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## Reindeer Husbandry in Sweden

### Introduction

This chapter will focus on reindeer husbandry in Sweden. Reindeer are herded over an area of approximately 160.000 square kilometres, or about 34% of Sweden. All reindeer herding activity in Sweden is regulated by the “Swedish Reindeer Herding Act”. Like the Norwegian case, the Act secures reindeer herding as a exclusive right for the Saami people of Sweden, and is of profound importance. Reindeer herding is closely connected to membership of a Saami Village. The designated areas for praxis of reindeer husbandry are within the borders of the Saami Village. Sweden, like Norway, has one exception from this rule, and that is a limited reindeer herding below the Saami territory in the Kalix and Torne river valleys in Norrbotten– following the borderline between Sweden and Finland. This is named “Concession Areas”.

### Collected Data

The background information for this chapter is based on several publications about Swedish reindeer husbandry, but one publication should be mentioned especially; in Swedish it is called “Svensk rennäring” (Swedish Reindeer Husbandry) from 1999. This publication is the first overview of the socio-economic landscape of the industry, and it is a co-operation between Samiid Riikkasearvi/SSR (Association for Swedish Saami People), Jordbruksverket (the Swedish Agricultural Board), Sveriges Lantbruksuniversitet (Swedish Agriculture University) and Statistiska Centralbyrån (Swedish Statistical Bureau).

In addition to all the official statistics collected for the project, a series of interviews have been conducted in 5 Saami villages with leaders, herders and reindeer owners. We have focused on the problems and obsta-

cles that the members of the villages are facing in their every day work.

A presentation like this will never give justice to the variation inside the industry. But hopefully this chapter will give a general impression about the situation for the people within the reindeer husbandry.

## National Management of Reindeer Husbandry

### Organisation

#### *Reindeer Pasture Areas*

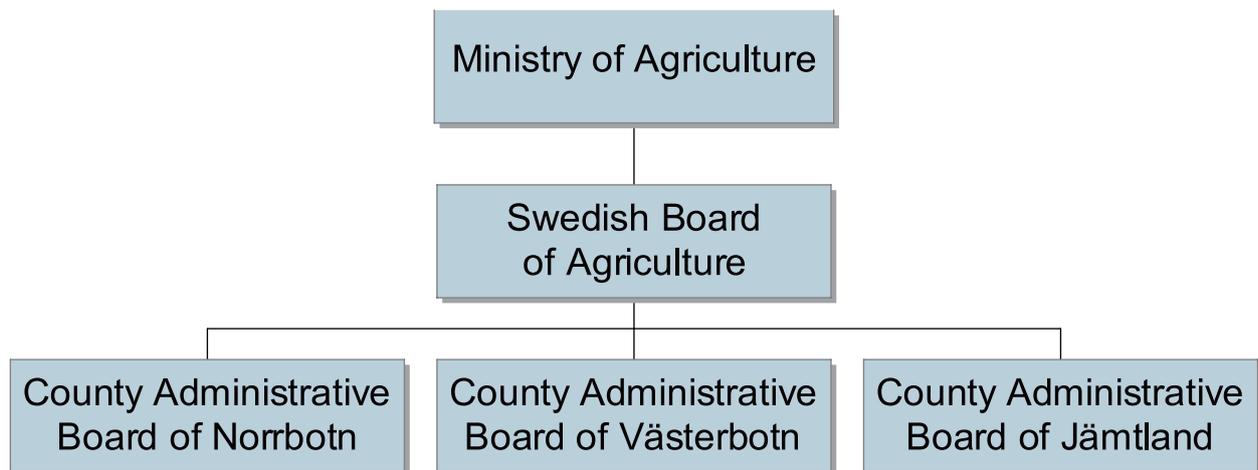
Reindeer husbandry is practised in the Counties of Norrbotten, Västerbotten and Jämtland, covering about 160.000 square kilometres, or 34% of Sweden. Sweden classifies the different pastures in a way which is unique. Sweden operates with several important administrative concepts - Saami territory, cultivation line, year around pastures, winter pastures and concession pastures - which function as border lines between the different pastures.

In the SOU 2001:101 “En ny rennäringspolitik” (Towards a new reindeer husbandry politics) the system of division of the Swedish pastures is explained. It states:

“Reindeer management may be conducted throughout the year in the Sami territories of Norrbotten and Västerbotten counties, partly above the limit of cultivation, partly below this limit on land where forest reindeer management is traditionally conducted in the spring, summer or autumn on land belonging to the state or that belonged to the state on the last day of June 1992 (Crown Lands) or constitutes reindeer pastures on reindeer mountains in Jämtland and Dalarna counties that belonged to the state on the last day of June 1992 and that were specifically made available for reindeer pasture.

Reindeer management may be carried out from October to April in other parts of the Saami territories below the cultivation limit, within such areas outside the Saami territories and reindeer mountain pastures where reindeer management has traditionally been conducted during certain times of the year.”

Figure 1: National Management of Reindeer Husbandry



## State Management system

The following text will give a short presentation of the Swedish management system. The management system in Sweden and Norway is based upon the same principles, and system in Sweden could be described schematically according to figure 1.

As shown in figure 1 the highest level is the Ministry of Agriculture. It is responsible for all the co-ordination regarding Saami issues in the different Ministries and also has the responsibility towards the Saami Parliament. In addition to this the Ministry of Agriculture is responsible for all questions of principal character regarding reindeer husbandry. Most of the decisions concerning the reindeer husbandry is delegated to The Swedish Board of Agriculture.

### Swedish Board of Agriculture

The Swedish Board of Agriculture is the Government's expert authority in the field of agricultural and food policy, and the authority responsible for the sectors agriculture, horticulture and reindeer husbandry. Its responsibility therefore includes monitoring, analysing and reporting to the Government on developments in these areas, and implementing policy decisions within its designated field of activities.

The general responsibility for the reindeer husbandry is within their responsibility, but the day-to-day activities includes executive work, different kind of reviews and investigations and the administrative work regarding different compensations etc.

### County Administrative Board

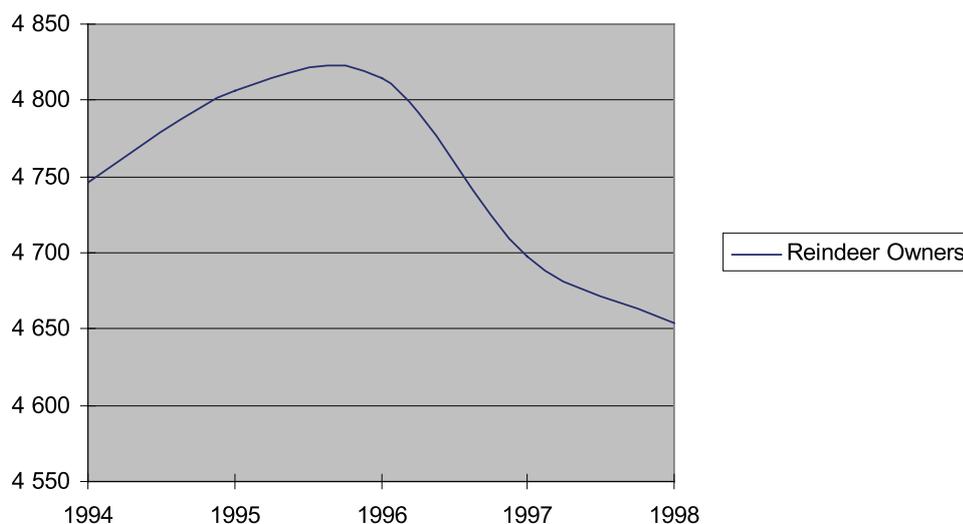
The County Administrative Board of Norrbotten, Västerbotten and Jämtland is the executive authority on reindeer husbandry within the Swedish management system. They are responsible for the daily contact with the Saami Villages. Some of their responsibilities is control of the maximum number of reindeer on different pastures, based on surveys in cooperation with the saami villages beside the number of predators within the pastures, and consequently the number of reindeer lost to predators that is paid compensation for.

All three county administrative boards have one expert on reindeer industry. In addition to this, the county administrative boards is the secretariat for the "reindeer industry delegation/board". This board consist of seven members, where three of the members are reindeer owners.

### Saami Villages

The saami villages are the units which organises the reindeer owners within the designated pasture area of each saami village. The area of reindeer husbandry in Sweden is divided into 56 saami villages. The concept of a saami village is not a settlement, but an organisation of the use of a designated area, although in practice a settlement is often the centre in the area. The saami village is not allowed to be involved in any economic activities other than reindeer husbandry. As will be shown in the subchapter on legislation, there

Figure 2: Development of Reindeer Owners in Sweden, 1994 - 1998



is currently a proposal for a new legislation that will give the saami villages opportunities to expand its economic activities also in other areas of interest.

Every reindeer owner is considered as a self-employed person, and the saami villages function as co-operations of individual reindeer owners. For example, the compensations for loss of reindeer are paid to the saami villages, which distributes the amount according to the size of the herd of each reindeer owner.

The saami village is equivalent to the reindeer districts in Norway, and the individual reindeer owners are equivalent to a husbandry unit in Norway.

### Reindeer Owners in Sweden

Figure 2 shows the development in the number of reindeer owners between 1994 and 1998. The trend

in Sweden is a slight reduction of 2,1% in this period. A reduction on 2,1% is around 100 persons and probably reflects normal variation in the data material and in the society as a whole. Compared to Finland with a decrease of 16%, or 1000 persons, the situation in Sweden is stable. The same is the situation in Norway with a slight increase of 4%.

The number of owners in Sweden is stable, but how is the division of reindeer between the owners? We will present some of the material available in Sweden concerning numbers of animals, herd size, sex, age etc.

Figure 3 shows the number of owners divided into different herd size groups. The general impression from Sweden is that the majority of the reindeer owners - 3727 persons, or 80% - owned between 1 and 49 reindeer in 1998. The second largest group of owners - 313 persons, or 6,7% - owned between 50-99 reindeer, and the third group with 291 persons, or

Figure 3: Number of Reindeer Owners and Size Group of the Herd, 1998

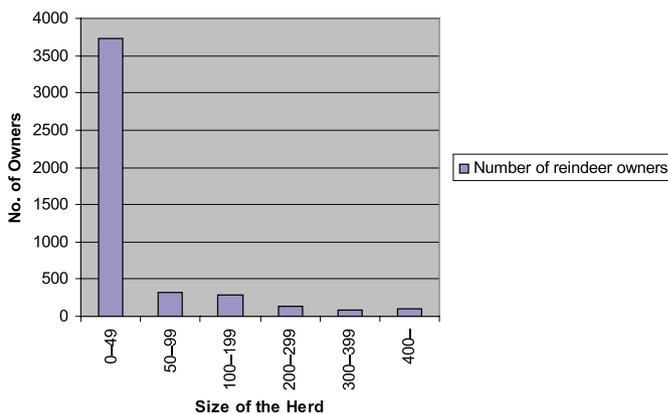
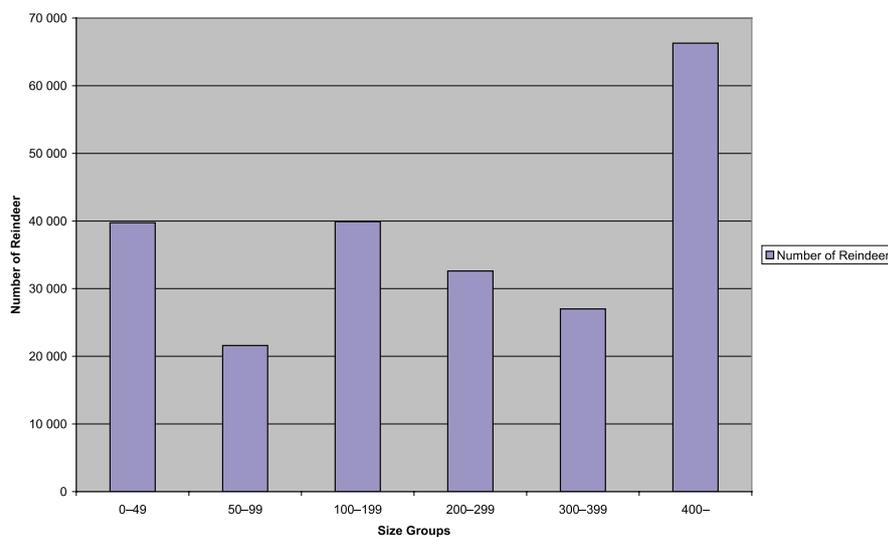


Figure 4: Number of Reindeer in Different Size Groups, 1998



6,2% owned between 100-199 reindeer. 108 persons, or 2,3% of the owners have a herd of more than 400 reindeer.

A consequence of figure 3 is shown in figure 4. The figure gives an indication of the total number of reindeer in the different herd sizes. The average number of reindeer in group 1-49 is 11. In size group 50-99 the average number of reindeer is 69, and in size group 400- the average number of reindeer is 630.

This indicates that there are many small reindeer owners with an average herd size on 11 animals, and on the other hand, the reindeer owners with large herds, means in average 630 animals.

Figure 5 focuses on reindeer owners divided in different age groups and the figure speaks for itself. It is a clear trend in Sweden to a predominance of reindeer owners over 50 year. There are 2269 reindeer owners over 50 year, or 49%. An even more interesting observation in this figure is a equal number of reindeer owners between 30-34 year and over 80. This figure show the problem with recruitment in Sweden,

The distribution of male and female reindeer owners. in Sweden follows the same pattern as in

Norway. The number of male owners outnumber the female owners and according to the data from Sweden there are 2867 male reindeer owners, or 62%, and 1633 female owners, or 35%. 3% of the owners is decedent estates.

Figure 6 gives a overview of the distribution between male and female when it comes to herd size. In herd size from 300 reindeer and upwards, male reindeer owners constitute 90% or more of the owners, but in the other end - between 1 and 99 reindeer, male reindeer owners constitute about 62%.

Two important pictures can be drawn from the figures presented. It is a predominance of male reindeer owners, and the male reindeer owners own most of the animals, and the largest herds. This picture is more or less similar with the situation in the other scandinavian countires.

The second thing we want to draw attention to is the difficult recruitment situation. As the figure shows, it is slaghtly more reindeer owner at age 80 than there is reindeer owners age 25-29. This is an indication on the difficult situation for recruitment into the reindeer industry in Sweden.

Figure 5: The Number of Reindeer Owners Divided in Age Groups, 1998

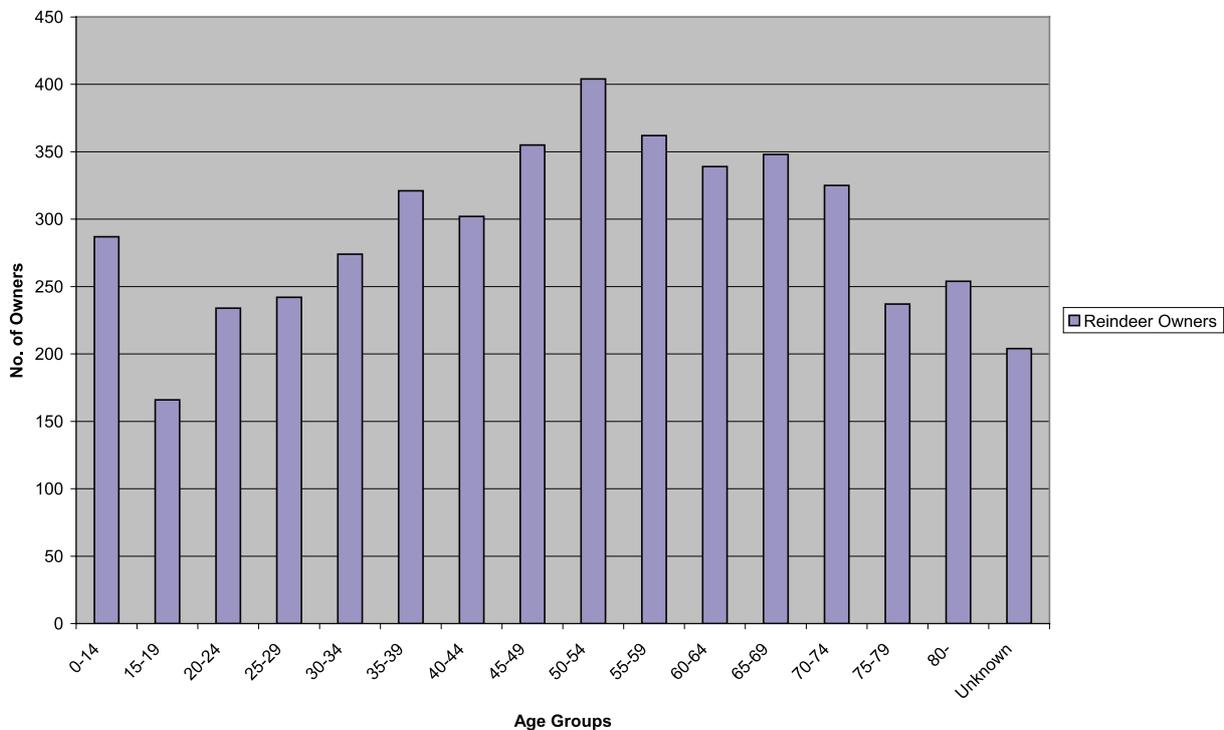
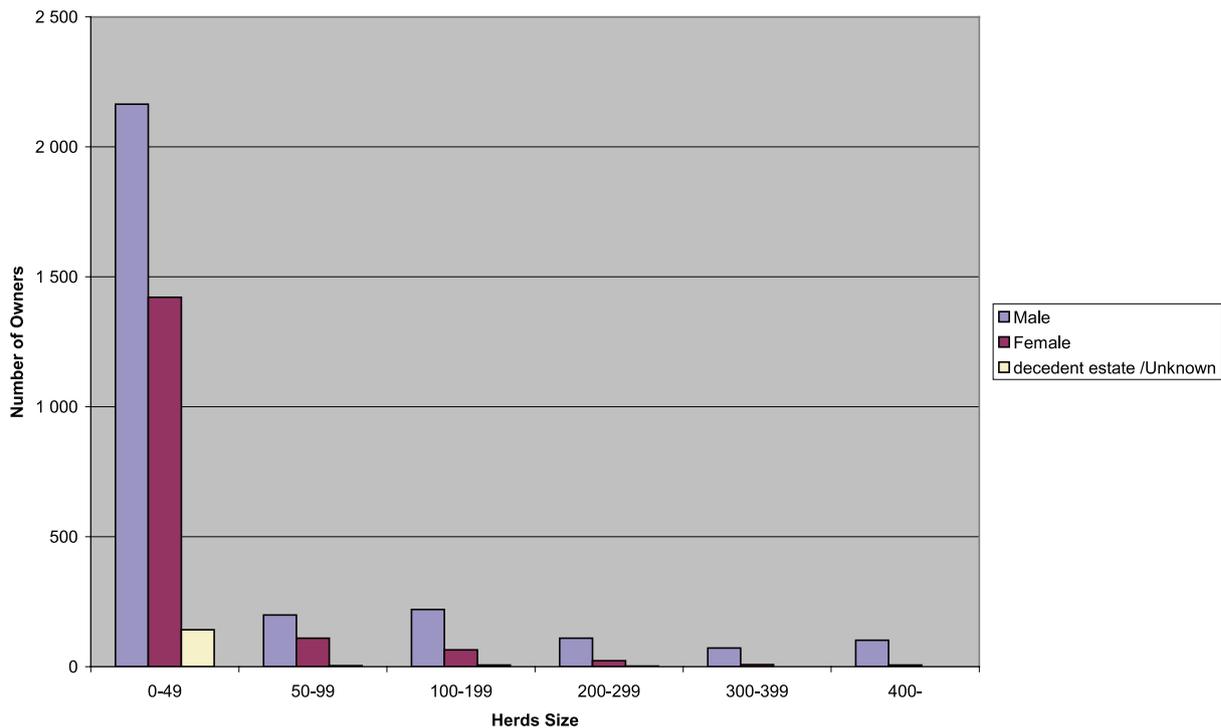


Figure 6: Distribution of Male and Female Reindeer Owners in Different Herd Size, 1998



## Economy in Swedish Reindeer Husbandry

### Introduction

This part of the chapter will give a short introduction to the economy connected to the reindeer husbandry. The general questions asked in the beginning of the chapter were: How important is the income from the industry to the family? What kind of income is important to the industry? What are the costs connected to the industry? It should be noted that the figures are based on averages, and do not give an exact picture of the variations within the industry.

### Size of the herds

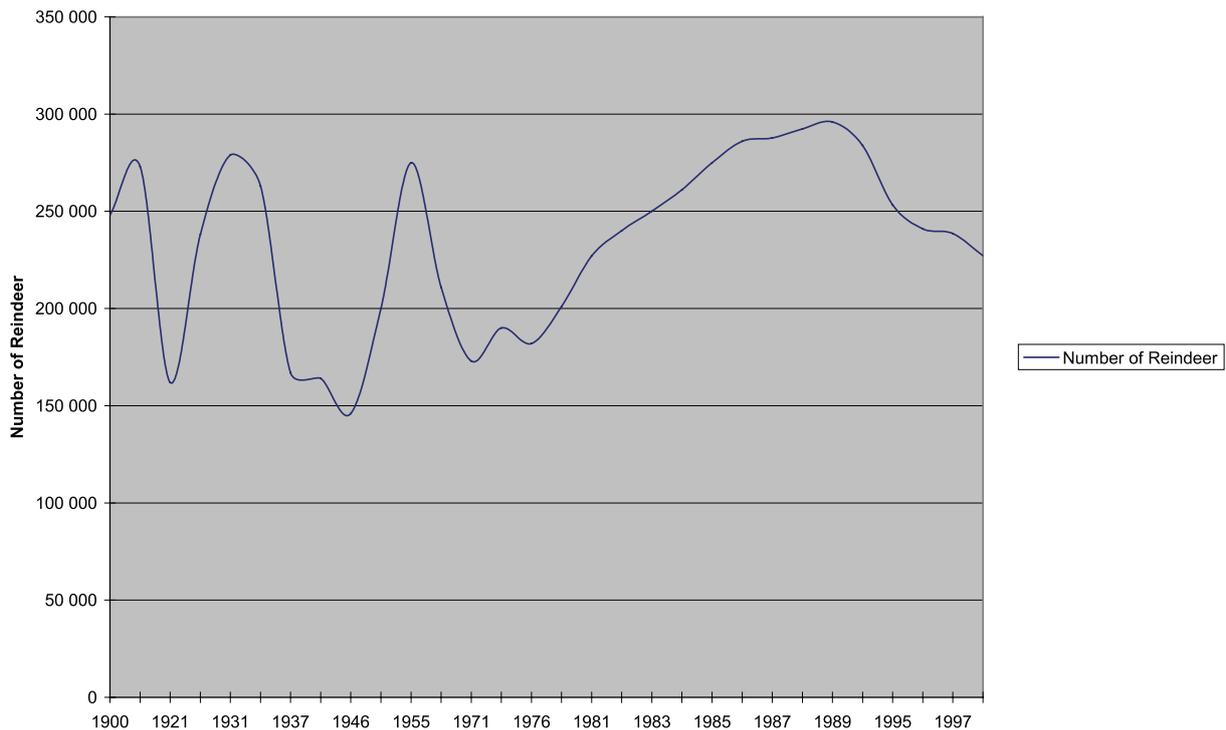
Figure 7 shows the development in number of reindeer in Sweden between 1900 and 1998. The development in the total number of reindeer is similar to the development in Norway from the 1970's to the end of the 1990's as shown in chapter 5. The trend has been a steady increase in the number of reindeer from the

beginning of 1980 until 1989/90. From 1990 to 1998 the number of animals has decreased every year.

The background for this development is a complex connection between extra favorable natural conditions and a general social and technological change in the society. One of the explanations offered by scientists is the development in the mechanisation and rationalisation of the reindeer husbandry. More mechanical equipment was introduced as part of the herding activity. This gave the opportunity to manage larger herds, while at the same time it also required more income to pay for the new equipment. The rationalisation of the industry, which was partly encouraged by the official authorities, focused on a maximal production of reindeer meat to increase the profitability for the reindeer industry. A maximal use of pastures over a long period gives little tolerance against too heavy grazing.

The Swedish reindeer owners pointed to the Chernobyl accident in April 1986 as another important explanation. Huge land areas in Scandinavia, and especially in Sweden, was contaminated with radioactive fall-down. This situation caused a collapse in the Swedish reindeer meat market. The government offered economic support to the reindeer owners for the meat that could not be used because of too high content of radioactivity. In a situation where most of

Figure 7: The Development of the Total Number of Reindeer in Sweden, 1900 - 1998



the reindeer meat was destructed the reaction from many reindeer owners was to keep the herd on the grazing ground. This strategy increased the number of reindeer rapidly and according to several reindeer owners the result was too many reindeer on the pastures. There was a need for a reduction in the number of animals, and this is partly reflected in decrease shown in the statistics.

The reduction has not been the same for all the counties. Figure 8 shows the development in number of reindeer divided in counties between 1994 and 1998.

## Distribution of Income in the Family

To get a understanding of the economy in reindeer husbandry, we will look closer at the division of income within the reindeer owners' families. The statistical material from Sweden is divided in a way that makes it possible to compare the income of both single persons and families.

Figure 9 shows that a single persons with a herd size between 300-499 reindeer the vages covers 48%

of the total income, while income from the reindeer husbandry amounts to 30%. The average for single persons not taking into account the herd size, the importance of vages raises to 69%, while the income from reindeer husbandry decreases to 18%.

When it comes to the average family the situation differs. Families with a herd size between 300-499 the vages covers 78% of the total income, while reindeer husbandry amounts to 15%. Not taking into account the herd size, the average income for a family is divided between 84% vages and 10% from the reindeer husbandry.

Income from vages can be both from work outside the reindeer husbandry, but some saami villages pay their members vages for the work they put down in maintenance of infrastructure within the villages' pasture area etc. This is registered as regular salary, even though it is directly related to work in the reindeer husbandry.

For the families the high percentage of income from vages, may also be caused by one of the couple working outside the reindeer industry. Since the general level of vages in the Swedish society is higher than in reindeer husbandry, the income from reindeer husbandry will cover a lesser part of the families' total income than the vages from regular employment.

Figure 8: Total Number of Reindeer by County, 1994 - 1998

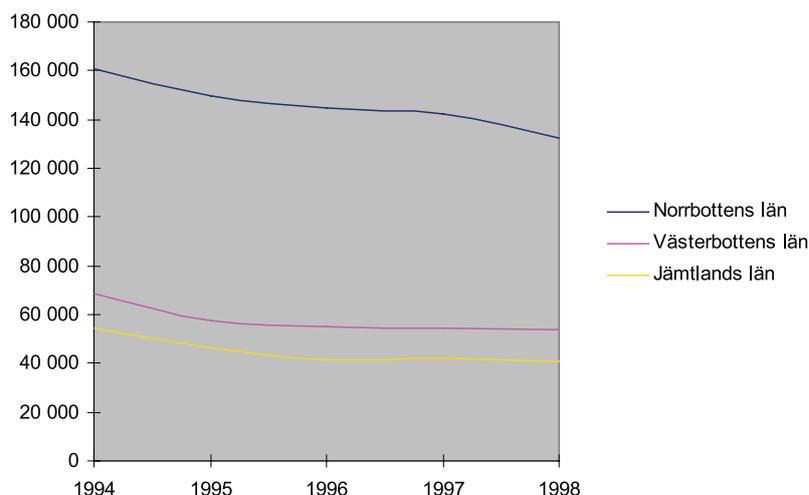
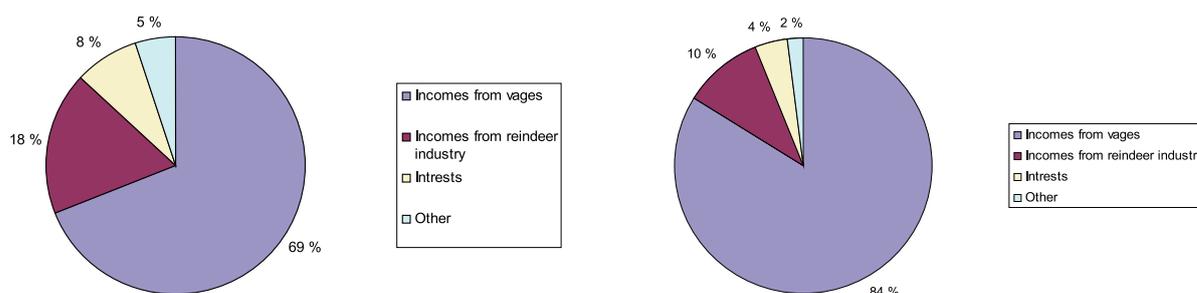


Figure 9: The Division of the Total Income, Single Person And Family, 1998



### Income Connected to Reindeer Husbandry

The description of the income in the Swedish reindeer husbandry is based on the statistics of an average of the self-employed reindeer owners. The publication “Swedish Reindeer Husbandry” gives an example on one average reindeer owner in Sweden in 1998. This example shows the different incomes to this reindeer owner during one year in addition to all the incomes to the saami village which he belongs.

The following text give a short overview of the distribution of these incomes.

#### Reindeer meat

Figure 10 indicates the situation in the beginning of the 1980’s with a steady increase in meat production. This trend changes dramatically in 1986/87 after the Chernobyl accident. The production was reduced

with almost 2.000 tons over night. From 1989 the meat production began to increase again, but from 1991- 1998 the meat production fell steadily.

For the average reindeer owner the income from meat covers 43% of the total income from reindeer husbandry.

#### Compensation for loss of reindeer

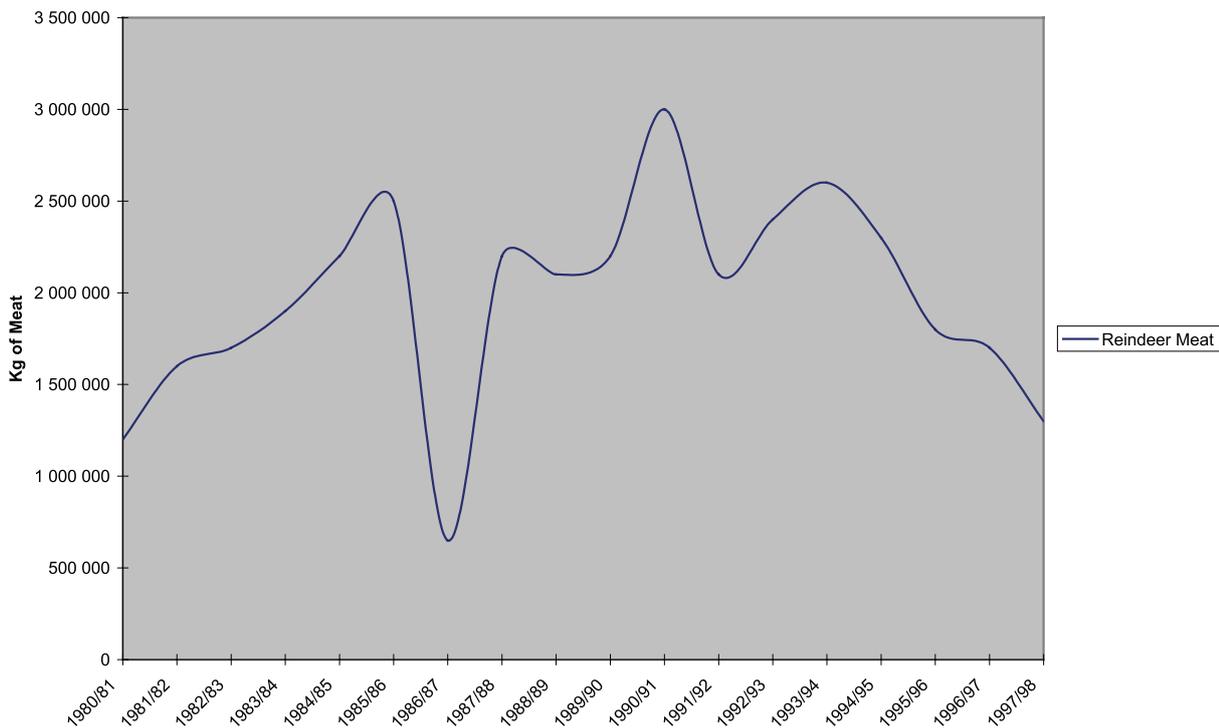
The compensation for loss of reindeer to predators, car accidents etc. amounts to 20% of the average reindeer owners income from reindeer husbandry.

#### Additional Earnings

Earnings from sale of deerskins, antlers, hunting and fishing amount to 26% of the average reindeer owners income which is related to reindeer husbandry.

The average income from wages received from the saami village amounts to 11% for the average reindeer owner.

Figure 10: Production of Reindeer Meat in Sweden, 1980 - 1998



## Costs Connected to Reindeer Husbandry

The statistical material for Sweden is difficult to compare with the other scandinavian countries because of the division of expences. The costs in reindeer husbandry for the average reindeer owner are connected to transport, mechanical equipment, artificial feeding, dogs, constructions, office and insurance. A calculation of the expences to transport and mechanical equipment reveals that they cover approximately half of the total costs for each reindeer owner. The use of helicopters as an aid in herding is a considerable expence, which is paid by the saami village. The close co-operation between the saami village and the reindeer owners makes it difficult to calculate the actual costs connected to the reindeer husbandry for each owner.

## External Conditions

### Introduction

The economy part of this chapter is based upon the national official statistics in Sweden. The presentation indicated a trend in the economic situation for the swedish reindeer husbandry at the end of the last century. But reindeer husbandry is much more than economy. Someone would even claim that reindeer husbandry is not about economy at all, but about other values.

This part of the chapter will focus on external conditions that affect the industry in different ways. This part is based on interviews made during the projects field trips in Sweden in March 2002. And again, the topics for discussion during this interviews were the

same as for the other countries; predators, loss of pastures, small game hunting, tourist industry and access to market.

## Predators

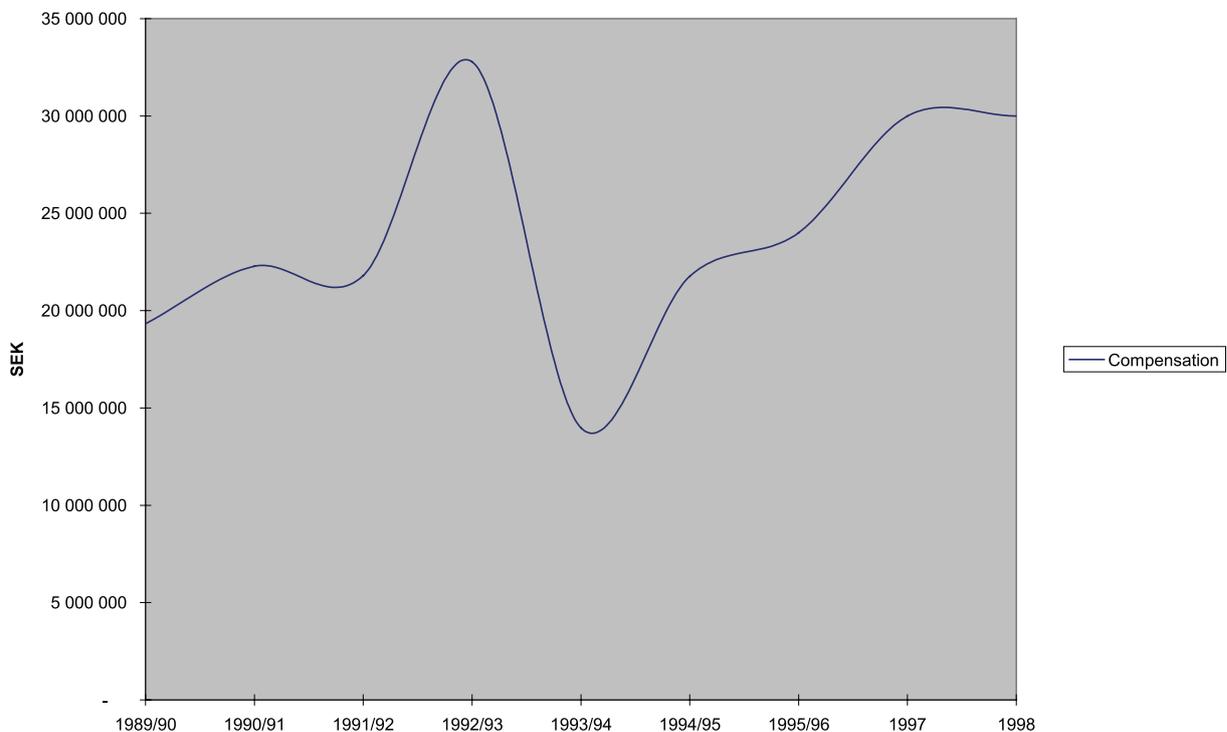
There is an ongoing debate both on a national, and an international level, about predators. The opinions are strong, and the disagreements are many. The debates are concerned with how many predators exist, is this number of predators in accordance with the national policy, how much damage are the predators responsible for etc. All these questions are important, but it is difficult to give good answers to them. It seems that “everybody” agrees on the fact that the predators belong to the natural environment, and that predators are an important factor of this environment. The disagreements concern how the predators should be managed and controlled, and how much harm they should be allowed to do before they are removed.

This debate is strong in Sweden, and predators are one of the “top-three” topics among reindeer owners. All the owners interviewed during the fieldtrip brought up this issue, and expressed a clear attitude

towards predators. The stories told, and the experiences with predators differ between the areas, but one message was universal: the number of predators is growing, and they are causing more and more damage in the herds. The damage to the herds have at least two sides; one economic side and one emotional side, but so far most of the attention has been paid to the economic impact.

The Swedish compensation system connected to predators differs from the systems in the other countries in this report. Sweden has a system based on the occurrence of different predators inside the pasture area of the Saami village. The compensation is estimated through the number of reproduction of each predator every year. One reproduction of wolverine or lynx is compensated equivalent to 200 reindeer. Reproduction of one wolf is compensated equivalent to 500 reindeer. If there is no reproduction inside one Saami village area, but only occasional occurrence of wolverine or/and lynx, the Saami village will get compensation equivalent to 50 reindeer for each species. If this is the case for wolf, the compensation will be equivalent to 50 reindeer for every wolf/individual. When it comes to bear and golden eagle, the compensation system is based on the size of the pasture area multiplied with 0.02.

Figure 11: Compensation for Loss of Reindeer to Predators, 1989 - 1998





Artificial Feeding of Reindeer in Sweden

Photo © Johnny-Leo L. Jernsletten

The important point is that compensation for loss of reindeer is paid to the Saami village independent of whether the reindeer is found dead or not. This is a compensation for the number of reindeer assumed killed by predators that year. The compensation in 1998 for damage by predators was estimated to be 58.000 reindeer totally for Sweden. The Swedish government has allocated 30 million SEK to the compensation system, and 30 million divided on 58.000 reindeer gives a price for each reindeer of SEK 517 in 1998.

Figure 11 shows the development of compensation for loss of reindeer to predators in the period 1989-1998.

The figure shows a variation in the compensation from 1989 to 1997. The compensation is stable on SEK 30 million because this is the amount of money allocated from the government. This means that it is actually the value of each reindeer that varies from 1997 since the amount of money for compensation is constant.

All reindeer owners expressed a deep concern when it comes to the fluctuating values of the reindeer. In praxis it means that it is the owner of the herd who

must take the economic loss when the value of the reindeer decreases. The reindeer owners underlined that they do not know about other self-employed persons who sell products which vary in value from year to year. The reindeer owners are generally satisfied with the compensation system today, on the conditions that there is set a fixed value for each reindeer. This system means that the Swedish government must allocate the money needed to cover the actual expenses connected to loss of reindeer. This amount of money would change in accordance with the numbers of predators within the reindeer areas in Sweden.

As mentioned at the beginning of this section, economic compensation is important to a self-employed person, but many of the owners also pointed out the emotional side of having predators within ones pastures. It is a personal strain to find your own reindeer teared to pieces of predators. Sometimes you can see from the track in the snow how much the reindeer has suffered before death occurred. It can be difficult to understand for people outside the industry the emotional tie to the individual reindeer - a competent owner recognises each individual reindeer in the herd, and have different terms for the composition of

colours, shape of the antlers, etc as well as behavioral characteristics.

## Loss of Pastures/Forestry

For the discussion about “Loss of Pastures”, please refer to chapter 5. For the discussion about “Forestry”, please refer to chapter 7.

## Small Game Hunting

For the discussion about “Small Game Hunting”, please refer to chapter 5.

## Market and Value Added Production

For the discussion about “Market and Value Added Production”, please refer to chapter 5.

## Legislation in Reindeer Husbandry

The most important issue concerning legislation in Sweden at present is the report “A New Reindeer Management Policy” (SOU 2001:101). This contains substantive recommendations and proposals for changes in the Swedish management system, and opportunities for extended economic activities within the saami villages. When it comes to changes in the national management system, it is proposed that the main responsibility for the management of the reindeer industry should be transferred to the Saami Parliament. The exception is the management of pastures, which will continue to be governed by the County Administrative Boards of Nordbotten, Västerbotten and Jämtland.

The saami villages are to day restricted from other economic activities than reindeer husbandry. The new proposal involves extensive economic freedom, which will offer the saami villages a more differentiated economic basis. Especially for the women this will give opportunities for income connected to work with handicrafts, tourism etc. within the framework of the saami villages.

Another important proposal in the report is the equality of ownership to land and pasturing rights.

In praxis this means that in conflict situations both parties - landowners and reindeer owners - have the same strong case in the legal system. Hopefully these changes in the legal status will forward a joint planning of the use of land areas, for example between the forest industry and the reindeer owners, which will lessen the level of conflicts.

The proposals of the rapport on equality of land use rights is in sharp contrast with the actual situation in southern Sweden, where there are ongoing conflicts in court between landowners and reindeer owners. So far the reindeer owners have had the sole responsibility of proving that they have a traditional right to use privately owned land as winter pastures. According to the reindeer owners the loss of their rights to winter pastures in southern Sweden will mean the end to reindeer husbandry in a large area, because there are no alternative pastures available.

In addition the agreement between Norwegian and Swedish governments on the concession pastures is being reviewed, and proposals for amendments are put forward in the report “Recommendations from the Norwegian-Swedish reindeer pasture commission” (2001). The reports are expected to have impact on the management systems in both Sweden and Norway. In addition to these reports, there is an ongoing debate on the necessary conditions for a future ratification of the ILO Convention no. 169 in Sweden, which will have an impact on the issue of rights to pasture areas.

Most of the legislation that impinges upon the reindeer industry is managed by the local governments. These are directives on traffic on the outlying fields or grazing grounds, building and construction on the grazing ground, etc. Such legislation is always open for interpretation and consideration from the local government, something which opens for different 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 on them. This type of legislation is designed to be a tool for the local communities, and not for the reindeer industry. The legislation is not oriented towards protecting the reindeer industry from disturbances etc.

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 in the management system. Some of the explanation could be that this is not an industry which brings big tax incomes to

the community, the industry is slightly 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 situation with loss of pasture connected to infrastructure development is a major threat to the reindeer industry also in Sweden, as shown in chapter 5. A joint effort between national authorities and the reindeer industry is needed to secure the remaining grazing areas.

Predators are a growing concern to the industry. The compensation system of Sweden, which is based on the occurrence of different predators inside one pasture area, is well functioning but to make is reliable

for the reindeer owners the compensation should be based on a fixed price on each reindeer.

The Saami reindeer husbandry has always been based on the family as a social and economic unit. The development in legislation on reindeer management has reduced the family members' rights and, as a consequence, their involvement in the industry. According to the report "A New Reindeer Management Policy" (SOU 2001:101), the proposal for more economic freedom will rise the opportunities for the involvement of other family members along with the reindeer owners within the economic framework of the saami villages.

The market for reindeer meat in Sweden is favorable and the positive development of value-adding production should continue. The reindeer meat is a highly valued product, and the opportunities within the domestic market is good.

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