - the animals need a good calving area where the female reindeer could get cover from the wind and predators. To minimize the risk for human disturbance is also of great importance. All these different pasture areas must have easy access with minimal obstruction for the herd.

Access to pasture areas which comply with all these conditions is an increasing problem/challenge. Loss of pasture was one of the conditions that almost every reindeer owner emphasised as an important problem. It is in fact one of the conditions almost all the reindeer owners/herders in Norway, Sweden, Finland, Russia and Alaska mentioned during the interviews. There will be no reindeer husbandry without sufficient pastures.

The only impression of the situation in Norway due to loss of pastures is given through Figure 11. The figure describes the compensation to the different districts for loss of pastures, but only for losses the district is entitled to according to Norwegian law.

The Norwegian Reindeer Husbandry Administration expresses concern over the development in Norway. In the latest report "Ressursregnskap for reindriftsnæringen" for the period of April 1 2000 to Mars 31 2001 it is stated:

Development and disturbance often results in loss of pasture or at least reduced use of the pastures close to this disturbance.[...] The reindeer is weakened regarding the condition when the

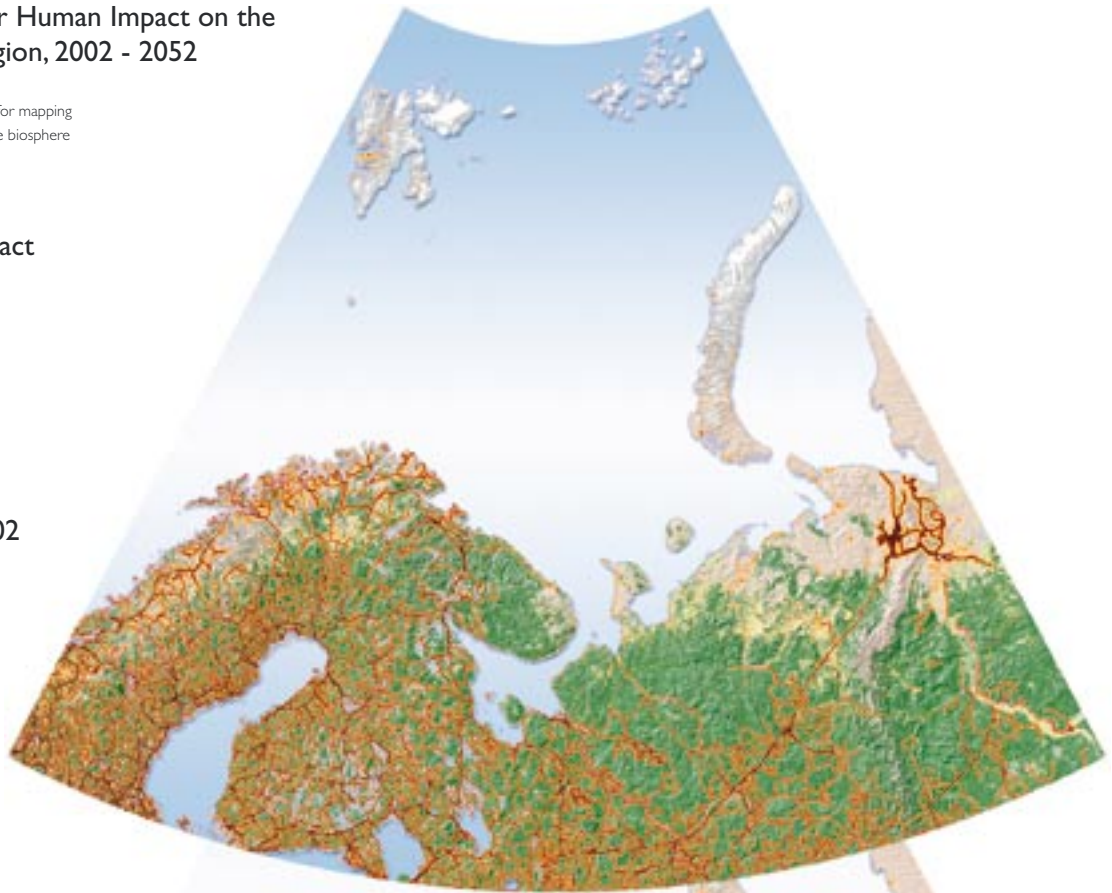
## Scenario for Human Impact on the Barents Region, 2002 - 2052

Map © GLOBIO  
Global methodology for mapping  
human impacts on the biosphere

### Human Impact



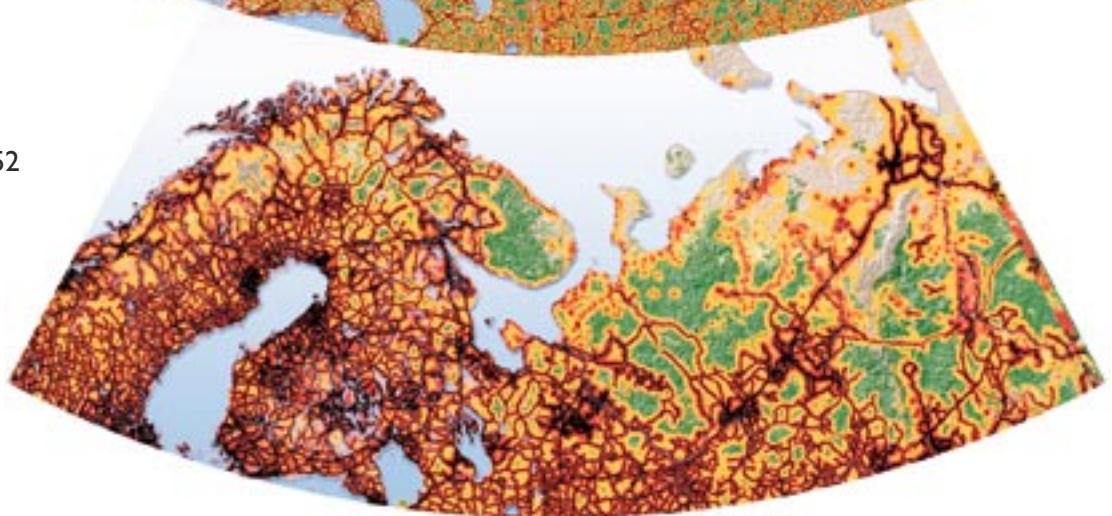
Barents 2002



Barents 2022



Barents 2052





energy consumption increases (increased activity) and/or reduction in the grazing activity due to high density of reindeer in the undisturbed area, reduction in grazing time, or absence of effective grazing time.

It is also pointed out various effects related to different kinds of disturbances:

- Local consequences: Increased energy consumption from the reindeer, or loss of grazing time connected to disturbances; permanent loss of pastures. These effects will infrequently or seldom give longterm negative impact on the reindeer husbandry.
- Regional consequences: Reduced use of good pasture areas close to development areas and roads; obstruction in the access to pasture area, and a decrease of the average slaughtering weight for the reindeer. The regional effects could give longterm negative impact of the industry.

Research on the human impact on grazing ground also shows that establishment of leisure time resorts could have considerable impact on the use of pasture, because of the reindeer tendency to avoid human obstructions. Such an establishment could lead to a 50% decrease of the use of the pasture in a 4 km circle around the resorts. This is a dramatic impact on the reindeer husbandry.

The human impacts on “wilderness” is documented in the published report “GLOBIO. Global methodology for mapping human impacts on the biosphere”. The report addresses the human impact on the biosphere, and also a focus towards the indigenous peoples. Under paragraph 5.4 “impacts on indigenous cultures” they describe the situation in Northern Scandinavia and parts of Russia.

Northern Scandinavia and parts of Russia are examples of areas where the current growth of infrastructure related to transportation, oil and gas, and mineral extraction is increasingly incompatible with land requirements for reindeer husbandry. In these areas infrastructure growth is associated with the loss of traditional lands, and conditions forcing indigenous people to abandon nomadic herding patterns for more sedentary life styles.

The report also states that

The coastal areas of Finnmark are crucial to the Saami indigenous people for calving grounds and summer ranges of their livestock of semi-domesticated reindeer. The same coastal zones, however, have been those subjected to most of the development. [...] Currently, a series of proposed development projects for mineral exploration, power stations, roads and resorts threaten the remaining grazing land and biodiversity in the region.

The report estimates that about 26% of the grazing ground in northern part of Norway is lost, and 50% of all the grazing areas in Norway is seriously impacted by human activity.

All these effects and impacts towards the industry added together are one of the biggest threats that the industry faces today.

## Small Game Hunting in Norway, Sweden and Finland

The situation connected with small game hunting is more or less identical for Norway, Sweden and Finland. The development in Sweden in the beginning of 1990 differs from the situation in Norway and Finland, but the general impression of the situation today is that the situation in these three Nordic countries are almost the same.

Small game hunting is a popular activity in Norway, Sweden and Finland. The hunting season for grouse is August/September until March. It is estimated that several hundred thousands of persons in each country is involved in small game hunting, and in some of the most popular areas the density of hunters per square kilometre is very high - especially in late September.

The disturbance on the herds from small game hunters, especially with dogs, was mentioned in many of the interviews with the reindeer owners. The reindeer owners underlined that they are not against small game hunting and the fact that people use the pasture areas for recreation. The problem is more related to the fact that ordinary people do not know anything about reindeer husbandry or where reindeer husbandry is practised. Lack of information to the public about reindeer husbandry in combination with

an almost “invisible” industry creates conflicts. One of the reindeer owners expressed his experiences that both hunters and hikers have a lack of knowledge about the reindeer industry in general or the reindeer behavior in particular. Some possible reasons can be: a) They are not aware that there are reindeer in the area, and b) their experience with animals in the field is sheep, which can be approached without problems. The consequences of disturbance for the reindeer and sheep is very different. All the hunters will during a day cover a large territory. The kind of “hunting” movement in the terrain – moving fourth and back to cover most of the surface in search for small game – causes considerably disturbances to the animals. Such hunting activities in combination with the use of dogs make the situation for the animals even worse.

The problem connected with disturbances from small game hunting is in principle the same in all countries. And again, as described for Norway and Sweden, the disturbances will causes the herd to move around on the grazing ground resulting in a bad utilization of the pastures an a unnecessary increase of energy consumption of each animal.

A high hunting pressure, in combination with the fenced pastures (Paliskunat), could be an unfortunate combination. The pastures available for each reindeer areas Finland is relatively small, and the movement of the herd is restricted by the fences. In this case, a relatively minor disturbance could have a significant impact in the herd. It is important to underline that the project do not have any data that could support this hypothesis, but still it is important to bear this in mind.

The conflict between reindeer husbandry and small game hunting is significant but not a direct treath to the industry. The reasons behind this conflict is also quite clear, and the solution is not necesarily expencive. It all comes down to public information about the reindeer husbandry, its use of pastures, and some general recommendations where to go and what to do if you come across a herd. This is a task for the local reindeer husbandry adminitration in cooperation with the local hunting and fishing organisation.

## Market and Value added production in Norway, Sweden and Finland

The reindeer industry in Scandinavia could be described as a primary producer of meat with no, or

just a small degree of, value-adding activities. The reindeer owner sells the live reindeer to the nearest slaughtering house. The owner must pay for the slaughtering and for the waste produced by the slaughtering process. It is a deficiency of reindeer meat on the Scandinavia market and there is in practice no export of reindeer meat. Within Scandinavia there is some export of Finnish and Swedish reindeer meat into the Norwegian market.

There is a growing attention towards product development in the reindeer industry. The consumers in Scandinavia want easy access to the traditional products of reindeer meat, and there is also a market for new products. Reindeer meat is well received in the national markets in Scandinavia, and is perceived as healthy and clean arctic food. The market has reacted in a positive manner when it comes to price. The price of reindeer meat is much higher than for other comparable meat products.

The slaughtering houses have strict regulations connected to the activity. They have to conform to the EU-directives. The regulations are the same for big slaughtering houses as for private small-scale production activity. This is creating troubles for reindeer owners trying to establish a small scale production. The general feedback from the industry is that information about the rules and regulations is not easy available. It is difficult to estimate the total cost of a project, and the regulations are changing every year. The persons interviewed about the value-adding production agreed on that the requirement and regulations regulating the small scale production should be strict in order to secure high quality meat. But many of the regulations are unnecessary and only create extra costs. An initiative from the national authorities to easen up some of the regulations, in order to avoid unnassacary costs, would be of great importance. There is a strong interest inside the industry to focus on the value-adding production, but the regulations today are limiting the initiatives from many reindeer owners.

In addition to the regulations, the knowledge about the production and a generally difficult recruitment situation was also mentioned as an explanation for not starting up with value-adding production. After the investments is done, you need to spend all your time with the production, you need to secure a stable input of meat, and you need people to help you year around. This means that the owners do not have time to spend in the herd, which is their main inspiration in the daily work. Besides, the income from the production should cover the extra expence of having



Reindeer Fillet, Example of High Quality Product.

Photo © Johnny-Leo L. Jernsletten

someone else look after your herd.

In accordance with the different national statistics for Norway, Sweden and Finland, the main part of the reindeer meat is consumed through the national market in these countries. Finland is exporting meat both to Sweden and Norway, Sweden is exporting both to Finland and Norway, but Norway is only importing reindeer meat from Finland and Sweden (22%) in 2000.

According to a market survey done in Sweden 1999, the reindeer owners are only focused on price for the meat in their relations to the market (restaurant owners, whole sale purchasers). This means that they will sell to the highest bidder, and change contacts from time to time. From the buyers point of view this is a shortsighted strategy because it causes an uncertain situation for the market. For example, the restaurants are sceptical to put reindeer dishes on their permanent menu when it is uncertain whether they get deliveries or not. By establishing more stable contacts with buyers, the market for reindeer meat could be enhanced also in areas without direct contact with the industry. This might in a long term perspective be more profitable for the reindeer owners, as well as the whole sale dealers who would get more involved and be willing to spend more of their means to develop the market for reindeer meat, as well as other reindeer products like tongues, marrowbones, steaks etc.

As the survey in Sweden shows, there is a potential demand for new products. This requires an increase in the value-adding production within the industry. The problem is that the individual reindeer owners do not have the necessary competence or knowledge to manoeuvre through the complicated regulations. In Norway a special value-adding programme has been recently introduced, to overcome the obstacles that the reindeer owners experience and stimulate and accommodate the small-scale production throughout the districts.

## Legislation in Reindeer Husbandry

### Introduction

The situation regarding national legislation towards the reindeer industry in Norway, Sweden and Finland diverge when it comes to the formulation of the laws

and the specific contents of the law. At the same time the general picture is that the intention and the directions of the laws are almost the same. During the field trips in Norway, Sweden and Finland, the experience from the interviews in one country could be used to formulate questions in another country. Several experiences from the reindeer owners in different countries were similar even if the legislation differs between the countries.

During 2001, two important reports were published in Norway and Sweden: the Norwegian report "Propposal for an amendment to the Norwegian Reindeer Herding Act" (NOU 2001:35), and the Swedish "A New Reindeer Management Policy" (SOU 2001:101). In addition to these reports, a third report "Recommendations from the Norwegian-Swedish reindeer pasture commission" was also published. All three reports are now on public inquiry and they are expected to have impact on the management systems in both countries. We will return to the Swedish report in the next chapter.

### *The Norwegian Reindeer Herding Act*

The report "Propposal for an amendment to the Norwegian Reindeer Herding Act" (NOU 2001:35) was published in 2001. This report is the result of the work of an expert committee with a mandate to review the law from 1978 with a special focus on the control and administration of reindeer husbandry and the internal situation within reindeer husbandry, including the individual reindeer owner's legal status. One of the problems today is that the current law does not sufficiently reflect the rights of the reindeer owners in relation to each other. The committee states that

"The understanding that everyone within the industry has the same rights to grazing areas, and it is up to the administering authorities free discretion to undertake distribution and impose limitations in order to create a satisfactory husbandry system, is not in accordance with the way the reindeer owners themselves regard their own internal affairs. The statutes must therefore take into consideration the traditions and the social structure on which the whole industry is founded, and relate rights and duties to these".

And they continue

"The committee places importance on the creation of laws and rules based on culture and tradi-



tion within the reindeer husbandry, at the same time preserving the rights of individual reindeer owners. The current law uses husbandry unit and districts as basic unit within the reindeer husbandry industry. However, this form of classification does not coincide with the traditional economic and social systems within the industry. The single reindeer owner seldom operates alone, rather in a form of partnership, the *siida*. The committee stresses the importance of giving the *siida* a more prominent place in the future legislation”.

The focus on the *siida* is important when it comes to the regulation of the number of reindeer. The system today is connected to the district and the husbandry units. If the *siida* system is not taken into consideration when the total number of reindeer is decided, inter-relationships between reindeer owners are neglected, which could give a misleading impression of the actual use of the pastures.

The report also focuses on what they call a “Co-ordinated recruitment”. This is to secure a satisfactory schemes for the transition a *siida* share to the next generation. According to the report the owner of a *siida* share can establish a co-ordinated share for one of his or her children. This can not be done before the owner has reached the age of 50. The new owner of such a co-ordinated *siida* share has the same rights, responsibilities and duties as the owner of the main *siida* share. This proposal is important to secure the recruitment to the industry, which is essential for the industry.

#### *Local Government*

Most of the legislation that impinges upon the reindeer industry is managed by the local governments. These are directives on traffic, building and construction on the grazing ground, etc. Such legislation is always open for interpretation from the local government, something which opens for unequal practice of the same legislation. Reindeer owners who are in contact with several local governments during their migration, are confused as to how these directives will impinge upon them. Besides, the legislation is designed to be a tool for the local communities to reduce the possible damages caused by the reindeer industry on other interests, and is not oriented towards protecting the reindeer industry from disturbances etc.

Due to the nomadic form of life, the reindeer owners experience a certain resentment from the areas

where they are not registered as residents. The fight to protect their own interests can be especially difficult in these areas.

In order to make use of the existing legislation, a minimal knowledge about reindeer husbandry is required. Interviews with bureaucrats in local governments supported the view of the industry that there is a general lack of knowledge within the management system.

Some of the explanations given in the interviews is that this is not an industry which brings large tax incomes to the community, the industry is not very visible in the landscape, and is often in conflict with other types of industry developments which create more jobs and more tax income.

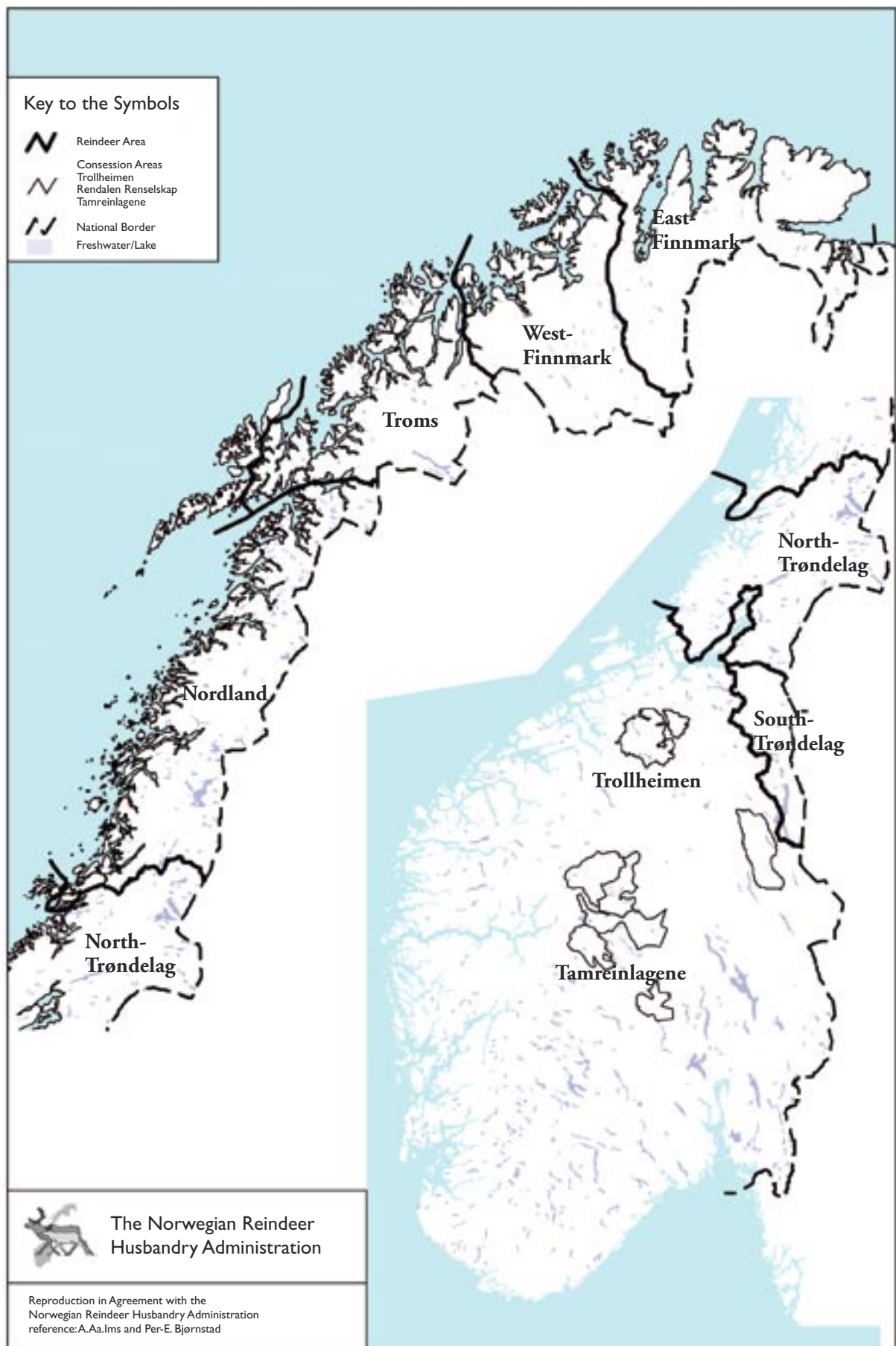
## Summary

The reindeer husbandry in Norway is under pressure. The pressure comes from the national authorities to reduce the total number of animals due to heavy grazing over several years; it comes from an increase in number of predators and it comes from an increased development of infrastructure on the pasture area.

The number of predators must be kept under control. The requirements of the compensation system concerning the grounds for repayment is not in accordance with the claimed losses. Between 1996-2000 80% of the claimed losses due to predators were not approved. Provided that the government is prepared to pay the actual expenses, the reindeer owners do not oppose the existence of predators within their pastures as long as their number does not exceed a sustainable level.

The main challenge for national authorities and the reindeer industry concerning the loss of pastures is to start a constructive dialogue on how to develop a system of co-existence. This should focus on a municipal level, and integrate the total planning process; from construction of cabins and roads, to disturbances and small-game hunting.

The average income of reindeer owners is lower than for the general population. This is partly due to the heavy investments in necessary technical tools, like snowmobiles, four-wheeled-motorbikes etc. The reindeer owners have only partly the privileges of reduced taxes on commodities, compared to other primary industries.



App. 80% of the expences are connected to technological tools, and the potential to rise the profitability of the industry is therefore mainly connected to creating better income opportunities.

The prospects concerning the market for reindeer products are favorable. The market is willing to pay a relatively high price compared to other types of meat. The main concern from the buyers point of view is the unstable delivery situation of meat, which makes marketing difficult because the demands can not be met year round. The demand from the market does not coincide well with the traditions within reindeer husbandry for times of slaughter. A question is

whether the industry is willing to, or able to, change the slaughtering schedules to provide a year round supply of fresh meat.

There is also a potential demand for new products. This requires an increase in the value-adding production within the industry. The problem is that the individual reindeer owners do not have the necessary competence or knowledge to manoeuvre through the complicated regulations. In Norway a special value-adding programme has been recently introduced, to overcome the obstacles that the reindeer owners experience and stimulate and accommodate the small-scale production throughout the districts.

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