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The economic role of hunting tourism –examples from Northern areas

Anne Matilainen
Susanna Keskinarkaus
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1 Introduction

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Hunting in the Northern context can be roughly divided into two different styles: the "Nordic hunting" style, which prevails in Nordic countries and the "Scottish/Irish" hunting style found in the United Kingdom. The Nordic style represents hunting that is seen more as a leisure activity or way of life than a tourism related business opportunity. The traditional role of hunting in Nordic society, the structure of land ownership, and the extensive hunting club activities in these countries have provided good possibilities for recreational hunting for all social groups and the number of local hunters is high. Hunting occurs both in private and state land, where local people, especially indigenous people have special hunting rights.

In the Northern or Nordic hunting culture (see e.g. Willebrand, 2008; Liukkonen et al 2007; Heberlein 2000; Matilainen 2007) maintaining ecological sustainability, the social nature of the hunting event, and appreciation of the wilderness have been identified as central elements (Nygård and Uthard, 2009). For example, the most important motives for hunting given by Finnish hunters are; peace and quiet of the forest, training dogs, sense of community and social contacts, nature experiences, physical exercise, gaining meat, game management and controlling otherwise overly large game populations, rather than shooting *per se* (Metsästäjäin Keskusjärjestö 2003, Petäjistö et al 2004, Valkeajärvi et al 2004, Nygård and Uthard, 2009; Liukkonen et al 2007). Hunting in Nordic countries is mainly based on natural populations of wild animals and game management is not intensive, and the land used for hunting is simultaneously used for other activities, e.g. forestry, reindeer herding or agriculture.

In contrast the development of hunting in Scotland has been quite a different. Due to the landowning structure, where the majority of land is privately owned, hunting is focused almost entirely on large privately owned estates. Typically the game management activities are intensive and in Scotland, many large landholdings are managed primarily for sport shooting. Intensive game management is aimed at producing high densities of animals and larger bag sizes. The right to shoot game, which resides with the land owner, and shooting (including shooting of game birds and deer) opportunities are often sold or leased to the guests of the estate or retained by the land owner for their own use. In this sense hunting tourism has a long tradition in Scotland, which has also shaped the image of the hunting tourism industry in Scotland. For example term hunting is often replaced with term sport shooting in Scotland, term hunting referring only to fox hunting, and paying clients are usually referred to as 'guests'.

Hunting tourism can be defined as a form of tourism, where a person travels outside his/her municipality of residence for the purpose of hunting (Keskinarkaus and Matilainen 2009). This definition includes both domestic and international travel for hunting. Hunting does not have to be the only purpose for the trip, but should be a central element of it. Hunting is typical a rural activity and therefore hunting tourism focuses on rural areas, utilizing its resources and potentially provides business opportunities and external income.

The northern periphery of Europe is rich in different species of game populations due to the extensive wideness areas and variety of natural and semi-natural habitats. Historically hunting and utilisation of

game species have been a significant source of livelihood in this region. However, the number of rural hunters, particularly in Nordic countries, is decreasing due to aging rural populations (e.g. Keskinarkaus at al 2009) and this may lead to an ecological 'surplus' for hunting tourism. Indeed, hunting tourism has been seen as one potential solution to continued sustainable management of game populations in the rural areas, whilst also diversifying rural economies and providing a source of livelihood based on the existing cultures of the northern regions.

The tourism industry is continually growing, globally 10 % of the workforce is employed in tourism sector. Within the EU tourism generates 6 % of regions GDP (Ryymin, 2007), and in the Nordic countries, for example Finland, nature tourism is one of the fastest growing tourism sectors (Ryymin 2007, Ryymin 2008). Hunting tourism is one, currently small, sector of nature tourism. Typically hunting tourism is currently seen as a complementing activity for nature tourism companies; it can help extend the operating season into autumn and off-season periods, and improve the economic sustainability of these companies, but at the moment is not seen as a business opportunity it its own right.

Hunting tourism is a labour intensive industry, and operators must have extensive knowledge of local environment. This entails using local hunting guides and staff in the development and delivery of the products. Previous studies suggest that income from nature tourism remains well in rural areas (Honkala 2001, Saarinen 2003 etc). These factors make it particularly interesting in relation to rural development, for example in Sweden it has been predicted that number of people employed in nature tourism will double in near future (Alatalo 2003), and that the majority of these jobs, if not all, will be focused on rural regions.

The economic benefits of hunting tourism may be direct or indirect. The economic benefit will arise, not only via the hunting tourism companies, but also via service companies providing for example fuel, food, and accommodation. It has been estimated that 2/3 of the income generated through tourism comes indirectly via these service industries (Ministry of the Environment 2002). Therefore, even the independent hunters, who are often domestic tourists, can have surprisingly significant effect to the local economics. The economic role of hunting tourism can also manifest itself in a form of the good hunting possibilities increasing the value of the land or estate.

In order to objectively assess the potential for the hunting tourism sector as a source of economic diversity and livelihood in Northern areas, there is a need to estimate more precise figures on the economic value and potential of the sector. This information does not currently widely exist and many current investment and development activities in this sector are based on "educated guesses". More reliable and accurate information will help entrepreneurs and regional policy makers in decision making at different levels and facilitate social acceptance in the operational environment.

This report aims to provide some of this information in the form of case studies from five countries in the northern areas; Finland, Sweden, Iceland, Scotland and Canada. Each case study represents a form of hunting tourism typical to each region and describes its economic role in a national or regional context. Rather than providing exact figures, the cases illustrate the magnitude of the economic impact. The case study approach was chosen for this report to provide as accurate information as possible, whilst taking in to account the huge regional diversity in the structure, form and volume of hunting tourism in the northern areas The only country in the area this report covers with a significant and well developed hunting tourism sector is Scotland. This, as well as the different structure of Scottish hunting culture, should be kept in mind when interpreting the results of this report.

In each report the most important current customer groups for hunting tourism have been described. Typically in the Nordic countries the hunting tourism structures are quite similar, while in Scotland the tourism structure and earning logics of the companies differed from the Nordic countries. The chosen approaches have been explained in the national reports. The reports also compile the existing information/literature related to economic role of hunting tourism. The country reports are also published as independent reports in the project web pages (www.north-hunt.org)

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2. Economic impact of hunting tourism in rural Iceland

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2.1 Introduction

Hunting in Iceland is generally seen as a common right, available to everyone interested in hunting and holds the relevant permits. Hunting takes place both on private land, where the landowner's permission is needed, and in commons and other public grounds outside of privately owned land where all Icelandic residents are allowed to hunt since no one can legally prove their ownership of these areas (Act 64/1994). The demand for hunting on privately owned land is thought to have increased in recent years (Bjarnadóttir & Sigursteinsdóttir, 2009) and hunting tourism companies have started to emerge to service this growing demand. Many of these companies also provide other tourism services e.g. fishing tourism, guide services, accommodation and catering. A recent study amongst stakeholders of hunting tourism shows that entrepreneurs in Icelandic hunting tourism consider both foreign and domestic hunters to be potential customers for hunting tourism products (Sigursteinsdóttir & Bjarnadóttir, 2010). Some hunting tourism businesses focus on foreign markets, because foreign hunters usually buy different kinds of hunting tourism packages and additional services.

In many regions, tourism is increasingly seen as a means for economic development (Leeuwen, Nijkamp & Rietveld, 2006). Tourism has increasingly become an important industry in rural areas in Iceland and farmers involved with tourism are increasingly providing access to their land for tourism (Benediktsson, Júlíusdóttir & Karlsdóttir, 2008). Over the last two decades, tourism has had a considerable economic impact in Iceland and it has been (and still is) the main growth industry in rural areas where other employment opportunities have decreased. Hunting tourism is thought to provide considerable income to rural economies during the hunting season. However, there is little information on the actual economic impact of hunting tourism in Iceland, and decisions in the hunting tourism sector seem to be largely based on educated guesses. Figures on the economic effects of hunting tourism have not been separately recorded in national financial reports, and data on hunting statistics are fragmented and, in many cases, outdated. Landowners report an increase in demand for hunting on their lands which has motivated them to consider what the economic potential of hunting tourism could mean for them (Jóhannesdóttir, Blöndal & Snæbjörnsson, 2006).

Against this backdrop of a paucity of information but growing interest in the development of hunting tourism the aim of this study is to provide objective information on the economic effects of hunters on the economies of areas used for hunting. An on-line survey was conducted amongst Icelandic hunters to gather information regarding Icelandic hunter spending patterns in the year of 2010, and how they impact tourism businesses in rural areas.

This report will proceed in three parts. We first describe hunting in Iceland and compile statistics from previous studies of the economic impact of hunting in Iceland. Then we have summarise demographic and behavioural patterns of hunters and hunting activities and lastly we estimate economic effects of small game hunting and reindeer hunting in rural areas in Iceland, based on the aforementioned survey.

2.2 Hunting in Iceland

Hunting and the use of wild game resources have been an important source of livelihood in Iceland for centuries. In some cases hunting has been vital in order for the Icelanders to survive in the country's unforgiving climate and harsh environment. Hunting played an important role in providing food for the household or to eliminate vermin that threatened livestock or livelihoods. In some areas, hunting played vital role in subsistence communities, especially hunting of seabirds and seals (Friðriksson, 1996).

Iceland is currently divided into six hunting areas (Figure 1). According to the Icelandic Act on Hunting and Control of Birds and Wild Mammals (Act 64/1994), all animals are protected with the exclusion of; rats (*Rattus*), house mice (*Mus musculus*) and minks (*Mustela*). The Minister for the Environment can revoke protection if a species population is considered large enough to sustain hunting and that the hunting is for acquiring meat, skins or other animal products, or if the population is causing significant damage. According to Icelandic law 39 species can be hunted, but the number of animals killed depends on the legislation at any time. Birds are about ¾ of these species, the rest being species of seals, the arctic fox and reindeer.

All hunting related issues are governed by the Department of Natural Resources (DNR) in the Environment Agency of Iceland, and they control all game management, shooting and hunting courses, licenses, hunting cards and data collection (e.g. bag statistics) and management. The current system of regulating hunting, demands that all hunters in Iceland obtain a firearms license and a hunting card issued by the DNR, after having completed relevant training courses and passed tests. To hunt birds and small mammals valid firearms license and hunting card are needed, but to hunt reindeer a reindeer hunting license for each animal to be shot is required. All Icelandic hunters, who have a valid hunting card and a firearm license, are permitted to hunt on common ground (Act 64/1994). Hunters are required to return bag statistics every year, even if they did not shoot anything. Icelandic landowners are obliged to follow Icelandic law the same as hunters. However, they do not have the reindeer hunting rights on their own land, but they have the right to hunt or allow/lease hunting of geese, ducks and other birds that are legally allowed to be hunted. Foreign hunters are only allowed to hunt on private land (Regulation 291/1995) and need to obtain a short-term hunting license from the National Commissioner of the Icelandic Police, a short-term hunting card from DNR before the hunting trip, and must hold a valid hunting card/license in their home country where relevant (Act 64/1994).

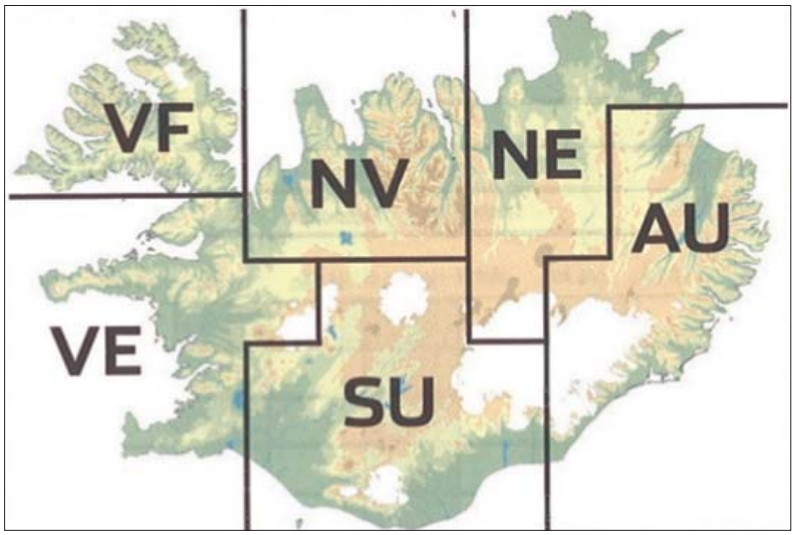

Figure 1 .
Division of Iceland in hunting areas
Source: Umhverfisstofnun, 2009

In 2009 DNR issued 12 227 hunting cards to hunters with Icelandic residence (Information from DNR). The majority of hunters in Iceland are Icelandic nationals, 97% are men and 3% women. Approximately 5% of the Icelandic population, 20 years of age or older held a valid hunting card in 2009. The year 2009 demonstrated an increased interest in hunting, manifest in the number of hunting cards issued (up 9% from 2008), and increased participation in the prerequisite training courses (up 49% from 2008). This increase can be seen especially among women; 197 women held valid hunting cards in 2000, but this number was 317 in 2009. From 2006, the number of women, who participate in license courses, has doubled with the greatest increase between the years 2008, when 66 women participated in the license training curse, and 2009, when 92 participated.

In 2009 DNR issued 198 hunting licenses to foreign hunters, representing approximately 1% of hunting cards issued. Foreign hunters are considered to spend more money on the hunting experience than domestic hunters. In addition to interest from foreign hunters some hunting tourism companies report a growing interest among domestic hunters seeking the convenience of a packaged hunting deal rather than having to organising hunting trips themselves (Bjarnadóttir & Sigursteinsdóttir, 2010). Such planning can be very time consuming, especially if the hunter doesn't know the hunting grounds and information about them a is scattered or non-existent.

2.2.1 Small game hunting

Small game hunting takes place both on private land, with the landowner's permission, and on common ground. The lease, and leasing, of private land for hunting have become increasing common in recent years, though prices vary with demand. Atlantic puffin (*Fratercula arctica*), Pink-footed geese (*Anser brachyrchynchus*), Graylag geese (*Anser anser*) and Rock ptarmigan (*Lagopus muta*) are the most popular game species in Iceland. Hunting regulations do not allow birds to be shot while sitting. For that reason puffins are mainly hunted with pocket nets. Ptarmigan hunting takes place both on private and common land. The ptarmigan population shows large multi-annual, approximately 10-year, cycles in density. Ptarmigan hunting was banned in 2003 when population estimates suggested that the population had significantly decreased. Although there are no special legal limitation in terms of amount of hunting nor the number of ptarmigan that can be shot, hunters are requested to voluntarily limit it themselves to their personal needs[1]. An earlier study indicates that the majority of hunters do limit the hunting

[1] In 2005 a moratorium was issued for the selling of Icelandic ptarmigan (Reg. 800/2005).

themselves when so requested, and the main motivation for ptarmigan hunting is to obtain ptarmigan for use in festive, family meals during Christmas celebrations (Umhverfisstofnun, 2003). However, in the past five years, the government has gradually shortened the ptarmigan hunting season; in 2005 the season lasted 45 days and in 2008 and 2009 hunting days were limited to 18.

Goose hunting usually takes place in uncultivated lands, farmed lands or along riverbanks. The most commonly hunted goose species is the Greylag Goose, which is mostly hunted in lowland areas on cultivated fields. There is a high demand for goose hunting throughout the open season which runs from 20th August until most have migrated to Europe at beginning of November. According to bag statistics, 42 639 Greylag Geese were shot in 2008, which makes the Greylag Goose the third most hunted game bird in Iceland after puffins (54 144) and ptarmigan (48 402) (Information from DNR).

Those having a firearms license can hunt seals (*Phoca*) in Iceland with the landowner's permission. All hunters can hunt arctic fox (*Alopex lagopus*) and mink, but these are also actively hunted for population control by municipality initiatives and there is a bounty for each animal shot.

A licensed guide is not required for small game hunting. Some hunting tourism companies' do offer guided small game hunting, in which case the companies generally operate on either their own private land, or on land leased from private landowners. Both hunters and companies lease land from landowners for small game hunting. The price for leasing a land varies from one land owner to another, depending on the game species, abundance, location, and demand. Some companies offer both hunting licenses (access to hunting grounds with or without a guide) and package deals including for example a hunting guide, transport, meals, and accommodation.

2.2.2 Reindeer hunting

Reindeer are only found in Eastern Iceland, corresponding the hunting area AU (Fig.1). During the hunting season, which generally extends from 1st of August till 15th of September (the hunting season can be changed by the Minister of the Environment), the reindeer are found on the heath and moor lands of the highland interior. Access to these remote hunting grounds is by 4x4s vehicles, helicopter or on foot. All hunters who plan to hunt reindeer must apply for a reindeer hunting license from The Reindeer Committee of Iceland. The Minister for the Environment sets an annual quota for reindeer hunting in January each year after consulting with East Iceland Institute of Natural History and DNR. The annual quota is around 1,300 animals (1,333 in the year 2009) and licenses are allocated by a random draw of applications in February each year - one reindeer per hunter. The draw is considered a simple system where all hunters who apply have an equal chance to obtain a license. The number of applications exceeds the annual quota; in 2009 the number of applications per available license was approximately 2.4.

All hunters must hire a guide, who helps them in the hunt and has a statutory responsibility to monitor the habitat and animals (Regulation 486/2003). There are currently 84 licensed guides, but not all are active every year. Some guides will guide many hunters during the season while others will only take a few individuals each season. Each guide is allowed to take a maximum of three hunters on any one hunting trip. The duration of hunting trips varies from only a day to up to a week, but almost always ends with a kill. The guides have to know the hunting area well, monitor the location of animals, and liaise with other guides in the area to organise hunts with minimal disturbance to other hunting parties. It is estimated is that on average each licensed guide is employed for at least one full day for each license

issued which distributed among the number of active guides equates to significant level of employment (Þróunarfélag Austurlands, 2005).

Most domestic hunters who are allocated a reindeer hunting license contact a guide directly and plan most of the travel arrangements themselves, although this is sometimes done in cooperation with the guide. A number of hunting tourism companies offer reindeer hunting packages including local transportation, accommodation, meals, guide, trophy fee, hunting and firearms license and possibly other tourism activities. Packages can also include small game hunting depending on the season.

The potential for growth and development of reindeer hunting tourism have been debated in Iceland. Concerns have been raised about the length of the hunting season and some guides have argued that the season may be too short and that intensive hunting might at times be stressful for the herds. From a hunting tourism business point of view the regulation and allocation of licenses are often considered a barrier to development since it is impossible to arrange reindeer hunting licenses for potential clients.

2.3 Previous studies

Few studies of the economic impact of tourism in Iceland have been carried out. Jónsson, Friðbertsson and Ásbjörnsson (2006) estimated the regional economic impact of tourism in Iceland based on data on foreign tourists and concluded that tourism is important for rural areas in Iceland since tourism is mostly based on natural resources such as landscape and natural beauty. However, opportunities for economic vitality in rural (remote) areas seem to be fewer (see e.g. Botterill et al, 2000). Jónsson et al. (2006) estimate that tourist income per day during the summer (which is the tourism high-season in rural Iceland) is low as the majority of the tourists tend to be concentrated in rural areas where there are limited possibilities to spend money.

There is little information of the economic impact of hunting tourism in Iceland and some decisions in the hunting tourism sector seem to be based on educated guesses. The Icelandic Hunting and Shooting Association conducted one survey among its membership in 2001 on expenditure on hunting and found that their members spent on average 69 000 ISK per year on hunting (Skotveiðifélag Íslands, 2001). Today this would equate to an estimated 125 000 ISK and was found by using the change in CPI from the average of August till December 2000 to May 2010. In 2009 the Icelandic Hunting and Shooting Association estimated that the derived income from reindeer hunting in East Iceland was around 100 mISK a year (Skotveiðifélag Íslands, 2009). Jóhannesdóttir et al. (2006) have considered what the economic value of selling hunting rights could be for landowners in Iceland and estimated that selling goose and ptarmigan hunting permits could be worth an estimated 298 000 ISK per land holding per hunting season. These estimates do not include additional services such as accommodation, catering, guidance or other activities/services.

2.4 Material and methods

In this report the main objective is to estimate the economic effects of hunting tourism on rural communities. The question posed is; what is the difference between one region having hunting and another having no hunting at all? The main indicator used here is the creation of jobs. One job here refers to full time annual employment of one individual, delivering around 160 hours per months through the

year, thus it can be several part time jobs summing up to one. The method used is an input-output analysis. Several methods are known for estimating economic effects, each requiring different data (see e.g. Karlsson, 2007). Input-output analysis follows the flow of monies through a regional economy and therefore requires thorough information on the flow of money caused by the activity being studied. In this method it is always inevitable to make some estimates.

Our analysis is based on information gathered from an online survey in the spring of 2010. The aim of the survey was to gather information on the potential economic impact of hunting tourism on small scale rural tourism enterprises, all qualifying as micro size according EU Commission Recommendation on the definition of SMEs (96/280/EC). Therefore questions were related to monetary information, for example, costs, expenditure, and services purchased in relation to hunting during 2009. Questions on hunting activities were also asked, for example, location and the species hunted, frequency and duration of hunting trips, and what type of accommodation was used when staying overnight. The questionnaire also sought information on the socio-economic background of respondents. Hunters were invited to participate in the survey when they returned their 2009 bag reports online and renewed their hunting licences. Approximately 9 800 or 81% of hunters in Iceland returned their bag reports online for the 2009 hunting season. The number of respondents was 491.

The input-output analysis focuses on the spending of hunters at their final destination, i.e. where the hunting takes place. The analysis assumes that the spending would not occur in the region if no hunting activities were possible. This is rather obvious in the case of hunters coming from other regions, although it is possible in some cases that these hunters would still come and spend money to some extent for some other reason(s), but presumably they would go elsewhere to hunt if possible. In the case of hunters living in the hunting region these effects are not as clear. What would the local hunters do if they could not hunt in the home region? Would they hunt elsewhere or would they simply do something else with their money, spending it never the less in the region? If that is the case then the economic effects of these hunters is much less than those coming from outside the region. At the same time it can be hypothesised that hunters resident within the region have a greater economical effect because of their spending before actually hunting – that is spending in hunting equipment and associated costs before arriving at final hunting local. This spending is partly in the hunting region in the case of local hunters but entirely outside the region in the case of non-resident hunters. It is difficult to say which of these two effects are stronger so in this study it is regarded that non-resident hunters and local hunters have the same economic effects.

2.4.1 The flow of money and creation of jobs

Money can be brought into a community through two means. On one hand, simply by delivering the money to persons in that community. That can be done in exchange for work or simply as a grant of some kind. On the other hand money can be brought into a community by buying goods and services in that community. These two ways have slightly different effects in the community when the money changes hands and moves further in the economy. But in both cases jobs are created.

Buying goods and services

When money is used to buy goods and services, part of the amount goes to the persons or institution selling those goods or services. That is, in all cases part of the income of companies selling goods and services goes as wages to their workers. The ratio of labour cost to income is about 20% in the service

sector. It is possible to calculate a more accurate ratio if it is known what kind of goods and services are bought. This ratio (labour cost / turnover) can be calculated from annual accounts of Icelandic companies published by Statistics Iceland. The last year for which this data are available is 2007 but it is likely that the ratio has not changed significantly since then. If one million ISK is spent on goods and services it is assumed that about 200 thousands ISK is spent on labour cost in the companies where it is bought. About 90% of labour costs represent direct payments to worker force. In this context it is therefore assumed, if not calculated explicitly, that 180 000 ISK of each million ISK spent on goods and services ends as direct payments to the workers delivering these goods and services.

Delivered money

If money is delivered directly to a person, for example in exchange for work, then this amount is divided into two portions; taxes and individual net income. In Iceland taxes are of two kinds, taxes to the state (income tax) and taxes to the municipality (municipal income tax). These taxes are used, for example, to finance schools, health care services, and police. A large proportion of the money which is taken from individuals in the form of taxes is used to fund state- or municipal services.

The proportion of money classed as individual net income is largely used by individuals to buy goods and services, and approximately 18% of this money ends as direct wages to other workers in the service sector as already explained. It is though no guarantee that a person's purchase of goods and services will take place in the community where the individual lives. For example it is certain that part of the expenditure of individuals living in East Iceland will take place outside East Iceland, both in other parts of Iceland as well as in other countries. Here it is assumed that two thirds of East Icelanders' expenditure will take place in East Iceland. Furthermore it is assumed that a quarter of money delivered to an individual living in East Iceland ends up as wages to other people in East Iceland (for further discussion see Jón Þorvaldur Heiðarsson (2005: 14).

2.5 Hunters in Iceland

Table 1 provides an overview of demographics of the survey respondents categorised in to small game and reindeer hunting. In terms of small game hunting, 96,2% of the respondents are male and 3,8% are female. This rate is very similar to the rate of those who held valid hunting licences in 2009 (DNR). The average age is 41,9 years, range from 21 to 91 years old. The majority of respondents (41,5%) had received tertiary education. Sixty-seven percent of the respondents lived in hunting area VE (Fig. 1) which includes the capital of Iceland where 70% of Icelanders live. A smaller proportion (13,1%) live in hunting area NV[2] and 9,4% live in hunting area AU. Hunting area VF has the smallest population. These proportions concur with geographic distribution of hunting licences (Information from DNR).

Some similarities can be identified when comparing survey responses from small game hunters and reindeer hunters (Table 1). In terms of age a similar proportion of hunters belong to each age category, be it reindeer hunters or small game hunters, apart from the first category, ages 20-29 and the third, ages 40-49. In terms of the former, only 6,7% of all respondents belong to that category if they are reindeer hunters, whilst 13,1% belongs to this category of the small game hunters. In terms of the latter category, 41,1% belong to the category if they are reindeer hunters, compared to 32,8% if they are small game hunters. The reason for this could be, that the latter group has less disposable income and less hunting experience. When region of residence is examined the rate amongst respondents in hunting area AU is higher amongst respondents participating in reindeer hunting than for respondent's participants in small game hunting.

[2] The Akureyri region, which is the most populated area outside of the capital area, is located in hunting area NV.

Most of the respondents prefer to hunt in company of other hunters, especially with friends. However, respondents preferred hunting alone than hunting with a family member. When asked about most commonly hunted game, greylag geese were ranked the most common game, followed by ptarmigan, ducks and pink footed geese.

Table 1 *Demographics of hunters in Iceland in small game hunting and reindeer hunting*

		Small game hunting		Reindeer hunting	
		No.	**%**	**No.**	**%**
Gender					
	Male	461	96,2%	155	98,1%
	Female	18	3,8%	3	1,9%
Age					
	20-29	64	13,1%	11	6,7%
	30-39	150	30,7%	50	30,7%
	40-49	160	32,8%	67	41,1%
	50-59	85	17,4%	27	16,6%
	≥ 60	29	5,9%	8	4,9%
Marital status					
	Single/divorced | widow/widower	62	13,0%	20	12,6%
	Wedded	414	87,0%	139	87,4%
Education					
	Secondary education	83	17,3%	24	5,0%
	Vocational education	121	25,2%	45	9,4%
	Grammar school	31	6,5%	10	2,1%
	University degree	199	41,5%	67	14,0%
	Other	46	9,6%	15	3,1%
Residence					
	Hunting area VE	327	67,0%	110	67,5%
	Hunting area VF	12	2,5%	1	0,6%
	Hunting area NV	64	13,1%	21	12,9%
	Hunting area NE	15	3,1%	4	2,5%
	Hunting area AU	46	9,4%	24	14,7%
	Hunting area SU	24	4,9%	3	1,8%

Two out of five small game hunters who responded to the survey go on a two or three-day hunting trips, while approximately half of respondents hunt for one day or less during any one hunting trip. This means that the majority of small game hunters are not travelling far from home and do not stay overnight in their hunting area. Comparing area of residence and area of respondents last hunting trip and most commonly visited hunting area reveals that respondents living in rural areas (hunting areas VF, NE, AU and SU) most often hunt in the area where they live (Table 2). Exceptions can be identified with respondents living in areas VE and NV, which are the most populated areas in Iceland and include the capital city (in area VE) and the Akureyri region(in area NV). Further analysis of respondents living in these two hunting areas reveals that respondents living in the capital area most often hunt in hunting area SU

and respondents living in the Akureyri region most often hunt in hunting area NE. This is perhaps not surprising since the capital area is located close to the borders of SU and the Akureyri region is located to the borders of NE.

Table 2 *Are of residence compared with respondents' last hunting trip and their most common hunting areas (small game hunting)*

	Last hunting trip			Most common hunting area		
	No.	**Hunting in residence area**	**Hunting outside of residence area**	**No.**	**Hunting in residence area**	**Hunting outside of residence area**
Residence in area VE	320	37,2%	62,8%	327	39 %	62 %
Residence in area VF	12	83,3%	16,7%	12	92 %	8 %
Residence in area NV	62	53,2%	46,8%	64	48 %	52 %
Residence in area NE	15	93,3%	6,7%	15	87 %	13 %
Residence in area AU	45	95,6%	4,4%	46	91 %	9 %
Residence in area SU	24	83,3%	16,4%	24	71 %	29 %

Although 40% of the respondents go on a two or a three-day hunting trips, only one out of every three pay for their accommodation (Figure 2). Most of the hunters stay overnight with friends and relatives during hunting trips but if they need to book accommodation they use farmhouse accommodation (32% of them), summer houses/flats (11% of them) or a hunting lodge (9% of them). When catering is considered more than half of the respondents buy at least some food and beverages during their hunting trips. Only a small number of respondents always, very often or often rent land for small game hunting or pay for a guide during hunting trip (Figure 2).

Reindeer hunters usually stay 2-3 days in hunting area AU although they only stay with their guide for approximately one day. Almost all of them (90%) pay the guide for his services, the other get their guides free of charge, but are nonetheless required to have one. Most reindeer hunters prefer to accommodate in facilities provided by the guide.

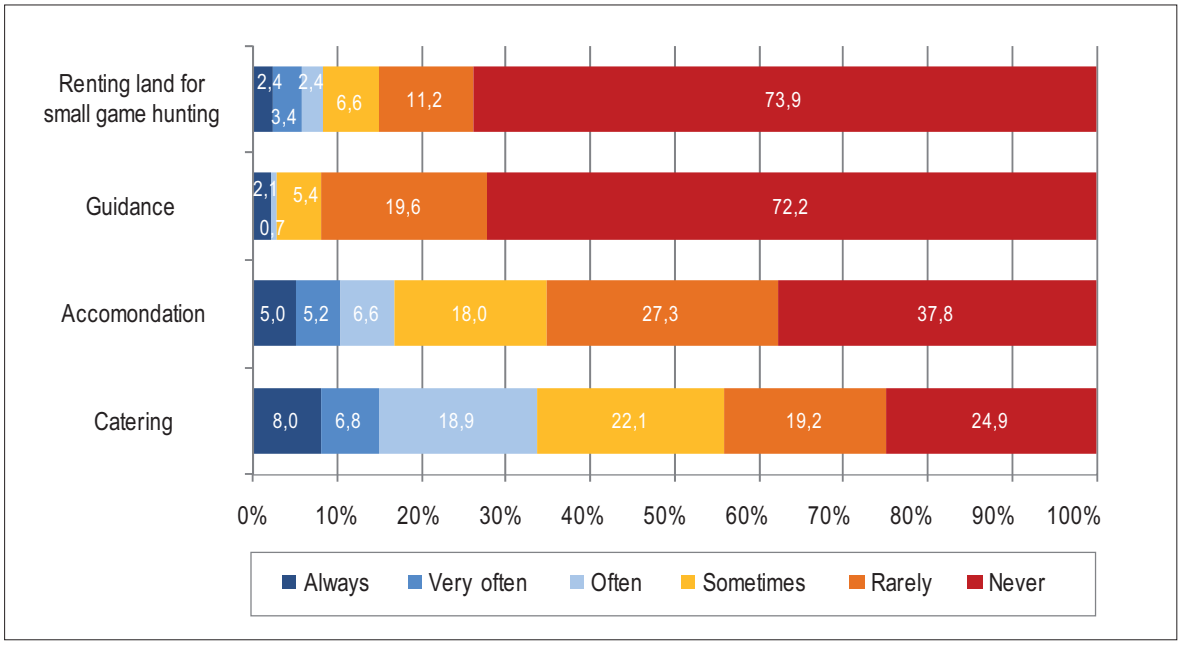

Figure 2 *Hunters' spending during hunting trips*

Respondents were asked to itemise how much they spent last hunting season in their residential area, while travelling and in the hunting area (at destination). The respondents were given 12 items of expenditures to consider[3]. The greatest proportion spent in the residential area is on hunting equipment, first aid kits, transport and food, beverages and catering (Figure 3). While travelling, most expenditure goes on fuel/gasoline, transport and on food, beverages and catering (Figure 3). At the final destination (in the hunting area), most expenditure is on accommodation, renting land and guidance (Figure 3).

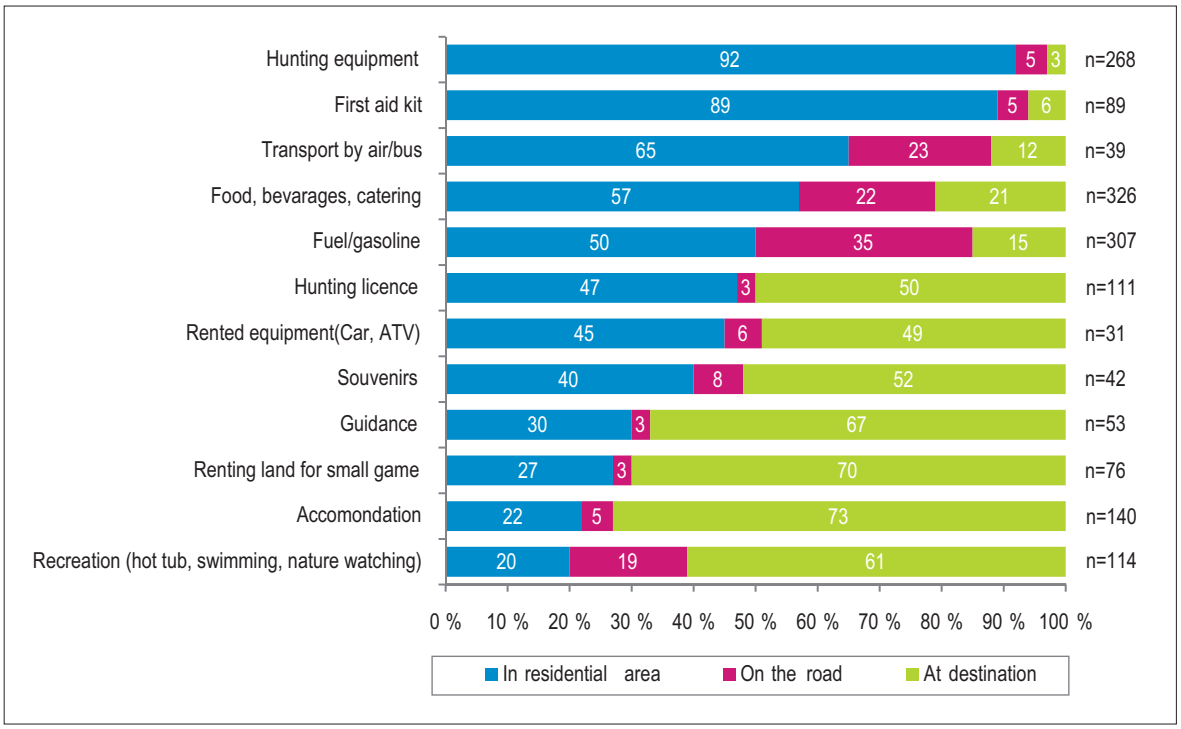

Figure 3 *The proportion spent by hunter on different services in their residential area, while travelling, and once at their final destination.*

2.6 Economic effects of hunting tourism in rural areas

2.6.1 Reindeer hunting

In this section we assess the economic effects of reindeer hunting in East Iceland. That is, what is the difference for East Iceland in terms of the number of jobs in the presence of reindeer hunting compared to having no hunting of reindeer, as the rest of the country does not have the animal at all.

Buying of goods and services by hunters, guide excluded

Those buying a licence for hunting reindeer in East Iceland (EI) will also buy services and goods in that region. According to the survey on the economic potential of hunting tourism in Iceland, reindeer hunters' spending in East Iceland, excluding the cost of a hunting guide, was on average 39 847 ISK (Table 3). Estimated average ratio of total spending going into labour costs is 18,9%. The total spending is a composite of several purchases and if accommodation is taken as an example, an estimated 28 ISK of every 100 ISK spent in accommodation goes to cover the labour cost of delivering this service, compared to 4 ISK of each 100 ISK goes for petrol (gasoline) (Table 3).

[3] It should be noted that behind some of the items of expenditure are few respondents. In many cases the respondents chose not to answer this question in the survey.

(Table 3). Estimated labour cost ratio is calculated from annual accounts of businesses providing a range of different services and products (Ísat grouping) published by Statistics Iceland.

Table 3. *Estimated spending of reindeer hunters in East Iceland 2009*

Amounts in ISK	**Percentage of hunters who pay for this product or service**	**Average spend**	**Percentage spent at destination**	**Estimated labour cost ratio**	**Labour cost (ISK)**
Food, beverages, catering	93,1%	16 580	50,0%	0,22	1 697
Accommodation	55,7%	15 994	81,7%	0,28	2 039
Fuel/gasoline	97,0%	23 942	38,7%	0,04	360
Transport by air / bus	18,5%	28 864	9,1%	0,27	131
Rented equipment (car, ATV)	38,3%	22 361	64,0%	0,25	1 371
Hunting equipment	77,5%	45 040	8,2%	0,16	457
Clothing	49,3%	34 683	3,9%	0,19	126
Guide and handling of meet			See next section		
Souvenirs	16,8%	10 435	47,4%	0,17	141
First aid kit	16,3%	5 569	25,8%	0,16	37
Recreation (hot pot, swimming, nature watching)	38,5%	5 834	62,6%	0,30	422
Other	48,6%	16 232	*50,0%*	0,19	739
Total spent in East Iceland per hunter			**39,847**	**0,189**	**7,520**

In 2009 1 333 reindeers were hunted and killed in East Iceland. If every hunter spent on average 39 847 ISK in East Iceland during the hunting trip (cost of hiring a guide excluded) then the total spending by reindeer hunters is an estimated 53 mISK (million ISK). Of this sum 18,9% (10,0 mISK) went to labour cost and thereof 9,0 mISK directly in to employees' wages.

Summary: Direct wages following the buying of goods and services **9,0 mISK**, delivered money **0**.

Payments for guidance, slaughtering facilities and butcher

According to the survey nine out of ten hunters (89,9%) paid for a guide and on average paid 26 431 ISK. The survey suggests that 13,4% of the guides were living outside East Iceland, so on average local guides were recieving 20 577 per hunter (26 431*0,899*0,866). When this multiplied by the 1 333 reindeers hunted it can be estimated that reindeer hunters spent 27,43 mISK on local guides. It is likely that this represents net income for the guides. Some cost to the guide is though inevitable, therefore it is assumed that 90% (24,69 mISK) of this sum was classed as delivered money and 10% (2,74 mISK) as cost in form of goods and services. Eighteen percent of the costs (0,49 mISK) is assumed to have been direct wages in the service sector.

About half of the hunters (49,4 %) paid for carcass handling and processing facilities at an average cost of 12 532 ISK. Given that most guides offer this facility and that specialist facilities for processing reindeer meat are found only in East Iceland we estimate that 66% of carcass handling and processing was carried out locally. The total spending in East Iceland is then estimated to be 5,5 mISK and this amount is treated as buying of goods and services, therefore 18% of 5,5 mISK (0,99 mISK) went as direct wages to workers.

Just over a fifth (21,9%) of the hunters paid for the services of a professional butcher at an average cost of 24 821 ISK. We estimate that 66% of butchering was carried out locally. The total spending in East Iceland is then estimated at 4,83 mISK. Most of this is assumed to represent net income for the butchers, but we assume some cost to the butcher and assumed, as in the case of guides, that 90% (4,35 mISK) of the amount is classed as delivered money and 10% (0,48 mISK) goes to purchasing goods and services, of which 18% (0,09 mISK) goes as direct wages to other service providers.

Summary: Direct wages following buying of goods and services **1,48 mISK** (0,49+0,99+0,09), delivered money **29,04 mISK** (24,69+4,35).

Hunting licence

In year 2009 the total raised from the sale of reindeer hunting licence was 96,85 mISK. This amount was divided into three portions.

Hunting licence, the share of the Environment Agency of Iceland (UST)

UST received 10,3 mISK to cover the costs of controlling and monitoring hunting. At least 8 mISK of this 10,3 mISK was spent in East Iceland and it is assumed that 7 mISK went on the the labour cost of 1,5 UST staff and the rest, 1 mISK was spent on goods and service. Of the 7 mISK, 6,3 mISK was direct wages and 18% of the 1 mISK ended up as direct wages in the service sector.

Summary: Direct wages following buying of goods and services **0,18 mISK**, delivered money **6,3 mISK**.

Hunting licence, the share of East-Iceland Institute of Natural History (NA)

NA received 3 957 mISK for research on reindeer which forms the basis for the control and regulation of the hunt quota. This research entails evaluation and monitoring of the reindeer population, habitat and vegetation use. The labour cost ratio in this institute is 68% so labour cost represent an estimated 2,69 mISK of which 2,42 mISK is classed as direct wages. The remaining 32%, was likely spent on goods and service and amounts 1 267 mISK and there of 18% in direct wages to other service sector workers.

Summary: Direct wages following buying of goods and services **0,228 mISK**, delivered money **2,42 mISK**.

Hunting licence, the share of landowners

The remainder is divided among the landowners, in 2009 this amounted to an estimated 82,6 mISK. These are the landowners who own the land where the reindeer are found during the hunting season. A few of these landowners do not live in East Iceland so payments to them have no economical meaning for East Iceland. It is not known how much of the payments go to this group but according to an expert at Agricultural Association in East Iceland it is believed that 10-20% of the farms are owned by people living outside East Iceland. The majority, here assumed to be 85%, are land owners living in East Iceland and their apportionment was estimated to be 70,2 mISK. It seems likely these payments are classified the same as other farm income and subject to taxation in the same way as other income. This 70,2 mISK is therefore classed delivered money.

Summary: Direct wages following buying of goods and services **0**, delivered money **70,2 mISK**.

Government funding

The funding received by the East-Iceland Institute of Natural History from their apportionment of the hunting licence (3 957 mISK) was insufficient to cover the cost of reindeer research. The shortfall of 6,7 mISK in 2009 was met by the Icelandic government. That is 68% in labour cost and 32% in goods and services.

Summary: Direct wages following buying of goods and services **0,386 mISK**, delivered money **4,1 mISK**.

Forward linkage effects and Crowding out effects

One effect which must be assessed when estimating economic impact and the creation of jobs by some activity or company, is whether or not the products from this company are processed further in the region. If so, this processing has an impact. Say company A produces something which company B uses as the main input in their production.. If company A closes, the basis for company B is taken away, it also closes and jobs may be lost. These effects are often called forward linkage effects or just forward linkage. (Forward linkage effects are part of the total multiplier effect).

It appears that forward linkage effects arising from reindeer hunting are rather limited in East Iceland. The main product which comes out of hunting is meat, although skin, horn and heads for trophies are also produced. However, there appears to be very limited activity of this kind to be found. The carcass and meat are usually retained by the hunter who may pay for butchering services, although this is often part of a service package offered by the guide. Horns and skin are used in producing handicrafts in East of Iceland and somewhat in other regions but turn-over is very limited. It is also possible that the crafts person will simply use other raw materials if those from reindeer are unavailable. In 2009 one entrepreneur in East Iceland offered a taxidermy service for production of trophies. In light of this it is assumed that only one person in the region is gainfully employed from the processing of raw materials from reindeer.

A 'crowding out' effect may be observed when new economic activity pushes other activities aside. The older one is then not competitive, so the establishment of the new activity then leads to job loses in the older one. However, there appears to be no crowding out effect in this system and is assumed to be zero in this study.

Jobs in East Iceland as a result of reindeer hunting

All the above mentioned effects of economic linkages sustained by reindeer hunting are summarised in table 4.

Table 4. *Moneyflow in East Iceland following reindeerhunting.*

The year 2009 Amounts in millions ISK	**Delivered money**	**Direct wages following buying of goods and services**
Buying of goods and services by reindeer hunters, guide excluded	0	9,00
Payments to guide, butcher and slaughtering facilities	29,04	1,48
Hunting licence, the share of UST	6,30	0,18
Hunting licence, the share of NA	2,42	0,23
Hunting licence, the share of landowners	70,20	0
Government funding	4,10	0,39
Total	**112,06**	**11,28**

Below an estimation is made how many jobs reindeer hunting created in East Iceland 2009. The estimate is based on table 4 and other available statistical information from the year 2009.

Employing effects of delivered money

According to UST and NA there are 3,3 jobs in these institutes because of the reindeers. So there is no need to estimate the number of jobs in this case, the delivered money of 12,82 mISK seems to stand behind 3,3 jobs. (In table 4 the numbers 6,3, 2,42 and 4,1 add up to 12,83 mISK).

Here we consider 29,04 mISK delivered to guides and butchers are direct wages. We assume a mean yearly salary of 3,7 mISK for employees in the service sector in East Iceland in 2009. Therefore, the estimated annual regional income to guides and butchers of 29,04 mISK equates to 7,8 jobs (29,04/3,7).

The amount 3,7 mISK has the following basis: The mean total salaries for full-time employees by occupational groups in Iceland are published by the Icelandic Statistics. It was 334 000 ISK per month in the service sector (service workers and shop and market sales workers). But if compared to the average income by regions it seems as the wages are 8% lower in East Iceland in the service sector than in Iceland as a whole, but that comparison is only available till 2005. In this study it is regarded that this difference was still 8% in 2009 and out comes 307 000 ISK . That means the wages 3,7 mISK per year.

It the case of land owners it is more complicated to assess the impact of the estimated 70,2 mISK classed as delivered to this group. Payments to landowners for reindeer hunting most probably do not create jobs directly in East Iceland. But may however cross-subsidise other farm activities and represent a significant income, helping sustain farms and associated jobs in the region. In the long run however this should not be the case. The sale price of a farm should simply be higher than otherwise if the farm generates income because of reindeer hunting. The difference in price should be the present value of the likely payments. This perquisite should therefore be considered neutral in terms of the ease for the farmer to sustain a livelihood from their farm land, but should be reflected in the resale value of the land.

In total it is estimated that delivered money creates 11,1 jobs (3,3+7,8) directly in research, management, guiding services and processing of meat. There are also indirect effects of the delivered money. It is assumed that a 25% of delivered money goes as direct wages to others in East Iceland as previously explained. Twenty-five percent of 112,06 mISK is 28 mISK. This amount equates to about 7,6 jobs (28/3.7). But this is not all because the chain goes on, creating more indirect effects. When 28 mISK are delivered as wages in East Iceland 25%, 7 mISK, of that amount ends up as another persons wages and then again and again. This is part of the multiplier effect. The total amount which goes in this way in direct wages is about 37 mISK (28+7+1,75+0,44+....)[4]. The delivered money, estimated at 112 mISK should therefore equate to approximately 10,0 jobs (37/3,7).

In total delivered money generated from reindeer hunting is estimated to provided for for 21,1 (11,1+10,0) jobs in East Iceland in 2009.

Employing effects of direct wages

An estimated 11,28 mISK that went in direct wages following buying of goods and services in East Iceland is due to reindeer hunting (Table 4). As before that is not the whole effect; 25% of that amount is likely to end up as direct wages paid to other employees, and so on. The total amount which goes in this way in direct wages is an estimated 15,0 mISK and equates to an estimated 4,0 jobs (15,0/3,7). As previously discussed it is assumed that forward linkage effects create one job in East Iceland - handling of materials such reindeer meet, skin and etc.

[4] This is geometric progression. Geometric progressions are endless but still have limit.

In total it is estimated that reindeer hunting was the basis for 26 jobs in East Iceland in 2009 (Table 5).

Table 5. *Estimated number of jobs in East Iceland because of reindeer hunting*

Estimated number of jobs in East Iceland because of reindeer hunting	**Number of jobs**
Direct jobs because of research, management and guidance	11.1
Indirect jobs because of delivered money	10.0
Indirect jobs because of buying of goods and services	4.0
Forward linkage effects	1
Total	26.1

On average it is estimated that each full time job supports two people (see Jón Þorvaldur Heiðarsson 2005:17). If the reindeer hunting supports 26 jobs then it is likely that 52 inhabitants in East Iceland live off reindeer hunting. In most parts of rural Iceland rural populations are declining. These rural areas have been fighting to retain or create every job in the region because experience shows that if jobs are lost people move away from the area. Unemployment has for this reason been very low in these areas. If there were no reindeer hunting in East Iceland it is likely that 26 jobs would be lost to the region with the corresponding loss of 52 inhabitants from the region.

Jobs outside East Iceland

It was assumed that some landowners, as well as guides and butchers, were living outside East Iceland. It was also assumed that some of the abattoirs were located outside the region and that part of the payments to UST were spent outside East Iceland. This flow of money to parties outside East Iceland is estimated to have been 20,2 mISK in delivered money and 0,68 mISK in direct wages to people selling goods and services. It can be estimated that this flow of money created approximately 3,9 jobs outside East Iceland. In this case the average wages used for calculation are 4,0 mISK/year (average wages in all Iceland in the sector). Some of these jobs were probably in rural Iceland but it is likely that most of them were in the capital area.

The efficiency of reindeer hunting

The sale of hunting licenses for reindeers in Iceland is not done in an efficient way according to natural resource economics. Efficient use of a resource implies that its use maximizes the present value of the net benefit (Tietenberg and Lewis 2009). The source in this case is wild reindeers in East Iceland. Over hunting is not considered a problem as is sometimes the case in hunting of wild animals. The inefficiency occurs in the sale of each unit of the resource, which is the sale of each hunting licence. The hunting licence is sold at a lower price than might be possible. No attempt is made to sell the licences at the highest price possible. Because of this the income from the resource is far lower and the economic impact on East Iceland is far less than it would be if the sale of each unit from the source would be more efficient. More efficient sale would create more jobs indirectly compared to the present system. It would mean higher payments to landowners and probably even more research and monitoring. From the economic point of view, it would be better to sell the hunting licence at the highest possible price i.e. selling it to those who are willing to pay the highest price. That would insure efficient pricing at least.

Furthermore the system of allocation of hunting licences is probably not attractive to foreign hunters who may be willing to pay larger sums money than Icelandic hunters and thus represent a potentially lucrative market. In the current system license allocation is determined by a lottery whether all applicants have an equal chance of being drawn regardless of the willingness to pay above the current marlet

value.. The 'lottery' system of allocating licences may deter foreign hunters from considering reindeer hunting in Iceland as a possible hunting activity. If hunting licences were to be sold to those who were willing to pay the highest price it may encourage foreign hunters to bid, rather than taking their business else where. Therefore it is likely that the Icelandic economy misses valuable revenue because of the inefficient price for using this resource. The potential of selling license to foreign hunters on high price has not been investigated but there is need for such investigation.

2.6.2 Small game hunting

In this chapter the economic effects of small game hunting on hunting regions is assessed. As the hunting regions are almost entirely in the rural areas outside the capital region, this can be looked at as the estimated economic effects of small game hunting on rural Iceland. The estimation tries to answer the question what the difference is for rural Iceland in number of jobs in the presence of small game hunting or compared to the absence of small game hunting.

Buying goods and services by hunters

Many other species of animal are hunted in Iceland apart from reindeer. The most common species include the graylag goose, ptarmigan, pink footed goose, ducks (like mallard) and guillemot. This type of small game hunting is economically importance in the regions where it takes place. According to the survey reported here hunters spend on average 31 571 ISK per person, per hunting season (Table 6). The estimated ratio of spend that goes to labour cost when different goods and services are bought are presented in Table 6. This ratio is calculated from annual accounts of firms in various businesses (Ísat grouping) which are published by Iceland Statistics.

Table 6. *Estimated spending of small game hunters in hunting region.*

Amounts in ISK	**Average spending**	**Pro-portion spent at destination**	**Estimated labour cost ratio**	**Labour cost (ISK)**
Food, beverages, catering	26 897	31,2%	0,22	1 756
Accommodation	22 126	63,7%	0,28	1 602
Transport by air / bus	34 783	6,3%	0,27	75
Fuel/gasoline	43 141	27,4%	0,04	462
Rented equipment (car, ATV)	33 300	17,0%	0,25	95
Renting land for hunting geese	45 687	47,8%		
Hunting licence	21 467	46,2%		
Guidance	32 700	34,2%		
Hunting equipment	29 936	10,4%	0,16	465
Clothing	19 662	*4,0%*	0,19	*118*
Souvenirs	12 733	24,7%	0,17	61
First aid kit	5 091	7,2%	0,16	17
Recreation (hot pot, swimming, nature watching)	7 846	52,3%	0,30	501
Renting land for hunting ptarmigan	15 793	*50,0%*		
Total spent in hunting area per hunter excluding guidance, licence and renting		**31 571**	**0,163**	**5 152**

The amount spent on clothing and renting land for hunting ptarmigan are estimated as the survey did not ask for these figures.

In the year 2009 the number of hunters holding a hunting licence was 12 227. When the average spend for each hunter is multiplied by the number of hunters the sum of money spent on recreational hunting in Iceland in 2009 can be estimated. In 2009 an estimated total of 123 mISK was spent on renting land (for hunting geese and ptarmigan) and hunting licences (both paid to local landowners). These payments are not in return for work and it is likely that this amount was mostly net income for the landowners and it is assumed that 90%, or 111 mISK, of this sum was delivered money and 10%, or 12 mISK, went in to buying of goods and services. As before it is assumed that 18%, 2,2 mISK, of the payments for goods and services ended up as direct wages.

Summary: Direct wages following buying of goods and services **2,2 mISK**, delivered money **111 mISK**.
Payments for hunting guides represent payments for work. It is estimated that a total of 17,9 mISK were paid to local guides (12 227*0,131*11 183). As with the case for reindeer guides it is assumed that 90% of the amount was delivered money (16,1 mISK) and 10% (1,8 mISK) went in to buying goods and services, of which 18%, or 0,32 mISK, went in to direct wages in the service sector.

Summary: Direct wages following buying of goods and services **0,32 mISK**, delivered money **16,1 mISK**.
The total amount spent by hunters for good and services in 2009 is estimated to have been 386 mISK (12 227*31 571) (Table 6). Of which an estimated 63 mISK (16,3%) went in to labour cost in the sector (Table 6). As before, it is assumed that 90% of that amount, or 57 mISK, ended up in direct wages.
Summary: Direct wages following buying of goods and services **57 mISK**, delivered money **0**.

Number of jobs as a result of small game hunting

All the above mentioned effects of economic impacts of hunting are summarised in table 7.

Table 7. *Estimated money flow in hunting regions due to small game hunting in 2009.*

Amounts in millions ISK	**Delivered money**	**Direct wages following buying of goods and services**
Hunting licence and rent of land for hunting (to local landowners)	111,00	2,20
Payments to guide	16,10	0,32
Buying of goods and services by hunters	0	57,00
Total	127,10	59,52

Most small game hunting takes place outside the capital region. Using data presented in Table 7 and other economic statistics for 2009 we estimate how many jobs are sustained by small game hunting. As in the case of reindeer hunting in East Iceland it is assumed that average service sector wage of 3,7 mISK per annum.

Guiding jobs seem to be the only direct "jobs" resulting from small game hunting and in 2009 an estimated 4,3 (16,1/3,7) guiding jobs were supported through small game hunting. As in the case of reindeer hunting it is assumed that payments to landowners for hunting licences and renting of land for hunting geese does not create direct jobs.

The indirect effects of the delivered money are similar to the case of reindeer hunting and it is assumed that 25% of delivered money goes as direct wages to other people in the hunting region. One Qquarter

of 127,1 mISK is 31,8 mISK. After accounting for the multiplier effect the total amount estimated at 42,4 mISK (31,8+8+2+0,5+….) ends up as direct wages to workers The delivered money of 127,1 mISK should therefore support 11,5 indirect jobs (42,4/3,7).

In total delivered money derived from small game hunting in Iceland is estimated to have covered for 15,8 (4,3+11,5) jobs in 2009.

It is estimated that in total 59,52 mISK went in direct wages from buying of goods and services in the hunting regions (Table 7). After accounting for the multiplier effect this amounts to an estimated 79,4 mISK (59,5+14,9+3,7+0,9+….), which should have sustained 21,5 jobs in 2009 (79,4/3,7).

In total it is estimated that small game hunting was the basis for sustaining 37-38 jobs in hunting regions of Iceland in 2009 (Table 8).

Table 8. *Estimated number of jobs in rural Iceland because of small game hunting*

Estimated number of jobs in Iceland in 2009 outside the capital region as result of hunting	**Number of jobs**
Direct jobs in guidance	4,3
Indirect jobs because of delivered money	11,5
Indirect jobs because of buying of goods and services	21,5
Total	**37,3**

Based on the assumption that each full time job supports two individuals the estimated 37-38 jobs supported by small game hunting are likely to support 75 inhabitants in these rural, hunting regions. Therefore in the absence of small game hunting we speculate that 75 livelihoods would be lost from rural areas in the long run. The question that remains is would these 37-38 employment opportunities cease to exists if there were no small game hunting? Where would the current hunters spend the money documented here if hunting was not possible in Iceland? Would they spend it in the rural regions regardless?

Jobs outside the hunting region

It is assumed that part of the payments for hunting license and renting for hunting go to landowners outside the hunting region (e.g. in the case of payments for hunting license 46,2% is paid at final destination so it is estimated that 53,8% is paid outside the region (Table 6)). It is also assumed that some guides did live outside the hunting region. This flow of money to landowners and guides outside the hunting region is estimated to have been 155 mISK in delivered money and 3,12 mISK in direct wages to people selling goods and services. Based on an average salary of 4,0 mISK/year it can be estimated that this flow of money created about 22 jobs outside the hunting regions. It is difficult to determine the location of these jobs. Some of them are in other hunting regions, that is in rural Iceland but it is likely that most of them were located in the capital region.

2.7 Conclusions

Tourism has become an increasingly important industry in rural areas and it is believed to have considerable economic impact throughout Iceland, although this has not been verified. Hunting is thought to provide considerable income for the local rural economies during the hunting season, but information on the economic impact of hunting tourism in Iceland has been limited. Demand for hunting in privately owned land is thought to have increased in the past few years and, in turn, a number of hunting tourism companies have been started to cater for this growing demand.

The main goal of this research was to estimate the economic impact of hunting on rural areas in Iceland. The main question posed was what the difference was between one region having hunting and another having no hunting at all. The main indicator used in this research is the creation of jobs. A survey was conducted among hunters in order to gather information on the potential economic impact of hunting. Reindeer hunting only takes place in East Iceland (hunting area AU). Most of the hunters, the majority of whom spend 2-3 days on a hunting trip, come from outside the region and spend money on services and accommodation in the area. This survey suggests that an estimated 26 jobs exist in East Iceland because of reindeer hunting, and that these jobs likely support an estimated 52 inhabitants. According to natural resource economics the sale of hunting license for reindeer in East Iceland is not efficient. The number of hunting licenses will probably not increase, but from an economic point of view, reindeer hunting could create more income for East Iceland leading to more jobs in the region, if licenses were to be sold on the open market instead of being allotted through a lottery system by the government at a fixed price. However, this is a purely the economic view, and does not consider the social perspective.

When small game hunting is considered the survey results indicate that the majority of hunters stay close to home and the duration of hunting trips are most commonly one day or less. Those, who go on longer hunting trips mostly prefer to stay overnight with friends and relatives and thus are less likely to pay for services and accommodation in the hunting area. It is estimated that about 37 jobs exist in rural Iceland because of small game hunting, and that these jobs sustain about 75 inhabitants in rural areas.

Currently, the business around reindeer hunting in East Iceland is well-established as can be seen from the number of jobs that are in the area supported by hunting revenue. The business development of small game hunting on the other hand is still nascent. However, small game hunting seems to create in total at least 37 jobs in rural Iceland. If the small game as a resource would be utilised more through setting up hunting tourism enterprises (geared towards responsible hunting and the maintenance of the game resources), most certainly more jobs and livelihoods in rural Iceland could be sustained.

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3 The economics of hunting tourism in Finland

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3.1 Introduction

Hunting has a long tradition in Finland and still significantly influences the lifestyle of many Finnish people. Today hunting is perceived more as a leisure activity than a business opportunity. This is visible also in the attitudes of different stakeholder groups towards hunting tourism (Keskinarkaus and Matilainen 2010). The potential of hunting tourism as a source of livelihood is not fully recognized and there is a fear that hunting tourism could conflict with recreational hunting. Partly due to this attitude environment hunting tourism is still in its initial stages in Finland. However, hunting tourism has the potential to provide an additional source of livelihood for many companies especially in the remote rural areas. Since the hunting season is usually outside the traditional 'high season', it could provide tourism companies a possibility to extend their business activities in to autumn and guarantee the year around sustainability of the companies.

In addition to customers of rural tourism companies, there are annually 35 000 – 38 000 independent, domestic hunting tourists. These domestic hunting tourists use different rural services during their hunting trips thus influencing rural economics. However, no extensive economic estimations of this potential influence exist for Finland. Therefore, many decisions regarding the development of the sector are based on educated guesses. The aim of this study is to take the first steps in assessing the economic influence of hunting tourism and provide objective information on the magnitude of the economic effects of hunting tourism in Northern Finland, specifically the East Lapland sub-region.

This report first describes the hunting tourism sector in Finland and then reviews the existing literature on the economic impact of hunting tourism in Finland. It then presents the current typical business models in hunting tourism related to moose and small game. Chapters 7-8 summarise the study and the results related to economic role of hunting tourism, and finally the conclusions and practical implications are presented.

This report has been developed as a part of the North Hunt - project (Sustainable hunting tourism – business opportunity in the Northern Europe), funded by the *Northern Periphery Programme 2007 – 2013*.

3.2 The current situation of hunting tourism in Finland

Hunting has a long tradition in the Finnish society and it still has a significant role in the lifestyle of many Finnish people. Although hunting no longer has the role of an actual profession and livelihood, it has become a significant leisure activity. On average, 6-8% of all Finnish people are hunters (Metsästäjäin keskusjärjestö 2003, Sievänen 2001, Muuttola 2002). In remote rural areas the number of hunters can be up to 40 % of the population (Keskinarkaus et al 2009). Hunting is considered as a "everyman's" hobby or a lifestyle. 95% of hunters are men. (Metsästäjäin keskusjärjestö 2003). However, except for the gender division, the socio-economic profile of hunters represents well the overall profile of Finnish population. Hunting is not bound to e.g. the education or economic features. Recreational hunters

[1)] The regional economic calculations made for this report are the contribution of professor Hannu Törmä. The rest of the report is a joint contribution of Anne Matilainen and Susanna Keskinarkaus.

very well organized; there are thousands of local hunting clubs (approx 4000 according to Pellikka et al 2007) and game management associations in Finland, and there are two central organizations, Hunter's Central organisation (Metsästäjäin keskusjärjestö) and Finnish Hunters Association (Metsästäjäliitto) representing hunting interests.

Hunting rights are bound to land ownership. The majority of private land owners lease their forest areas to local hunting clubs, typically without monetary compensation. The compansation can be merely e.g. a fixed proportion of game meat annually. Metsähallitus, the organization governing state owned land, allocates the hunting rights on state owned land. Metsähallitus sells licenses primarily to those hunters that do not have other hunting opportunities and mainly prioritizes recreational activities rather than business development. Villi Pohjola the sales organization responsible for selling hunting licenses is also 100% state owned.

Local people in northern and eastern Finland have free hunting rights on state owned land in their own municipality. This area is called as free hunting rights" or 8§ -area according to the section of the hunting legislation stipulating these rights (Figure 1). This right dates back to the time, when the game had a significant role in the food supply of the local families. "Non-residents have to obtain a license in order to hunt on State owned land.

The current legislation from 2005 requires that all hunters buy a small game hunting license to hunt on state owned land individually and directly from Villi Pohjola. The sale is opened simultaneously to everyone and operates on a "first come, first served" basis, which causes some overburdening of the sales system especially during the first hours of the sale. According to the current legislation the license can not be purchased by hunting tourism operators, nor can tourism operators arrange licenses for their clients. Licenses to some hunting areas are under high demand and every year some of the hunters do not get the license to the hunting area and/or preferred time period. Therefore, hunting tourism operators can not guarantee that their clients will get the hunting license, even though the clients would buy a hunting tourism package including guidance, accommodation and catering services. On the other hand, the customers do not know whether they will get the license, when they are booking for the additional services, which usually needs to be done well in advance.

The first annual tranche, representing approximately 50% of the annual quota, is sold at the beginning of the summer and the remainder in early autumn for that year's hunting season. Since the entrepreneurs can not package the license with their products on state land, it is very difficult to organize competitive small game based hunting tourism packages, especially for the foreign markets. The system also causes changes and cancellations by the domestic customers, if they end up getting licenses to different areas to where they have arranged, for example, accommodation.

There are no official statistics on the amount of hunting tourism companies, since in the classification the sector can not be separated from tourism companies in general. However, there have been estimated to be approximately 200 hunting tourism companies in Finland, of which about 20-25 % are actively market hunting tourism services to foreign customer groups (Keskinarkaus et al 2009). In another study, The Game and Fish Research Centre estimated that there are approximately 400 companies selling hunting tourism in Finland (Toivonen et al 2008). In addition to hunting, these companies offer e.g. fishing tourism products, accommodation, catering services, guide services and other, non-hunting, activities. The majority of these companies are located in northern, central and eastern Finland. (Figure 2) Rough estimates on the number of smaller operators suggest that, prior to change in legislation in 2005, 500–800 tourism companies had right to sell hunting licences to individual tourists.

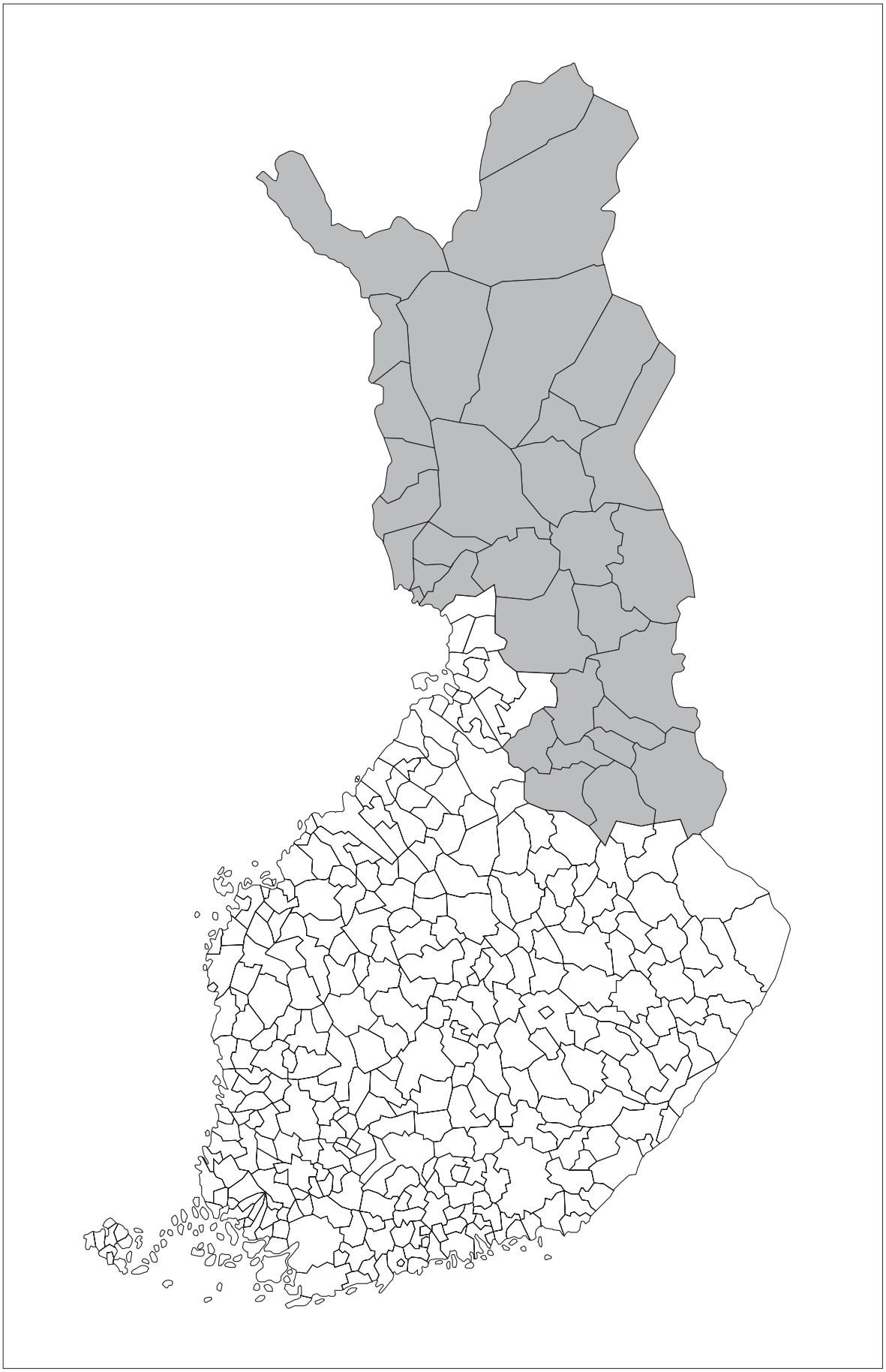

Figure 1. *The "8§-area" indicating the area, where local people have free hunting rights on State land within their home municipality. The 8§-area is marked with the dark color in the map.*

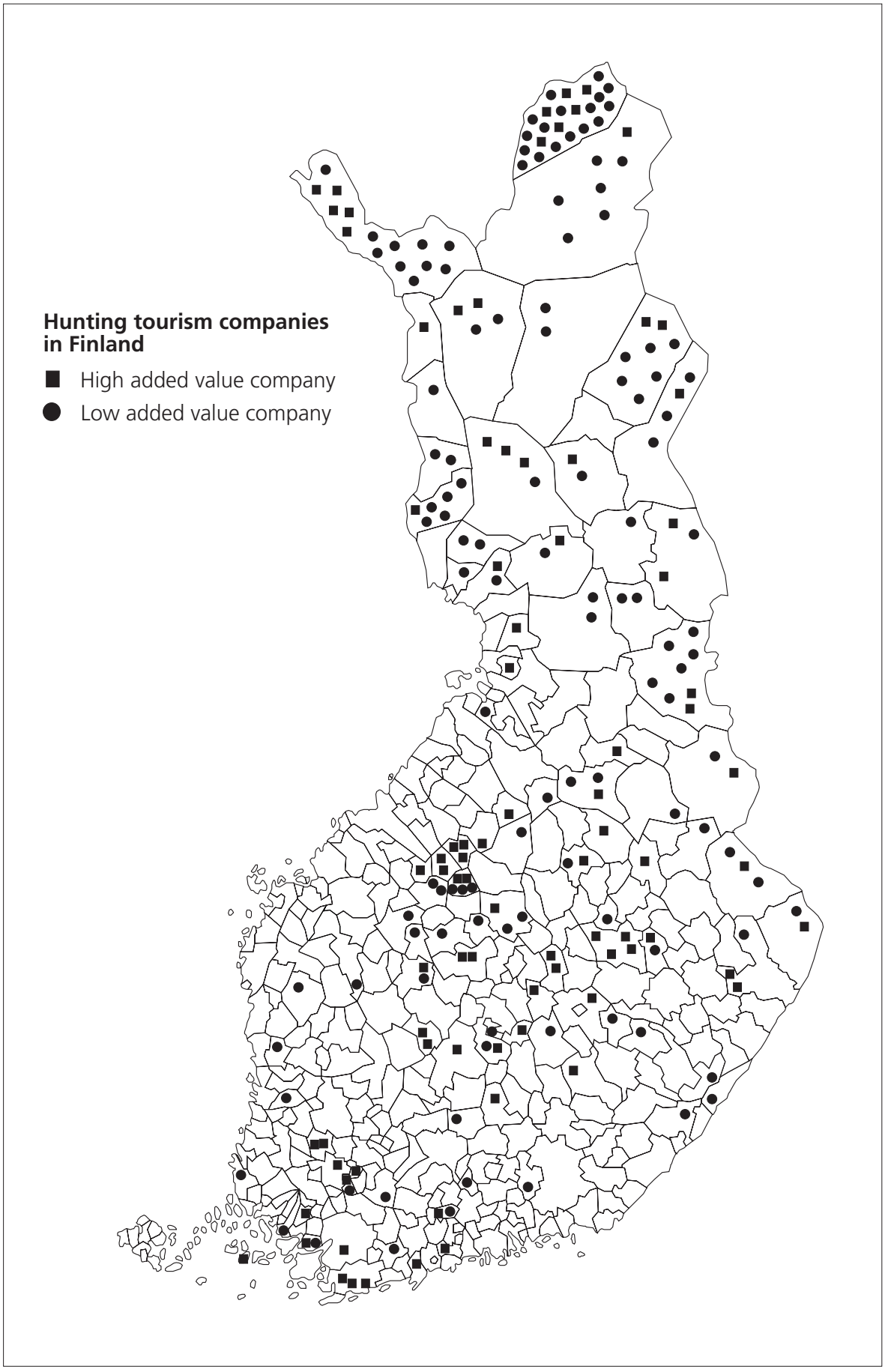

Figure 2. *The hunting tourism companies in Finland (Source: Keskinarkaus et al 2009).*

There are no national surveys on the commercial hunting tourism provision in Finland. However, based on regional surveys, the existing service provision is considered very diverse with significant variation in the type and quality of service offered. Hunting tourism services are mainly provided by farm holiday companies, activity and programme service companies and hunting clubs. Typically the companies operate on seasonal basis. The annual company income ranged from a few hundred Euros to 10 000 Euros or more (Matilainen and Pouta-Aho 2003). Of the hunting clubs only a very small proportion offer hunting tourism products. It has been estimated that in the area of free local hunting rights there would be 30-50 clubs offering commercial hunting opportunities (Keskinarkaus et al 2009). The number can be larger in the southern parts of Finland, when operating mainly on private land.

3.3 The most potential customer groups for hunting tourism

Two main customer groups for hunting tourism can be identified in Finland. The larger group consists of the domestic tourists, who annually hunt on State land, mainly in eastern and northern Finland. Typically this group represent independent tourists buying their own licenses directly from Villi Pohjola and organising the trip themselves. These so called permit hunters (see Keskinarkaus and Matilainen 2009) typically buy only very basic services e.g. accommodation and consumer goods (e.g. food and beverages) during their hunt in the area they are visiting. However, there are approx 35 000 – 38 000 permit hunters annually (Metsähallitus, statistics) and they are likely to influence local economies as they use local services (restaurants, cafe's, gas stations, bars etc) and make purchases (groceries, gas, souvenirs) in rural areas outside the typical 'high season' thus extending the business period of rural businesses. These direct expenditures can represent a significant income for rural areas and when the whole regional effect is considered the income is even bigger.

The second group of hunting tourists typically consists of foreign or business customers who organise their trip via a sales organisation or travel agency. They usually buy different kinds of hunting packages including additional services like guiding, sauna and other programme services. Numerically this group is not very large, however income from this group may be large compared to the domestic market. In these hunting tourism products the added value for a single hunting licence could be significantly bigger than in the domestic tourism model. This group is also a very clear customer segment and relatively easy to reach for marketing. For comparison there were an estimated 2 000 foreign hunters in Finland in 2007, representing less than 1% of the hunting cards issued that year (Keskinarkaus and Matilainen 2010). Some of these foreign hunters can also be independent hunters.

There are no national figures on the division between independent domestic tourists and domestic tourists buying some sort of hunting tourism package, since statistics on division of the customers of customers are not available. However, according to one survey carried out in Central Finland, 60% of the hunting tourism market was targeted to the so called independent tourists and 40% was offered as hunting tourism packages (Matilainen and Pouta-Pohjosaho 2003). However, this survey was carried out before the change in legislation in 2005.

3.4 The most relevant hunting tourism models

The most popular game species for hunting tourism in Finland are moose (*Alces alces*) and grouse species, particularly willow grouse (*Lagopus lagopus*), black grouse (*Lyrurus tetrix*) and capricaillie (*Tetrao urogallus*). These species are also the most favoured among local hunters, which can lead to conflict especially when game populations are small and quotas are limited.

There are developed a few different kind of business models via which hunting tourism products are sold for both moose and small game. The models differ each others based on the different license system (moose and small game), the social environment of the hunting tourism company and the geographical variation in the hunting culture.

3.4.1 Moose hunting

Hunting tourism based on moose hunting is typically implemented in close co-operation with the local hunting clubs or by the clubs themselves. Some of the clubs have agreed with the hunting tourism operator to host a certain number of guests each season and the moose licenses for the guests come from the clubs' own quota. Typically the hunting club estimates the number of guests that can be hosted so that members own recreational hunting is not compromised. If the club utilize state land they rent the hunting rights from Metsähallitus. In the same way independent tourists or a hunting tourism company can also put together their own moose hunting club and apply to rent the hunting grounds from Metsähallitus. In addition to the access to the hunting grounds, the hunters need to pay a moose-hunting fee of 42 euros to State, which gives them the right to hunt moose on allocated state land.

The regulations stipulate that the names of the hunters in each moose hunting club must be given with the application for the moose hunting area. The regulation was established so that the game management authority could apply the principle that the moose hunting rights on state land would primarily be allocated to hunters without other moose hunting opportunities (Metsästyslaki 46§). The license authorities can check, before granting the moose hunting area, the other hunting possibilities of the named hunters. Therefore, "the spirit of the legislation" expects that there should not be any changes in the participants of the hunting club after the application procedure is finalised. However, strict letter of the law, allows others to join a moose hunting club after the application is finalised. This practice was legislated for in order to utilize dog handlers from other hunting clubs and to allow guests (paying or otherwise) to join a moose hunting club. The possibility to add members to the group after the hunting area application has promoted the development of some kind of 'secondary market' for moose hunting grounds in Finland. In addition to the moose hunting grounds the hunting club needs a moose hunting license. The licenses (how many and what kind of moose are allowed to shot) are distributed by the game management districts for each hunting club based on the population estimations.

For moose hunting there are four different hunting tourism "models" (Keskinarkaus et al 2009). In the first model (figure 3) the hunting clubs themselves organise the tours without the involvement of a hunting tourism company. In this model customer contacts are strongly based on the personal contacts of the club members, and the quality of for, example accommodation and catering, is typically low. In the second model (figure 4) the hunting clubs organise the hunting event themselves, but sub-contract some other services, for example accommodation and catering from different suppliers in the local area. Like in the first model, the customer contacts are typically, but not always, based on the personal con-

nections of the club members. Sometimes, especially when operating on private land, the hunting clubs may advertise hunting tourism opportunities in the hunting media, for example web pages and hunting magazines.

In the model 3 (figure 5), the hunting tourism products are implemented by a tourism company. The tourism company pays the hunting club a daily fee for taking the tourists along on their hunting trips and sometimes an additional fee depending on the moose the tourist shoots. Typically, the club also usually keeps the meat. The hunting tourism company operates in the customer interface and organizes the rest of the hunting tourism package including local transportation, accommodation, meals and other tourism activities as well as possibly a programme for non-hunter family members. The hunting tourism company's revenue is especially generated from these additional services rather than via provision of the hunting opportunity *per se*. The package can for example include a one week programme with moose hunting and potentially small game hunting. Most of the customers are foreign or business customers and the companies may have sales agents in other countries. The price range for one week hunting tour varies in Eastern Finland between 1 360 – 2 000 €. In addition there is a shooting fee (approx 350 €/ moose) and trophy fee of approx 25 €/ per spike of the antlers. Sometimes parts of the product are also sub-contracted to other tourism companies in the area.

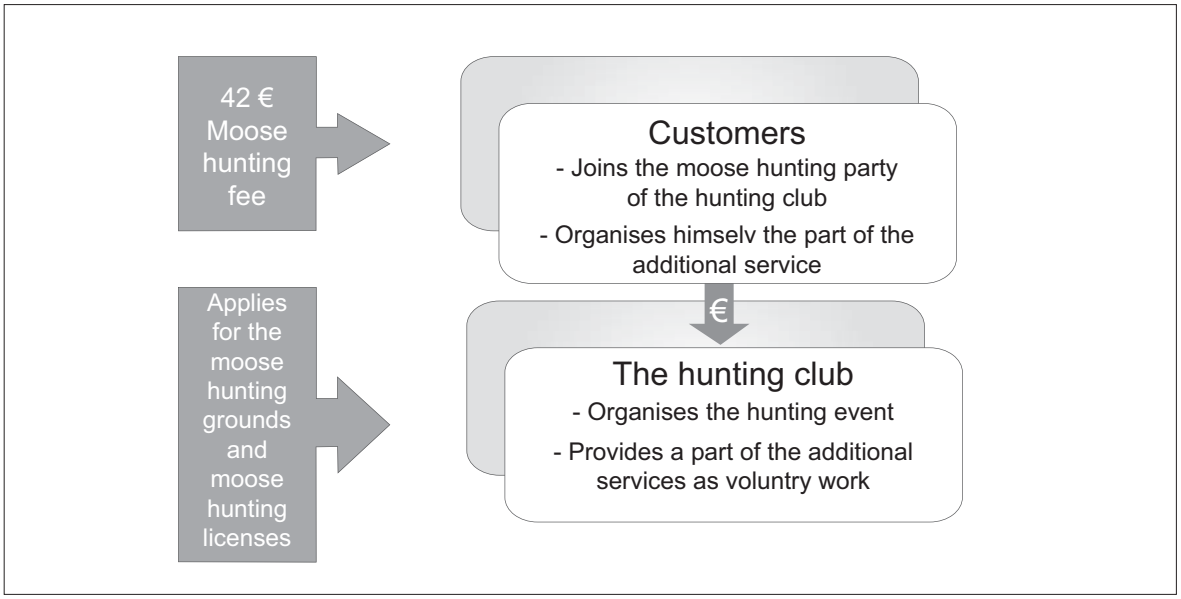

Figure 3. *The moose based hunting tourism model, where the hunting club is the main actor. (Keskinarkaus et al 2009).*

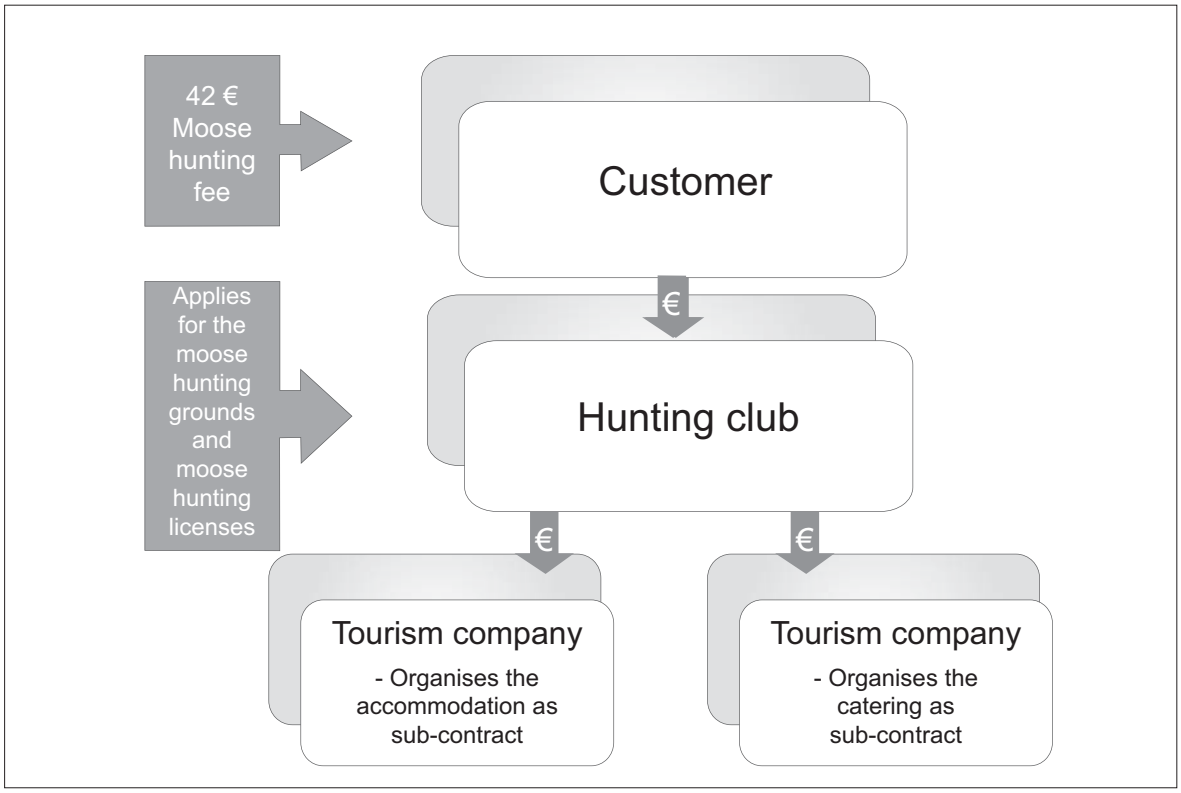

Figure 4. *The moose based hunting tourism model, where the hunting club is the main actor, but uses sub-contractors providing a part of the service. (Keskinarkaus et al 2009).*

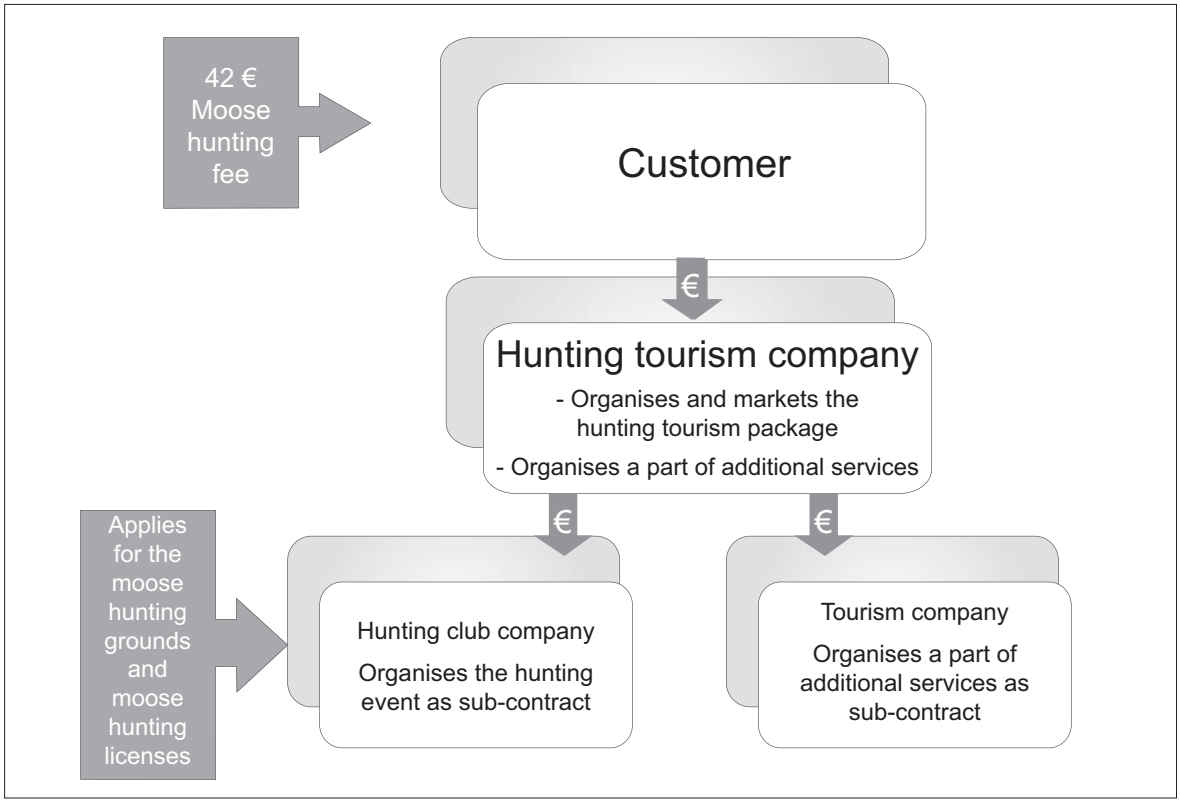

Figure 5. *The moose based hunting tourism model, where the hunting tourism company is the main actor using hunting clubs and other tourism companies as sub-contractors providing parts of the service. (Keskinarkaus et al 2009).*

In the first three models the hunting clubs base their activities on the voluntary work of members and serving hunting customers can be an onerous task for the members involved. The clubs typically invest the income from hunting tourism activities in to maintaining their hunting lodges and game management facilities, and the income is not distributed to the club members. On a local level, these moose based hunting tourism models have proven to be very sustainable. However, from the legislator's point of view, the spirit of the law is violated - according to the law, hunting should be provided primarily to those people and groups "without other hunting opportunities". This has proven to be very hard to monitor in practise. Since moose hunting is a group activity, hunting areas and moose licenses are allocated based on the number of hunters in a hunting party i.e. named hunting club members and their other hunting possibilities. When tourists are included to the group after the standard application procedure, the hunters participating in the hunt are different from those named in the application, who may very well also have "other hunting possibilities".

In the regions where locals do not have automatic access to hunt on state land (outside the 8§-area), the tourism operators have the possibility to rent hunting areas from Metsähallitus for a particular customer group (model 4). This, according to the application procedure, requires that the list of participants (shooters) is delivered to Metsähallitus due to the administrative reasons by the end of January. Competition for these areas can be high in some regions and the tourism operator may not get the area they applied for. This causes substantial uncertainty to the company's business in these areas. Nevertheless, this fourth model (figure 6) would follow literally both the spirit and letter of the legislation. However, socially at the local level this model has not proved to be very sustainable. The tourism operators are competing with local hunting groups and clubs for hunting grounds. Gaining hunting land access by taking the hunting possibility away from locals can seriously affect the social sustainability of hunting tourism in these areas jeopardising the co-operation of local people and local acceptance for the company's activities. For these reasons, this model is not very widely used, though in the areas, where the competition for the moose hunting grounds is less intense it has proven to be successful.

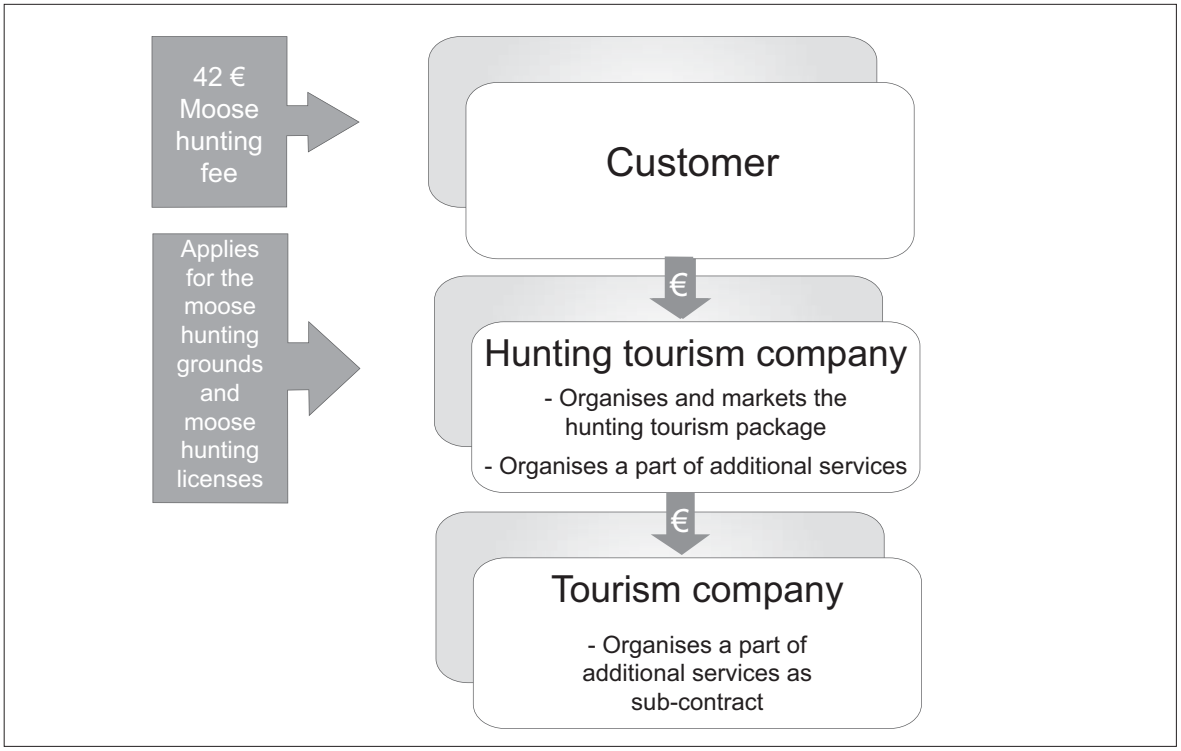

Figure 6. *The moose based hunting tourism model, where the hunting tourism company is the main actor applying the hunting grounds for the hunting tourists and using other tourism companies as sub-contractors providing parts of the service. (Keskinarkaus et al 2009).*

The ecological sustainability of moose hunting in all hunting tourism models is seen as quite secure by all stakeholder groups related to hunting tourism. There is trust in the population monitoring system among stakeholders despite of some estimation problems in the system. Since the moose shot by the hunting tourists are abstracted from the hunting club/group quota or the tourist group has gained their own hunting ground via the application process, the number of hunted moose does not increase due to the tourist hunters. Some hunting clubs are concerned though that an increase in the moose hunting activity could increase land rents on private land. (see e.g. Keskinarkaus and Matilainen 2010, Keskinarkaus et al 2009).

3.4.2 Small game hunting

The most interest in hunting tourism for small game are grouse species (black grouse, willow ptarmigan, capercaillie, hazel grouse), mountain hare (*Lepus timidus*) and water foul. After the legislation changes in 2005 (see chapter 3.2) the more developed hunting tourism products based on small game hunting on state's land almost vanished. Tourists now have to buy the competed hunting licenses themselves and the tour operators sell only accommodation and possibly catering and guide services (Figure 7). While tourism operators can apply for the license as part of their service, it has to be done individually for named hunters, the entrepreneur can not guarantee success of the application. For this reason the most of the more developed hunting tourism products based on small game are concentrated on private land. Either the entrepreneur owns land, rents private land, or has made an agreement with a local hunting club to bring customers on the hunting club's hunting area. Typically the tourist operator pays the hunting club to organise the hunting event for the tourists. Some clubs sell small game hunting day licenses for the tourists either directly or via hunting tourism operators. The prices vary from 5 (hare) – 15 (fowl) € a day. A hunting guide for one day can cost approx. 100 – 300 €. (Figure 8).

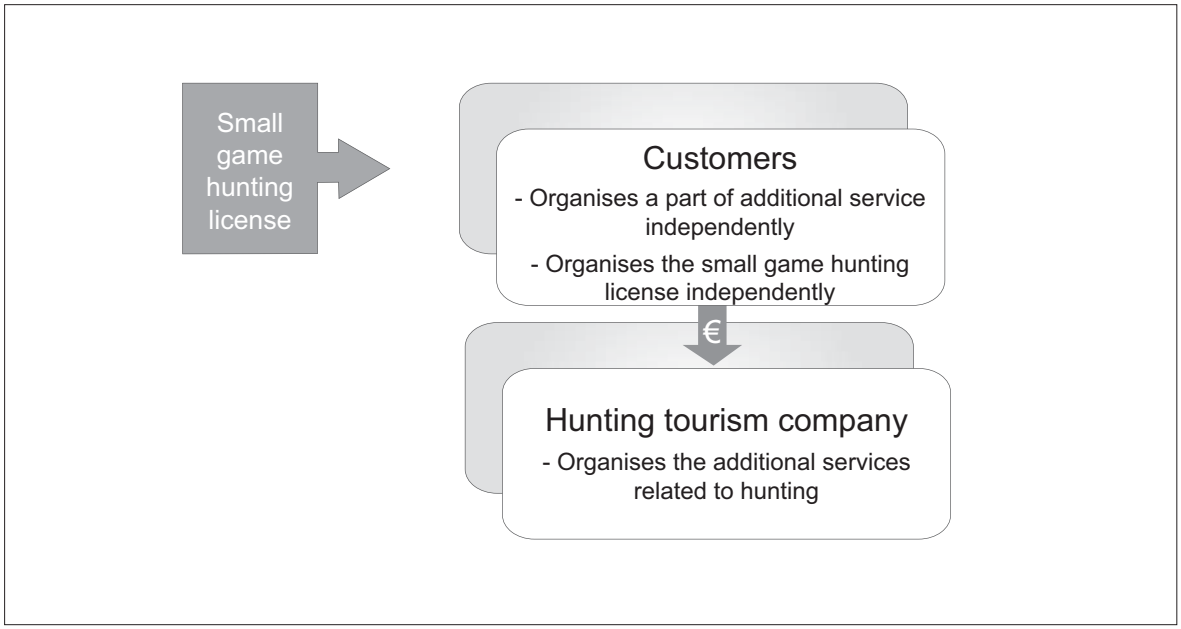

Figure 7. *The small game based hunting tourism model, where the hunting tourist is the main actor applying the hunting license himself and buying some additional services from hunting tourism company. (Keskinarkaus et al 2009).*

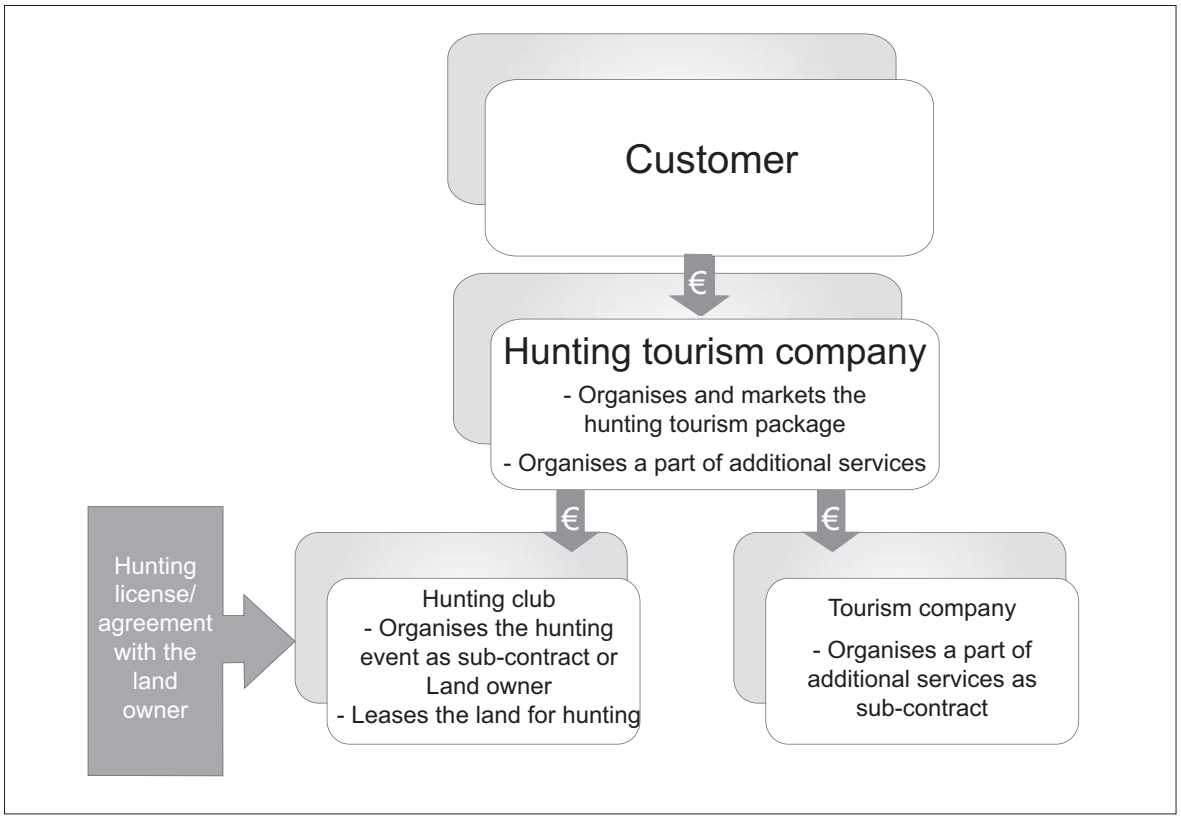

Figure 8. *The small game based hunting tourism model, where the hunting tourism company is the main actor organizing the hunting in co-operation with the local hunting club or land owners and buying some additional services from tourism companies as sub-contracts.*

In addition to the hunting tourism packages, there are a large number of independent hunting tourists, who buy the license for small game hunting and organize the hunting trip themselves. Typically these are domestic tourist hunting grouse species, water flow and sometimes hare.

The ecological sustainability of commercial small game hunting on state land is considered sufficiently robust to over exploitation (see e.g. Keskinarkaus and Matilainen 2010, Keskinarkaus et al 2009). There is an extensive national population monitoring system and the annual license quotas for state land are carefully assessed. However, there is a lack of information concerning the bag statistics of local hunters in northern and eastern Finland, where they have free hunting rights and no obligation to report their bag statistics. Due to uncertainties in the size of the harvest by local hunters, the authorities are cautious not to overestimate the number of licenses sold, and typically over half (65%) of the estimated total hunting capacity is allocated for local hunting and only 35% are sold to the tourists (i.e. people from outside the municipality).

When organising hunting on private land, responsibility for safeguarding ecological sustainability lies mostly with the landowners and local hunting clubs. Hunting clubs have proven to be effective at regulating the level of harvest and are aware of the effect of hunting pressure on future hunting opportunities. While there is a risk of over harvesting game where hunting tourism companies own land, the risk of jeopardizing the long term ecological – and thus economic -sustainability acts to deter over exploitation. The hunting companies' land areas are typically small in relation to the total habitat and therefore the hunting pressure on the company's land is unlikely to affect the ecological sustainability of a game species in the area.

3.5 Marketing the Finnish hunting tourism

The hunting enterprises typically advertise via their web pages. Advertising targeted at the domestic market can be found in hunting related magazines. Companies selling more advanced products are also targeting foreign markets and may have connections with established sales agent to reach Central European customers. Returning customers and new customers who come by recommendation are an important and typical source of custom for hunting tourism companies. In most cases the hunting services provided by the hunting clubs are developed and 'marketed' through the personal connections of the club members.

The hunting opportunities to state land are marketed mainly by Villi Pohjola (Wild North), which is a state owned company to whom Metsähallitus has delegated the selling of individual hunting licenses. The main marketing channel is the company's web site (www.villipohjola.fi), but also brochures in different languages are produced and distributed.

Since the hunting tourism in Finland is almost solely based on the natural populations, the certainty of bag or trophy can not be used as a marketing argument. Therefore, current marketing is focused mainly on the concept of 'wilderness experience' and depending on the market, the uniqueness of the game species in Finland (Keskinarkaus and Matilainen 2010).

3.6 The economics of Finnish hunting tourism in existing literature

Practically no previous information exists of the economics of hunting tourism: neither its' volume nor its' regional impact. One of the difficulties in looking at the niche market of hunting tourism within the tourism industry is that the economic figures of tourism services are spread within many industry classifications and the economic parameters are thus also buried within classifications such as "other services". Regardless, there is a consensus among the general public and rural developers that nature-based tourism has is economically significant for certain regions, has development potential and is worth assessing.

Although nature has traditionally been the source of livelihood in the North, the discourse attributing the strengths of Lapland to the nature still lives strong today (Valkonen, 2003) and affects how people feel about exploiting natural resources such as game. Even though hunting tourism should be evaluated from an economic perspective, it is vital to remember also the social aspect of the phenomena when assessing the impact of different alternatives. Valkonen (2003) remarks that the proponents of different types of nature use all tend to agree that the link between the nature and economics in Lapland is direct and fixed and the source of disagreement is only regarding the type of utilization that the parties advocate. In Lapland, nature is portrayed as the source on livelihood and as a symbol for the future (Valkonen, 2003). The resource function of nature extends from an economic resource to a mental resource. Nature in Lapland is a tool for keeping the area inhabited and arguments for nature use are expected to include an economic rational (Valkonen, 2003). Livelihoods seen as proper for Lapland are expected to be based on the nature and tourism has been one of those since the 1980's. Tourism discussions combine the economic and conservation objectives for nature (Valkonen, 2003).

Traditional every-man's use of the nature conflicts with the resource view of nature that seeks to financially gain from the nature resource. Everyman's rights are uncontrolled and therefore problematic. This conflict is also clearly reflected in the pro- and anti- hunting tourism –arguments where some defend non-commercial use and others seek to turn the nature into a product.

In this literature review, we first consider hunting tourism within the global tourism cluster. Current economic research in nature-based tourism in Finland is then shortly described where relevant to hunting tourism.

3.6.1 Tourism economics

Ten percent of the global work force is employed in tourism and it is a growing sector. Tourism creates 6 % of GDP in the EU and 2,4 % in Finland. Tourism expenditures include accommodation, restaurants, travel, travel agencies, culture, recreation, fuel, shopping and miscellaneous spending. (Harju-Autti and Ryymin, 2008).

The tourism cluster also includes enterprises dependent on tourism such as travel, tourism services, events, recreational services and food services. In Finland the total turnover of the tourism cluster amounts to 12 billion Euros a year (Harju-Autti and Ryymin, 2008) wherein 5,1 Billion Euros is the share of the tourism industry (accommodation, restaurants, activities) specifically. In 2006, the tourism industry alone provided over 50 000 jobs in Finland, though jobs are typical seasonal and outsourced. The economic significance of the tourist sector is strengthening.

The amount of tourism enterprises in rural areas is particularly difficult to estimate since the companies are often listed as farms and not enterprises. The total number of tourism-related enterprises was 13 500 in 2006 (Ryymin, 2007). Domestic tourism accounts for 72 % of the demand for accommodation, and 65 % of travel is leisure related. Within Finland, domestic customers make 27 million recreational overnight-trips of which 5 million are in commercial hotels (Harju-Autti and Ryymin, 2008)

Internationally, the main attraction for tourists to travel to Finland is its exotic and unspoilt nature. Finland is also seen as a clean and safe cultural destination without crowds. Tourists expected beautiful sceneries and interesting rural areas. Visitors responded positively to lakes, architecture, design, indigenous people and sauna (Harju-Autti and Ryymin 2008). According to a report on the Finnish tourism sector (Harju-Autti and Ryymin, 2008), the challenges in Finnish tourism lie in the recreational nature of the businesses: the threshold to enter into the tourism business is low and the quality of the products thus varies significantly.

Kaikkonen et al. (2006) investigated the status and challenges of small rural tourism enterprises in Kainuu, which is one of the remote regions in eastern Finland, where there is potential for hunting tourism to influence rural economics. March and July are the season peaks whereas other months are quite stable. Tourists spent 206 million Euros in Kainuu, 456 million Euros in Northern Ostrobothnia and 551 million Euros in Lapland in 2002 (Savela ym 2004). Foreign tourists account for 12,2 % of the total in Kainuu, 19 % in Northern Ostrobothnia and 45 % in Lapland. Out of the 20 entrepreneurs interviewed, only three had a tourism-related education and five had attended shorter vocational training. The most common educational backgrounds were in agriculture and commercial studies. The average age of entrepreneurs was 54 years, and issues of who was going to continue the business were an unaddressed concern. The enterprises business focused on farming, forestry and construction services in addition to tourism. A clear majority had accommodation services and many also provided activities and/or catering. While some had planned to go in to the tourism sector, many had "stumbled in to" tourism as a business due to demand. In activity-based enterprises the hobbies and recreational skills of the entrepreneur greatly affect what activities they provide as professionals. Entrepreneurs mostly assessed their business to be moderately profitable or close to a zero return. Policy makers assessed the reasons for this and identi-

fied weak marketing, high fixed costs, the seasonal nature of the business and low customer numbers account for low profitability. The special challenges in marketing competencies were in targeting the international marketing and using electronic media. The entrepreneurs felt they did not have enough time to focus on marketing and development due to the other business activities. The enterprises were worried about the declining transportation services. Rural accommodation entrepreneurs also criticized Metsähallitus for removing the possibility for hunting entrepreneurs' to sell hunting licenses, but also praised them for starting license sales at the beginning of the summer. Forest management decisions of big landowners also affected the business opportunities of some enterprises. The respondents felt that internationalization of the tourism business would soften the seasonal fluctuations of customer numbers and facilitate long term planning.

3.6.2 Fishing tourism

Hunting and fishing tourism are often compared since they are both forms of consumptive nature tourism and often offered as services by the same nature tourism enterprises. According to a survey conducted by the Finnish Game and Fisheries Research Institute (Toivonen, 2008), there are about 1 100 fishing tourism enterprises in Finland accounting for an annual turnover of 18,6 million Euro. Each company has about 200 fishing customers a year, out of which half state fishing as the prime reason for their trip. Thirty seven percent of the customers stay for a few days. A quarter of the customers are foreign and mostly come from Germany and Russia. Their report uses the same logic of defining sector enterprises as ours: companies that base their business activities on providing services (at least accommodation) for the niche group in question (hunters/fishermen) can be considered sector enterprises. Finnish Game and Fisheries Research Institute also classified the enterprises under service categories based on information provided on their web-pages and found that a fifth of the companies have hunting and fishing as their main business activity, while half of the companies listed a variety of activities of which hunting and fishing were only a part of the business. The average turnover of fishing-focused companies was 60 000 Euro while the average for the whole sector was 129 000 Euro. The average company employed half a person a year. The majority (70 %) of the turnover came from private consumption and the remainder from business customers. 45 % of the fishing tourism companies also offered hunting services.

3.6.3 Hunting tourism

Mänty (2006) evaluated the development opportunities for hunting tourism in southern and eastern Lapland and concludes that the focus of development activities should be on the quality of the products, which should be high-class and highly specialized. In her study (Mänty, 2006), an interviewed travel agency noted that legal company status and fulfilling certain quality criteria were important prerequisites for cooperation. From the tourism development point of view, the uncertainty over hunting licenses is a major challenge. In Mänty's (2006) study entrepreneurs stated that hunting tourism was not a major business but represented an additional activity to their other tourism products. They listed their key challenges as; *attaining hunting licenses, competition (hunting clubs offer hunting at lower prices), a lack of professionalism, deficits in product-building, and a shortage in national marketing efforts*. Entrepreneurs also stated that arranging hunting trips takes a lot of effort and is expensive. Hunting tourism entrepreneurs highlighted that they sell a hunting trip, not game per se. Ecological sustainability was not seen as problematic since the same amount of game would be hunted regardless of the number of customers. On the issue of social sustainability, the entrepreneurs felt that cooperating openly with the locals was essential for continuing business activities in the area. Mänty (2006) also interviewed hunting clubs,

many of which feared that hunting tourism activities would displease the land owners and endanger the recreational functions of the hunting club. In Mänty's assessment of the current status of hunting tourism, she notes that local services benefit from hunting tourists and the positive effects can be seen in the most popular destinations. She concludes that the best practice scenario would be for entrepreneurs and hunting clubs to work together as a network for providing tourism services for hunters. Such activities would have to be started in a slow and patient manner in order to build trust, functional processes and stable quality. It is also evident from her study that hunting tourism in Finland must be based on the local hunting culture and respect for the limits of ecological sustainability. An optimal product would introduce the local hunting culture to the customer and utilize regional strengths. The products should also be well packaged to respond to international and business-to-business-demand.

The University of Turku, Centre for Training and Development conducted an inquiry on hunting tourism in Southwest Finland (Karlin, 2005). The main game species identified were roe deer and white-tailed deer. Some hunting clubs allowed customers to join deer/moose hunts and the price varied between 7 – 400 €. The prices for small game hunting varied between 5 €/day to 170 €/year. The hunting clubs acted independently without an entrepreneur contact, but most of the companies stated that they would be interested in hunting club cooperation. The hunting clubs that didn't take customers on their hunts stated that the prime reason was that they don't know how the landowners would react, that the public opinion is against guest hunting, and that the game populations would be threatened.

Matilainen & Pouta-Pohjosalo (2003) studied hunting tourism supply in Central Finland in their Bachelor's Thesis and found 30 hunting tourism providers in the area including five hunting clubs. The majority provided basic tourism services whereas 40 % also provided custom services. The companies mainly offered accommodation, food and guide services. Only 10 % of hunting tourism providers hunted on their own land. Matilainen & Pouta-Pohjosalo (2003) concluded that marketing activities in the sector were practically non-existent, but that customer loyalty was high. The companies didn't seem interested in expanding their business activities.

Pietikäinen (2006) also investigated hunting tourism in her Bachelor's Thesis. In her study the region was Northern Ostrobothnia and the focus was on hunting clubs. The surveyed hunting clubs mostly charged the customer under 10 € for a day of hunting. Over a third of the clubs were willing to have guests on their hunts and mostly preferred to have a maximum 20 guests per season. Pietikäinen's (2006) study supports the view that hunting clubs shun hunting tourism due to fear of landowner response, sensitivity to public opinion and concern over the game populations. Seven percent of the hunting clubs were willing to let hunting tourism enterprises use their meat processing shed and the compensation varied between 10 and 500 Euros per use.

German hunting tourists are a major customer group for Finnish hunting tourism companies. Haakana (2007) states in his Bachelor's Thesis that almost half of the 338 000 German hunters have been hunting abroad and 38% are hunting tourists yearly. Europeans spend an average of 1,200 Euro per hunting trip (Hofer, 2002) and Germans 1250 – 3000 €/hunt.

Heino and Holopainen (2003) focused on hunting tourism in central Finland in their Bachelor's thesis and their results suggest that small game hunters were more interested in hunting tourism than other hunters. More than half of the hunters in their sample group felt that their hunting possibilities were inadequate and a little less than half of these were interested in hunting tourism services. However, only 14 % of the overall respondents were interested in hunting guide services.

There is still very little research on hunting tourism within the tourism sector and especially professional hunting tourism. Existing research is temporally dispersed and focuses mostly on certain very particual niche details of the sector rather than the sector as a whole. There is clearly a need to reliably evaluate the economic significance of the sector.

3.7 Material and methods

The aim of this study is to *estimate I) the direct spending and II) regional economic role of hunting tourism in Northern Finland, especially in East Lapland sub-region*. The region was chosen, because many of the most sought after hunting areas are located on state land in this region. It provides a good example of the area with high hunting tourism activity (mostly domestic permit hunters).

The spending of the hunters who visited the area has been studied by using a quantitative approach. The data was collected by using an e-mail survey targeted to those permit hunters, who bought a small game hunting licence in one of the 9 most competed for hunting areas in Lapland and East Finland during the first two weeks of the hunting season in autumn 2008. For the time period the first two weeks of the season were chosen, since hunting permits for the beginning of hunting season is typically the most competitively sought after. The contact information of these permit hunters was provided by Metsähallitus. The e-mail survey was conducted between December 2008 and January 2009 and a structured questionnaire was created for the survey. In addition to spending habitats the survey focused on the motives of permit hunters and their attitudes towards hunting tourism entrepreneurship. In this report only the issues related to the economic role of hunting tourism are reported. The survey covered questions related to the different types of spending within the region, where the hunting ground was located, and outside the region during travel. The survey was sent out to all permit hunters (n=653) within the target group whose e-mail address was available, 48,3 % (n=314) replied.

In order to analyse the regional economic role of the sector, in addition to spending, a cost structure for the sector had to be created. For this a survey of hunting tourism companies was conducted. A mail questionnaire was sent out to 132 hunting tourism companies in Finland in 2009. The structured questionnaire focused on the cost structure of the companies, the turnover related to hunting tourism, investments, investment plans, tariffs of the most popular products, and the structure of the clientele. The post survey was supplemented with the structured phone interviews. Due to the low response rate and wide variation in those responses received (n=33) two typologies of the companies were created. The companies were divided to the "high added value" and "low added value" companies based on the content of their hunting tourism products.

The low added value companies provided only accommodation, and some catering services, but not for example guiding services. Therefore, it can be said that these companies remind to a lot of rural accommodation companies. However, in their advertising services for hunters were highlighted, and the companies used good hunting possibilities in their main marketing. The high added value companies provided, in addition to accommodation and catering, also forest transportation, guide and dog services, trophy processing and possibly also other programmed services. Provision of guiding has been used as one main separating service between high and low added value companies.

The validity of the company types was tested by using an expert group and by highlighting especially the responses of the companies operating in East Lapland area. Due to these estimations in the data structure, it must be noted that the results of the study must be kept as indicative rather than as accurate figures.

The number small game licenses issued, their lengths and prices used in different calculations are collected from the databases of Metsähallitus.

3.7.1 The data analysing

The quantitative data related to the permit hunter survey was analysed by using descriptive frequencies and cross tabulations (tested by X^2-test) in order to study statistical differences in the data (Ranta et al 1993). The statistical analysis were done in SPSS 16.0 – programme.

The economic regional role of hunting tourism for both individual domestic tourists (i.e permit hunters) and domestic and foreign tourists coming to hunt in the region via hunting tourism companies was evaluated by using Computable General Equilibrium (CGE) simulation model. CGE models are a recognised method to evaluate the short- and long-term regional economic effects of different activities. Their main idea is that in a regional economy "everything affects everything". Therefore, the model takes in consideration the direct, indirect and induced effects from a change in economic conditions. The direct effect is the amount of money the change injects in to the sector in question. The indirect effect is what happens in other sectors. The induced effect is what happens when all new money enter final demand, such as in private and public consumption. Indirect and induced effects are called multiplier effects.

The RegFin model was used in the application. RegFin is a Finnish multi-sector and interregional CGE simulation model which extensively describes the relationships and linkages of regional economy. The model has been explained in details in in Törmä (2008), Törmä and Lehtonen (2009), and in Rutherford and Törmä (2010).

3.7.2 The role of actors in the RegFin-model

The model assumes there are four domestic agents (firm, household, national and regional government) that follow their own interests. Each region has one utility maximizing representative household that owns all physical capital (machines, equipment, vehicles, ware houses etc.), labour hours, and land area. He/she sells capital, labour hours, and hectares of land to companies to earn income or capital and land rents and wages. This income, minus taxes, plus transfers from the national and regional governments is summed to calculate disposable income. The household uses this as either consumption or savings.

The firms aim to maximize their profits and are assumed to produce only one sector specific output. They demand capital, labour, and land inputs and buy them and the intermediate commodities they need in production from the factor markets. Factor prices are determined in this trading process. Consumer prices are determined in the commodity markets when the demand from the consumer meets the firms' supply. These prices include taxes and subsidies. Investments are exogenous and must be equal to savings in general equilibrium.

National and regional governments do not participate in production, but they buy services produced by the firms. The public sector has policy goals and tools, which are direct and indirect taxes, subsidies and transfers. The governments collect tax revenues but also have subsidy and transfer expenditures. Public services are financed through net tax revenues. The public sector has relations via net taxes to both the and firms.

There are three region concepts in the model: own region, all other regions of the country (ROC), and rest of the world (ROW). The two other regions are accounted for only via domestic and foreign trade. Changes of relative prices affect choices in trade. Domestic goods and services, often intermediates are imported if the own region is in deficit or cannot satisfy the required demand in production. The own region will export in aggregate terms to the domestic markets to earn income. Domestic trade must be in balance over the country for every sector by definition. In our hunting tourism model the hunters/ customers come from ROC or ROW.

A small open economy is assumed, so foreign import and export prices are exogenous. The own region will import from abroad if some sector is in deficit and export if there is a sector that is in surplus. It will export abroad to earn income. Foreign trade need not balance by sector. There are thus two common pools, a domestic and foreign one where the trade takes place. Domestic and foreign trade involves all sectors not only hunting tourism, which is connected to the other sectors via intermediate demand.

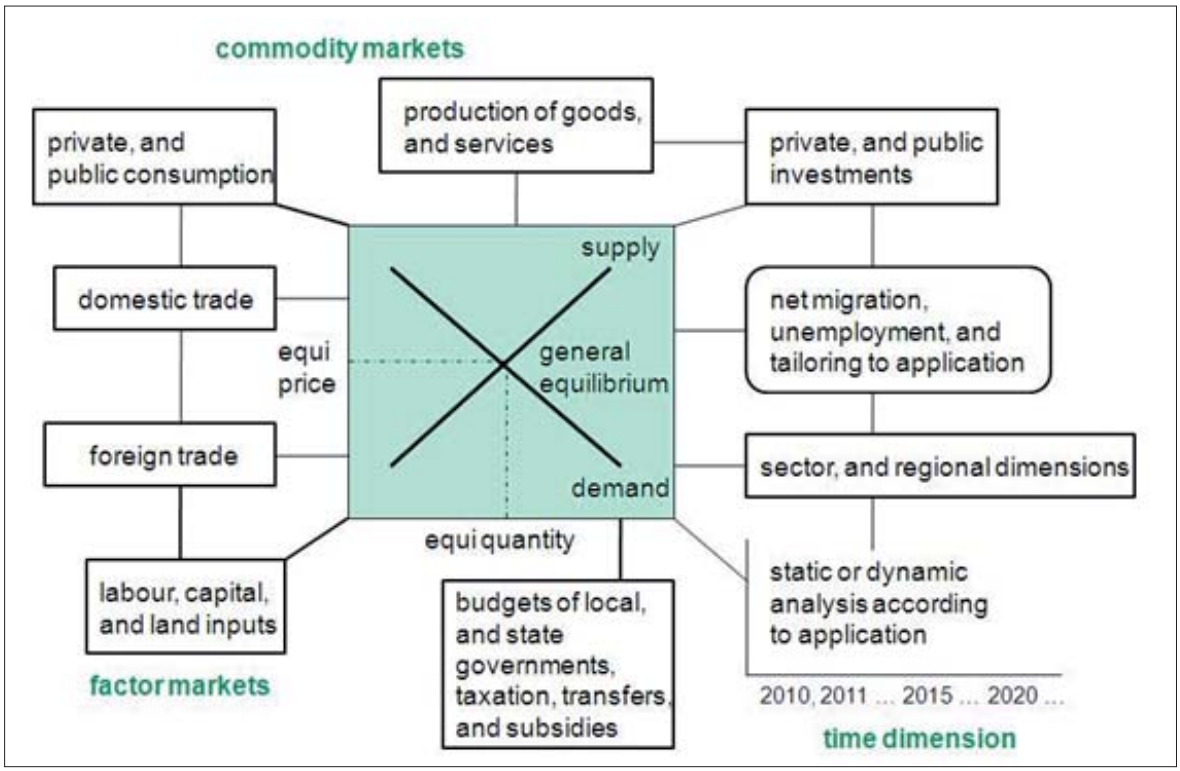

Figure 9. *Structure and equilibrium mechanism of the base model.*

All key elements are represented in the figure 9. Different markets of the economy are inter-connected via money flows. Supply and demand meet in all markets and the equilibrium prices and quantities are determined. General equilibrium only exists if all markets are in equilibrium at the same time. There is one exception; the labour market can be out of equilibrium, so there can be unemployment, which is often a serious problem.

The data base or the SAM (Social Accounting Matrix) for East Lapland was constructed by using the most recent 2002 regional input-output tables. The sub-regional SAM for East Lapland was constructed by using the efficient AFLQ (Flegg and Webber 2000, Tohmo 2004, Bonfiglio and Chelli 2008) regionalization technique. This was used as a hybrid method, so combined with real data on total intermediate use, wages and salaries, value added, investments, and total output from the regional statistics. Three sectors were specified: primary production, industry, hunting tourism, and services.

3.8 Results

3.8.1 The spending of the permit hunters

The respondents of the e-mail survey reflected well the typical permit hunters in Finland (e.g. Korhonen 2005, Ermala and Leinonen 1995). The majority of respondents (93,9%) bought the small game license in order to hunt grouse species (Willow grouse, Black grouse). In addition some (9.9%) of the respondents stated also to hunt mountain hare during their hunting trip. This reflects the results from previous studies relating to permit hunters bag interests (Korhonen 2005). The duration of the hunting trip ranged from 2 to 9 days (88,5%) and the average distance to the hunting ground was 500 km. Most of the permit hunters travelled with their own car (93,3%) and the hunting party consisted of the friends (65.3%) or family (15%). The average size of the hunting team was 3-4 persons and 71 % of permit hunters had their own dog in their hunting group.

The main motives given for the hunting trip there were mentioned: relaxing with friends, training the dog, recreation in nature, and socializing with the group. For many respondents the annual hunting trip with the familiar group was already a tradition. The main issues affecting the choice of the hunting destination were: familiarity of the area (63,1%), geography/natural environment of the area (54,8%) and being able to get the hunting license for the area (56,4%). The time of the hunting trip was dictated primarily by being able to get the license for the time period in question (74,8), hunting possibilities in the chosen hunting grounds in the time in question (65%) and the time of the respondents' holiday (53,5%).The majority (98,7%) of respondents were men and the most (34.3%) were aged between 41-50 years. Many (73,6 %) also had some other hunting possibilities (own land or land areas of the hunting club) in their own municipality of neighbourhood and 70 % of the respondents were members of at least one hunting club.

The respondents were asked about their spending during the hunting trip both in the region, where their hunting grounds were located and outside of the region travelling. This categorisation was chosen since according to the general assumption the permit hunters buy all the needed goods and spend the most of their money outside the region, where they hunt and therefore, the benefits do not actually focus on the rural regions.

The results show that most of the costs were related to accommodation and transportation; spending within the region of the hunting grounds is presented in Table 1, while spending outside the hunting area are presented in Table 2.

Table 1. *Spending within the region of the hunting grounds. (n=number of responses)*

	Transportation	**Accommodation**	**Food and daily consumer goods**	**Restaurants, cafeterias, bars**	**Hunting services** (e.g. guide, dogs, bag and troffee processing)	**Other programme services**	**Other**
n	248	127	246	152	23	23	82
Mean	119,35 €	180,54 €	134,61 €	59,30 €	103,30 €	40, 83 €	67,65 €
Median	100 €	120,00 €	100 €	40 €	70 €	30 €	50 €
Min	5 €	20 €	5 €	5 €	39 €	5 €	5 €
Max	700 €	1 300 €	900 €	1 100 €	500 €	500 €	300 €

Table 2. *Spending outside the region of the hunting grounds during the travel. (n=number of responses)*

	Transportation	**Accommodation**	**Food and daily consumer goods**	**Restaurants, cafeterias, bars**	**Hunting services** (e.g. guide, dogs, bag and troffee processing)	**Other programme services**	**Other purchases and souveniers**
n	164	21	107	81	5	3	19
Mean	132,69	142,38	94,63	46,79	50,40	26,67	97,89
Median	100	100	55	30	50	20	50
Min	10	20	5	10	40	20	10
Max	700	800	450	500	62	40	1000

Although variation related to spending is large, it can be estimated that on average an independent small game permit hunter spends approx 700 € in the region where the hunting grounds are located. Since it is known from the database of Metsähallitus that there were 21 516 small game hunting licenses sold in 2008, it can be estimated that the permit hunters bring as direct income to the 8§-area approx 15,5 million Euros. The influence is significantly bigger, when the multiplying effect is included in the estimation. The multiplier effect was studied by using the CGE simulation model described above for East Lapland sub-region.

3.8.2 The economic role of small game focused hunting tourism in Easter Lapland sub-region

Eastern Lapland sub-region covers 4 municipalities in east Lapland (Figure 10). Most of the region is remote rural areas, Kemijärvi being the only city. There are only approximately 20 000 inhabitants in Eastern Lapland sub-region. The proportion of the state land area is high and some of the most competed for State owned hunting grounds are located in Eastern Lapland. Therefore, it provides an excellent case of the remote rural area with active hunting tourism. The role of hunting and tourism is also large in the regional economics. Eastern Lapland has been the least prosperous sub-region in Finland (Itä-Lappi - hyvän elämän… 2009).

In order to analyse the regional economic role of permit hunting based hunting tourism, the direct spending and the length of the visit for both the permit hunters and customers of hunting tourism companies have to be estimated. In addition the cost structure of the hunting tourism companies had to be constructed.

Figure 10. *The location of the Eastern Lapland (Itä-Lappi) subregion (Lapin liitto http://www.lappi.fi/lappi/seutukunnat)*

Permit hunters' spending in Eastern Lapland sub-region

From the e-mail survey, the data concerning the permit hunters visited especially in Eastern Lapland (n=90) were analysed separately in order to get more specific spending figures for that region. The spending is presented in the Table 3. Since the variation was large in the expenditure classes, the spending estimates needed for the CGE-model were created by evaluating the results of the study in an expert group. For example, for some estimates median is used instead of mean, since it was considered by the expert group to best describe the situation. For some spending estimates on the other hand, the mean was seen to accurately describe the situation. For the spending related to purchases of hunting and other programme services, the minimum figure was used in order to avoid overestimating the sum spent. According to the previous studies (e.g. Joensuu 2006) and expert group, only very few permit hunters are using different programme services.

The average stay of the permit hunters in Eastern Lapland was 5 days and the duration of the whole trip 7 days. The average size of the group was 3.26 persons. The distance of the hunting grounds from the residence of the permit hunters was in average 710 kilometers (Min=120 km, Max=1200km), which indicates that the most of the permit hunters came from southern or central Finland.

Table 3. *The spending of the permit hunters visited Eastern Lapland in autumn 2008.*

Independent permit hunters (n= 90), spending within the region during the hunting trip:	**€/person/hunting trip (5 days)**
Accommodation:	219,96 €/person (mean)
Transportation (inc gasoline, train/bus tickets, taxes etc):	140,24 € /person (mean)
Food and daily consumer goods	150 €/person (median)
Restaurants, cafeterias, bars::	50 €/person (median)
Hunting services(e.g. guide, dogs, bag and troffee processing):	60 €/person (minimum)
Other programme services:	10€/person (minimum)
Other purchases and souvenirs:	50 €/person (median)
Total	**680,24 €/person (138 €/person/day)**

The different hunting tourism company types in Easter Lapland region

According to the results of the hunting tourism company survey, companies were categorised as "high added value" and "low added value" companies based on service provision of the companies (see chapter 7). The main differences between these two company types' cost structures were the costs related to the use of sub-contractors as service providers and the costs related to maintenance of the buildings. High added value companies used much more other SMEs as sub-contractors in their products, while the low added value companies typically owned the accommodation facilities themselves. The cost structures of these two company types are presented in the table 4.

Table 4. *The costs structure of hunting tourism company typologies.*

% of the costs	low added value companies	high added value companies
services which the company delivers itself	20	22
staff costs	25	21
sub-contracting	8	16
hunting licences	0	7
land rent	0	7
maintainance of acommodation facilities, office buildings etc. inc. depreciation	24	6
other	5	6
insurance	8	5
office costs	5	5
marketing	5	5
total	100	100

Both company types provided hunting tourism services mainly to domestic customers. According to the survey, the proportion of the domestic customers in low added value companies was 95% and in high added value companies 77%. The average stay was 4,5 days for clients of low added value companies and 3 days for clients of high added value companies. By mapping information from different sources, for example, business registers, internet pages and databanks and interviews with the regional business advisors there were identified 8 low added value companies and 4 high added value companies operating in the Eastern Lapland sub-region in autumn 2009. Hunting tourism is not classified as an own industry sector or sub-sector in official statistics. Therefore, cross-checking from different information sources was necessary.

Based on the service structure of low added value and high added value companies, the direct spending of the companies' customers was estimated based on the permit hunter survey and the estimates were assessed by the expert group. The costs related to the company's service provision were reduced from the total spending. The spending of the customers of low and high added value companies has been presented in the table 5.

Table 5. *The direct spending of the customers of low and high added value hunting tourism companies in the sub-region of Easter Lapland in 2008.*

permit hunters (n= 90), spending within the hunting region/ hunting trip	**€/person/hunting trip the customers of the low added value companies**	**€/person/hunting trip the customers of the high added value companies**
Price paid to the hunting tourism company for their services:	225 €/person (50€/day, inc. accommodation, part of the catering/food service)	870 €/person (290/day inc accommodation, catering services, forest transportation, hunting services (guiding, dogs etc) and other programme service)
Transportation:	126 € /person	84,14 € /person
Food and daily consumer goods:	67,5 €/person	includes to the price paid to the hunting tourism company
Restaurants, cafeterias, bars:	45 €/person	30 €/person
Hunting services(e.g. guide, dogs, bag and troffee processing):	54 €/person	includes to the price paid to the hunting tourism company
Other programme services:	9 €/person	includes to the price paid to the hunting tourism company
Other purchases and souvenirs:	45 €/person	30 €/person
Total	**571,72 €/person** **(127€ /person/day)**	**1014, 14 €/person** **(338 €/person/day)**

The regional economic effect

Both the permit hunters and the customers of hunting tourism companies spent money in the hunting region for different purchases. The new money generating to the regional economics starts to circulate further in the region forming the general effect to the regional economics (Figure 11).The general effect includes direct influence, the indirect influence and the induced influence (see chapter 7).

The purchases are focused on end products and services, so the majority of the new money generated in the regional economics comes via final demand. Part of the new money is saved by the local population, so this proportion is not circulating in the short term in regional economies. In the hunting tourism companies the products are further processed, so the role of intermediates i.e. the inputs sub-contracted from other companies, and the raw-materials and natural resources is significantly bigger. As the value-added of the hunting firms grows, also the intermediate demand from other firms increases (Figure 11).

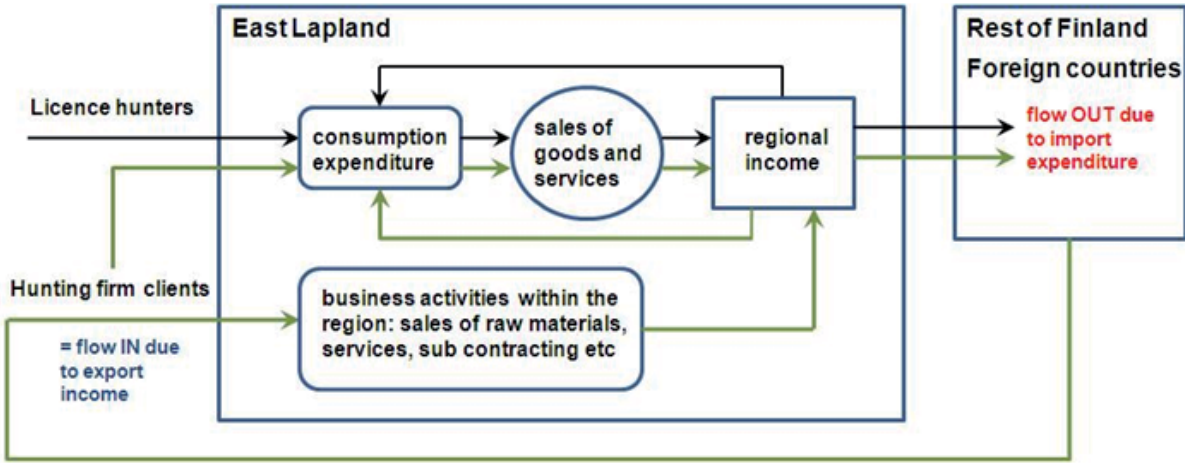

Figure 11. *The money flows in the RegFin –model.*

According to RegFin calculations, the independent permit hunters direct spending generated approximately 2,400 M€ in Eastern Lapland in 2008. The total effect, including the multiplier effects was estimated to be 4,970 M €. The total regional economic effect of the existing (8) low added value hunting tourism companies was 424 000 €, and that of the existing high added value companies (4) 472 000 €. The differences in total effects are mainly due to the scale of the turn-over, and different kinds of customer/hunter numbers. There were 3 490 independent permit hunters in the sub-region of Eastern Lapland in 2008, while there was estimated to be 38 customers/company in the low added value hunting tourism companies (in total 304 customers) and 50 customers/company in the high added value hunting companies (in total 200 customers).

In order the evaluate and compare the general effect of different hunting tourism models without the influence of scale, it is interesting to analyse, what kind of effect the same amount of money spent by the independent permit hunters, the customers of low added or high value companies had. For this calculation, it was assumed a 1,000 M€ increase in spending/turn-over in each of the hunting tourism models. This is a convenient way to compare relative efficiency in generating new regional income. 1M € was chosen in order to simplify the calculations, not on the basis of realistic growth estimates and it has been used just as a tool to estimate the relatively effects.

The provision of public services and investments were held constant in the simulation. The assumption was that since the hunting tourism activity is only a small share of the regional GDP, 449.4 M€ in East Lapland, there is no need to expand the overall size of the public sector. Also usual amount of total investments are enough to satisfy the increased demand for hunting tourism services.

Table 6. *Efficiency of one million euros increase in spending/turn-over in hunting tourism in different hunting tourism models.*

Item	license hunters	low added value firms	high added value firms
private consumption	2,9	1,7	1,8
domestic exports	-0,0	0,8	0,8
foreign exports	-0,0	0,0	0,3
domestic imports	-1,6	-0,9	-1,1
foreign imports	-0,4	-0,2	-0,2
real GDP	0,9	1,4	1,6

License hunters consume the most and the new money is expanding private consumption after circulating in the regional economy. This does not bring any additional export income, and the increased living standard tends to buy imported goods and services. The end result is that one extra million spent by license hunters, increases regional GDP by 0,9 million.

In the case of low and high value added hunting firms private consumption increases, but not as much as it did for licence hunters. On the other hand, domestic and foreign trade are more balanced. There is at least domestic exports which counterparts domestic and foreign imports. The low value-added firms generate 1,4, and the high firms 1,6 million Euros of real GDP per one million extra turn-over.

The low added value firms are about 60 % more effective than the license hunters in generating extra regional income. High firms are some 13 % more effective with respect to the low ones. The exercise shows, how important the demand for local intermediates, and local processing of the goods and ser-

vices are. It also shows that it is important to have both domestic and foreign customers, which bring export income to the region.

It can also be evaluated, how many Euros each small game hunting license will bring to the regional economy depending on which hunting tourism model is used. From the table 7 it can be seen that when the added value of the hunting tourism products is raised, the value of the one hunting license is 66% higher compared to the independent permit hunter. This supports the results of the RegFin calculations.

However, when analyzing the results, it must be noted that in the current situation even the high added value companies existing in the sub-region do not represent the actual highly processed tourism products, when e.g. compared to the other countries. Therefore, at the moment the difference between the low and high added value companies is not very significant. However, the results indicate that the further the added value would be raised in the hunting tourism products, the more money would be generated to the area and more "valuable" the hunting licenses would be for the regional economics.

Table 7. *The value of one small game license to the regional economics, when sold via different tourism models.*

company/hunting tourism type	the value of one small game permit for the regional economics, direct influence	the value of one small game permit for the regional economics, general influence	the number of the licenses/ customers/year
independent permit hunter	680 €	1424 €	3490
the customer of the low added value company	582 €	1395 €	304
the customer of the high added value company	845 €	2360 €	200

3.9 Conclusions

It can be said that the regional economic role of hunting tourism is already relatively significant, even though there are not that many hunting tourism companies in Finland. The hunting tourism based on the small game licenses generated to Eastern Lapland in total 5,86 M€ in 2008. Mainly the influence is based on the large amount of the independent permit hunters visiting the region. Assuming the multiplier effects would be similar in all Lapland and Northern Finland, it can be estimated that the total effect of the independent permit hunters to the regional economy in the 8 §-area would be approx 32,1 M € annually. The effect of the existing hunting tourism business activity is still a minor one.

However, the income generated via hunting tourism companies clearly multiplies itself in the region better than the income generated by independent permit hunters. The value of one small game hunting permit is almost double (1,7) when it is "sold" via high added value company compared to the case of independent permit hunter. According to RegFin calculations, the high added value companies are 73% more effective in generating the regional income than independent permit hunters. The role of the multiplier effect increases when the added value in the hunting tourism products is improved. Therefore, based on the results of this study, from the regional economic point of view, the hunting tourism development activities should be targeted to improving the added value of the products and developing new high quality products to the markets. When interpreting the results it is, nevertheless, important to keep in mind that, even though the RegFin-results are according to the sensibility tests stabile, due to the estimations in the data, the results should be kept more indicative than absolute figures.

The current hunting tourism business models based on small game and moose are relatively "low added value company"- models. The more regional sub-contractors that are used and the more products are packaged, the bigger the economic effect is for the region. However, the current hunting legislation, especially related to the state land, does not support the development of high added value products. The companies are not able to "package" the hunting licenses to their products. Instead the customer must often buy the small game license separately and compete for it with other permit hunters. For commercial moose hunting, under the current legislation customers have to join the moose hunting party after the application process - "against the spirit of the law" or the entrepreneur will have to competitively apply for moose hunting grounds with local hunting groups and independent hunting tourists. All this causes, not only uncertainty for the business activities, but also reluctance by the companies to invest and develop high quality products, when the primary factor of production is not secure even to the extent the population fluctuations would allow. This dictates that the existing products often stay at the "low added value" level and maximum regional effect is not achieved.

On private land areas, hunting tourism activities are easier to implement with agreements with private land owners and /or local hunting clubs. From a regional economic point of view, however, this study suggests that a solution to facilitate hunting tourism on state land, which would allow companies to develop long term successful high quality products and support other business activities in the region, would be beneficial. One way could be to allocate a certain, mutually agreed percentage of the licenses for hunting tourism companies. On the other hand this kind of solution might cause conflicts in social sustainability for hunting tourism as the companies would be prioritized over independent permit hunters in the competition for small game licenses. The questions are, what benefits are prioritized, economic or social, or is there a possibility to find a compromise, in which both could be taken into consideration.

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4. Economic Potential of Hunting Tourism in Swedish Lapland

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4.1 Summary

The economic situation of hunting tourism business in the county of Norrbotten named as "Swedish Lapland" has been difficult to estimate, when no surveys of any kind related to this have been made. This report is particularly relevant, since this is the first time hunting tourism companies have been questioned about their financial situation. In this report the results presented are mainly focused to the economics of hunting tourism companies. However, in order to understand the whole picture of the challenges faced by the hunting tourism companies, results focusing on more general issues are also included.

This report has been complied jointly between North Hunt (Sustainable hunting tourism – business opportunity in the Northern Europe) and Next Step (Next steps for hunting and fishing tourism in Norrbotten and Västerbotten) – projects. It will be followed up and monitored in the future as part of Next Step - development project. This means that we will hopefully discern positive economic trends in terms of increased sales and investment and can possibly economically estimate also the results of the North Hunt -project and other industry-specific development efforts.

This report has been funded by the *Northern Periphery Programme 2007 – 2013 (North Hunt) and Objective 1 of European Structural funds (Next Step).*

4.2 Introduction

Hunting has a long tradition in Swedish Lapland; it is part of the Swedish culture and in some areas represents an important source of financial income (Ericsson and Heberlein 2002).In Swedish Lapland, 37% of the inhabitants live in a household were someone hunts (Ericsson et al. 2005), while the figure for Sweden as whole is estimated to be 13 % (Ericsson and Heberlein 2002). Moose meat still has a large contribution to the total meat consumption in Swedish Lapland (Ericsson and Heberlein 2002).

Figure 1. *The location of Swedish Lapland.*

Hunting is the most common way to regulate and manage populations of wild animal (Ericsson and Heberlein 2002). In principle all wild mammals and birds (game species) are protected under Swedish law. If population density becomes too high or if game animals are creating problems, hunting is permitted (Ericsson and Heberlein 2002). Hunting has become an important recreational activity for rural and urban populations (Ericsson and Heberlein 2002, Alatalo 2003). Hunters typically have to travel outside their home municipality in order to find hunting opportunities, often long distances. According to Alatalo (2003), a hunting tourist can be defined as a person who leaves his/her home area for hunting more than one day.

Recently, hunting tourism has become popular and tourists from Sweden and other European countries are increasing in Swedish Lapland. However, knowledge on the extent of hunting tourism is still poor (Alatalo 2003). It has, however, been suggested, that since hunting tourism is typical rural activity, it could provide an important source of income in these areas (Alatalo 2003).

The aim of this study is to estimate the economic potential of the hunting tourism sector in Swedish Lapland and compile the basic information on the economic parameters of the sector in order to understand, how to develop this sector further.

4.3 Methods

To estimate the economic potential of the hunting tourism in northern Sweden, 20 companies that focus their business to hunting tourism were chosen by geographical distribution for this study. The companies were located in northern Sweden within the municipalities of Lomträsk, Pajala, Arjeplog, Överkalix, Gällivare, Luleå, Gunnarsbyn, Laisvall, Kiruna, Kalix, Kangos, Junosuando, Övertårneå, Älvsbyn and Korpilombolo. A representative of each company was interviewed by telephone during the spring 2010 and the participating companies answered 28 questions about their company. The questions focused on economic aspects but also the challenges the companies face in their business activities.

4.4 Results

4.4.1 Background information

Different company forms

Of the interviewed companies eight (40 %) were Ltd companies, one (5 %) was a trading company, one (5 %) was a limited partnership company and ten (50 %) were private business companies. The distribution is presented in the Figure 2.

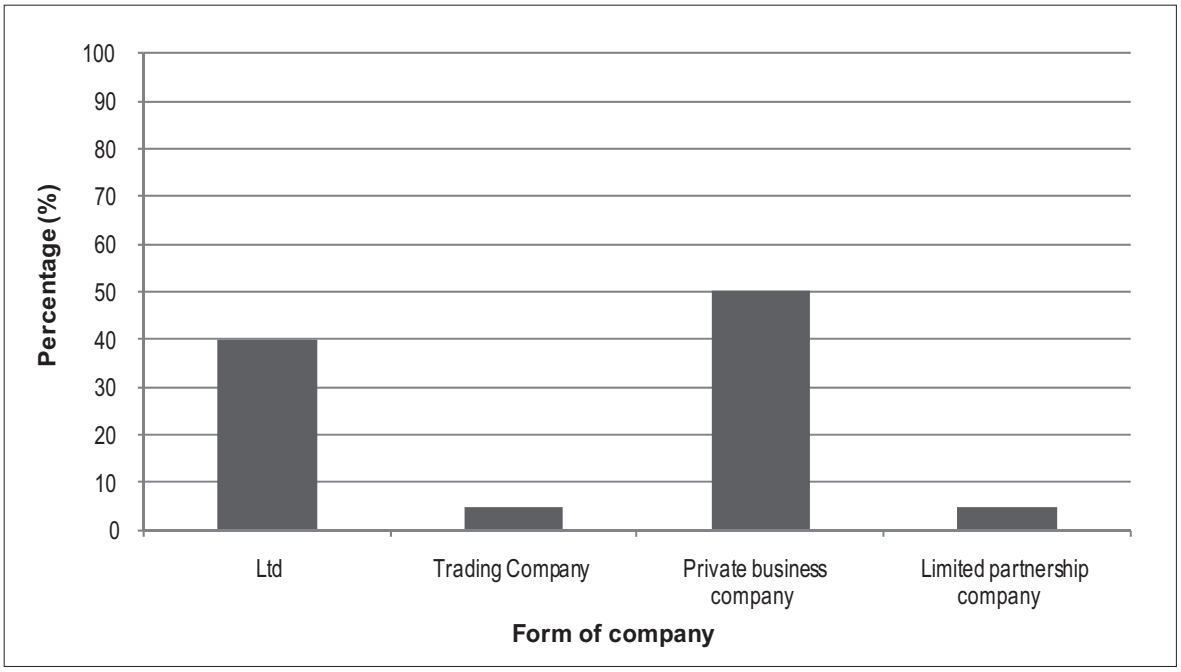

Figure 2. The percentage distribution among different companies forms represented in this study.

Reason for establishment

The main reasons for the entrepreneurs to establish their hunting tourism companies in Swedish Lapland were that they wanted to be able to stay and live in their home district. Therefore, they had to create a job for themselves, and that conditions for this type of business were good in Swedish Lapland.

Main activities of the business

The main of activities offered by the 20 companies taking part of this study were guiding (25%), outfitting (selling and marketing the hunting camps, but subcontracting guide) (19%), the other activities (17%), forestry (10%), rental cabins (11%), hunting camp (without guiding services) (4%), restaurant services (8%) and dog handling services (4%). (Figure 3)

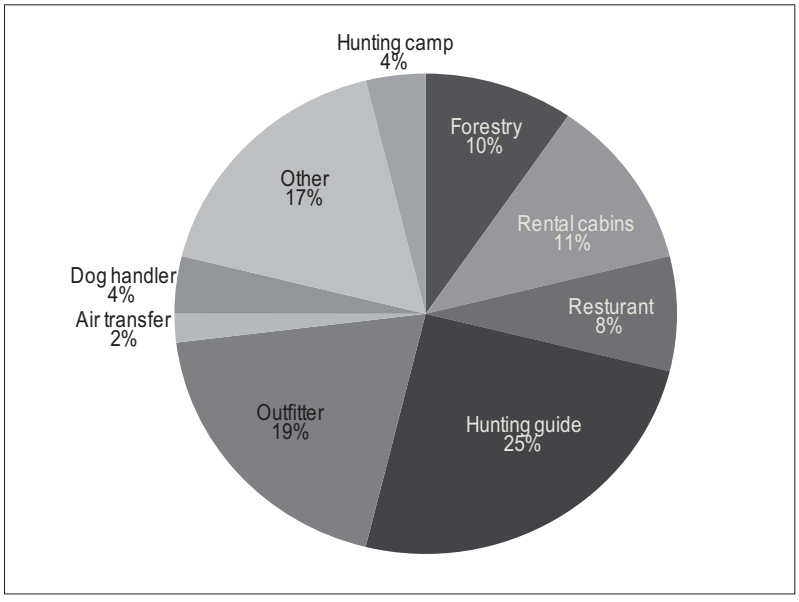

Figure 3.
Main types of activity offered by the participating companies (percent %).

Activities classified as "others" included, fishing guide, outdoor tourism, extreme sports (eg. river rafting), horse riding/treks, conference venue & facilities, business/incentive tourism (eg. business groups including conferences), floating sauna, military tourism (eg. showing old military equipment and facilities), heli-skiing services, and nature tourism

Involvement with the hunting tourism sector

16 of the 20 companies (75%) consider that their company could be classified as a "hunting tourism company" while four of the companies (25 %) did not. Here a hunting tourism company is defined as a company, having hunting tourism products in their service/product portfolio, but also selling fishing, canoeing or accommodation services.

Number of year in business

Of the 20 companies interviewed only one was newly established (operating for less than 5 years), all the other companies had been in business for at least 6 years and some more than 30 years

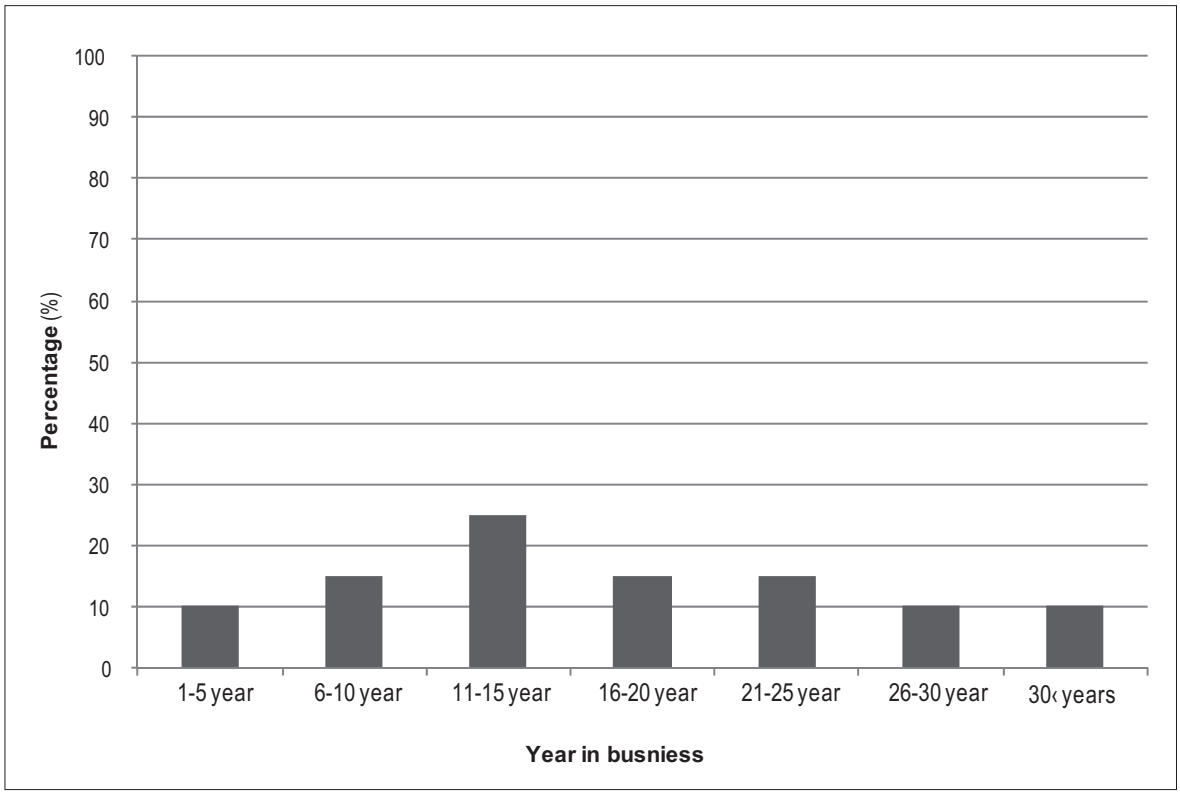

Figure 4. The number of year's businesses had been operating.

Co-operation with the other companies

17 of the hunting tourism companies (85 %) reported active cooperation with other companies in producing their hunting tourism products and packages, while three (15 %) not to co-operate with other companies at all. When asked, 15 (75 %) of the interviewed companies knew about Swedish Lapland Hunting Network (a co-operation network of hunting tourism companies), while five (25%) did not.

Environmental policies

In the study 11 (55 %) of the participating companies had a formulated environmental policy for their company to guide their operations to be environmentally sustainable, while 9 (45 %) did not have an active environmental policy.

4.4.2 Economic information

Annual turn over 2006-2008

The annual financial turnover of the companies during 2006, 2007 and 2008 is presented in the figure below (Figure 5).

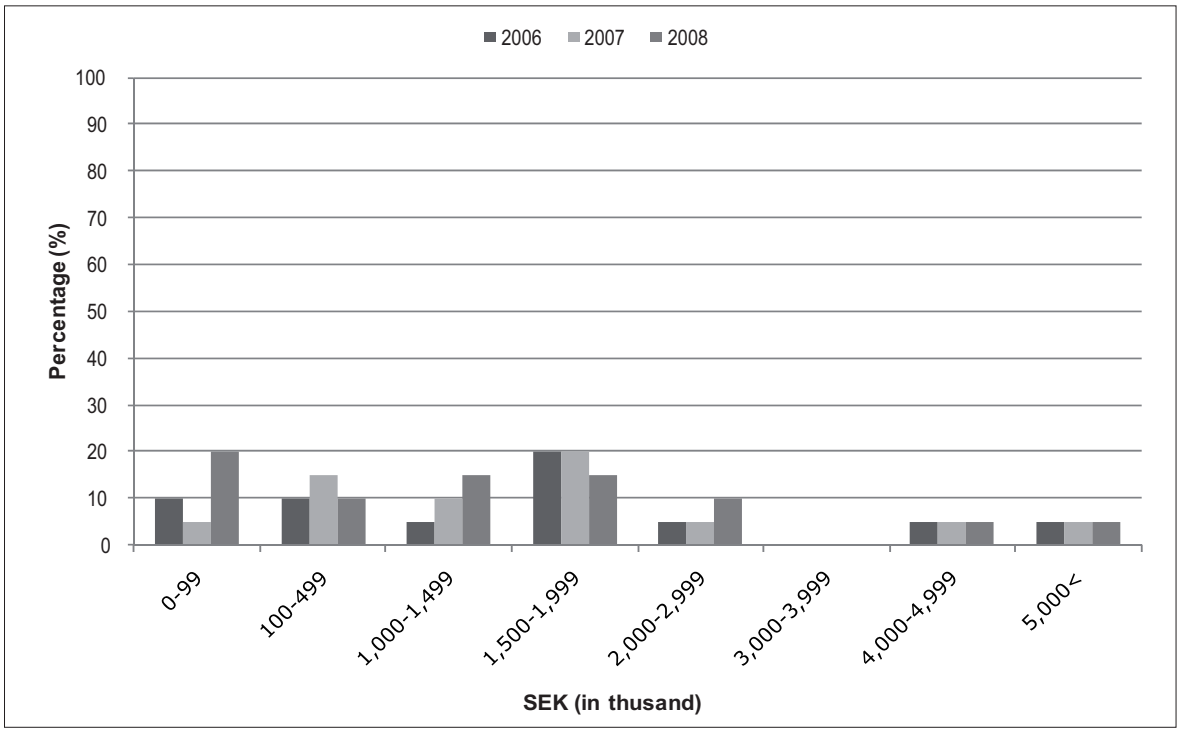

Figure 5. *The annual turnover reported by interviewed companies for 2006, 2007 and 2008.*

Investments

During the time period of 2006-2008, 18 (90 %) of the companies had made significant investments such as helicopters and new facilities in their companies while two of the companies (10 %) had not invested at all.

Types of investments that have been done:

- Restoration of buildings
- Installation of heating system
- Purchase of cabins
- Boats
- Helicopters
- Rental of land
- Equipment
- Security
- New products
- Web agents

External financial support

In this study, four (20 %) of the companies had received financial external support while 16 companies (80 %) had not.

Type of support:

- Support for starting the company
- Consulting
- Financial support from EU
- Rural support

The answers show that either the hunting tourism companies are not aware of the available small business grants or support forms or they have no interest to use these.

Employees

Among the interviewed companies, eight (40%) of them have one owner who works full time in the company. Eleven (55%) of the companies, employ 1.5-4 people annually and in nine of these companies the owner is one of the employees. During hunting season 12 companies (60 %) have 1-10 people seasonally employed. An average salary of the hunting tourism company's employee is approximately 2 000 € / month.

Main activities

The main activities in the companies were; hunting and other activities 50 %, Hostmanship 31 %, Marketing/ sales 9 % and administration 10 % (Figure 6).

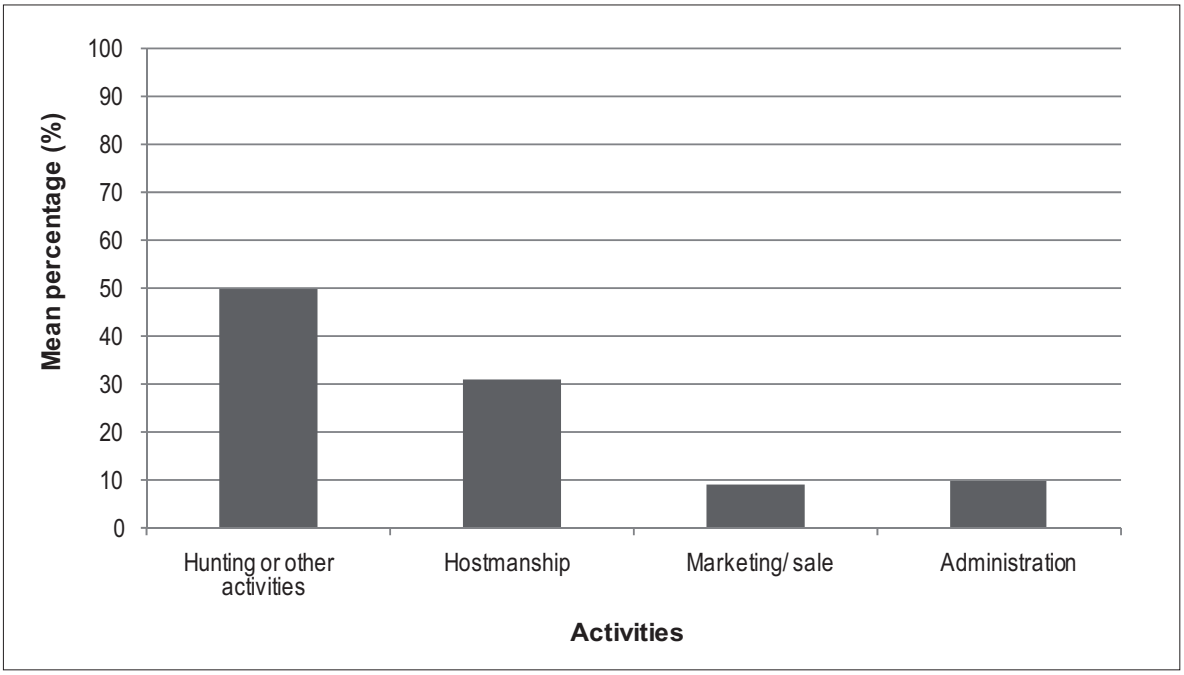

Figure 6. *Mean value of the percentage distribution among main activities in the participating companies.*

Recruitment area of the employees

The majority of employees of hunting tourism companies are local people or the people from relatively near the company's location. In 11 companies (55 %), the recruited employees were all local, in three companies (15 %) regional, in two companies (10 %) national and two companies (10 %) international.

High seasons

The high, or busiest, season for hunting tourism was during autumn in 19 (95 %) of the participating companies, during winter for three (15 %) of the companies and during spring for one (5 %) of the company. The high season is strongly connected to the hunting seasons.

4.4.3 Access to hunting grounds

Utilisation of rental ground

This study shows that 10 (50 %) of the companies utilize rental hunting grounds in their business activities, while 10 (50 %) did not. Those, who did not use rented hunting grounds, mentioned the following land areas they used in their activities:

- Privately own hunting grounds
- Member in a moose managing area (can be a mix between private and state owned land)
- Hunting club (can be a mix between private and state owned land)
- State owned land in the high mountain (indigenous people have the right to hunt)
- Buying hunting licenses from the State and private landowners

The types of the hunting grounds used

In this study 18 (90%) of the companies were active mainly in the forest land, six (30 %) companies operated in the areas close to high mountains range, six (30 %) within high mountain area and one (5 %) in the coast area (Figure 7).

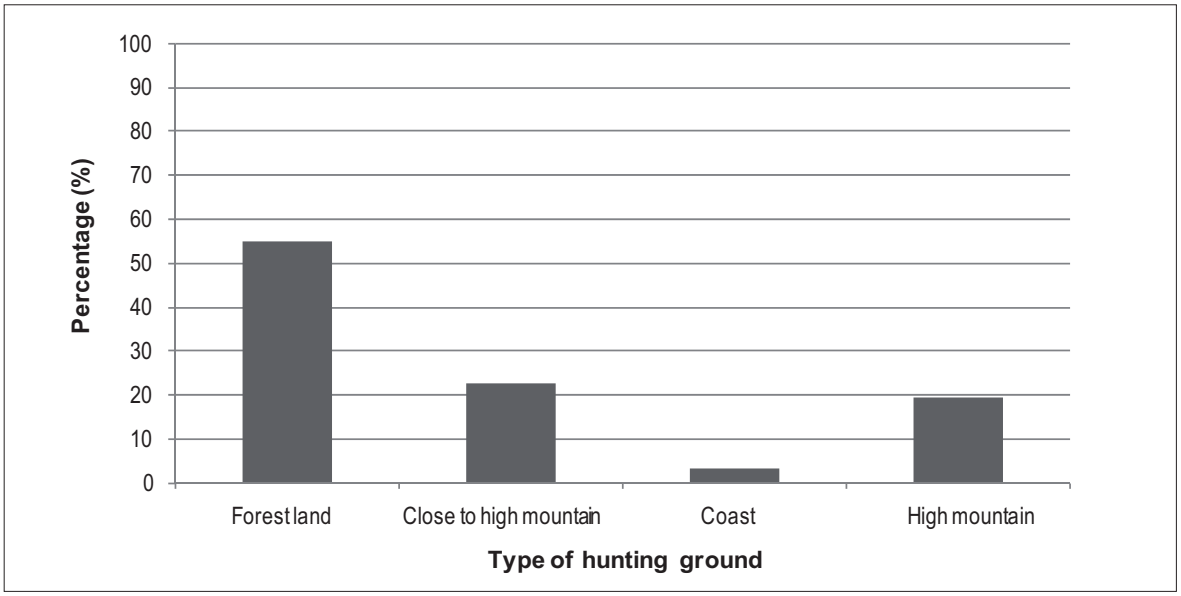

Figure 7. *The different type of hunting ground and the percentage distribution of were the companies were active.*

4.4.4 Marketing and customers

Marketing methods

The most important marketing methods reported by the interviewed companies were internet and customer care in a form of PR and "good will" activities aiming to increase the return customer's rates. As less important were mentioned advertising, fairs, newsletters and other ways (Figure 8).

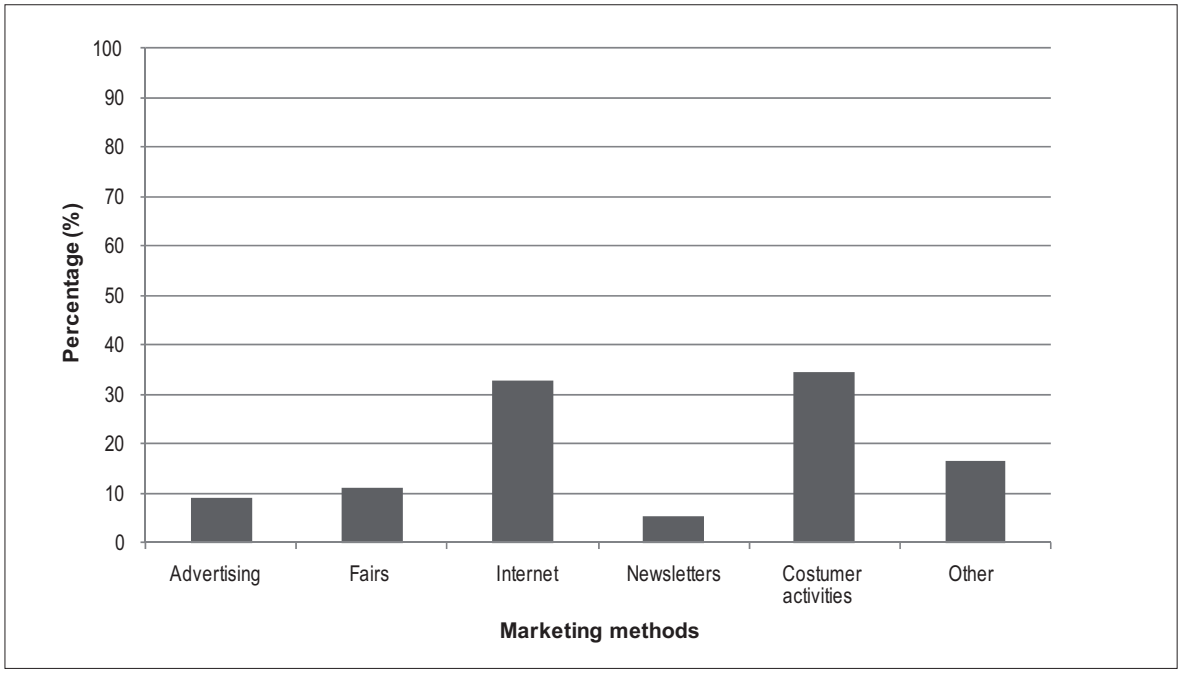

Figure 8. *The marketing methods and the percentage distribution of the most important methods in the different companies.*

As other way were mentioned:

- Hunting agents
- Incoming operators
- Tourism offices
- FAM-trips
- Media such as magazines and television

Prioritized markets

Those companies that did actively market their services The majority of companies (45 %) prioritized international marketing, 25 % national marketing, 20 % regional marketing and 10 % local marketing. The most important international markets reported were Germany, Switzerland, Italy, France, Spain, Poland, Russia, Finland and Norway.

Category of hunting tourists

Companies categorised the majority of their customers as friends or acquaintances (38%), followed by single hunters and business groups (24% each), with family trips and trophy hunters representing a relatively small proportion of their custom base (7 % each). (Figure 9)

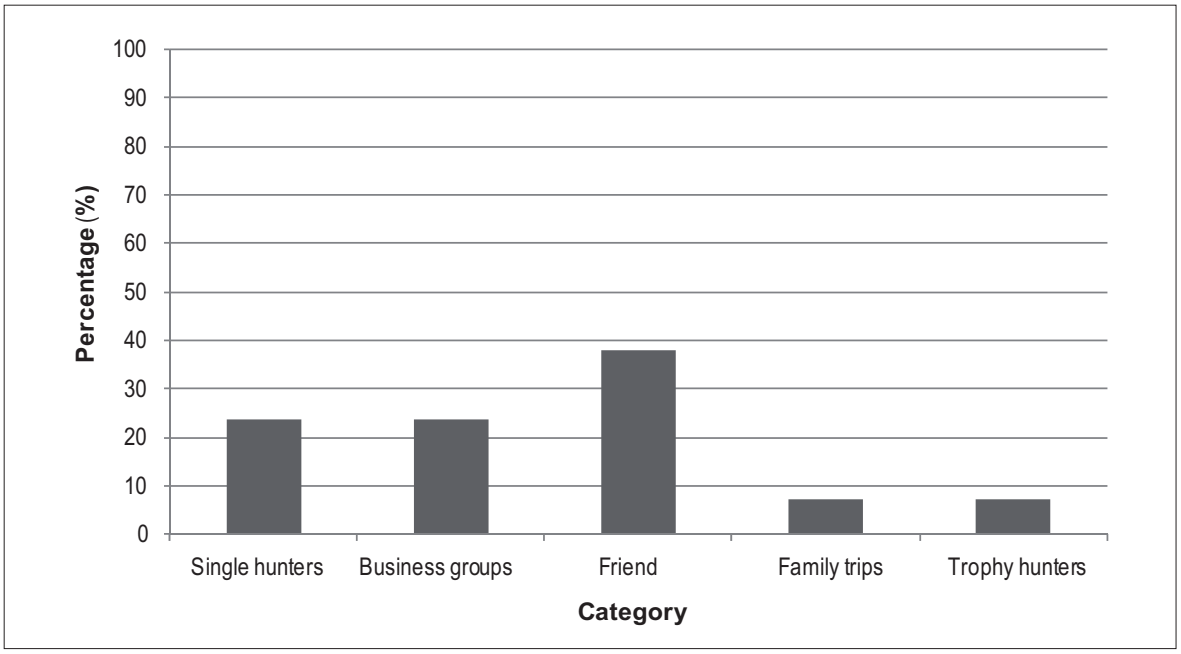

Figure 9. *Percentage distribution among the different hunting tourist categories in this study.*

Most popular game species

The most popular species reported for hunting tourism were Capercaille (*Tetrao urogallus*), Willow grouse (*Lagopus lagopus*), Black grouse (*Tetrao tetrix*), Moose (*Alces alces*), waterfowl, and others (including Hazel-hen(*Bonasia bonasia)* and winter hunting for capercaillie and black grouse) (Figure 10).

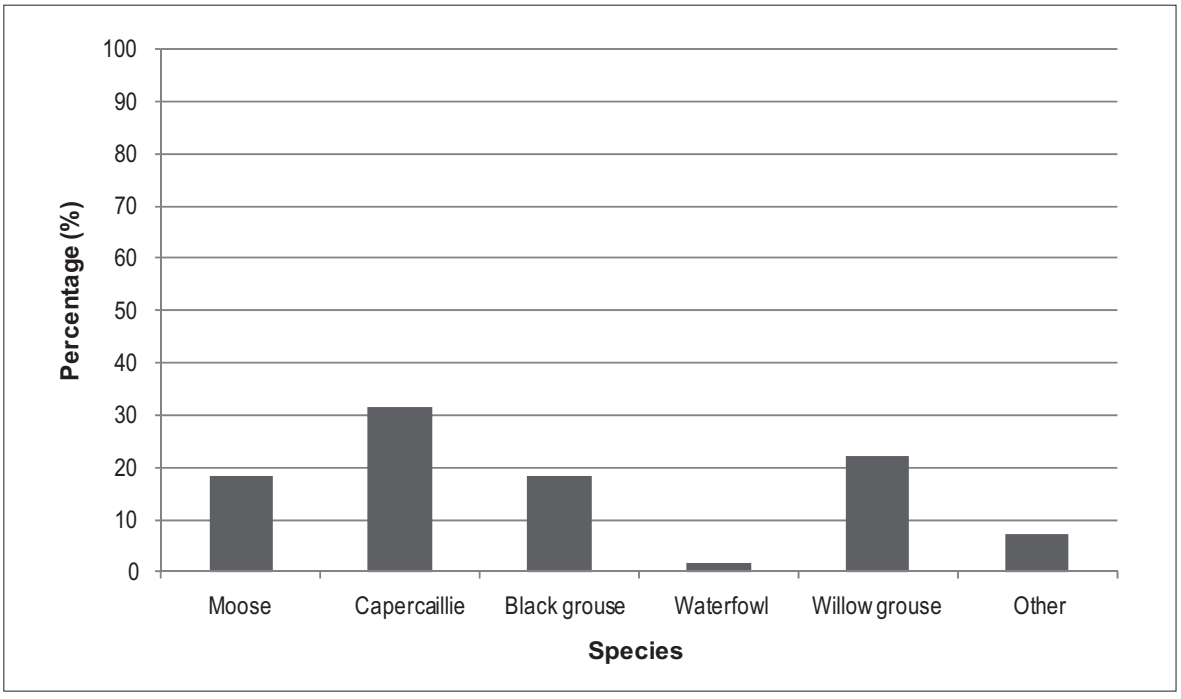

Figure 10. *The most attractive species for hunting tourists, according to the participating companies.*

4.4.5 Development potential and training needs

Potential for development

According to this study 19 (95 %) of the companies thought that the potential for development of hunting tourism in Swedish Lapland was good. One company (5%) did not see a positive future for the sector. Areas identified for development included; better deals for rental hunting ground, better access to hunting ground for commercial use, cooperation, packaging products for families, trophy hunting, sustainable development, profiling, wise use, quality assurance, marketing, more business, and authority needs to learn more about the tourism industry

The main reason given as to why hunting of tourism could not develop further was the issue of regulations of hunting on state owned lands which prohibit commercial land use on the state owned land close to the high mountains.

Business areas for development

Interviewed companies listed three business areas that they considered important when developing business activities. These were; accommodation (31 %), guiding (31%), and food and beverage (23%). Transfer (10%) and other (5 %) were mentioned but seen as important (Figure 11). In 'others' companies considered that marketing and customer relations, and also reported that all areas could be better developed.

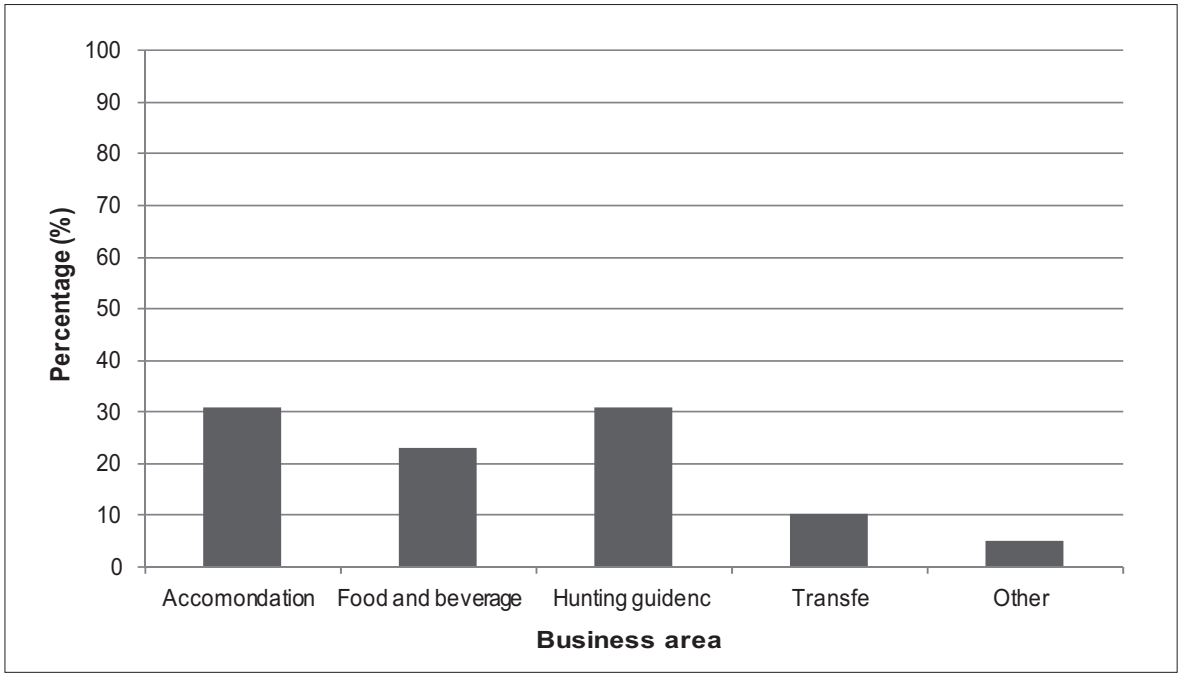

Figure 11. *The areas that have potential for development according to this study.*

The most potential hunting products for future development

When asked to identify areas that had the best potential for development interviwd companies identified; moose hunting (29%), winter hunting for capercaillie (18%), capercaillie hunting (18%), willow grouse hunting (16 %), bear hunting (16 %), and others (3 %) (Figure 12).

Others: All types of hunting can be developed

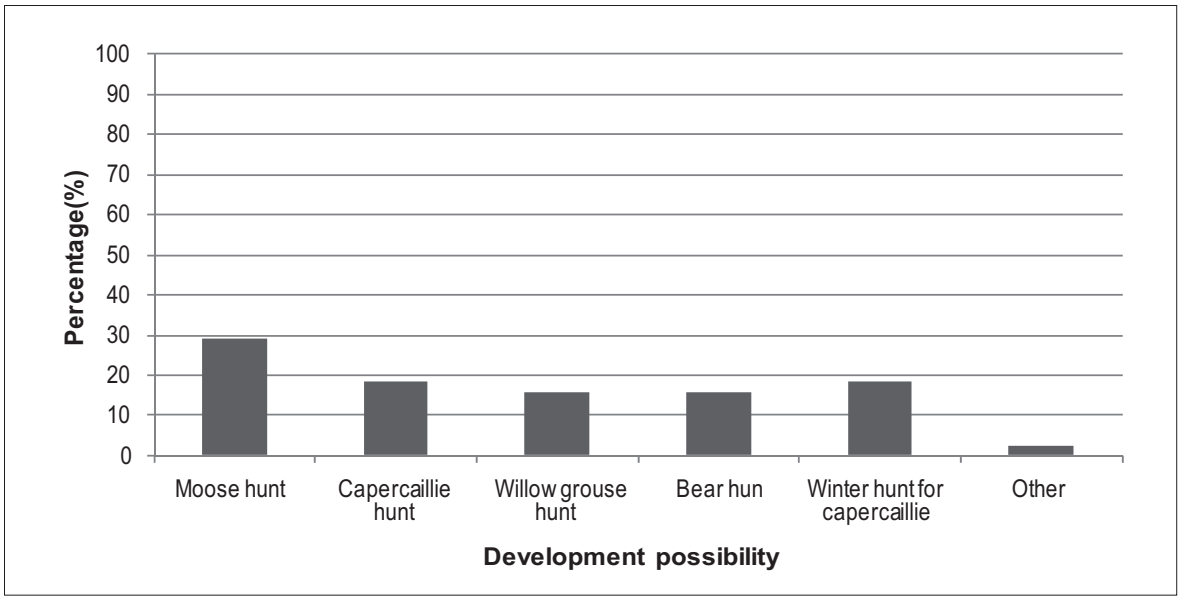

Figure 12. *Areas with potential for development according to the participating companies.*

Important factors for development

Examples of factors interviewed companies identified as important for the development of hunting tourism was:

- Infrastructure (professional hunting guides wanted a good access to hunting grounds (roads etc.) but also there need to be available good quality accommodation possibilities and companies)
- Rules and regulations
- Rental agreements for hunting grounds
- Sustainable development in general
- Cooperation
- Access to educated employees
- Training
- Marketing
- Accommodation with good standard
- Network
- New agents
- Quality security
- Family packages
- Extended seasons

Development threats of Swedish Lapland as a hunting tourism destination

In this study 16 (80 %) of the interviewed companies identified threats to the ongoing development of Swedish Lapland as a hunting tourism destination. The threats identified included; agreements regarding hunting grounds, system of rules and restrictions that are continual ling changing, laws and rules that complicate the business, lack of cooperation, unsustainable development, local resistant, regional and national politic decisions, and lack of knowledge among the decision makers of rural development. Four companies (20 %) did not see any major threats to the future development of hunting tourism in Swedish Lapland.

Quality system or certification model

In this study 17 companies (85 %) thought it was necessary to have some kind of quality control/assurance system or certification model for the hunting tourism industry in Swedish Lapland, while 3 (15 %) did not know or were uncertain. The main reason for the need of quality system was given was that it would increase the credibility of the industry in general.

Companys' training needs

Thirteen companies (65 %) had identified training needs, while seven (35 %) did not consider they had current training needs. All companies identified lack of time as the main reason not to participate to available training/education. The need for more customised training courses was highlighted, for example; regulations, hunting terminology in foreign language, security, environment issues, marketing, packaging the products, language skills, hospitality, economics, horse handling and co-operation relationships.

4.5 Discussion

The survey shows that all the companies participated in the study have a relevant legal and business structure, which shows that they are in fact organised business, not just part time leisure activities. More than 50% of interviewed companies have activities that are directly related to hunting tourism, such as leasing hunting dogs and hunting guides. Despite of this, the industry shows a weak growth since according to the results only one new company has been established in Swedish Lapland over the past five years. The reasons behind this should be further analysed in order to enhance the growth in the sector. Over 50% of the companies surveyed have a formulated environmental plan which shows that the nature values are largely incorporated to companies activities. The industry has a turnover of variation which can be linked to activities and products. Some of the companies surveyed are helicopter carriers with large turnovers while in other business models no large investments are needed.

The survey also shows that hunting tourism plays an important role in the rural areas as companies largely employ local workers. Concerning marketing, internet and public relations activities play a vital method and it is interesting to note is that at the end it seems that the agents and incoming operators are not in the main focus of marketing activities. When studying the product variation, according to the results it seems that the forest bird shooting and other types of bird hunting is the most popular hunt to be sold. However, the companies also say that hostmanship is an important part of the business and of the overall experience. Accommodation in combination with food together is the main development areas according to the hunting tourism entrepreneurs.

In general, as authors own reflections it can be said that hunting tourism industry in the Swedish Lapland has a great future potential in the form of huge areas of forest, a relatively good game population and talented entrepreneurs. The priority in the future must be on marketing efforts and sales, which will promote more development capital and investments to the industry.

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5. The local and regional economic impacts of sport shooting in the Highlands of Scotland

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5.1 Introduction

Sport shooting, hereafter referred to as shooting and used to include all forms of shooting of game species, is estimated to be worth £240million annually to the Scottish economy (PACEC 2006). There is ongoing debate regarding the degree to which shooting estates are an appropriate form of land use and game management in terms of economic and social development in a modern society (Wightman 1996; Chenevix-Trench and Philip 2001; Wightman, Higgins et al. 2002; MacMillan, Leitch et al. 2010). Behind the ethical and social debate, comparatively little is known about the capture and distribution of economic benefits at local and regional scales, particularly in relation to the style of sporting land management. In this paper we transfer the idea of farming "styles" (e.g. van der Ploeg 1994; van der Ploeg 2003) to sporting land management and construct a typology of styles of shooting provision in the Scottish Highlands. We then investigate variation in employment, origins of shooting guests and purchasing of goods and services in relation to these styles, in order to better understand the local and regional economic impacts of shooting in this region.

In Scotland, the right to kill game resides with the land owner, although the right can be gifted or sold by the land owner to third parties. How the right to shoot on private land is managed varies with the game species in question, and estate and owner motivation; there is therefore a diversity of management structures and practices which are likely to have an effect on the economic impact of shooting. Among the estimated 8,800 shooting providers in Scotland, the most commonly found organisational structures are sporting estates, shooting tenancies (where an individual rents shooting rights from the land-owner) and syndicates (which may operate on estate land and take responsibility for some aspects of land management) (PACEC 2006). In some cases, shooting estates may be managed more as a source of recreation for the owner and their invited guests as opposed to a commercial enterprise, or the estate may receive revenue from other commercial activities which may be used to 'cross-subsidise' the shooting side of estate activities. There is however, evidence that some owners are attempting to increase their revenues from shooting activities and diversify commercial activities and management approaches in order to generate new business opportunities (MacGregor 1988; MacMillan, Leitch et al. 2010). Furthermore, over the last twenty years, culminating in the Land Reform (Scotland) Act 2003, there has been an increase in land ownership by local communities, conservation organisations and government agencies (Wightman 1996; Chenevix-Trench and Philip 2001; Price, Dixon et al. 2002; Scottish Executive 2003). Much of this land has sport shooting as an actual or potential use, and management is likely to vary compared to privately owned sporting estates.

Shooting in Scotland differs from the rest of the UK in two major respects: firstly the most common type of shooting opportunity provided is deer stalking, as opposed to driven lowland game (i.e. pheasant and partridge); secondly, a much higher proportion of providers offer walked up or driven grouse shooting (PACEC 2006). Income from driven shooting far exceeds that from alternative hunting styles, for example, fees per brace for driven grouse shooting are almost twice as high as those for walked up and

almost four times those for shooting over pointer dogs (Dunlop 2010). However, driven shoots require much higher densities of birds and thus a much larger investment in more intensive, management which has greater potential for social and environmental conflicts (Smith 2009). However, it has been suggested that this uniquely British shooting opportunity, which draws participants from all over the world, is the key economic land use for the Scottish hills in that it generates more unsubsidised income per unit area of land than any other upland land use (McMorran 2009; Smith 2009). Within Scotland, there is geographic variation in the extent of driven or walked up grouse shooting compared to deer stalking. Generally, land to the west is of poorer quality and therefore tends to be used as grazing for sheep and deer. However, the higher quality moorland further east can support much higher numbers of grouse, although the yield (bag) can be highly variable as a result of natural population cycles influenced by predation, grouse ecology, weather and disease (e.g. Hudson 1986; Hudson 1992; Cattadori, Haydon et al. 2005; Redpath, Mougeot et al. 2006).

In Scotland shooting providers directly employ the equivalent of 5,300 FTE (full-time equivalents), through a total of 58,000 jobs, many of which are part-time and/or seasonal, which are those most likely to be lost as a result of years of poor shooting opportunities (McGilvray 1995; PACEC 2006). A further 11,000 FTE jobs are supported by shooting providers through the rest of the supply chain, including downstream effects such as sales of meat to game dealers (PACEC 2006). It is likely that the origin of shooting participants, employment, and the extent of use of first round suppliers from within the local area and the region, will vary between the different types of organisational structures.

The different land conditions, ownership structures and motives of sporting managers create a mosaic of different practices with likely differences in social and economic impact. The aims of the present study are first of all to construct a typology which captures the diversity of organisational structures which provide access to shooting opportunities in the Highlands and Islands of Scotland. Secondly, we aim to indicate the local and regional economic impacts of these "styles" of sporting land management in terms of employment and whole supply chain effects, and thus the realised and potential economic impact of sport shooting as tourism in remote rural areas of the Highland and Islands.

5.2 Methods

5.2.1 Study areas

Interviews were conducted in three areas of the Highlands: Wester Ross and South West Sutherland (area 1); Easter Ross and surrounds (area 2); and Speyside and Monadliath (area 3) (Figure 1). The rationale behind choosing these three areas was to try and capture the diversity of different types of shooting in the Highlands and Islands region as a whole, in terms of whether the primary interest is deer stalking, lowland game, or grouse respectively.

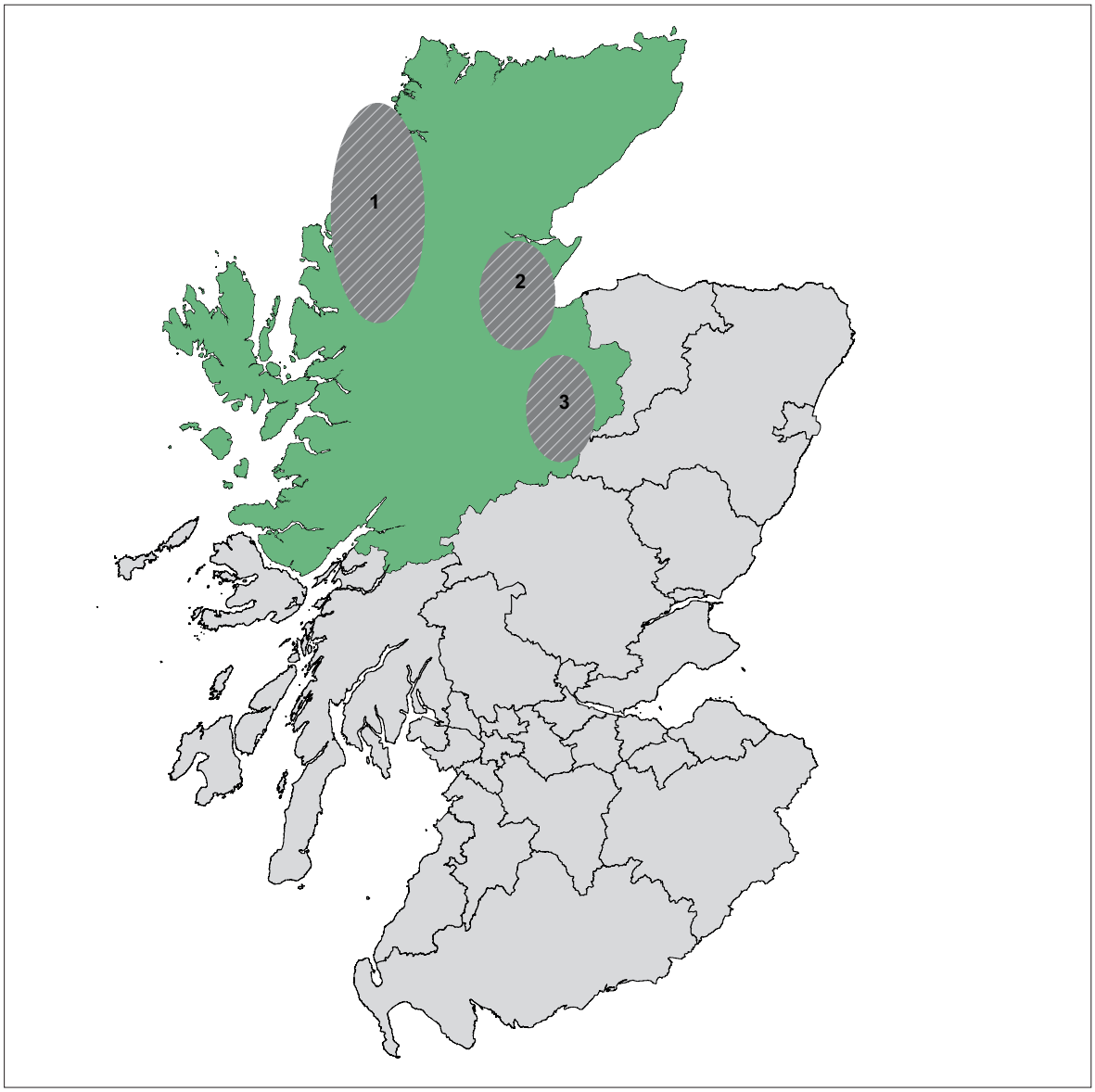

Figure 1. *Map of Scotland showing the Highlands & Islands region (green) and indicative location of the three study areas. 1: Wester Ross and South West Sutherland; 2: Easter Ross and surrounds; 3: Speyside and Monadliath.*

5.2.2 Estimating the management and economic impacts of sport shooting

Semi-structured interviews were conducted with 24 stake-holders involved with the management of 33 estates, across the three study areas (Table 1). Each interview was framed around two sets of questions. The first set was designed to establish the "style" of sport shooting provider.

To do this we first established the type of ownership of the land (i.e. private, NGO, community or government agency), as it might be expected that the management objectives and estate policies would vary according to this. The size of the estate and the type of shooting done (e.g. deer stalking, driven grouse etc.) were then established, as well as the relative importance of shooting relative to other estate activities and the commercialisation of the sport (i.e. the amount of let shooting). Finally we sought to establish whether the shooting was managed "in hand" or let out to a tenant or syndicate, and whether any of the shooting was let through a sporting agent.

The second set of questions were designed to establish the local and regional economic impacts of the sport in terms of employment and the purchasing of goods and services. Stakeholders were asked about full- and part-time/seasonal employment specifically related to sport shooting. They were then asked to estimate the percentage of their annual spend on a variety of goods and services spent: "locally" (defined as within 40 miles of the estate), "regionally" (defined as within the Highlands and Islands council region) and outwith the region. They were similarly asked to assign the origin of their shooting guests to these three categories, as guests from outside the region or local area will be bringing money in to the local and/or regional economy.

Stakeholders were also shown a map of estate boundaries in the Highlands and asked how typical or not they thought their own management of sport shooting was in relation to other estates in their area. With the stake-holders consent, interviews were recorded and later transcribed and subsequent analyses were carried out in NVivo.

Table 1. *Interviewed stakeholders according to area and occupation. Some participants can be considered to fit in to two categories, and were assigned to the most relevant one. Owner-managers were included in the owner category.*

Area	Owner	Manager	Stalker/Keeper	Agent	Consultant	Chairman	TOTAL
1: Wester Ross and South West Sutherland	3	2	1			1	7
2: Easter Ross and surrounds	5	1					6
3: Speyside and Monadliath	2	3*	2		1		8
Working in more than one region		1		2			3
TOTAL	10	7	3	2	1	1	24

* in one case both the manager and the stalker participated in the interview, but as they were talking about the same estate they have been included together as one participant under the manager category.

5.3 Typology

Interviewees responses to questions relating to the importance of sport shooting relative to other estate activities, the types of sport shooting undertaken, the commercialisation of the sport and the management of shooting rights were used to construct a typology of sporting estate management in the Highlands of Scotland (Table 2, with more detailed descriptions given in Boxes 1-3).

Table 2. *Typology of sport shooting providers in the Highlands and Islands of Scotland.*

	Highly commercialised	**Non-commercial**	**Sport non-primary**
Relative importance of sport	Primary or very important	Typically primary, or used for biodiversity management	Not the primary thing for which the estate is being managed
Amount of let shooting	Most with some retained by the owner	None	All, with the possible exception of hind/doe culls and marauding stags
Type of shooting done	All types	Predominantly deer-stalking	All types
Size	Typically larger than 10,000, and in some cases more than 50,000 acres	Typically between 10,000 and 25,000 acres	Varies. From less than 5,000 to close to 50,000 acres
Use of sporting agents	Some	None	Not common
Shooting rights let to tenants or syndicates	Some, particularly on larger estates	None	Rare
Ownership	Private	Private, NGO and government	Private, NGO and community

BOX 1: Highly commercialised estates

These are privately-owned estates where most of the shooting is let, but a small amount is retained by the owner. Importantly, on these estates sport is either the primary interest, or is at least very important relative to other estate activities. In our sample there was a mix of deer stalking, driven and walked up grouse, low ground shooting including pheasant, partridge and also quarry species such as woodcock and duck. All of the large (more than 50,000 acres) estates fall in to this category, and most of the others are at least 10,000 acres. Most of these estates rely heavily on return custom, though they might get a small number of their clients through sporting agents. While there are exceptions, the larger estates in this category tend to let some of their shooting rights to tenants or syndicates, whereas the smaller estates are typically managing all of their shooting in-house.

There is a certain degree of hybridisation between the three "styles" of shooting provider we have defined. For example, two estates which are managed primarily for sport shooting also let all of the shooting out to paying clients (i.e. none is retained by the owners). Conversely, one of the providers lets less than half of their shooting and has a range of other estate activities, although sport is the primary reason for the estate ownership. This contrasts with another provider who also lets less than half of their shooting, but for whom shooting is a by-product of land management.

BOX 2: Non-commercial estates
These are estates where shooting is done, but none of the shooting is let. Sport is most often the primary interest on these estates, although there are exceptions where the estates are being managed primarily for conservation and most of the shooting is for biodiversity management. In our sample all but one estate in this category only has deer stalking with no other type of sport shooting done. These estates are typically between 10,000 and 25,000 acres in size.

In most cases, the highly commercialised estates are not able to cover all of the costs associated with sport shooting with income from sport shooting, and non-commercial estates are also typically operating at a loss in terms of sport shooting. However, estates which let all of their shooting as the non-primary activity were much more likely to at least be covering their costs, though there is some variation between estates, and also within estates between years.

BOX 3: Let shooting as a non-primary estate activity
There are a number of estates where all of the sport shooting is let to paying clients, but sport is not the main reason for estate ownership or the primary management objective. Typically these are either estates where farming or crofting is the primary concern, or estates now being managed for conservation and biodiversity regeneration owing to the interests of the current owner. In our sample there is a mixture of types of shooting, including grouse, pheasant and woodcock, but deer stalking is the predominant activity in this category. These estates vary in size from less than 5,000 acres to close to 50,000 acres. They do not typically use sporting agents to attract clients, nor do they typically let shooting rights to tenants or syndicates.

Within our sample, we found that the majority of estates in area 3 (Speyside and Monadliath) were highly commercialised. The only exceptions were estates being managed primarily for biodiversity conservation and ecological restoration. Stakeholders in this survey suggested that while many privately owned estates in this area let a proportion of their shooting and retain the rest for private use, the situation is in fact highly variable depending on both ownership objectives, length of ownership and habitat. For example, one stakeholder suggested that:

> *"There are estates that are in relatively long term ownership and being run fairly commercially…whereas the estates that have been bought more recently by people who actually have enough money and want to enjoy grouse shooting themselves, they'll let much less, and they might only let in years when there's a lot of grouse…then they'll let the surplus."*

Highly commercialised estates were also the most common "style" found in area 2 (Easter Ross and surrounds) representing around two thirds of the total, with the remainder letting shooting as the non-primary estate activity. According to interviewees this does reflect the broader trend in this area, where the majority of, if not all, estates are letting some or all of their shooting. According to one interviewee:

"Other than, [estate name] I don't know of any estate that doesn't let its shooting"

A little over half of the estates in area 1 (Wester Ross and SW Sutherland) were non-commercial, and a further third were letting shooting as the non-primary estate activity. Further discussions with interviewees suggested that there is a trend in the area towards fewer non-commercial estates. It was suggested that most estate owners are now happy to let some of their shooting in order to increase estate income, in a style more akin to highly commercialised estates than to shooting as the non-primary activity. One stakeholder stated:

> *"I would say there's fewer and fewer places now like the two I mentioned… where the owners are basically not interested in letting sport…I can't think of too many estates that if they've got sport available to let wouldn't be quite happy to let it and get the income"*

Two stakeholders also highlighted a lack of resident owners in this area, which can be problematic for deer management issues.

5.4 Local and Regional economic impacts

Respondents were asked about employment in relation to shooting, including both full-time and more casual or seasonal employment (e.g. grouse beaters). They were also asked to estimate the proportion of their total spend on a variety of goods and services which would go to local businesses (within 40 miles of the estate), regionally (within the Highlands and Islands council region), and outside the region. Finally, they were asked about the origin of shooting guests, on the premise that guest visiting from outside the region are bringing money in to the local economy. Tables 3-6 and the following sections summarise these economic impacts for each of the styles of shooting provider defined above.

Table 3. *Origin of guests and levels of employment on the different "styles" of estate in the Highlands and Islands.*

	Highly commercialised	**Non-commercial**	**Sport non-primary**
Origin of guests	Mostly outside the region, but more local and regional than either non-commercial or sport non-primary	Practically all from outside the region or done by staff	Practically all from outside the region
Accommodation for guests	Almost all estate owned	Almost all estate owned	Almost all estate owned, except on community owned estates when guests stay in local accommodation
Full time employees* (FTE=full-time equivalents)	1 – 27 FTE (mean = 8.9, n=9)	0 – 4 FTE (mean = 1.5, n=7)	0 - 4 FTE (mean = 2, n=7)
Full time employees per 1000 acres*	0.06–1 FTE (mean = 0.35, n=8)	0.04-0.4 FTE (mean = 0.22, n=4)	0-0.1 FTE (mean = 0.05, n=6)
*these figures **exclude** temporary and seasonal staff including beaters etc.			

5.4.1 Highly commercialised sporting estates

The majority of shooting guests on these estates come from outside the region, and often most of the business will come from mainland Europe. Therefore this represents money entering the local, regional and often national economy from outside. However, compared to the estates which let all their shooting as the non-primary estate activity, much more shooting is let to locals and people from within the Highlands and Islands region. The majority of non-local guests are staying in estate-owned accommodation, and this was often attributed to a desire to add value and offset high costs associated with sport shooting provision.

In general, full-time employment is much higher on these estates than on either of the other two styles. Two-thirds of these estates have more employees than the maximum number (4 FTE) on non-commercial estates, or where sport is a non-primary activity. They are also providing a large amount of seasonal, and casual employment over and above the extra house-keeping and outdoor staff (e.g stalkers and ghillies) which might be employed by other "styles" of estate. This is predominantly the case on estates with driven shoots, where large numbers of people are required on shoot days for beating, loading, picking up etc. One interesting difference which was highlighted is that on driven pheasant and partridge shoots these casual employees are often local people, whereas driven grouse shoots (now) tend to employ people from outside of the UK. Typically several estates will come together to employ and house a team, who then work on these estates for the grouse shooting season. Our stake-holders cited the lack of availability of local people for this type of work as the reason for out-sourcing.

Table 4. *Sourcing of goods and services by highly commercialised estates. Stake-holders were asked to say whether goods and services were purchased locally (within 40 miles of the estate), regionally (within the Highlands and Islands council region), or outside the region.*

Food and drink	Mostly local though some dry goods, and typically alcohol, will be purchased outwith the region
Buildings and roads	Typically done by estate staff, but otherwise local contractors
Fencing	Typically local contractors
Firearms and ammunition	Local or regional suppliers
Clothing	Almost always local
Vehicles	Typically bought regionally and maintained locally
Feed	Where it's relevant it's usually purchased regionally or outwith the region
Game	Mostly sold through local game dealers.

In terms of the purchasing of goods and services, the main differences between highly commercialised estates, as compared to the other two "styles" are:

- Some food, and more often alcoholic beverages, are purchased from larger companies based outside of the Highlands and Islands region. However, most food is still typically purchased locally.
- Construction and maintenance of estate buildings and roads is more likely to be done by estate staff, which probably reflects higher staffing levels on these estates.

- Where game feed is purchased, it is typically purchased regionally or sometimes from outside the region, compared to more local sourcing by the other "styles" of estate.
- Game is typically sold through local game dealers.

5.4.2 Non-commercial estates

These estates are either employing someone to undertake culls, or else shooting is done by friends and family of the owner. These guests are most likely to come from outside the region and stay on the estate. On average, this style of estate employs around 1.5 FTEs, which will typically be stalking staff. Often a part-time housekeeper will also be employed for the few weeks a year when shooting is taking place, and there may also be some seasonal employment of additional stalkers and ghillies.

Table 5. *Sourcing of goods and services by non-commercial estates. Stake-holders were asked to say whether goods and services were purchased locally (within 40 miles of the estate), regionally (within the Highlands and Islands council region), or outside the region.*

Food and drink	Mostly local, some regional
Buildings and roads	Generally local, or done by estate staff
Fencing	Most often local contractors
Firearms and ammunition	Regional
Clothing	Local
Vehicles	Typically bought regionally and maintained locally
Feed	Where it's relevant it's usually local
Game	Most is sold through game dealers outside the region.

Most goods and services are purchased locally by non-commercial estates. The main exceptions are the purchasing of vehicles and firearms and ammunition, and the sale of game to dealers from outside the region, which is likely a reflection of the local availability of these facilities and services as most of the non-commercial estates are in area 1 (Wester Ross and SW Sutherland) which is relatively remote compared with the other areas.

5.5 Let shooting as a non-primary estate activity

Practically all of the shooting on these estates is let to people from outside the region, who are bringing money in to the local and regional economies. However, generally these guests will stay in accommodation owned by the estate, except on community owned land where they would more typically be staying in local bed and breakfasts, hotels or self-catering accommodation.

Relative to the size of the estate, this style has the lowest employment on average. Most full-time staff are typically stalkers or keepers, with some additional time from administrative and house staff. In addition to this, there is some seasonal employment of house staff, ghillies or contract stalkers and other casual employees at appropriate times of the year, which provides some employment for relatively small (around 1-5) numbers of local people.

Goods and services are typically purchased locally by these estates. The main differences between estates letting shooting as the non-primary activity and the other "styles" are:

- Food and drink are sometimes not provided by the estate, so that spend may not be as important as for the other "styles" of estate. However, when it is provided it is purchased locally, and otherwise guests may well be purchasing their own food in the local area.
- Clothing (estate tweeds or other protective clothing) is typically purchased locally by the other "styles" of estate, whereas for estates letting shooting as the non-primary activity the sourcing of clothing is highly varied and may be from the local area, the region or outside the region, or indeed may not be supplied by the estate at all.
- There is some interest in moving towards improving larder facilities and obtaining a licence to process and package their own game to add value.

Table 6. *Sourcing of goods and services by estates where shooting is let as the non-primary estate activity. Stake-holders were asked to say whether goods and services were purchased locally (within 40 miles of the estate), regionally (within the Highlands and Islands council region), or outside the region.*

Food and drink	Sometimes not provided, but generally local
Buildings and roads	Generally local, or done by estate staff
Fencing	Generally local, or done by estate staff
Firearms and ammunition	Local or regional
Clothing	Highly variable. Sometimes not provided by the estate, where it is it can be purchased locally, regionally or outside the region
Vehicles	Typically bought regionally and maintained locally
Feed	Where it is relevant it's purchased locally or regionally
Game	Generally sold through a dealer, either regionally or outside the region. Some interest in moving towards processing and packaging the game themselves to add value.

5.6 Conclusions

Sport shooting providers in the Highlands and Islands can be assigned to three main "styles". Firstly there are "highly commercialised sporting estates". These are privately owned estates where shooting is the primary management objective and most of the shooting is let, with a small amount retained by the owner for private use. Secondly, there are "non-commercial estates". These may be owned by a private individual, by an NGO or by the government. No sport is let, either because it is retained for the enjoyment of the owner and their friends and family, or because the primary objective is biodiversity management and the shooting takes the form of a deer cull. Finally, there are estates with "let shooting as a non-primary estate activity". These are estates where either farming or biodiversity conservation is the primary management objective, and all of the shooting is commercially let. They may be owned by a private individual, an NGO or be in community ownership.

Regardless of the "style" of estate, almost all of the shooting guests come from outside of the Highlands and Islands region. They typically stay in estate-owned accommodation, which can be attributed to a desire on the part of owners and managers to partially offset the costs associated with game management

and provision. There is also very little variation in terms of the sourcing of goods and services between the three "styles", with most goods and services being purchased locally where possible. Many stakeholders related this to an estate policy for supporting the local economy or otherwise to the reliability of sourcing goods and services from local providers with whom they can build long-term relationships. The main difference in terms of the economic impact of the different "styles" of sporting estate management is employment. Highly commercialised estates generally employ more staff than either of the other "styles", and although they have a large number of seasonal or casual staff such as grouse beaters, they also have on average 8.8 members of full-time staff (range = 1 – 27), compared to 1.5 (range = 0 - 4) and 2 (range = 0 – 4) for non-commercial and let shooting as the non-primary activity, respectively. It is important to note that while higher employment may be partly attributable to larger estate sizes, employment per 1000 acres is still higher on average on highly commercialised estates, though the difference is less (averages of 0.35, 0.22 and 0.05 FTE/1000 acres for highly commercialised, non-commercial and sport non-primary respectively).

Non-commercial estates are typically deer forests, whereas the other two "styles" provide a greater mixture of shooting opportunities, although most driven shoots are provided by highly commercialised estates. In our sample there is some geographic variation in "styles", which is to some extent backed up by interviewees' opinions of commercialisation of sport more generally in the three study areas. For example, estates in Speyside and Monadliath are highly variable in terms of estate objectives, but almost all will let some shooting, and in our sample highly commercialised estates were most common. This is possibly because there are relatively more opportunities to provide commercially viable driven shoots in Speyside and Monadliath compared to the other areas. Highly commercialised estates were rare in Wester Ross and SW Sutherland, where deer-stalking is typically the only type of shooting undertaken. There seem to be more non-commercial estates in this area compared with our others. However, interviewees identified a trend towards more estates letting at least some of their shooting commercially in the area. Non-commercial estates were rare in Easter Ross and the surrounds, where there is a mix of deer-stalking and lowland game depending largely on local geography. This fits with interviewees' view of the area, that virtually all estates are letting some of their shooting.

Although there are differences in the intensity of game management, particularly in terms of employment generation, it would appear that relatively few sporting estates are highly profitable. Whereas some sporting estates routinely run at a loss and are subsidised by other income sources of the owner, others may operate more closely to a break-even situation. Of the three "styles" of sporting land management identified here, those letting shooting as the non-primary estate activity are most likely to cover costs or possibly make a profit. This is likely to be because investments in to shooting provision are lower than for highly commercialised estates (for whom sport is the primary motivation) which are often providing driven shooting opportunities. Non-commercial estates are not making income from sport and so clearly cannot cover costs or make a profit from shooting provision. From a landowner perspective, the appreciation of estate value over time, and the importance of excellent game records to maintain and enhance that value, can provide a strong justification for ownership, so there is a market justification for ownership, even taking into account running costs. There is also evidence of a push by some estate owners to enhance the profitability of sporting shooting by a greater proportion of letting, although this tactic may be as much to reduce sport shooting enterprise deficits as a profit maximising activity.

Given all this, sport shooting in the Highlands may not seem like an especially robust platform for local economic development. However, while sport shooting in Highland Scotland is better thought of as primarily a social and cultural activity than a purely commercial enterprise, it is important to stress the potentially significant impacts on local and regional economies. This study reveals a spectrum of "styles" of

sporting land management which range from the occasionally profitable, to the marginally commercial, to the unambiguously loss-making. But behind these commercial and non-commercial activities lies a web of complex and beneficial economic interactions with the regional economies in which these estates are based. Such evidence as there is suggests that the greater the intensity of sporting management the greater the beneficial local economic impact, though, as in other aspects of tourism, there is evidence of increasing numbers of 'bought-in' temporary and seasonal workers, whose presence will increase leakage of benefits out of the local economy.

The presence of apparently unprofitable sport shooting (for the land owner) is not necessarily a problem. Many other rural land uses, including farming and forestry are also often associated with what is termed 'psychic income' rather than high levels of profitability. Their presence within a rural land use mix also connects to regional and local economies through upstream suppliers and downstream markets. The relative merits of these different land uses could be formally established through a comparative study, using a common methodology. Without such a study, claim and counter-claim will continue to cloud understanding. Given its resilience as a cultural activity, the continued demand for sport shooting and the willingness of land owners to offer sport shooting as an activity, it will continue to form a part of the fabric of the Highland land-based economy. Because it is unsubsidised, unlike its competing uses of forestry and farming, it may have certain advantages at a time of compromised public funds, although it remains potentially vulnerable to cutbacks in personal spending.

In comparison to other European styles of sport shooting land management, Scotland offers a unique and distinctive product, which is in part attributable to the Scottish sport shooting culture and in part to the scope for intensive driven grouse shooting. Of itself this does not guarantee commercial success, but it offers a unique selling point which creates scope for new market development and for sustaining a long-standing land use in upland Britain with strongly embedded economic associations with the regions in which it is located.

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6. The economics of the outfitting industry in Newfoundland and Labrador, Canada

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6.1 Executive summary

This case report summarises the findings from "*The Way Forward*" – report, the provincial outfitting strategy for Canada's most easterly province – Newfoundland and Labrador. *The Way Forward*-report, published in autumn 2006 aimed to provide assistance to the Newfoundland and Labrador Outfitter's Association (NLOA) and the Department of Tourism, Culture and Recreation in formulating a provincial strategy for the outfitting industry. In this report only the economic findings from the state of affairs inventory that served as background information for the strategy, are presented. Outfitting, as a term, is closely associated with outdoor recreational activities primarily hunting and fishing but which can also include rafting, canoeing, hiking etc. as secondary tourist services. In this context outfitters include the service providers for outdoor recreational tourism that are presently providing accommodation and guide services in the province.

Newfoundland and Labrador's big game hunting industry is recognized as one of the best in North America. The high success rates, pristine character of the province, rapid expansion of the industry in the 1980s, and the reorientation of the industry to higher spending markets in the 1990s, created an extended period of growth and prosperity. At the beginning of 2000 century the growth declined a bit along with the declining big game population causing challenges to the sector. Statistics gathered from public and private agencies reveal that big game populations, that are the basis for the outfitting industry, are in general declining, resulting in a reduction in allocations and quotas. Only the black bear and the barren-ground caribou are maintaining their present numbers.

In terms of the industry's size, the province's operators are represented by 153 outfitters with the majority offering both hunting and fishing packages. The majority of outfitters have been in business for over ten years and have at least one or two lodges that offer a range of amenities. The location of outfitting camps reveals the importance of the industry to the rural economy of the province. On the Island of Newfoundland the highest concentrations of outfitting camps are located on the west coast.

In analyzing the length of stay and pricing of outfitters, it was summarized that the average length of stay for hunting guest is approximately 6 days with moose hunts capturing the highest price for outfitters, followed by the caribou, and then the black bear. Combination hunts are particularly popular for outfitters diversifying their packages while trophy hunts are less common.

With the decline in big game populations, there is an opportunity to increase prices for the woodland caribou in particular. Other competing destinations are charging high prices for hunting increasingly rare species. Big game seasons vary based on species and zone. On the Island woodland caribou and moose

are open from mid-September to mid-December. Barren ground caribou in Labrador are hunted from August to April. A spring and fall hunt for the black bear is offered throughout the province. The big game seasons coincide with the outfitter seasons in general but an increasing percentage of operators have diversified, and are open year round. There are opportunities for more operators to offer shoulder season and winter opportunities for clients.

The economics of the outfitting industry reveals that province's overall tourism industry contributed 1.8% to the provincial GDP in 2004 but it remains one of the fastest growing sectors of the economy. In terms of the outfitting industry's contribution to the tourism sector, outfitting was found to contribute approximately $37 million of direct and indirect revenues to the province and 12.5% to the tourism sector. These numbers are comparable to the agriculture, forestry, and logging sectors.

In evaluating the operating expenses of outfitters, the mean gross revenue was approximately $163,000 with wages and salaries accounting for approximately $47,000, non-wage operating expenses at approximately $84,000, and gross profit at approximately $31,000. These numbers are comparable to the operating statistics of other tourism operators in the industry illustrating the relative efficiency of the industry.

In addressing human resources, the province is experiencing a labour shortage that is expected to continue, reflecting larger trends nationally. There is a need for a human resource strategy that promotes business retention and professionalism for the outfitting sector to minimize turnover and improve business performance. In assessing the present labour market for the outfitting sector, survey results reveal that the outfitting sector employs approximately 49 full-time and 1183 seasonal positions. Approximately 15% of outfitters have created at least one permanent position in addition to themselves, with 70% having created 5-14 seasonal jobs. Approximately one-third of operators are encountering problems recruiting staff especially guides and customer service staff.

Diversification is mentioned by many outfitters as an opportunity to increase revenues and improve business performance. Traditionally outfitters have focused on hunting and fishing packages, but over the past few years the majority of outfitters have expanded into the outdoor adventure, cultural, experiential, and nature-based markets. Results from the 2006 Outfitter's Survey and the 1999 Non-resident Big Game Hunter Survey identify marine fishing, wildlife viewing (including whale watching), and fishing of significant interest. For many operators, packages have been organized through pre- and post- tours, that cater to couples or families, and that are in partnership with other operators. Government regulations, lack of sufficient capital, seasonality, and an absence of ideas were mentioned as the biggest hurdles to diversification.

One of the biggest challenges to the future health and viability of the industry is the increase in competing land uses in traditional big game habitat. Short-term leases for outfitters coupled with mining, forestry, alternative energy (hydro, wind), and cabin development are threatening the industry and the personal investment of operators. These conflicts are causing crowding, reduced success rates, a loss of vital habitat resulting in a devalued outfitting product. Action plans and strategies that integrate social, economic, and environmental factors in decision-making are needed to sustain rural livelihoods. An integrated land use plan is required to keep total resource demands on Crown Lands in line with sustainable use.

The regulatory and policy issues reviewed in this report highlight many challenges faced by the outfitting sector. In our analysis, which spanned the country, we see clear evidence of industry working hand-in-hand with government, as is the case in Newfoundland and Labrador. Reworking or "tweaking" current

regulations and policy under the umbrella of "consulting partnerships" can, and has had, a positive effect in other jurisdictions.

The current system of allocation of resources and assignment to outfitters is unique to Newfoundland and Labrador. It is clearly evident, based on the comparative analyses, that allocations are done differently based on species, number of management units, number of outfitters, and a host of other factors. Perhaps the most challenging issue is that of finding and employing skilled guides. It is a difficult "sell" trying to convince young people to enter a seasonal vocation. While diversification offers some relief, the reality is that only a few operators have the physical and/or natural resources, financial means, and/or access to multi-disciplined guides close to their properties to execute a diversification strategy.

Government regulation and policy play an obvious role in the outfitting industry across Canada. The efficiency and effectiveness of these regulations demand a periodic review to keep pace with the ever-changing industry landscape. There is no doubt that regulation and policy are required, but in the same breath they can become burdensome, and in some cases restrictive to the overall growth of the industry. The greatest challenge to implementing regulatory and policy change for the betterment of the outfitting sector is mustering the "political will" to execute in a timely fashion.

Newfoundland and Labrador has been successful in attracting hunters with its abundant natural resources, vast tracts of wilderness, competitive pricing, and skilled guides. DTCR (Department of Tourism, Culture and Recreation) has used its modest budget in an efficient and strategic manner, focusing on those marketing activities with the greatest return on investment and regularly evaluating marketing methods to determine where refocusing should occur.

Outfitters have developed good relationships with their customers, building a good repeat business and turning them into marketing ambassadors for the province as evidenced by the high number of potential visitors who say they became aware of the province from other hunters and friends or family. The 1999 Non-resident Big Game Hunter survey showed that repeat hunters were down slightly and that there was a declining satisfaction in the availability of game. It is not possible to make a direct comparison with the research completed as part of this study, but it would appear that Newfoundland and Labrador outfitters are doing many things right. Repeat business is still strong and for those sportsmen who have visited the province, visitor satisfaction is high. They identify the availability of game, wilderness environment, peace and quiet, outdoor adventure, success rates, and guiding services as very important. Newfoundland and Labrador scores high in all these areas.

Amidst this success, there are concerns. The hunting market has matured and is not expected to grow as fast as the overall population. Women and ethnic minorities do not have the same affinity for hunting as the traditional market of white, Anglo-Saxon males; attempts to cultivate these markets have had limited success for hunting.

Many hunters show a high preference for outdoor activities. As well many are traveling with non hunting companions, Newfoundland and Labrador outfitters must develop quality complimentary activities such as wildlife viewing (including whale watching), hiking, ATVing, snowmobiling, canoeing/kayaking, deep sea fishing, bush plane fly-outs, and small game hunting.

Access to the province can be difficult and costly, and may pose a competitive disadvantage. Other hunting destinations are targeting the same customers; some with better travel connections and with comparable wildlife experiences or cultural appeal. Newfoundland and Labrador may be able to develop new

competitive strengths by offering combination hunts that focus on the island's unique wildlife (woodland caribou, bear and moose) or by focusing on new markets.

Maintaining the quality of the Newfoundland product in light of increasing competition will be critical. With some outfitters experiencing guide shortages already, finding new labour sources has to be a priority.

Technology is impacting the outfitting industry especially in the area of marketing. The Internet is the leading source of information for travelers, but outfitters as a group are not taking full advantage of this technology. Some outfitters struggle to get proper Internet access, others find it difficult to respond to queries and most outfitters have yet to capitalize on some of the new Internet marketing techniques such as pay per click, cross marketing, e-newsletters, etc.

In 2006 outfitter survey, several respondents indicated they were unsure about the best ways to approach new markets. Future marketing success will be contingent upon outfitters receiving help in understanding these new technologies and markets.

6.2 Material and methods

All the results of this report are based on the results presented in *The Way Forward*- document (Hull et al 2006). The *Way Forward* document applies primary and secondary research methods to summarize qualitative and quantitative data that identifies the present conditions affecting the outfitting industry. This baseline data was then used to propose strategic planning recommendations for the industry.

The primary research methods included a survey of outfitters and a survey of target markets that collected quantitative and qualitative data. In addition, focus groups and consultations with key stakeholders in industry and government also provided qualitative data to assist in further evaluating management needs.

For the outfitters survey, a standard set of pre-tested, semi-structured survey questions were generated by the research team in conjunction with the Newfoundland and Labrador Statistics Agency. There were at least five rounds of changes to the Outfitter's Survey. The questions were approved by Newfoundland and Labrador Outfitter's Association (NLOA) and the Department of Tourism, Culture and Recreation (DTCR), and then administered by phone. For outfitters not able to participate by phone, questionnaires were faxed to them, filled in, and then returned for analysis. Ninety eight outfitters out of a possible 153 licensed companies in the province (DTCR 2006d) participated in the survey, representing a 64 percent response rate. The surveys took on average one hour to complete.

For the survey of target markets, a set of pre-tested, semi-structured survey questions were generated by the research team in conjunction with the New Zealand Tourism Research Institute (NZTRI). The questions were approved by NLOA and DTCR, and then administered online by NZTRI over a two week period. The surveys took approximately twenty minutes to complete. The surveys were administered to two sets of databases.

The first database was drawn from a pool of clients selected from NLOA members. A total of 124 names and emails were collected from outfitters in the province by NLOA. Each client received an email with the online survey link, requesting them to complete the survey.

The second database was drawn from a pool of clients requesting the 2006 Hunt/Fish Guide from the Department of Tourism, Culture, and Recreation. A total of 469 names and emails were collected from the DTCR. Each potential client received an email with the online survey link, requesting them to complete the survey. One hundred and eighty two clients from the two databases responded to the survey representing a 31 percent response rate. In the evaluation of survey results, the information was organized into three general categories – outfitters that offer hunting packages, outfitters that offer fishing packages, and outfitters that offer both hunting and fishing opportunities.

In addition to the surveys, the research team organized two focus groups – one with industry and another with government representatives. The purpose of the focus groups was to collect information on development options and to review policies pertaining to existing regulations, legislation, product, market trends, and organizational structure of the outfitting industry.

The goal of a focus group is to discuss a particular topic—in this case, the sustainability of the outfitting industry. At the meeting, questions were administered by members of the consulting team to participants in an effort to help evaluate the strengths, weaknesses, opportunities, and threats (SWOT) for the outfitting industry over the next ten years. Focus group meeting lasted ninety minutes and asked a series of four questions to participants.

The research team also collabourated with NLOA on a series of meetings with the Department of Tourism, Culture, and Recreation and the Department of Environment and Conservation to discuss the status of the resource, product, regulations, and marketing issues impacting the industry. These meetings lasted between four and six hours and provided government with an opportunity to provide input into the reporting.

Once the information from the surveys, focus groups, and consultations were compiled, secondary research, including a review of government documents and reports, case-studies, and market studies, were integrated into the body of this report to provide a summary of baseline data for the outfitting sector (Hull et al 2006).

6.3 The overview of the industry

Newfoundland and Labrador's big game hunting (moose, black bear, caribou) experiences are recognized as among the best in North America. In 2005, the outfitting industry contributed approximately $45 million CAD to the provincial economy generating significant employment opportunities throughout rural regions of the Province. According to statistics compiled by the NLOA (Newfoundland and Labrador Outfitter's Association), the hunt/fish market contributes an estimated $7000 in direct and indirect spending per tourist annually from June to November (NLOA 2006a).

Since the 1980s, the outfitting industry has expanded rapidly. From 1988 to 2003 the number of lodges in the Province increased from 83 to 193 with non-resident moose and caribou license sales increasing from 1361 to 4878 during the same time period (NLOA 2006a). The sector's growth over the last three decades is attributed to: the high success rates, the pristine character of the province, the relatively low competition for resources, and the high quality of tourism services offered by outfitters. As the industry has expanded, local operators have responded to market demand by upgrading and improving their roofed accommodations, prepared foods, guide services, air charters, and public transportation.

In the 1990s, the adoption of provincial policies aimed at encouraging the development of higher quality lodges and services helped to promote the continued growth and sustainability of the industry. The increased availability of non-resident licenses, provision of longer term leases, buffer zones to stabilize resources used by lodges, provision of five year big game allocations, and increases in lodge license allocations, as well as departmental counseling all assisted in reorienting the industry to higher spending markets.

These efforts, in combination with government led marketing efforts aimed at new markets, cooperative advertising, media FAM tours, and market readiness all enabled the outfitting tourism product to become a platform from which lodges are now diversifying their products and extending their offerings in other seasons. Snowmobiling, wildlife viewing, nature/culture interpretation, and ATV excursions are a number of experiences being packaged to diversify the industry and to maintain the industry's viability and profitability over the long-term.

In 2006, a number of challenges are threatening the sustainability of the industry. Since 1999, there has been a freeze on new construction of consumptive lodges. The results from the 2006 outfitter's survey (Table 1) also reveals a number of negative changes affecting the overall quality of the outfitting product that include: conflicting land use with logging and mining operations and unfettered cabin development, poor access to the province and in the quality of roads within the province, declining big game populations, as well as increasing costs and restrictive government regulation of the industry.

Table 1. *Recent causes of negative changes affecting outfitters (Source: DTCR 2006d)*

	Hunting		Fishing		Both	
	%	N	N	%	N	%
Total	21	100.0%	18	100.0%	56	100.0%
Logging operations	9	56.3%	3	18.8%	10	27.0%
Development	3	18.8%	4	25.0%	6	16.2%
Access to the province	0	.0%	1	6.3%	6	16.2%
Increase in coyotes	3	18.8%	0	.0%	5	13.5%
Increased fees/cost	1	6.3%	0	.0%	5	13.5%
Decreased number of game	2	12.5%	0	.0%	4	10.8%
Government regulations	1	6.3%	2	12.5%	4	10.8%
Hassle of air travel	0	.0%	0	.0%	4	10.8%
Mining exploration	0	.0%	0	.0%	3	8.1%
Competition	0	.0%	1	6.3%	2	5.4%
Cost of travel	0	.0%	1	6.3%	2	5.4%
Exchange rate	1	6.3%	0	.0%	1	2.7%
No answer	1	6.3%	1	6.3%	1	2.7%
ATV damage/regulations	0	.0%	1	6.3%	1	2.7%
Land Claims Agreement	0	.0%	0	.0%	1	2.7%
Condition of roads	0	.0%	4	25.0%	1	2.7%
Totals may exceed 100% due to multiple responses. DTCR 2006d						

In addition to the overall concerns of industry trends, outfitters also mentioned that, over the next five years, they foresee a need to invest in their businesses: to diversify and extend their season; to make equipment and accommodation upgrades; and to offer more guide training opportunities to their staff to remain competitive. In their marketing efforts, outfitters mentioned the need to target new markets (i.e. corporate, culture, European) and adopt more Internet-based marketing strategies. A significant percentage of operators also mentioned that they would be selling or closing their operation (hunt 14.3%, fish 17.3%, both 22.2%) suggesting that the industry will downsize over the short-term.

Table 2. *In what ways do you see your outfitting operation changing in the next 5 years? (Source: DTCR 2006d)*

	Hunting		Fishing		Both	
	N	%	N	%	N	%
Total	50	100.0%	49	100.0%	112	100.0%
Market to corporate groups	3	14.3%	6	26.1%	10	18.5%
Spend more on Internet marketing	5	23.8%	5	21.7%	9	16.7%
Equipment upgrades	5	23.8%	4	17.4%	8	14.8%
Add new accommodation facilities	4	19.0%	3	13.0%	8	14.8%
Sell the outfitting operation	2	9.5%	3	13.0%	8	14.8%
Add new outdoor activities	2	9.5%	1	4.3%	7	13.0%
Add new hunting and fishing packages	4	19.0%	5	21.7%	7	13.0%
More training for your guides	2	9.5%	2	8.7%	6	11.1%
Extend the length of your operating season	3	14.3%	2	8.7%	6	11.1%
Decreased number of licenses and business	2	9.5%	0	.0%	6	11.1%
Don't Know/Unsure	2	9.5%	2	8.7%	6	11.1%
Stay the same/no change	0	.0%	5	21.7%	5	9.3%
Spend more time finding good staff	2	9.5%	2	8.7%	4	7.4%
Close the outfitting operation	1	4.8%	1	4.3%	4	7.4%
Improved access to your outfitting operation	2	9.5%	1	4.3%	3	5.6%
Negative impact of Air Canada with cost of travel	0	.0%	1	4.3%	3	5.6%
Resource depletion due to coyotes	4	19.0%	0	.0%	2	3.7%
More conservation efforts needed	0	.0%	0	.0%	2	3.7%
Gain larger allocation of licenses	0	.0%	0	.0%	2	3.7%
Negative impacts due to logging industry/road construction	1	4.8%	1	4.3%	2	3.7%
Add cultural experiences	2	9.5%	1	4.3%	1	1.9%
Rules and regulations needed to be changed	1	4.8%	0	.0%	1	1.9%
Become more competitive	0	.0%	0	.0%	1	1.9%
Partner with new management	0	.0%	0	.0%	1	1.9%
Better advertising	1	4.8%	1	4.3%	0	.0%
Easier access, more vandalism	0	.0%	1	4.3%	0	.0%
More guests, more business	0	.0%	1	4.3%	0	.0%
Negative impact of gun registry	1	4.8%	0	.0%	0	.0%
Expand to European markets	0	.0%	1	4.3%	0	.0%
None specified	1	4.8%	0	.0%	0	.0%
Totals may exceed 100% due to multiple responses. DTCR 2006d						

In addition, Table 3 reveals that outfitters feel that there are major barriers to expanding the quality of their services at their operations. These barriers are linked to uncertain resource allocations, lack of qualified staff, government regulations, lack of adequate access, and lack of access to sufficient capital for investment.

Table 3. *What would you consider to be the major barriers to expanding the quality of the product / service of your outfitting operation? (Source: DTCR 2006d)*

	Hunting		Fishing		Both	
	N	%	N	%	N	%
Total	36	100.0%	36	100.0%	93	100.0%
Uncertain resource allocations (big game / fish)	9	42.9%	4	17.4%	15	27.8%
Don't Know/Unsure	1	4.8%	4	17.4%	12	22.2%
Lack of qualified staff	5	23.8%	3	13.0%	10	18.5%
Government regulations	7	33.3%	4	17.4%	9	16.7%
No barriers	1	4.8%	3	13.0%	9	16.7%
Access to your facility/province	3	14.3%	3	13.0%	8	14.8%
Access to sufficient capital	4	19.0%	3	13.0%	7	13.0%
Seasonality	0	.0%	4	17.4%	5	9.3%
Uncertain how to reach new customer markets	1	4.8%	1	4.3%	4	7.4%
Conservation policies/unfair forestry operations	2	9.5%	1	4.3%	4	7.4%
Lack of Internet services	0	.0%	1	4.3%	2	3.7%
Transportation of game	1	4.8%	0	.0%	2	3.7%
License prices	0	.0%	1	4.3%	2	3.7%
Other	1	4.8%	3	13.0%	2	3.7%
The physical condition of your outfitting operation	0	.0%	1	4.3%	1	1.9%
Availability of game	1	4.8%	0	.0%	1	1.9%
Totals may exceed 100% due to multiple responses. DTCR 2006d						

6.4 The game resource

The most significant game species related to outfitting in Newfoundland and Labrador are so called big game species that include the moose, caribou and black bear.

The Moose (*Alces alces*) is the largest member of the deer family in North America. Moose are native to Labrador and were introduced to Gander Bay, Newfoundland in 1878 and Howley, Newfoundland in 1904. They frequent wooded hillsides of rocky mountain ranges as well as the margins of ponds, lakes, and rivers of the boreal forest and swamps. On the northern tundra they frequent boggy areas. Moose is a prized animal, important for meat and trophies. The first official hunting season for moose in Newfoundland and Labrador was in 1930. On the island of Newfoundland, moose population estimates climbed from approximately 70,000 animals in 1975 to 140,000 animals in 1998. Since 1998 there has been a population decline, with the number of animals in 2005 totaling approximately 120,000 animals (DEC 2006b). It is important to point out that the decrease in moose numbers may be due to the natural cycle of the species. Even so, rifle hunters are enjoying success rates of over 85% as a result of moose population densities exceeding 2 per square kilometer in a number of areas (DTCR 2005c).

A total of 26,255 moose licenses are available for 2006-07. There are 13,755 either sex, 12,380 male-only or calf, and 100 female-only or calf licenses, representing a decrease of 205 total licenses from 2005-6. To meet the decrease in licenses, quota adjustments were made to twenty two Moose Management Areas. Approximately 10.5% of these licenses (2,757) are designated for non-resident hunters (DEC 2006a).

Caribou (*Rangifer farandus*) are equally native to Newfoundland and Labrador. There are two subspecies, the woodland caribou, located on the Island and the barren ground caribou located in Labrador. The George River Herd in Labrador moves between forest and tundra in Quebec and Labrador and is the largest herd in Canada, numbering approximately 450,000 animals (DTCR 2005c). In the summer caribou can be found on barren lands, while in winter they tend to frequent mixed forest and more sheltered areas. The average lifespan of caribou is fifteen years. Average weight for males is 180 kgs (400lbs), 135 kg (300 lbs) for females. Caribou is the only genus where both sexes are antlered, with antlers spreading up to 1.5 metres (5 ft) wide in some cases (DEC 2006a).

From 1954 to 2000 the population of caribou on the island steadily increased to approximately 98,000 individuals. In the 21st century there has been a declining population with numbers in 2006 at approximately 75,000 individuals (DEC 2006a). In 2006-7 there were 4,635 caribou licenses available, 2,000 either sex, 2,635 male-only. Of this total, approximately 25% are available for non-residents.

The quotas from the caribou population on the island reveal that there is a general decline across the island except on the Northern Peninsula. Predation by bear and coyote have been mentioned in survey results and focus group meetings by members of industry and government as possible factors that may be contributing to the decrease in numbers but this is not yet confirmed through scientific research. Disease has also been mentioned as a factor that may be influencing mortality rates. In Labrador there are several distinct populations of caribou. The George River Herd ranges throughout the northern half of Labrador and in Quebec. The Red Wine, Mealy Mountain, and Lac Joseph herd are located in the central and southern regions of Labrador and are presently protected under the province's Endangered Species Act. Approximately 5,100 non-resident licenses are available annually to harvest the George River Herd in the designated 18 Caribou Management Units (CMUs). The CMUs open and close as caribou migrate through them. At least three days notice is given prior to closing. Non-resident hunters are permitted to take two barren-ground caribou on each license and have success rates over 90% (DTCR 2005c).

Black Bear (*Ursus americanus*) reside in heavily wooded areas and dense bush land as a native species to Newfoundland and Labrador. Black bears on average are 150 cm long with a height of 100-120 cm. Males on average weigh 135 kg, while females are smaller, weighing 70 kg. The bears of Newfoundland and Labrador tend to be larger than those on the North American mainland as a result of a genetic disposition toward larger size due to low hunting pressure (DTCR 2005c). There are an estimated 10,000 black bears on the island of Newfoundland. The 49 management units for moose are also utilized for black bear. In Labrador, there are only three management units.

For the recreational and commercial hunt, two bears are permitted, either sex in all open zones. Female bears accompanied by cubs may not be taken. From 2000 to 2005, there were 2,290 licenses available for hunting black bear on the island (DEC 2006a). There are no statistics available for Labrador on the black bear. Black bear populations are stable and with the province's reputation for large bears, there is an opportunity to offer a world-class experience (DTCR 2005c).

6.5 The structure of the industry

The next section provides a profile of the outfitting industry summarizing general information on the industry, the season, economics, human resources, diversification and competing land uses.

6.5.1 The Outfitters – General Information

The outfitting industry in Newfoundland and Labrador is represented by 153 outfitters representing 165 separate operations (DTCR 2006d). The survey of the outfitters from 2006 reveals that 21.4 % offer hunting packages, 23,5% offer fishing packages and the majority (55,1%) offer both hunting and fishing products (Hull et al 2006).

Survey results show that the majority of outfitters have been in business for over ten years (76.2%/hunting, 56.5%/fishing, and 63%/both) (Table 4). In summarizing the physical infrastructure of the operations, 76.9 % have at least one or two lodges with only one fifth of outfitters also using tent camps. The Newfoundland and Labrador outfitting sector does not depend on a large number of mobile camping accommodation as is the cases in the province of Alberta.

Approximately 70 % of the lodges are well-equipped with hot running water, flush toilets, showers or bath, electricity, refrigerators, and propane ranges (DTCR 2006d).

Table 4. *Number of years your outfitting operation have been in business.*

Years	Hunting outfitters	Fishing outfitters	Outfitters offering both hunting and fishing
1 to 4	14, 3% (n=3)	26,1% (n=6)	5,6% (n=3)
5 to 9	9,5% (n=2)	13,0% (n=4)	24,1% (n=13)
10 to 19	42,9% (n=9)	17,4% (n=4)	38,9% (n=21)
20 to 29	14,3% (n=3)	26,1% (n=6)	9,3% (n=5)
30 to 39	9,5% (n=2)	4,3% (n=1)	7,4% (n=4)
40 or more	9,5% (n=2)	8,7% (n=2)	7,4% (n=4)
do not know/unsure	0	4,3% (n=1)	7,4% (n=4)
total	100% (n=21)	100% (n=23)	100% (n=53)

(Source: Hull et al 2006)

Figures 1 and 2 provide a spatial distribution of the outfitting industry in the province for main lodges. Out camps are not indicated in the maps. The majority of outfitters based on the Island of Newfoundland are located in western Newfoundland with the highest concentration of camps on the Great Northern Peninsula and in the southwest corner of the province. In Labrador, fishing lodges are based in southern and southeastern Labrador around the world class Eagle River watershed. Outfitters offering both hunting and fishing are located primarily in western and northern Labrador. The spatial distribution illustrates the importance of the outfitting industry to the rural regions of the province.

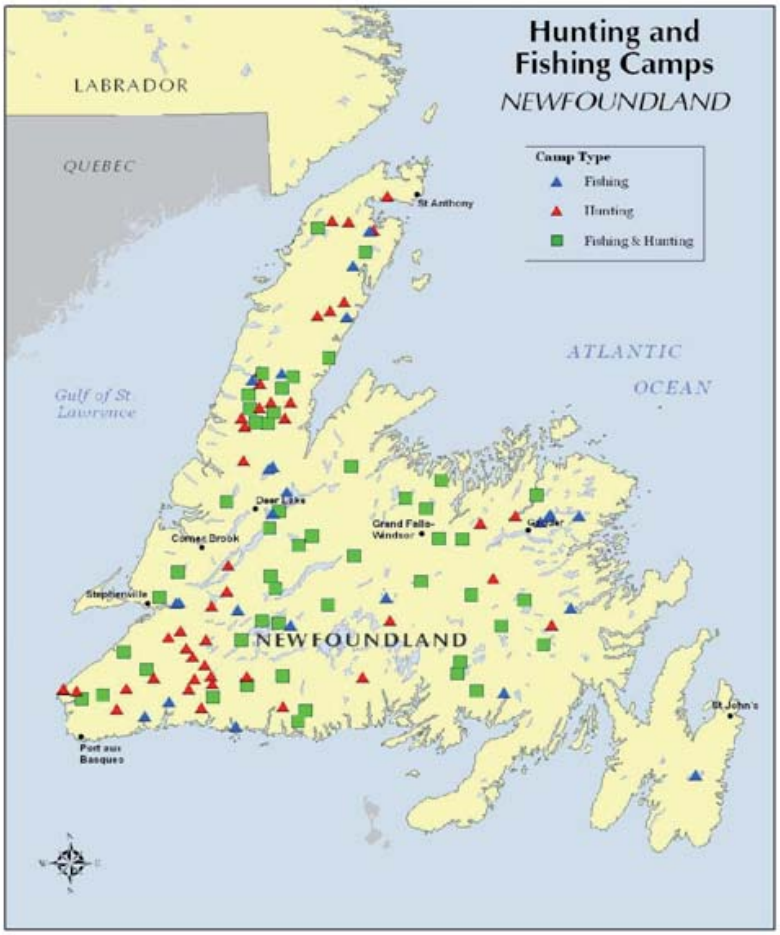

Figure 1.
A map Newfoundland presenting the location of main outfitting lodges.
(Source: Hull et al 2006)

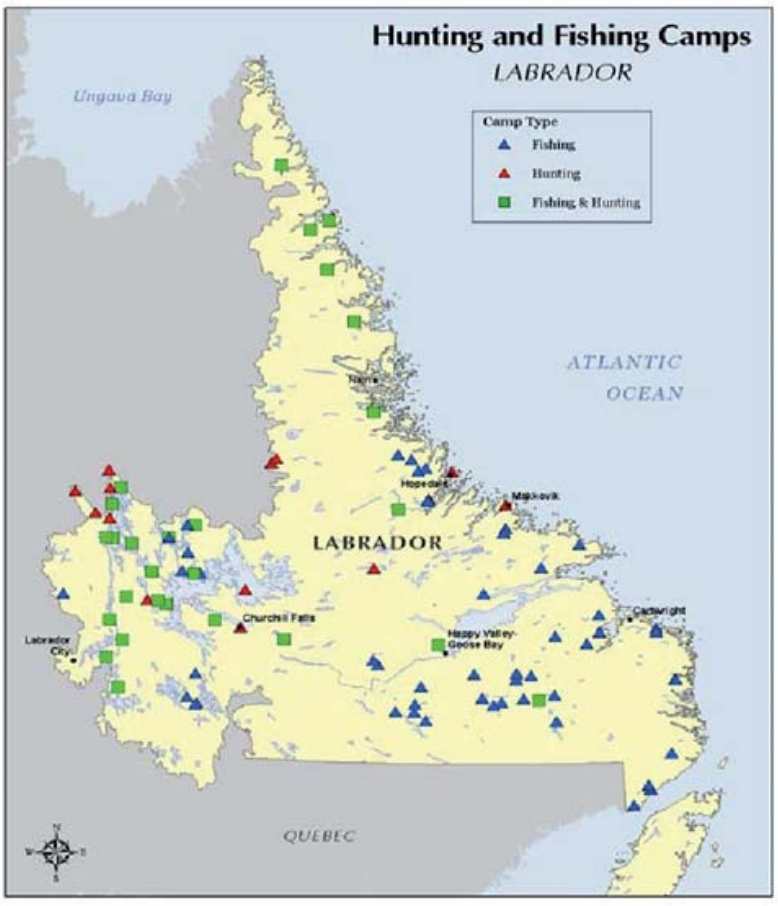

Figure 2.
A map Labrador presenting the location of main outfitting lodges
(Source: Hull et al 2006)

6.5.2 Hunting based outfitting

The statistics for hunting sector provide a summary of the big game quotas, license sales and the average price of hunts in the province. The average stay for hunting guests is about six days. Most (82%) of outfitters have quota for moose that they sell themselves through The Department of Tourism, Culture and Recreation (2005c) reports that there are 70 outfitters offering moose packages in the province. Almost half have a quota of 30 or more moose per year. The average price of one-week moose hunting is approximately $ 3550 (DTCR 2005c). The majority of hunting outfitters also had a quota for caribou (84%). On the Island of Newfoundland there are more than a dozen outfitters who have offered Barren Ground Caribou packages (DTCR 2005c). The prize for an average one week caribou hunt is approx $ 3550 (DTCR 2005c). The majority of outfitters (88%) also have a quota for black bear of which half have a quota of 20 or less bear per year. The average price of one-week bear hunting is about $2200 and is available from one of over 80 outfitters (DTCR 2005c, 2006d).

When compared to other big game destinations, Newfoundland and Labrador is most comparable to South Africa in terms of client numbers. The province would probably benefit from packages offering hunts for multiple species and with that increasing the stay. Higher prized hunts such as trophy hunts offer value added services, which provide sub-contracting possibilities like those relating to taxidermy. Most of the outfitters, however, do not offer trophy hunting for most of the species. Instead the majority of the operators have increased their revenue by promoting packages that offer combination hunts. The average price of one week moose and caribou hunt is $ 5400, one week moose and black bear hunt $4500 and one week caribou-black bear hunt $4450 (DTCR 2006d).

Newfoundland and Labrador generates $37 million CAD from hunting tourism industry (NLOA 2006b). In Alaska the abundant wildlife resources support a much larger outfitting industry that welcomes 90 000 visitors compared to 6000 visitors of Newfoundland and Labrador. Even though the length of the visits are same than in Newfoundland and Labrador, the sheer number of visitors generates significantly more revenues for the sector in Alaska. Personalised guide service and a code of conduct in Nunavut, Canada are also comparable to the Newfoundland and Labrador outfitting sector. Diversification in all destinations includes an emphasis on non-consumptive wildlife viewing activities, fishing opportunities, adventure and cultural tours that focus on the destination's unique selling points (Table 5).

Table 5. *Competitive Hunting Destinations: A Comparable Analysis*

Country	South Africa	Alaska, USA	Nunavut, Canada	Newfoundland and Labrador, Canada
Wildlife Resource	The Big Five: African elephant, buffalo, leopard, lion, rhinoceros	American Bison Black Bear Brown Bear Caribou Dall Sheep Moose Mountain goat Musk ox Sitka black tail deer	Polar Bear Grizzly Bear Barren-ground caribou Musk ox Wolf	Woodland caribou Barren ground caribou Moose Black bear

Average # days	7 to 21 days	7 days	10-14 days	7 days
Price	$500 US/ per day	$2500 -20,000 US	$25-35,000 CAD	$2200 CAD black bear $3500 CAD moose or caribou $5400 CAD combination hunt
Industry revenues	$146 million US in 2003	$100 million annually on average	$2.9 million annually CAD	$42 million annually CAD
Number of clients	7,000 in 2003	90,000 in 2001	518 in 2001	5,724 in 2005
Diversification	Fishing Horse trails Clay shooting Battlefield tours Cultural tours Train rides Golf	Photography Sight seeing Sport fishing Trapping Fossil hunting Kayaking	Dogsledding Kayaking Nature viewing Hiking Cultural tours Trophy fishing Youth/women programs	Wildlife viewing Fishing Cultural tours Hiking Small game hunting Snowmobiling
Comments	-Private game ranches -65% of clients have taxidermy done in South Africa -Trophy hunts	-Mixed bag hunts	-Code of conduct - Guides are required	-Guides required -Combination hunts -Code of conduct Trophy hunts limited
Source: Hull et al 2006				

6.5.3 The season

Big game season dates are a subject of changes, but in general the dates of the island of Newfoundland they are for woodland caribou from mid September to mid December and for moose from mid September to mid December. The black bear hunting season is divided to spring and autumn hunts. Spring hunt is from early May to mid July and the autumn season from early September to Early November. (DTCR 2005c).

The length of season of the outfitting companies varies with outfitters. For those outfitters offering exclusively hunting or fishing packages, the season is shorter, coinciding with the opening and closing dates for big game and the recreational fishery. The season for outfitters offering hunting packages is mainly September and October. June is also an important month, coinciding with the spring black bear hunt. Outfitters offering exclusively fishing are busiest from June to September. ´

For outfitters offering hunting and fishing opportunities, it is evident that they have been able to extend their seasons and also diversify their business. Survey results reveal that the majority of respondents are busiest from June to December coinciding with the hunting and fishing seasons. In addition, approximately 20% of respondents operate year round (Table 6).

Table 6. *What months of the year do you currently operate?*

Month	Hunting outfitters (n=21)	Fishing outfitters (n=23)	Outfitters offering both hunting and fishing (n=53)
January	0	8,7% (n=2)	14,8% (n=8)
February	4,8 % (n=1)	8,7% (n=2)	16,7% (n=9)
March	4,8 % (n=1)	8,7% (n=2)	20,4% (n=11)
April	0	4,3% (n=1)	20,4% (n=11)
May	4,8 % (n=1)	8,7% (n=2)	25,9% (n=14)
June	33,3% (n=7)	91,3% (n=21)	70,4% (n=38)
July	19% (n=4)	100% (n=23)	72,2% (n=39)
August	19% (n=4)	91,3% (n=21)	64,8 (n=35)
September	100% (n=21)	60,9% (n=14)	94,4% (n=51)
October	100% (n=21)	13% (n=3)	85,2% (n=46)
November	23,8% (n=5)	4,3% (n=1)	48,1% (n=26)
December	4,8% (n=1)	4,3% (n=1)	20,4% (n=11)

(Source: Hull et al 2006)

6.5.4 Economic contribution of outfitting

In determining the economic impact of outfitting industry to the tourism sector, Table 7 presents a model based on outfitter revenue, transport fees, miscellaneous fees and license fees. The 2006 Outfitter survey results show that the mean gross revenue for the 77 respondents was $163 490,63 CAD. Multiplying the mean by the number of respondents (77) generates a contribution of $ 12 588 897 CAD. Extrapolating this to the overall industry (153 outfitters) generated additional $ 19 670 011 for the total contribution of $32 258 818 from annual gross revenues.

In estimating the transportation costs, the assumption applied in the model is that the most of the clients fly to and within the province. As a result the airfares generate on additional $3 389 938. Miscellaneous spending of the clients at $ 500 per client per trip (includes additional accommodation, meals, beverages, gas, shipment of game etc) generates an additional $2 921 875. The cost of license fees for hunting and fishing in total an additional $1 962 006. Taxidermy revenues from hunters are annually $ 300 000. Combining outfitter gross revenues with other costs spent by the clients (transport, miscellaneous, license fees) generates direct revenues from outfitter industry totaling $ 28 243 829. In applying conservative indirect multiplier of 1,3 to this sub-total, the impacts of outfitting industry to the economy total $ 42,055,103. This figure is comparable to a number of resource-based sectors in provincial economy, like agriculture ($ 42,7 million) and forestry and logging ($ 81,9 million). It provides an important contribution to the rural communities and regions in the province. The economic impact also represents a contribution of 12,5% to the overall tourism sector.

Table 7. *Newfoundland and Labrador Economic Impact Model*

		Hunt					Fish					All		
	Consideration	**#**	**ref**	**$**	**ref**	**Subtotal**	**#**	**ref**	**$**	**ref**	**Subtotal**	**#**	**$**	**Subtotal**
	Outfitter revenues - from spring 2006 survey											*77*	*163 491*	12 588 807
	Outfitter revenues - extrapolated to total # of businesses													19 670 011
	Airfare to NL	4 000	*a*	1 000	*b*	4 000 000	1 475	*c*	1 000	*b*	1 475 000			5 475 000
	Internal travel - Labrador	766	*d*	500	*e*	383 000	1 475	*c*	500	*e*	737 500			1 120 500
	Internal travel - Islander	3 234	*f*	250	*g*	808 500	369	*h*	250	*g*	92 188			900 688
	Extra spending	4 000		500	*i*	2 000 000	1 844		500	*i*	921 875			2 921 875
	License fees - actual (see below)					1 777 631	1 475		100		147 500			1 925 131
	License fees - estimated						369	*j*	100		36 875			36 875
	Taxidermy	200		1 500	*k*	300 000								300 000
						9 269 131					3 410 938			32 350 079
											Indirect multiplier =		1.3	
	License fee calculation - hunting										Total direct & indirect impact			42 055 103
	species	**# sold**		**fee**		**Total**								
	island moose	2 719		369		1 003 311								
	island caribou	1 310		450		589 500								
	island bear	929		100		92 900								
	Labrador caribou	766		120		91 920								
		5 724				1 777 631								
	Assumptions													
a	Approximate number of big game hunters visiting NL annually													
b	Airfare and travel costs to reach Newfoundland and Labrador will average $1000 per person													
c	Number of non resident 2005 angling licences (DTCR pers comm, 2006)													
d	Assumed all hunters traveling to Labrador are those hunting Labrador caribou													
e	Travel costs from Island to Labrador estimated to be $500 pp(average)													
f	The difference between total hunters and those hunting Labrador caribou; assumes insignificant number of hunters are hunting both Labrador caribou and island species													
g	Estimated airfare, ground transfer costs once non-residents reach NL - average per person													
h	Labrador fishermen estimated to make up 80% of fishermen in the province, 1475 = 80%, 369 = 20%													
i	Extra spending indicated on NZRI customer survey appear low; replaced with estimate of $500 to cover 2 nights hotel, meals, gas, drinks, game shipping													
j	Actual licence fees are from Labrador. Assume that 80% of fishermen visiting NL go to Labrador. Estimated numbers and fees for Island are 20% of Labrador licence totals.													
k	Assumed 5% of hunters will use local taxidermists; a very conservative estimate. Estimate from DTCR personnel 1999 BGHS results.													

6.5.5 Annual operating expenses

In clarifying the annual operating statistics of outfitters, survey results show that wages and salaries accounted approximately 28,9% ($47 283 53), non-wage operating expenses approx 51,8% ($8 466 024) and gross profit for approximately 19,2 % ($3 154 386) of total gross revenues ($ 163 490 63). When comparing the survey results to the operating statistics of adventure operators (Tourism Canada 1995), the results show that outfitters are spending approximately the same amount of their revenues on labour, marketing and other expenses such as food, vehicles, fuel, licenses and airfare as adventure operators. Gross profit is also quite comparable.

Table 8. *Operating statistics of adventure tourism and outfitters.*

Expense category	% of sales of Adventure operators (Source: Tourism Canada 1995)	% of sales of outfitters
Labour	26,4%	28,9%
Marketing	7,1%	9,83%
Other	48,2%	42,07%
Gross profit	18,3%	19,2%
Total	100%	100%

(Source: Hull et al 2006)

6.5.6 Labour Market Trends

The tourism industry employs approximately 26 000 people in Newfoundland and Labrador (HNL 2006). According to the Tourism Labour Market Study by HNL, tourism operators in Newfoundland and Labrador are finding it more and more difficult to find skilled workers as mature employees retire, the industry grows and young people continue to leave the province. The current provincial labour shortage is trend that is expected to continue, reflecting larger trends nationally and in rural jurisdictions as the Canadian population ages. By 2016, a shortage of 950 000 workers in the tourism sector is forecasted across Canada (HNL 2006).

As the labour market shrinks, the Canadian Tourism Commission reports that from 2002 to 2005, the employment growth in the tourism industry reached upwards of 90 000 new jobs and that over the next five years, employment demand will increase to 400 000 jobs (HNL 2006).

In assessing the present labour market for outfitting sector, the survey results reveal that the outfitting sector employs approx 49 full-time and 1183 seasonal positions (DTCR 2006d). Approximately 15% of all outfitters (hunt, fish and both) create at least one permanent, year-around position in addition to themselves at their outfitting operations. Approximately 70% of outfitters have created between five and fourteen seasonal jobs (Table 9). However, 57,1% of the hunting companies mentioned having a shortage of applicants with guiding skills (DTCR 2006d).

Table 9. *Including yourself, how many seasonal jobs have been created as a result of your outfitting operations?*

Seasonal jobs	Hunting outfitters (n=21)	Fishing outfitters (n=23)	Outfitters offering both hunting and fishing (n=54)
0-4	14,3% (n=3)	26,1% (n=6)	18,5% (n=10)
5-9	61,9% (n=13)	52,2% (n=12)	51,9% (n=28)
10-14	9,5% (n=2)	13% (n=3)	18,5% (n=10)
15-19	9,5% (n=2)	4,3% (n=1)	7,4% (n=4)
20 or more	4,8% (n=1)	4,3% (n=1)	1,9% (n=1)
no answer	0	0	1,9% (n=1)

Source: Hull et al 2006

6.5.7 Diversification

In the 2004 Newfoundland and Labrador Product Development Strategy, recommendations were made to safeguard natural and cultural heritage assets and provide international quality product and service opportunities to increase visitation and revenues for the tourism industry (HNL 2004). Traditionally outfitting operations in the province have focused on offering and developing hunting and fishing packages for their clients. Over the last few years, in addition to hunting and fishing, an increasing number of operators have diversified, targeting niche markets interested in outdoor adventure, historic and cultural activities learning and enrichment, and nature-based and ecotourism products.

Approximately 70% of hunting outfitters and outfitters offering both hunting and fishing are offering other types of outdoor activities to their guests. Some of the most popular activities include small game hunting, backpacking/hiking/walking tours, canoeing/kayaking, snowmobiling and ATVing. The list of activities (Table 10) shows that outfitters have diversified their product provision and lengthened their operating seasons mainly into those activities offered in the shoulder seasons of hunting and fishing e.g. the winter months.

Table 10. *Which other types of outdoor activity are available for the guests?*

Activity	Hunting outfitters (n=37)	Outfitters offering both hunting and fishing (n=136)
ATVing	19% (n=4)	24,1% (n=13)
Backpacking/hiking/walking tours	14,3 (n=3)	25,9% (n=14)
Canoeing/kayaking	9,5% (n=2)	25,9% (n=14)
Flight-seeing	0	13% (n=7)
Ice fishing	9,5% (n=2)	14,8% (n=8)
Skiing/snowshoeing	9,5% (n=2)	14,8% (n=8)
Snowmobiling	23,8% (n=5)	29,6% (n=16)
Wildlife watching	14,3% (n=3)	14,8% (n=8)
Small game hunting	42,9% (n=9)	38,9% (n=21)
Other	4,8% (n=1)	14,8% (n=8)
None offered	28,6% (n=6)	31,5% (n=17)
Don't know/unsure	0	3,7% (n=2)

(Source: Hull et al 2006)

According to the survey results (Table 11/12), approx 30-% of outfitters offering both fishing and hunting are having success with pre- and post-tours, while only approx 20% of hunting outfitters have offered these packages. In addition to extending the stay of their clients, the changing nature of hunting/ fishing clients are requiring that outfitters offer number of additional activities e.g. for the families.

Table 11. *Do you offer pre-outfitting packages or activities to your guests (i.e. nature/culture/adventure/community tours before your hunting/fishing packages)?*

	Hunting outfitters (n=21)	**Fishing outfitters (n=23)**	**Outfitters offering both hunting and fishing (n=54)**
Yes	19% (n=4)	30,4% (n=7)	27,8% (n=15)
No	81% (n=17)	69,6% (n=16)	72,2% (n=39)

(Source: Hull et al 2006)

Table 12. *Do you offer post-outfitting packages or activities to your guests (i.e. nature/culture/adventure/community tours after your hunting/fishing packages)?*

	Hunting outfitters (n=21)	**Fishing outfitters (n=23)**	**Outfitters offering both hunting and fishing (n=54)**
Yes	23,8% (n=5)	39,1% (n=9)	31,5% (n=17)
No	71,40% (n=15)	60,90% (n=14)	66,7% (n=36)
Don't know	4,8% (n=1)	0	1,9% (n=1)

(Source: Hull et al 2006)

In evaluating the success of outfitting operations in partnering with other operators for e.g. sub-contracting, only a small minority has explored this option (4,8% of hunting, 11,1% of both fishing and hunting operators) to increase their product provision. Sub-contracting other tour operators e.g. for adventure, cultural and nature-based activities could, however, expand products offerings without requiring major capital investments.

6.5.8 Access to land

The land and fresh water area of the Newfoundland and Labrador is approximately 40 572 000 hectares with the land area totaling 37 387 200 hectares. Approximately 95% of the land is Crown land and with less than 5% of the province is privately owned. Crown land is defined under the Lands Act as any land including land underwater that has not been lawfully alienated from the Crown for private or public use. Through the provincial government, the use of Crown Lands are regulated for residents, institutions and businesses to permit them to harvest or use a variety of natural resources including forests, range, wildlife, and water that are found within these lands. Whenever too many individuals or interests compete to exploit these common property resources, "the tragedy of the commons" results whereby all competing interests lose out as the resource is diminished (Ostrom 1990).

Due to historical settlement patterns that discouraged year round settlement, the lack of a compulsory land registration system, and numerous private land claims based on adverse possession, it is sometimes difficult to determine the extent of Crown land holdings in the province (PDAC 2006).

For the majority of Newfoundland and Labrador outfitters, leasing the Crown land is a necessity for their business. According to the survey 100% of the hunting outfitters and 67% of outfitters offering both

hunting and fishing depend on Crown land leases. For approximately 67% of hunting outfitters and 63% of outfitters offering both hunting and fishing, the term of their lease is short (1-5 years), which makes the business planning extremely uncertain. Even so, for outfitters with long-term leases there are no guarantees for the resource conservation. Government is permitted to exploit land and resources as economic priorities change. The challenge is deciding, which competing interests should receive highest priority for the resources available in these lands.

Table 13. *What is the term of the lease in years?*

The term of the lease	Hunting outfitters (n=21)	Fishing outfitters (n=18)	Outfitters offering both hunting and fishing (n=35)
1	42,9% (n=9)	11,1% (n=2)	31,4% (n=11)
5	23,8% (n=5)	33,3% (n=6)	31,4% (n=11)
10	0	0	2,9% (n=1)
25	0	5,6 % (n=1)	0
50	14,3% (n=3)	38,9% (n=7)	11,4% (n=4)
99	9,5% (n=2)	0	2,9% (n=1)
Don't know/unsure	9,5% (n=2)	11,1% (n=2)	20% (n=7)

(Source: Hull et al 2006)

6.5.9 Current markets

Hunting is a sport that is deeply rooted in North American traditions. Guided hunting in Canada is dominated by foreign hunters, many from the United States. Non-resident hunters form the backbone of the outfitting industry in Newfoundland and Labrador as non-residents may not hunt big game without hiring an outfitter. This reliance is consistent with other Canadian provinces. The British Columbia Outfitter Association has found that over 86% of their clients come from the United States (GOA of B.C. 2002).

Newfoundland and Labrador's Department of Tourism, Culture and Recreation recognises the preponderance of Americans in the guided hunting markets. A vast majority (80%) of the province's big game hunters comes from the United States and 40.8% of U.S. hunters come from three states, Michigan, Pennsylvania, and New York. Other key markets are Ohio, Massachusetts, New Jersey, Connecticut, Wisconsin, Maryland, and Texas. The primary Canadian markets are Nova Scotia, Ontario, and Quebec (Table 14).

Those consumers targeted by Department of Tourism, Culture and Recreation are male, 25 – 65 years of age, with an emphasis on those over 45. They have a mid to high household income, post secondary education, and live in rural areas (DTCR 2005a). Many of them have hunted in the province before.

Table 14. *Estimated number of guests by markets of hunting outfitters (The responses may not equal 100%, since the outfitters estimations, did not always equal 100%).*

	Estimated number of guests	% of all hunting guests
New England States	145	17%
Mid-Atlantic States	367	42,94%
Other USA	119	13,96%
Ontario	28	3,28%
Quebec	53	6,23%
Western Canada	2	0,22%
Newfoundland and Labrador	2	0,22%
Other Atlantic provinces	51	5,95%
Europe	6	0,67%
Asia	0	0
Other location	1	0,13%

(Source: Hull et al 2006)

6.5.10 Marketing strategies

Marketing by the outfitters and the destination marketing organizations are changing. There is less emphasis on the printed material than before. Hunting and fishing shows have been used to reach consumers in the major metropolitan areas, but their effectiveness is fading as more and more consumers are switching to Internet for marketing.

Word of mount and personal referrals are still very important marketing methods for outfitters, but other methods are also needed. There is a growing emphasis on Internet although this is relatively new media for some outfitters. There may be opportunities to refine websites and improve sales through techniques like key word purchasing. Training for outfitters on how to best utilize the web based marketing strategies are required.

Attracting travel writers from hunting and fishing publications or hosts of hunting/fishing related tv-shows are a desirable ways to attract new customers. Direct sales calls and e-mails have also proven to be useful. Marketing through non-traditional venues may merit attention. Setting up a booth at a boat show may provide an outfitter a better profile and less competition than attending a hunting show. Outfitter clients are also likely to hold membership in an auto club or a sports club (Table 15). Advertising in the publications of these organizations or buying their mailing lists for direct mail may be worthwhile methods of advertising.

Table 15. *Current Market – Organizational Membership & Trade Show Attendance*

	Canadian Wilderness Resort Guests Who Are Residents of Canada
Memberships	
Auto club	37%
Sports club	32%
Nature organization	18%
Art gallery/museum	5%
Zoo/botanical garden	2%
Gardening club	1%
Trade Shows Attended Regularly	
Sportsmen's shows	38%
RV/Camper shows	26%
Boat shows	24%
Consumer travel shows	18%
From Special TAMS tabulations, Canada Current, tables 17/18. Source: RRCL 2004	

6.6 Conclusions

In short, the big game and recreational fisheries resources that are the mainstay of the industry in Newfoundland and Labrador are on a downward cycle. Moose and woodland caribou are particularly affected while black bear, barren ground caribou are stable. Quotas and license allocations are diminishing as the industry experiences a downsizing after a long period of expansion at the end of the 20th century.

At present, the outfitting industry in Newfoundland and Labrador supports 153 operators. The majority of operators have one or two lodges and a range of amenities. Hunting and fishing are now being supplemented with a diversified range of activities and packages to respond to the changing marketplace and to extend business operations to the shoulder seasons. Economically the industry contributes $37 million to the provincial economy and captures 12,5% of the tourism sector. The average annual gross revenue for outfitters is 163 000 CAD (Hull et al 2006).

As the provincial labour market shrinks, a coordinated program of training opportunities and work experiences are necessary to promote business retention and professionalism within the industry. Competing land uses pose one of the greatest challenges to the sustainability of the sector as mining, forestry, development and alternative energy interests are targeting prime lands, that presently support big game and recreational fisheries. In addition, there is a need to change regulations to better support the outfitting industry. Partnerships between industry and government as well as between industry associations cross the country are required to bring about positive results.

In terms of marketing, the outfitting industry has been successful in attracting hunters and anglers to the province by promoting the abundant natural resources, availability of game, competitive pricing and skilled guides. In addition, the provincial tourism department has been efficient and strategic in adopting marketing activities with the greatest return. Their efforts have been complemented by the positive

relationships between outfitters and their guests, who have built a successful repeat business. Visitor satisfaction is high. As traditional hunting and fishing markets have matured there is a need to develop quality complementary activities. Better travel connections are needed as well as new competitive hunting and fishing products that focus on the province's unique wildlife or that targets new markets through such strategies as trophy hunts. Increasing competition will require outfitters to maintain quality customer service. Future marketing success will depend on adopting Internet marketing techniques. The provincial outfitter's association needs to work in partnership with government agencies to maximize marketing impact on behalf of its members.

Strategic recommendations advocate the need for the proper management of wildlife resources and the province's outfitting product. This will be accomplished through policy and regulatory changes that will improve the efficiency of the industry and assist outfitters in taking advantage of the province's unique selling points to offer a higher yielding, high-quality product. By adopting these strategies, the outfitting industry will remain competitive in the marketplace, maximize local economic impacts, and continue to be recognized as a world-class outfitting destination.

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