The DEER-WOOD project

North-Trøndelag county, Norway

Skogeierforeninga Nord (Forest Owners' Association, North)

1. Background – Nordic/ Scottish Collaboration.

In February 1998, Inn-Trøndelag Forest Owners' Association (I-T FOA, later merged into Forest Owners' Association North) was asked by the Norwegian Forest Owners' Federation (NFOF) to participate in a project on Managing deers across multiple land ownerships. The background for the question was:

1) that NFOF had taken the responsibility on behalf of Nordic Council of Ministers to establish cooperation between Scottish and Nordic units in forestry,
2) that an initiative had recently been made by Forestry Commission, Edinburgh, on a collaboration on deer management,
3) that an NPP-funding system had been established.

Statistics of elk culled in Nord-Trøndelag county (N-T) show that around 1960 1500 elks were culled annually, 1970 600, since then an even growth so for the recent years the annual number culled has reached 4000 or more.

In 1997 the venison value amounted to NOK mio 37, while the road side value of timber harvested was NOK mio 184 (average for the 90-es NOK mio 230).

Since early 80-es N-T has had the following aim for deer management:

"The deer management should be practiced in order to obtain the highest possible level of production and of venison. At the same time eventual damage on agriculture, horticulture, forestry and traffic should be kept on an acceptable level.

There is a general agreement that the management has been successful regarding raising the number of moose and their productivity. The number now is on a historically speaking high level. So there is a need of new knowledge on the relation deer/forest.

The deer population growth has brought about considerable browsing damage. So, a number of local authorities would like to have the damages monitored. The problems are known throughout the country and in the other Nordic countries as well.

The foresters are concerned about the economic consequences of using wrong species on a site, or of not to secure regeneration because of the risk of browsing damages. This is mainly on Scots pine. Another question is also raised – if browsing is really taken into consideration in forest management, say leaving shrub for browsing when preparing the ground for regeneration.

A third topic, which has recently attracted attention, is the effect of browsing on biodiversity.

For the local land-owners' associations that have emphasized deer management as a part of the land-owners' income, including services and investments in connection to hunting, fluctuations in hunting opportunities brings about income instability and problems related to market. In step with the raising number of deer, we have had an increase of sales of hunting rights. Some private land-owners have developed this into a considerable income source. As an extreme, the annual income of the deer hunting is more that 50 % of the timber sales value, this in Tangeråsen local landowners' association where they also manage their timber production, harvesting and sales very well.

The general view in N-T is that the winter browsing is the limiting factor. It is desirable to develop a simple monitoring method in order to establish an early warning system.

In the projects "Elk in N-T, FM report no 1 1991" and "Elk browsing monitoring in Sparbu 1995", comprehensive monitoring of browsing was carried out. The methods that were used were developed by the scientist Mr. Knut

Solbraa of NISK/NLH, in connection with the national project Elk – Wood – Society in the 80-es. This implied a total monitoring aiming at assessment of resources, browsing pressure and calculation of damages. The conclusion after the monitoring in Sparbu county was that this method was too resource-demanding and therefore less apt to the more continous management needs. During the period after the above mentioned projects there have been many approaches about methodology and potentials of improvement to be used by local managers.

Autumn 1998 two inquiries were made. The county governor's office asked the local Forestry Service while the forest owners associations asked their local foresters, about the development in regard to browsing, and also about the need of more knowledge. In 50 % of the local answers the browsing of sallow, rowan and aspen was described as "strong". A majority of the answers also wanted to monitor browsing.

2.1 The overall objective for a collaboration project

Develop and exchange knowledge and experience on deer management

- raising contribution to the local economy
- maintain long term sustainability, in particular having in mind biodiversity and wood production

The participating countries are supposed to cover different aspects within the collaboration. Each of the sub-actions will be carried out as an independent project within each country. The sub-actions will be selected having in mind the spesific challenges that one faces. The organising of the collaboration gives additional insight and information from other countries.

On the background of the overall objectives the steering committee of N-T concludes with the following areas of action:

2.2 Main objective

The parts of the project that should be carried on in N-T, should contribute to improve economic and ecologic woodland and deer management decisions in a long term perspective.

2.3 Sub-actions

Sub-action 1. A simplified method of monitoring winter-browsing ressources, deer utilisation of winter habitat and damage to spruce and pine. This in order to know more about the level of a long term stable and optimal number of deers.

The aim is to develop a method which is professionally satisfying, at the same time claiming so limited ressources that it can continously be practiced locally in the on-going deer management. The local authorities, in cooperation with the land-owners should implement the neccessary monitoring of winter-browsing ressources when needed.

Subaction 2. It should be included in the same process a monitoring of the landowners' practices as for making arrangements for an optimal production of winter-browsing species for deers. It further includes an assessment of the effects of a high deer population on biodiversity.

Subaction 3. Analyse on a district scale what could be the optimal balance of timber and deer, in economic terms within a biodiversity frame. This also includes analysis of an overoptimal (and underoptimal) number of deers, having in mind wood and biodiversity effects. Economic consequences of using wrong tree species for a site or of missing regeneration because of deer damage risks.

Sub-action 4. Elaborate tools for prognosticating winter-browsing opportunities for deers in the short and in the long run. If the project is successful, the deer and wood management will be carried out in a more substainable way. It will also enlarge the economic output, and the management of deer and wood will be more predictable.

3. Organisation

A steering committee of 9 has been established: 2 members from the forest owner's organisation, two from the county governor's office (one from the Dept. Forestry, one from the Dept. Environment). One member represents the forestry Department of the University College of Agriculture and Forestry of Norway, and the remaining three members represent the three local communities where the project activities will take place. Reference groups, representing the landowners, as well as the local municipalities are established for the specific local project activities. Two local districts (Steinkjer and Overhalla/Høylandet) with different industrial, population and natural conditions have been selected for testing and analysis. There will be a full time employment project manager. The project will be attached to a coordinator for a total project for Scottland – Norway and eventually others.

4. Timescales

The project will be pulled off during 2 years. At an early stage, all available information on knowledge and experience will be gathered, inside and outside Norway. The central project coordinator should assist in establishing contacts. Excursions/meetings together with professionals should be a basic part of the project at this stage.

4.1. **Monitoring methods and courses for participants.**
After systematizing the available knowledge, a monitoring test system will be introduced and courses for local participants, re objective, will be held. This will be done in cooperation with the local reference groups. Specific monitoring will be carried out in the selected local districts.

Criteria for selection of local districts are:

- a good structure in the organising of landowners, interest among landowners
- a local public administration that would like to contribute actively to reach the aims of the project
- one local district with heavy browsing over extensive areas
- one local district with medium strong browsing
- winter browsing related to seasonal migration of deers (lowlands – highlands, browsing along watercourses).

Before the local monitoring, short courses for the local field participants (land owners in particular) will be held. An important part of the preparation is to engage quite a high number of locals (landowners etc.) to have tested if this could be introduced as a permanent method if most costs should be field work carried out or paid by the landowners themselves. This would be in accordance with central guide-lines about local responsibility for the management of wildlife and fresh-water fishing resources. To certify the local work, control surveys on a number of plots will be necessary.

4.2 **Forecasting based upon forest surveys.**
It is desirable to utilise existing data from forest surveys, in order to develop prognostication tools regarding overviews of accessible winter-browsing in the short as well as in the long run, and obtain a long term stability of number of deer during the winter. An important part of this will be to throw light on the influence of deer on biodiversity.

4.3 **Deer as resource, environmentally based activities to raise local income and employment.**
In the meetings with collaborating units abroad there will be access to new knowledge on tourism, be it the present situation, what has been achieved and eventual new ways to go. In the survey of the selected districts, the present hunting opportunities will be surveyed. Based upon this information, differences among countries and development opportunities will be visible.

4.4 **Reporting etc.**
Methods of surveying, and tools for forecasting will be made available for others as soon as they are worked out. A Norwegian report will be worked out at the end of the project, and will also be included in the joint report including the other participants as well. The central coordinator will have the responsibility for the joint report, in the same way as for a joint conference at the end of project period.

4.5 Budget

Details to be agreed

Annex 2
Description of pilot communities
The two pilot communities are 1. Steinkjer community and 2. Overhalla and Høylandet communities. The wood and deer management is an important topic in both districts. Winterbrowsing limits the elk production. Seasonal deer migration is normal. The land-owners are well organised.

1. Steinkjer

Total area	1.7 m km²
Productive woodland	60,000 ha
Population	21,000

There is a growing centre with education, public administration, trade and some industries mainly connected to agriculture and forestry. In the 6 villages, spread like a fan around the centre, there is an active agriculture and forestry. All together there are 1000 farms run actively in Steinkjer.

A tremendous rise of elk has taken place. 1972: 65 culled of a quota of 112, 1997: 848 culled of a quota of 883. Quota 1998: 1019.

It has been worked actively to organise land-owners in order to have one decision unit on the landowners' side. The hunting is controlled by dividing the community in 6 hunting areas, and a good deal of the management is carried through by these 6 units. None of them have a management plan for several years. Matters of common interest are discussed in the advisory wildlife committee, where the leaders of the areas meet the local public authorities. Most of the deer hunting is up to now performed by landowners and their families and friends. However, there is a recent development towards hiring out the elk hunting to hunters and also so-called guest-hunters. In Steinkjer there is a local assoiciation of land-owners that has hired out elk-hunting for many years, with an ongoing development of products, to-day one of the best in the country. A stable and vigorous elk population means a lot to local value creation.

2. Overhalla and Høylandet

Overhalla:	Total area	713 km²
	Productive woodland	15,500 ha
	Population	3,700

Private ownership to woodland predominates, but there is also one state owned estate and 3 common forests. Overhalla is a typical agriculture and forestry community. There are 4 villages, and the community is divided east – west by the Namsen river. This watercourse has always been cruical to the inhabitants, and is also important to deers. The vegetation along the Namsen river and the side-rivers are probably the great winterbrowsing ressource for deers. Their use of it differs among years, depending on winter conditions. The elk population has also in Overhalla increased rapidly – 293 culled as the record until now (1997). Quota 1998 335 elk. 93 % are culled as "free elk" (quota not divided on sex and age) according to management plan including an agreement with the wildlife authorities on hunting. The management is well organised in altogether 13 hunting areas, of which 12 have their management plans. The hunting areas vary between 12.000 ha and 120.000 ha.

The public wildlife responsibility is attached to the department of planning and development in the community. The local council forms the wildlife board. There is also an advisory commitee for wildlife, including representatives for the local landowners association and the hunters association. This involves the local interests in the public decisions made by the local council. There is a great concern with local management of wildlife.

Høylandet

Total area	772 km²
Productive woodland	18.400 ha
Population	1360

Most of the woodland is under private ownership. Farm forestry prevail (94 % of the woodland), the remaining State forest and common forest.

Høylandet is a valley stretching from Overhalla in the south along Søräs river and Kongsmo river to inner Follafjord in the north. The society is based most entirely on agriculture and forestry. The climate is oceanic to continental with much snow.

The elk population has grown steadily since 1970, however, it may be stabilized now. Minimum area per cull 250 ha. Quota for 1998 163 elks. The management areas vary from 3600 ha to 11400 ha.

The local public responsibilities are attached to the committee for planning and nature conservancy, and with the forest officer responsible for the administration. The situation, however, is that the deer management in reality is controlled by the land-owners, as the public responsibility is practiced by setting frames within which the elk hunting in the management plan areas can be operated quite independently of public decisions.