

**Nature-based tourism in forests as a tool for rural development –
Analysis of three study areas in North Karelia (Finland), Scotland
and the Catalan Pyrenees**

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FOREWORD

This report was written in a period of three months (from September to November 2001) at the European Forest Institute Headquarters thanks to an EFI Member Scholarship awarded to the author.

This study was designed regarding the necessity of focussing on the recreational role of forests, which was revealed by the preliminary results of the EU/FAIR funded project titled "Multifunctional Forest for Rural Development. Establishing criteria for regional specific strategies to balance public demands and forest owners' objectives. MULTIFOR.RD" (FAIR CT 98-4223).

I would like to thank all the respondents of the questionnaire in North Karelia, Scotland and the Catalan Pyrenees, which were essential in order to gather the data for this study. Also, I would like to give a special thanks to my supervisor Anssi Niskanen for his useful comments and suggestions during the production of this report. Last but not least, I am very grateful for the comments of Tuija Sievänen (Forest Finnish Research Institute) and Birgit Elands (Wageningen University) on the manuscript

Mònica Bori Sanz

ABSTRACT

The role of forests in nature tourism is becoming increasingly important. The aim of this report is to assess the role that nature, and particularly forests, play in tourism and recreation, and also to illustrate the potential contribution of nature-based tourism in forests to rural development in the European context. For this purpose, three European areas were selected: Koli National Park in North Karelia, Cadí Moixeró Natural Park in the Catalan Pyrenees and the Cairngorms area in Scotland. Tourism was previously assumed to be a significant activity and forest cover was also considerable in these sites. In order to obtain the data, forty-one structured qualitative questionnaires were completed by the representatives of various organisations involved in forest tourism and recreation, such as tourist and forest organisations, research institutes, government authorities and NGOs in each area.

Forests are seen to have a significant role for tourism, although it cannot be measured quantitatively, and other elements and structures apart from forests are also essential. Nonetheless, the results suggest that well-managed and organised tourism in forested rural areas can obviously enhance the economic, environmental and social development. However, there is a need for a holistic approach to nature tourism, consideration of regional conditions, participation and collaboration of the various stakeholders, education, capacity building, public intervention and entrepreneurial encouragement in tourism.

Keywords: forest tourism, recreation, rural development, qualitative questionnaires

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1. INTRODUCTION

1.1. The multifunctional role of forests

Traditional forestry production – mainly based on wood production – is still a relevant sector in the economies of many European countries, and particularly in the Northern or Central European countries. It plays a smaller role, though, in other countries, such as in the Mediterranean area, where other uses of forests e.g. forest environmental protection against erosion and forest fires and forest recreation are relatively more important, although difficult to compare in economic terms.

Recreation has always been and continues to be a very important element of forest use throughout Europe. Tourism in forested areas seems to play an increasing role also in economically sustain local communities. Forest tourism can be a source of employment for local people, generate extra revenues and enhance the quality of life. Nonetheless, high tourist pressure may, in certain sites, have negative environmental and socio-cultural impacts.

Nowadays forestry needs to be reconsidered regarding the new approaches to forestry, particularly multifunctional forestry. There are good expectations for a future development of forestry in Europe taking into account a change in the perception of forestry and considering its multiple ecological, economic and social functions.

In recent years, together with wider changes in the role of the primary sector in developed Western economies, fundamental changes regarding the role of forests have occurred (Slee 2000). It is widely recognised that the traditional production function of forests is in a change towards a multifunctional use. Other non-timber forest uses, such as recreation, tourism and biodiversity have increased in importance, and they can provide alternative income and employment opportunities for the local economy (Johnson 2000). As Sisak (2000) reports, benefits derived from forests can be not only direct, but also indirect or of a non-market character. Some of these non-market values of forestry can be transformed into economic ones.

1.2. Rural development

Rural areas in the EU account for 80% of the territory. Rural areas, though, are a highly complex phenomena, which needs to fulfil various economic, natural and socio-cultural functions. Moreover, there are different definitions of rural areas according to different criteria, such as areas dominated by primary production, areas adjacent to urban centres, areas with a high number of tourist, etc (Buck 2000).

Research on the future prospects of rural areas has become important in the last years due to significant problems in rural areas, such as the decrease of product prices, limited job opportunities and decrease of incomes in rural areas (Hyttinen et al. 2000). Weber (2000) points out that there is a concentration of a bigger amount of jobs and also higher qualified jobs in urban centres, and that the per capita income is higher in urban agglomerations than in many rural areas.

On the other hand, some rural areas (especially those in urbanised societies) are facing an increase of functional claims and they are over-developed. Efforts are made in

order to stop excessive development, as well as preserving the traditional conditions of rural areas. Otherwise, a great proportion of the territory would become urbanised.

Rural areas are valuable not only because still 10–30% of the population in Western Europe and even 40% in Central and Eastern European countries live there, but also because they provide for landscape-related recreation in societies where urbanisation and tourism are increasing. Moreover, rural areas contribute to the maintenance of cultural heritage, as well as to biodiversity and to ecological compensation and storage.

Rural areas have constantly been under a transition process, as primary sector professions have decreased continuously since the 1960s. As a result, in many rural areas in Europe the economic activities are dominated by non-agrarian professions. For example, in Central Europe, agriculture and forestry count for 10% of the regional gross added value (Weber 2000). Additionally, rural areas are more and more conceived as recreational spaces for urban people, as leisure culture increases in our society (Koch and Rasmussen 2000).

According to Long and Lane (2000), traditional rural economies are experiencing economic restructuring in order to stimulate their economy. The word heard today in the rural world is “revitalisation”. There is a need to diversify rural economies to gain stability and security.

The concept of rural development is highly contested. Different definitions and theories about rural development are found in the literature (Slee 2000). Nonetheless, rural development can be defined as “the process of strengthening the liveability in rural areas according the quality of life, landscape identity, economic viability and quality of the biophysical environment” (Elands 2000). Rural development is not only about improving the economic opportunities of rural inhabitants, but also about enhancing their social structures and services, as well as maintaining the quality of the rural environment and landscape. Therefore, alternative job opportunities, improved services and infrastructures, environmental management measures can be put forward in rural development initiatives.

Forests constitute a significant part of rural areas and in many cases income derived from forestry is vital to maintain land management in rural areas (Rametsteiner 2000). Forestry is an important means of rural development either by afforestation of abandoned agricultural land or by employing existing forests for more than just timber production (Koch and Rasmussen 2000).

Due to the substitution of capital for labour, jobs in forestry have become fewer and decision-making has often become more distant (Slee 2000). There is a need for development opportunities, which requires a better understanding of local capabilities to develop enterprises and employment, as well as understanding the multiple functions of forests.

Elands (2000) argues that the role of forestry in rural development is perceived differently by various stakeholders with different discourses (which depend on the main problems in the area and how they are perceived by these stakeholders), such as:

- Forestry should aim to prevent economic decline, it should help to avoid emigration and should stabilise the population, and thus contribute towards the maintenance of basic community infrastructure (Community sustainability discourse).
- Forestry should aim primarily to strengthen the ecological infrastructure, with additional recreational use for an increasingly urbanised population (Hedonistic discourse).
- At the farm level, forestry should be integrated with agriculture together with leisure activities. At the regional level, forests should contribute towards the maintenance of an attractive rural landscape (Agri-ruralist discourse).

On the other hand, different kinds of rurality have been identified in various regions in Europe, and forestry has a different contribution in rural development in each of them (Koch and Rasmussen 2000). So, forests play a relevant role in the process of rural development, although their contribution is strongly linked to the local conditions and to the interests of the stakeholders involved.

Finally, it has become more clear that within Europe different conditions with respect to the role of forestry and rural development exist (Wiersum cf. Koch and Rasmussen 2000). The results of development policies in a region are highly dependent on the complex economic, social and political conditions of each region. Different policy means and strategies need to be applied in different regions (Neil and Tykkyläinen 1998 cf. Niskanen and Lin 2001).

1.3. Forest-based recreation and tourism

Forestry has long been associated with recreation and tourism. Stokowski (2000) considers that the term resource-based recreation and tourism is used to refer to experiences related to natural areas or amenities that serve as an activity site of attraction for recreation. Nonetheless, there is a distinction between the concepts of recreation and tourism. Recreation refers to spending free time, mainly in the open air, while tourism refers to the economic aspects of leisure time. In addition, recreationists are visitors who live in the area itself or nearby. Tourists, though, are visitors that stay overnight in the area (not in their home address). So, visitors can be both tourists and recreationists.

There are not yet many studies on the benefits that forestry brings to tourism. However, tourism contributes to the local economy through the amount visitors themselves spend and also through the multiplier effect of that money going through the local economy (Johnson 2000). Benefits of tourism also include local employment (direct and indirect), stimulation of profitable domestic industries, diversification of the local economy, improvements of local infrastructure and intercultural understanding (Pigram and Jenkins 1999). Tourism is one of the whole new series of opportunities that rural communities consider. Tourism is not the panacea for all rural problems, but it has a number of positive attractions (Long and Lane 2000).

Recreational landscapes and nature tourism rely on the maintenance of forested land, since forests and woodlands are the part of the environment in which a great deal of recreation and tourism takes place. Visitors enjoy forests and the wide range of

activities that take place in forests. However, little tourist revenue reaches landowners, despite that much revenue is needed (Font and Tribe 2000b).

Recreation is a natural part of daily life among the Nordic people. In the Nordic, countries forest is the most usual environment for outdoor recreation (Sievänen 1997). Accordingly, Bostedt and Mattson (1993) report that a considerable portion of the tourist value in two areas in Sweden is attributable to the forest nature. Also in Sweden, Hörnsten (2000) highlights that the relationship with the forests is still close, but public use is changing from harvesting towards the purely recreational.

Forests often account for a consistent proportion of protected areas (Ciancio and Nocentini 1997). The main purposes of protected areas are to promote the conservation of biodiversity, together with the protection of endangered species, and to promote development in the area, especially through tourist activities. Therefore, there is a clear connection between the support to the establishment of protected areas and plans to develop tourism. National parks are one form of nature protection areas, often existing in the context of communities economically dependent on them. This is especially when the sustainability of many regional or local businesses is dependent of the national park management (McCool and Patterson 2000). Similarly, Haapala (2000) reports that at the local level (in villages and towns) the establishment of national parks was considered as a positive factor for developing the areas.

Currently, there is not only an increasing trend in tourism and its economic significance, but also in the demand for nature-based tourism and outdoor recreation (Gartner and Lime 2000). The economic importance of nature-based tourism is estimated to grow faster than that of any other segment of tourism in the future (Hall and Page 1999). Tourism as an income source is expected to grow in volume. In the whole world, 7% of labour works in tourism at the moment. In the EU 7 million people are employed in the tourist sector and the share of tourism in the GDP is over 5%. The annual estimate of travellers amount to 180 million and many of them are also visiting more than 10 000 protected areas in the EU. Additionally, undeveloped green areas, often in remote rural areas and non-industrialised areas of developed countries, are becoming and important attraction of tourism.

Long and Lane (2000) emphasise that tourism can provide “pluriactivity”, where individuals and family units live from several jobs rather than just one, giving variety and reducing risk. However, Turunen (1998) reports that it is very difficult for an entrepreneur in the tourism business to gain financially from outdoor pursuits and recreation alone. For this reason, there is a need to transform forests into products. Job opportunities and additional income can be done through guides, handcrafts articles, processing berries, etc.

Both forests and tourism are relevant issues from an environmental perspective. Tourism is sometimes argued to be the last possibility for nature protection. More special attention has been recently paid to negative environmental aspects of tourism. In principle, there is a potential for the co-development of tourism and forests: forests could absorb more tourism by increased recreational provision, and tourism could benefit forest owners by providing direct income that can be used for supporting sustainable forest management (Font and Tribe 2000b).

It appears that tourism and recreation will be increasingly attracted by the use of world's forest resources. Therefore, recreation and forest managers will have to balance the needs for timber against the recreational use of forests and public views of woodlands.

However, when thinking of the potential role for forests to contribute to rural development via tourism, a word of caution should be remembered. Hyttinen et al. (2000) concluded that, even if there is potential for income and employment in rural regions from recreation activities and for the provision of new opportunities in forest-related tourism, there was no clear link to forests and forest tourism regarding the economic benefits. This was particularly because it was difficult to show what was the role of forests in tourism in rural areas, as often forests were not the only attraction for tourists in a certain area. Hyttinen et al. (2000) also found that the financial gains from the utilisation of especially forest services seldom created economic revenue to forest owners.

The general objective of this study is to assess the role of nature-based tourism and recreation, and particularly the role of forests, as a tool for rural development in 3 European sites and regions: Koli National Park in North Karelia (Finland), Cadí-Moixeró Natural Park in the Catalan Pyrenees (Spain), and the Cairngorms in Scotland (UK).

The specific objectives are to assess:

- the role that forests play in tourism and recreation in the study regions; and
- the perception of environmental impacts of tourism and recreation in the study sites and related regions.

2. MATERIALS AND METHODS

2.1. Study area selection

Three areas with presumably high recreational values in different European regions were studied: Koli National Park in North Karelia (Finland), the Cairngorms area in Scotland (UK) and Cadí Moixeró Natural Park in the Catalan Pyrenees (Spain).

North Karelia, Scotland and the Catalan Pyrenees are considered to be basically rural areas with few important urban centres, and also with a prevalence of nature and wildlife. The Catalan Pyrenees and Scotland are areas visited by a high number of tourists. North Karelia is significantly occupied by the forest sector. Hence, the current trend of tertiarisation of the economy in rural areas is apparent, especially in the Catalan Pyrenees and Scotland, where tourism and commercial activities are significant for the economy of the area.

North Karelia and the Catalan Pyrenees can be considered as rural areas, while Scotland is quite diverse. A distinction should be made between rural and urban Scotland. There are no important urban agglomerations either in the Catalan Pyrenees or in North Karelia, and population density is low in both regions. Additionally, North Karelia and the Catalan Pyrenees reveal some of the socio-economic problems that rural areas are currently facing, such as very few job opportunities and low income levels, ageing of the population, emigration of youngsters. Unemployment is a serious problem in North Karelia, while low availability of services is more relevant in the Catalan Pyrenees.

On the other hand, Scotland consists of rural areas together with a predominantly urban population. The majority of the population is in the South and in the North in the rural area with a few important urban centres. In addition, there is little concern about the current socio-economic limitations in the rural world. The Cairngorms area is located in a rural area of Scotland, though.

The study areas were selected from countries with distinct amount of forest resources. Both in Spain and Finland, the proportion of forest and other wooded land is over 60%, while in the UK it is less than 10%. However, in Scotland the share of forested land is 15% (Forestry Commission of the UK 1998). In addition, each site has its own “forest culture” considering its forest tradition and social uses of forests.

According to the classification by Niskanen and Lin (2001), which takes into account both forests resources and socio-economic characteristics, Finland is a forest resource dominant country, while the UK and Spain are forest products consumption dominant countries. On the other hand, Wiersum (1998 cf. Koch and Rasmussen 2000) concludes that the UK and Finland are more oriented towards forest production rather than to forest services, unlike Spain. In Spain, though, forest production is less important than in Finland or the UK, while rural production (agriculture and livestock activities) is more important. In none of these countries, the linkages between forest and rural services appear to be significant.

Table 2.1. presents some basic statistics about the regions selected for this study.

Table 2.1. Forest and economic statistics 1996

	North Karelia	Scotland	Catalonia
Toral area (km ²)	21585	77080	31930
% Forested area	78.7	15	42.3
Population (million inhabitants)	0.18	5.13	6.09
Population density (persons/ km ²)	9.8	66	190
GDP per capita (Ecu)	14301	14699	14100
Unemployment rate (%)	15.1	8	17.4
Employment in primary production (%)	14.7	2.7	3.2
Employment in secondary production (%)	25	26.8	38.4
Employment in services (%)	59.6	70.4	58.4

Source: Eurokey (1999)

2.2. Study area 1: Koli National Park (North Karelia-Finland)

North Karelia

Forests and waterways cover 90% of Finland's area, while lakes and rivers cover the 10% of the country's surface (Silvennoinen et al. 1997 cf Komppula 2000). Finland is well known as a nature tourism destination. The most significant strengths of Finland are the clean environment, the large number of forests and lakes, wilderness, reasonable accessibility, snow and lots of activities to offer (Komppula 2000).

Nature-based tourism produces less than 20% of the total income in Finland, but it may play a very important role in the tourist economies in some regions (Saarinen 2000). Five percent of the total employment is in the forest sector, with 102 000 employees (Hytinen et al. 2000).

North Karelia is the easternmost province of Finland. It is a sparsely populated region, which covers an area of 21 585 km², with a population size of 175 137, resulting a population density of 9.8 inhabitants/ km² (Eurokey 1999). The city of Joensuu, with approximately 50 000 inhabitants, is where most population is concentrated.

Typical characteristics of the region include dense and well-growing forests together with landscapes of natural beauty. Over 70% of the region's surface area is forestry land (1.37 million ha, which is 6.8% of the total forest land in Finland) and 20% accounts for water. North Karelian forests are mainly conifer forests with Scots pine being the dominant species (65% pine, 25% spruce, 7% birch and 3% others). The forest growth per inhabitant in North Karelia is 42 m³, while it is 14 m³ for Finland and 1 m³ in most European countries. This is due to the low population density in the region, and it is among the reasons why the forest sector offers a lot of possibilities to provide income and employment opportunities in this area (Hytinen et al. 1996).

However, there is a high unemployment level in the region partly because the region is highly dependent on the primary sector. In 1996, 14.6% of the population relied on forestry and agriculture for their income. North Karelian forestry and forest industry, together with forestry education and research form a regional concentration of know-

how and industrial investments. About 60% of the labour force work in service industry, 22% in manufacturing (Hyttinen et al. 1996).

Major tourist attractions in the region are based on nature activities. The Regional Council of North Karelia owns 90% of the regional tourism marketing enterprise, North Karelia Tourist Service Ltd. The goal of this firm is to join forces with local enterprises and municipal tourist boards to market the area as a tourist destination. The private tourism industry is composed of about 260 enterprises (e.g. 50 hotels, 12 camping sites, 18 small holidays centres, and around 150 farm tourism enterprises). In 1995–1996, a regional tourism strategy was made for the regional tourism network. The aim was to define the competitive position and the strategic development areas of the region and set up a development programme with common goals for the period 1996–2000. Development of sustainable tourism was one of the 10 principles of the strategy (Komppula 2000).

Koli National Park

Although one of the smallest national parks in Finland, the Koli National Park constitutes a national heritage landscape. According to Lovén (2000), Koli was introduced as a symbol of Finnish nationalism, as an icon of forest-like landscapes and as a site of Finnish solitude and landscape. The spirit and image of the Koli landscape rises from the idea of remoteness. In addition, Koli NP has been a favoured visiting place of tourists and artists for over a hundred years.

The main purposes of the park consist of the conservation of the singular Finnish landscape, the geological features, the original nature and the culture of the Karelian forest hill area, such as the slash-and-burn cultivation, and its influence upon the old dwellings and scenery, and herb-rich forest-hill meadows.

According to the preliminary results of an ongoing visitor study, visitors go to Koli NP because they want to see the beautiful landscapes, and wilderness is understood to be near. One out of every four visitors is coming only for the silence and peace. Tourists are also seeking positive and refreshing spiritual experiences, achieved mostly through admiring the beautiful sites of the Park. They want to eat well and see interesting places. Down-hill skiing and cross country skiing are also important reasons for visiting Koli, which is not seen as a destination for long hiking or skiing trips (Lovén 2000).

The most favourite place for visitors in Koli National Park is the summit of Ukko-Koli Hill, which is the highest point from where the landscape can be admired. This scenic point is the highest summit in South Finland, being 347 m above the sea level and 253 m above the surrounding lake Pielinen (Lovén 2000).

Table 2.2. summarises the information of Koli National Park.

Table 2.2. Basic information about Koli National Park

<p>Region: North Karelia (Finland) Surface: 3000 hectares Forest area: n.a. Altitude: 347 m above the sea level and 253 m above the surface of the surrounding lake Pielinen Main type of forest: boarder of boreal and semi-boreal forest zones Protection status: National Park Establishment (year): 1991, widened in 1996 Managed by: Finnish Forest Research Institute (Metla) Ownership: Public Population: on the boundary area of three municipalities: Eno, Kontiolahti and Lieksa, having 34 000 people altogether. Tourist facilities: 70km of marked hiking trails, 20 km skiing trails, cabins and cooking places, slash-and-burn areas, Ukko-Nature Centre with cafeteria, hotel, 2 downhill slopes (drop 200 m) and 2 lifts, canoeing trips at the lake. Activities for tourists: Hiking, cycling, skiing, orienteering, fishing, wildlife observation, mushroom and berry picking, Visitor Centre, environmental education activities, crafts, hotels and restaurants, cultural and traditional activities. Number of visitors per year: 120 000–200 000 visitors every year Type of visitors: Mostly: families, day-trip makers and nature-oriented tourists; Some: young people, retired people, sport enthusiasts and students; Very few: researchers, work travellers and congresses. Visitors per hectare per year: 40 Visitors per inhabitant in the area per year: 4 Direct employees: 50 (high season), 40 (low season) Indirect employees: 20 (high season), 10 (low season) Education of employees: Mostly secondary school; some: university and professional school Private businesses operating at the Park: 6 tourist businesses</p>

2.3. Study area 2: The Cairngorms (Scotland-UK)

Scotland

Population in Scotland includes 5.12 million people with a population density of 66 inhabitants/ km² (Eurokey 1999). Woodland covers 15% of the land areas. About 11 000 people in Scotland are employed in forestry and timber processing. In addition, there are many downstream jobs dependent on forestry (Forestry Commission 1998).

The tourism industry is currently worth around £2.65 billion and provides 177 000 jobs for the people of Scotland. In 1994 about 10.3 million tourist trips were made to Scotland. The country's scenery and natural environment are important elements in what constitutes a pleasant holiday, both in Scotland and particularly in the Cairngorms. In recent years, the Scottish Tourist Board (STB) and other partners have promoted several schemes to combine environmental enhancement with tourism promotion and management. The STB emphasises the development of tourism in a sustainable way, and, for instance, efforts have been made to encourage local public transport and reduce reliance on motor cars.

At present there is a major STB campaign promoting activity holidays in Scotland, and facilities and resources in the Cairngorms can be expected to play a major role in supporting this rich tourism market.

The Cairngorms area

(Source: Cairngorms Partnership Homepage 2001)

The Cairngorms area covers around 8% of Scotland's land area and it offers a wide range of landscapes, such as high tops, forest or lowland lochs. The Cairngorms have four of the five highest mountains in the UK. Some of the rivers in the Cairngorms are of international importance for game angling, and other forest areas have hosted international events of orienteering.

A lot of the Cairngorms area is at high altitude with a cold climate, and restricting the major woodland resource to the valleys. Around 25% of Scotland's native woodland resource are in the Cairngorms and some of the largest pinewoods can also be found in the area, especially in the Dee and Spey valleys. Most of the woods, including the pinewoods, are privately owned.

Forests constitute about 15% of the Cairngorms surface, of which 9% is Scottish pine, 3% is broadleaved trees (mostly birch) and 3% is other planted species. In the last 50 years there has been a tremendous expansion of the forest resource of the Cairngorms, including native woodlands, encouraged by the Forestry Commission policy.

The woods of the Cairngorms also produce a substantial volume of timber, which supports jobs in forestry, timber harvesting, wood processing, haulage and ancillary services. Some of Europe's most modern sawmills can be found in the area. The woods also create a beautiful backdrop in the landscape.

The population of the Cairngorms Area in 1991 was 17 082, an increase of 7.8% from 15 842 in 1981. Almost two thirds of the population of the area live in Badenoch and Strathspey (65%). The most important feature is the greater numbers of elderly people in the Cairngorms. Almost one quarter of the population in the area is over 60 of age (23.5%), compared with 20.3% for Scotland as a whole. Also, there is a growth of one-person households, which is largely predicted by the increase of elderly population. Elderly single households account for 42% of the single-person households.

The Cairngorms area has higher employment in agriculture, distribution and catering compared with the Scottish average and a much smaller manufacturing base. Agriculture employed 6.9% of the workforce in 1991 and has declined up to today. 20% were employed in the manufacturing sector in 1991, when the unemployment rate was 6.9% in the Cairngorms area and 10.4% in Scotland.

The economy in the Cairngorms, though, is heavily dependent on tourism, which already started in the 19th century. For over 100 years, the Cairngorms have been recognised as one of the finest year-round sport and recreational playgrounds in the world. So, tourism is the biggest source of income in the area, and it offers a wide diversity of economic opportunities, most of which are linked to the beauty of the

natural environment. The majority of visitors to the Cairngorms have regularly found that the 'scenery' is the main attraction.

By 1991, the tourist sector expanded to 41% of employment in the Cairngorms, as there was a relative decline in other traditional sectors. Employment in tourism has seasonal characteristics. Also, both self-employment and part-time employment have tended to increase over the last 15 years. The number of self-employed in the Cairngorms is 20% of those economically active (compared to 9% in Scotland). Part-time self-employment is 11% versus 5% in Scotland. The growth in employment in the tourist sector has been a concern, since much of it is seasonal, part-time and low wage rates. The major part of tourist infrastructure of the Cairngorms is found in Aviemore.

Table 2.3 gives an overview of the main issues concerning this study at the Cairngorms area.

Table 2.3. Basic information about the Cairngorms area

<p>Region: Scotland (UK) Surface: 4 580 km² Forest area: 15% of total land area Main type of forest: Scottish pine (60%), broadleaves (20%) and 20% other planted trees. Protection status: in the process of becoming a National Park Establishment (year): September 2003 Managed by: The Cairngorms Partnership Ownership: Mixed (<i>most woods are private</i>) Resident population: 16 000 people Tourist facilities: 400 accommodation establishments (hotels, guest houses, bed and breakfasts, camping and caravan sites, youth hostels, etc.), visitor attractions, 14 tourist information centres (4 are open all year and 10 are seasonal), services offered by public and private sector (countryside sports, land-based outdoor activities, watersports, airsports), retail and catering sector, tourist trails (footpaths). Activities for tourists: Hiking, cycling, skiing, orienteering, fishing, canoeing, field sports, golf, gliding, wildlife observation, mushroom and berry picking, Visitor Centre, environmental education activities, crafts, hotels and restaurants, cultural and traditional activities, archaeological sites and museums. Number of visitors per year: over 850 000 Type of visitors: Mostly: families, young people and sport enthusiasts; Some: retired people, day-trip makers and nature oriented tourists; Very few: students and researchers. Visitors per hectare per year: 0.02 Visitors per inhabitant in the area per year: 53 Direct employees: 600 Indirect employees: 80% employment in tourism in certain parts Education of employees: Mostly primary and secondary school, some: university and professional school Private businesses operating at the Park: 168 landowners</p>

2.4. Study area 3: Cadí Moixeró Natural Park (Catalan Pyrenees, Spain)

Catalan Pyrenees

In Spain the forest sector employs 313 000 people (Hyttinen et al. 2000). Forests cover 42.3 % of the Catalan surface. Population in Catalonia is 6.091 million with a population density of 42.3 inhabitants/ km² (Eurokey 1999).

Mountain areas in Catalonia cover one fifth of the total surface, while only 2% of the total Catalan population live there. These areas are mostly dependent on primary sector activities. They are characterised by depopulation, low level of incomes, low availability of services and communications, hard weather conditions and accessibility. However, it is recognised that they play an important cultural and ecological role (Llei 2/1983).

Cadí Moixeró Natural Park

The Cadí Moixeró Natural Park is the biggest protected area in Catalonia and it is classified as a mountain Park. It has 42 entrances, as well as mountain trails and paths with signs in order to control visitors. It is a symbol for hikers in Catalonia. The high fauna and flora diversity and the geological conditions of the Park are highlighted. These are one of the main features of the Park.

The Park includes 17 municipalities with different social and economic realities. The 3 counties (Alt Urgell, Cerdanya and Berguedà) that integrate the Natural Park are considered mountainous regions (Llei 2/1983).

The aim of a Natural Park status consists of not only conserving the ecological and geological values of the area, but also promoting socio-economic development of the local population with an emphasis on environmentally friendly activities.

The main natural resources in the Park are forests and livestock, which are the main economic source for the local population. Agriculture mainly focuses on the production of fodder. In recent years, though, there has been an increase of the tourists activities, mainly promoted by the Park, both inside and outside the Park boundaries.

Currently there is an annual planning document for the management of the Park. Work is also being done in the elaboration of the Special Plan of the Park in order to define the normative framework and to prioritise the actions in the Park.

Several protection areas exist inside the Park borders. There are 2 hunting reserves, 3 partial natural reserves to protect the otter and 6 PEIN (Sites of Special Natural interest) areas. The Park is also a ZEPA (Area of Special Protection of Birds at the European level), and it has been selected in order to be part of the European Nature 2000 Net.

Table 2.4. shows some facts of Cadí Moixeró Natural Park.

Table 2.4. Basic information about Cadí Moixeró Natural Park

<p>Region: Catalan Pyrenees (Pre-Pyrenees) Surface: 41 342 ha Forest area: n.a. Altitude: Between 900m in the valleys and 2 648m at the highest point Main type of forest: <i>Pinus uncinata</i> and <i>Abies alba</i> in the higher altitudes. <i>Fagus sylvatica</i>, <i>Quercus pubescens</i> and <i>Pinus sylvestris</i> in the lower altitudes. Protection status: Natural Park Establishment (year): 1983 Managed by: Generalitat de Catalunya (regional government) Ownership: Mixed; 2/3 of the forests in the Park are public Population: 17 municipalities (8 500 inh. aprox.), only 40 people live inside the Park. Tourist facilities: Information Centre, hiking trails, guided tours in the snow, trails for cycling. 15 mountain houses, 6 camping sites, 8 rural houses and 38 hotels in the area. Cross-country and down-slope skiing facilities are not far away. Eco-museum in Bagà. Bellver de Cerdanya-Forest Fauna Interpretation Centre. The <i>River House</i> in Martinet. Activities for tourists: Hiking, climbing, cycling, orienteering, fishing, 4x4 trips, photography, wildlife observation, mushroom and berry picking, Visitor Centre, environmental education activities, crafts, hotels and restaurants, cultural and traditional activities, exhibitions, courses and workshops. Number of visitors per year: 500 000 approximately Type of visitors: Some: families, young people, retired people, day-trip makers, nature oriented tourists and students; Very few: sport enthusiasts and researchers. Visitors per hectare per year: 12 Visitors per inhabitant in the area per year: 59 Direct employees: 52 (17 Park employees and 35 employees of small businesses) (high season); 49 (14 Park employees and 35 employees of small businesses) (low season) Indirect employees: 600 approximately Education of employees: Some of them: primary and secondary school, university Private businesses operating at the Park: 14 small businesses</p>
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To sum up, tourism is an relevant sector in the economy of Koli NP, the Cairngorms and Cadí Moixeró NP. However, the density of visitors per inhabitant per year is significantly higher both in Cadí Moixeró (58.8) and the Cairngorms (53.1) than in Koli NP (3.5). The density of visitors per hectare in the Cairngorms, though, is the lowest (0.018) and it is the highest in Koli National Park (40). This is because in the Cairngorms and Cadí Moixeró NP a significant part of its extension is not accessible to visitors because it consists of high mountain tops.

2.5. Methods and data

In order to obtain data on the role of forests in tourism and recreation, and the significance of forest related tourism significance to rural economic development, questionnaires were addressed to forest experts, tourism experts, local authorities, researchers, private entrepreneurs and NGO representatives that had experience in the forests' role in tourism activities in each study area. In the questionnaire, emphasis was given to cross-sectoral (multidisciplinary) and multi-stakeholder approach.

Altogether 20 people from different organisations at each site were contacted in advance for their agreement to participate in the study. Despite the pre-contact, only 66% of the people contacted eventually completed the questionnaire. Finally, there were 14 respondents concerning Koli National Park (North Karelia), 15 respondents concerning the Cairngorms (Scotland), and 12 respondents concerning Cadí Moixeró Natural Park (Catalan Pyrenees).

The questionnaires were emailed together with a cover letter to the pre-selected respondents. The questionnaires included a first part with nine questions on the particular protected area and a second part nine questions about the region. These questions dealt with the economic activities; the importance of tourism and the role forests play in tourism; economic, social and environmental issues of tourist activities and the future trends (see Appendix 1). In addition to these, Park managers were asked to fill another questionnaire on standard information on the natural park they managed. These questions referred to the ownership and private enterprises operating in the Park, amount and profile of visitors, employees in the park and environmental management measures (see Appendix 2).

The questions were structured and qualitative. In most of them, respondents were asked to indicate the importance of several issues in a 1 to 5 scale (where '1' meant 'very important' and '5' meant 'not important'). Also, some questions contained a 1–3 scale, and there were some multiple response questions. Finally, respondents were given the opportunity to add comments after each question and at the end of the section.

The analysis of the questionnaire was based in means and standard deviation for each study region. Also, frequencies and histograms for each question were developed. Figures, such as pie charts, bar graphics and tables, were used to illustrate the results.

3. RESULTS

3.1. Tourism and rural socio-economic development

The economic benefits from tourism are especially seen important, firstly, at the Cairngorms area. All the respondents in the Cairngorms either strongly agree or agree that tourism not only significantly increases the local revenue (Figure 3.2.a), but also that it generates employment for local people (Figure 3.2.b). Secondly, at Koli National Park 21% of the respondents strongly agree and 58% agree that tourism contributes to increase the local revenue (Figure 3.1.a). In addition, 43% of the informants strongly agree and 50% agree that tourism creates employment for locals (Figure 3.1.b) at Koli NP. The fact that respondents at Koli NP seem not to value the economic benefits of tourism as much as respondents in the Cairngorms could be due to the higher development level of tourist activity in the Cairngorms compared to Koli NP. In the Cairngorms the amount of tourist enterprises (about 168) and also the density of visitors per inhabitant per year (about 53) is significantly higher than in Koli NP, where there are only 6 tourist businesses operating and about 3 visitors per inhabitant per year.

On the other hand, at Cadí Moixeró NP, respondents strongly agree or agree that tourism generates employment opportunities for locals (Figure 3.3.a), while it is not so clear whether it helps to increase the local revenue. Figure 3.3.b shows that over one third of the respondents disagree or are neutral about this at Cadí Moixeró NP. Probably in Cadí Moixeró NP tourist enterprises are mainly managed by outsiders, which is a substantial reason why they help to provide local employment opportunities, while do not foster an improvement of the local revenue.

These results suggest that there is a strong indication in favour of the economic importance of tourism at these specific sites, although it is not so obvious at Cadí Moixeró NP.

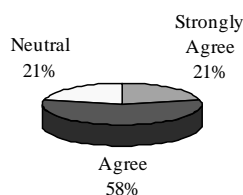


Figure 3.1.a. Tourism increases significantly the local revenue at Koli NP

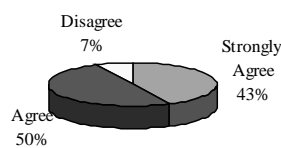


Figure 3.1.b. Tourism generates employment for locals at Koli NP

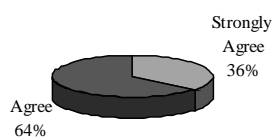


Figure 3.2.a. Tourism increases significantly the local revenue at the Cairngorms

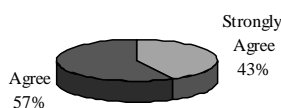


Figure 3.2.b. Tourism generates employment for locals at the Cairngorms

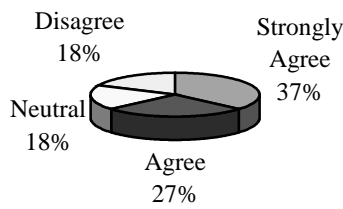


Figure 3.3.a. Tourism increases significantly the local revenue at Cadí Moixeró NP

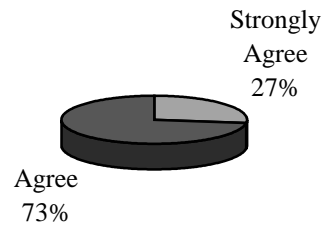


Figure 3.3.b. Tourism generates employment for locals at Cadí Moixeró NP

Despite the fact that only half of the respondents perceive tourism as an important economic sector in North Karelia (Figure 3.4), all the respondents agree that it is a crucial activity at Koli National Park (Figure 3.5). Koli National Park is a tourism flag-ship in the North Karelia, where forestry (together with industrial and commercial activities) is still important. However, there is no difference at both the regional and area level for the other study areas.

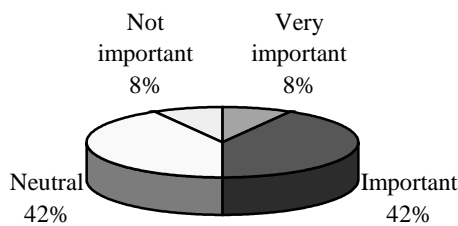


Figure 3.4. Perception of tourism in North Karelia

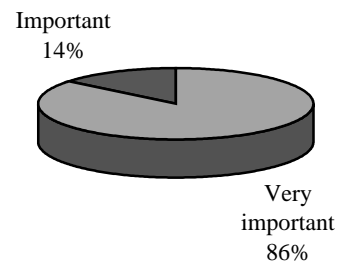


Figure 3.5. Perception of tourism at Koli NP

The respondents at Koli NP and in the Cairngorms area either strongly agree or agree or are neutral about the fact that tourism promotes rural development (see Figures 3. 6 and 3.7). However, according to respondents in Cadí Moixeró NP, this fact is not so clear, as there is a high percentage of neutral answers (33%) and also 45% of the respondents disagree on the presented argument (Figure 3.8). The high percentage of neutral answers suggests the possibility that respondents did not understand the term “rural development”, particularly in the Spanish case.

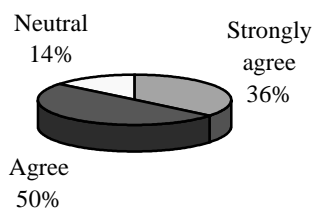


Figure 3.6. Tourism helps to promote rural development at Koli NP

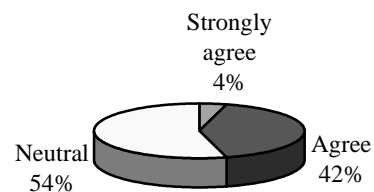


Figure 3.7. Tourism helps to promote rural development in the Cairngorms area

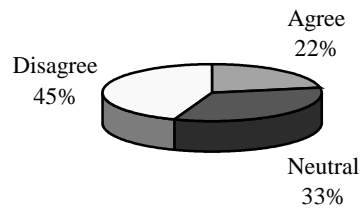


Figure 3.8. Tourism helps to promote rural development at Cadí Moixeró NP

Nonetheless, the results suggest that there is a link between the contribution of tourism to promote rural development and the fact whether tourism is perceived as a significant source of income. Thus, the fact that 70% of the respondents at Cadí Moixeró NP consider that tourism is not the main source of income for families directly employed in the Park (Figure 3.11) is an important reason why it is not so clear that tourism promotes rural development. Accordingly, it is difficult to say whether tourism is the main source of income for the families in the area both in the Cairngorms area or at Koli NP, as about half of the respondents think it is so and the other half not (see Figures 3.9 and 3.10). Nevertheless, rural development is not only about economics, which appears to be a significant element, but also includes a socio-cultural and environmental dimension.

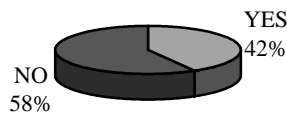


Figure 3.9. Is tourism the main source of income for families directly employed at Koli NP?

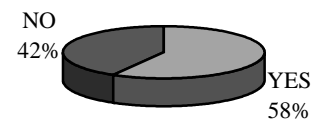


Figure 3.10. Is tourism the main source of income for families directly employed at the Cairngorms area?

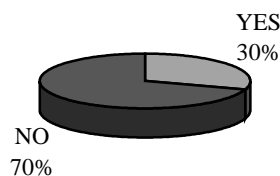


Figure 3.11. Is tourism the main source of income of families directly employed at Cadí Moixeró NP?

In terms of social and cultural impacts of tourism, respondents in the three protected areas agree that tourism brings social benefits to the local population. Figure 3.12 reveals that respondents are mostly neutral or agree with the fact that tourism is a benefit for the local society and also that it increases the availability of services for local inhabitants. However, it is at Koli NP where respondents appear to appreciate the most these social benefits, as values for the level of agreement about these two issues are higher. At Koli NP tourism is a relevant activity, but is not so crowded and this is why negative social impacts are not grasped by respondents.

A part from that, cultural benefits from tourism are seen to be lower than social benefits. As shown in Figure 3.12, most respondents are neutral about the fact that tourists respect the local culture, and that there is a positive cultural exchange between tourists and local population. Nonetheless, it is remarkable that respondents in the Cairngorms are the most negative about cultural impacts of tourism. This is probably due to the higher level of development of tourist activity compared to the other sites. The amount and density of visitors is larger in the Cairngorms, and this aspect affects the local cultural and traditional conditions of the area, as local residents are more easily influenced by new styles of life and cultures, which are brought by visitors.

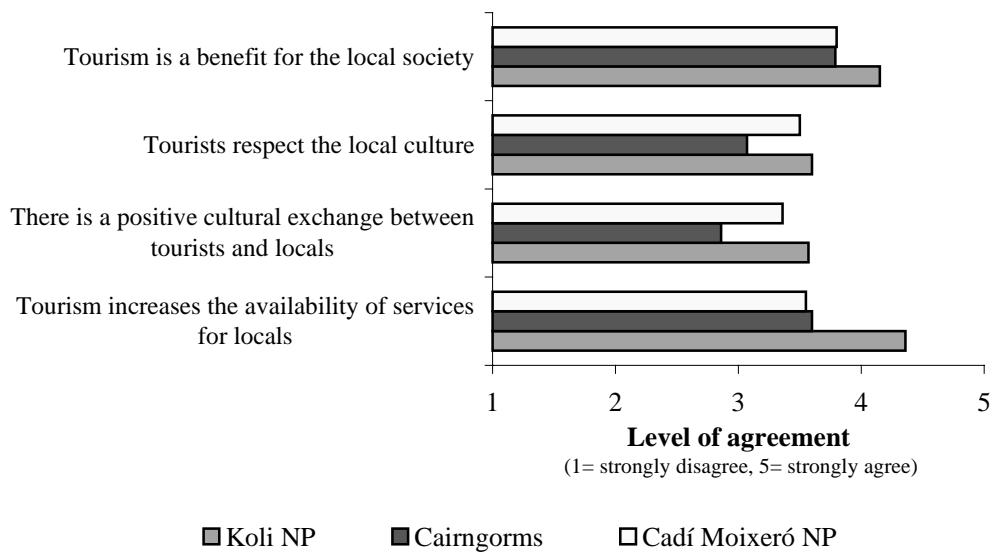


Figure 3.12. Perceptions of social and cultural impacts of tourism

3.2. The role of forests in tourism and recreation

First of all, according to respondents, recreation, tourism and nature conservation are very relevant activities at Koli NP, the Cairngorms area and Cadí Moixeró NP, as previously assumed. Also, there is an emphasis in research at Koli National Park, in wood production at the Cairngorms and in mushroom picking at Cadí Moixeró Natural Park. Figure 3.13 shows that the mean value of the responses for the previously mentioned activities is between the ‘important’ degree (4) and ‘very important’ degree (5). The fact that wood production is not considered to be relevant in Koli NP is probably due to the restrictions in wood use within the boundaries of the protected areas. This is also linked to the high value of nature conservation in the areas.

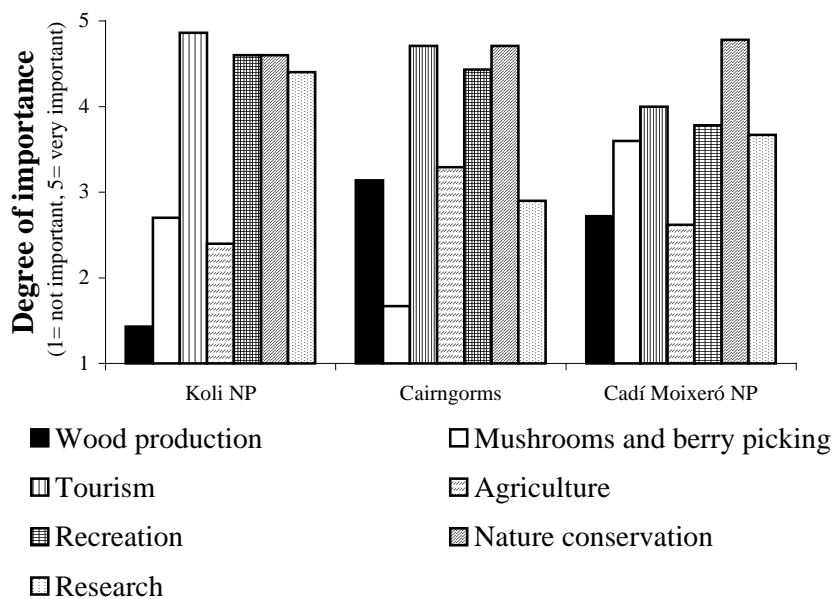


Figure 3.13. Perceptions on the importance of the main activities in the studied protected areas

As Figures 3.14 and 3.15 illustrate, the majority of respondents perceive forests as important for tourist activities, since the mean of the results is located between the ‘agree’ level (4) and ‘strongly agree’ level (5) in all cases. The differences in values are not as big as might be expected from the differences in forest cover. Besides, the study does not offer a valuation for other landscape elements. Some respondents, though, added that pastures, which are the result of livestock activity, are also an important part of the landscape in the Pyrenees. Additionally, in the Cairngorms area, it is pointed out that mountain tops are also a relevant tourist attraction. Much of the Cairngorms area consists of high mountains, and it is treeless. However, it is significant that most heavily visited areas are in the lower part (which is the most forested).

Therefore, it seems that it is not the forest in itself, but more the overall landscape type that is appreciated. Nonetheless, forests are seen to have a significant role for tourism, although this cannot be quantitatively measured.

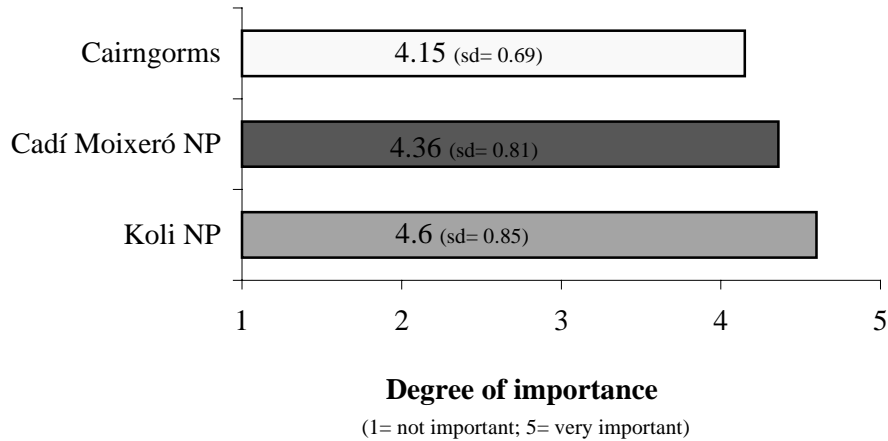


Figure 3.14. Perception on the role of forests in tourism in the studied protected areas

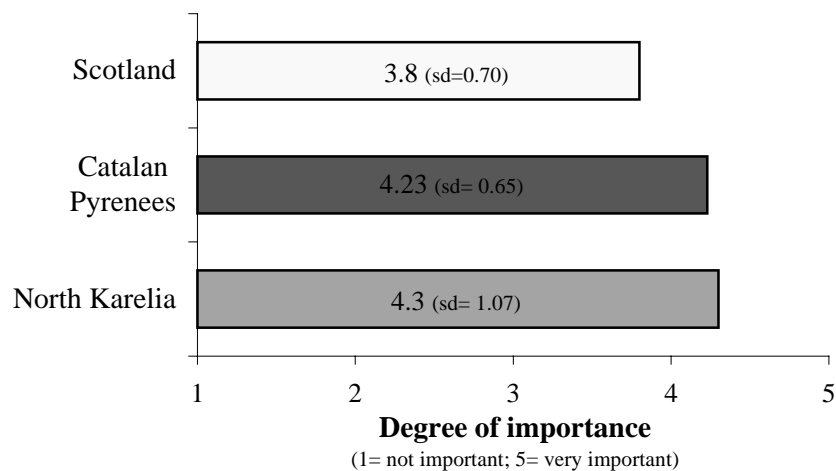


Figure 3.15. Perceptions on the role of forests in tourism in the study regions

3.3. Environmental concerns of tourism and recreation

As for the environmental perspective, Figure 3.16 indicates that the degree of agreement among respondents about the generation of environmental impacts by tourism, as well as about waste generation, degradation of forests and visual impacts are always between a 'neutral' degree (3) and 'agree' degree (4) at Cadí Moixeró NP, unlike the other sites. This fact could be explained by the high density of visitors per

inhabitant per year at Cadí Moixeró Natural Park, and especially by the low number of organised tourist enterprises in the area (only 14) coupled with a significantly high number of visitors (over 500 000 visitors per year). Organised tourism activities are likely to cause less serious impacts on the environment.

In general, waste generation is seen as a serious impact of tourist activities over the environment, together with negative visual impacts, while the degradation of forests due to tourism activities is not considered to be severe.

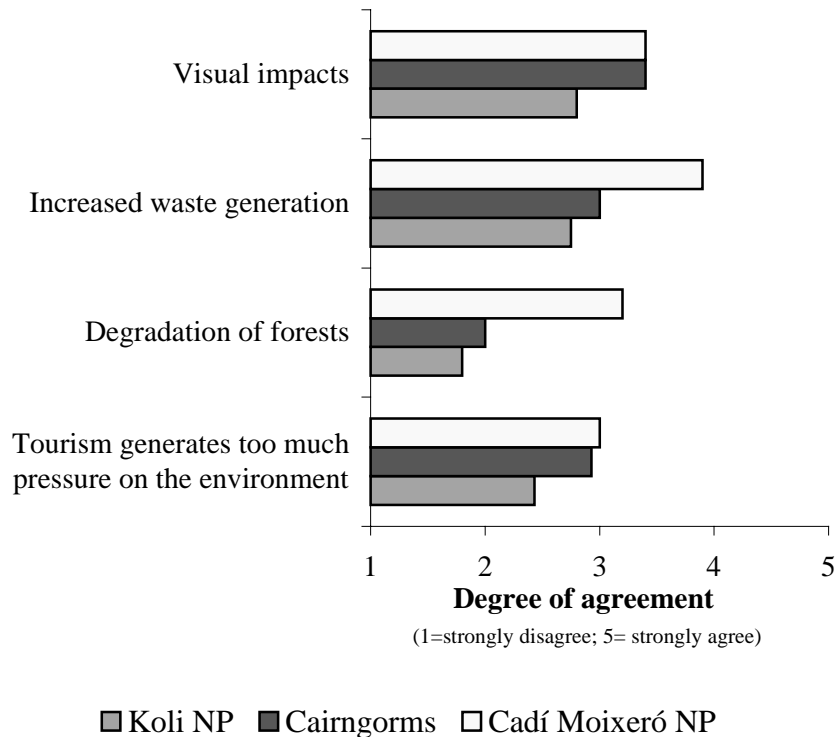


Figure 3.16. Perception of the environmental impacts of tourism at the studied protected areas

4. DISCUSSION AND CONCLUSION

4.1. Limitation of methods and data

First of all, it is important to highlight that it is impossible to generalise and make broad conclusions based on few case studies. Each site has its particular natural and socio-economic conditions and background, which make it unique and different to other sites. Therefore, only specific conclusions linked to the particular study areas can be raised. As McCool and Patterson (2000) report, there is a need for specific planning for each area in order to take into account the context and particular conditions and problems, instead of simple broad solutions.

Also, it is important to bear in mind the limited number of questionnaires that were used to gather the data when looking at the results and conclusions. Due to time restrictions to undertake this research, no more questionnaires could be implemented.

The data collected in the questionnaires is qualitative, and it strongly depends on the point of view of the respondent and his/her personal experience. In addition, another problem of using questionnaires is that respondents do not always answer exactly what they think. Finally, this study only provides a snapshot in a particular moment about the state of forest tourism and recreation, and rural development in the study areas. However, it does not reveal any trends or evolution of these issues during a period of time. Another set of questionnaires should be implemented in the future in order to gather this kind of information.

4.2. Local economy and tourism

The results indicate that in the sites where tourism has been promoted, for instance, through the establishment of a protected area, there are apparent economic benefits for the local population. Various authors have reported the positive economic impacts of tourism. Nevertheless, tourist activity in natural areas needs to be managed carefully, as well as planned and organised in advance, in order to maximise the benefits for locals, and enhance nature conservation at the same time.

Tourist activity is well developed in the Cairngorms area and also at Koli NP according to the results. However, it is obvious that tourism needs to be more developed at Cadí Moixeró NP, where there is the perception that basic tourist infrastructures are still missing and tourism appears not to be the main source of income for families dependent on the Park. Efforts are now being done by the Park managers to foster tourism in the area, and to support new local initiatives and promote collaboration.

The seasonality and part-time basis of employment at the Cairngorms, though, are the main concerns of tourist activity in the area. It is not obvious that tourism is the main source of income for families directly working at the Park. Therefore, tourist activity by itself is not enough to enhance local development, but rather the integration and combination of tourism with other activities.

4.3. Role of forests in tourism and recreation

Forests are a very important part of the landscape especially in North Karelia and the Catalan Pyrenees, while the forested area is not so large in Scotland. Also, many outdoor recreational activities can be undertaken in a forested area. These could be among the reasons why the studied perceptions emphasise that the role of forests in tourist and recreational activities was vital in the study areas. The more forests in the region, the more important were they perceived for recreation and tourism.

Nevertheless, the mere existence of forests in the area may not be enough to promote tourism, but other activities, services or infrastructures are also required. As Hyttinen et al. (2000) pointed out, abundant forest resources, as such, do not create employment. Other structures and services are also needed.

It is possible to identify different “forests cultures” within Europe, where the relative amounts and types of forests, their traditional uses and the place of forests in the culture of countries differ. North Karelia belongs to the Northern European culture; the economic role of forests in the economy is very important and, as reported by Sievänen (2001), outdoor recreation belongs to the Finnish way of life. The Catalan Pyrenees are included in the Southern European forest culture, where the protective role of forests is emphasised and the recreational role of forests is gaining importance. Scotland is included in the North-West European forest culture, which is characterised by a lower forest cover and higher population and urbanisation. This may also explain the differences in the perceptions towards forests’ role in tourism and recreation among the study sites.

4.4. Environment and tourism

According to Pigram (2000), tourism is primarily a resource-based activity, and tourism and nature conservation are interdependent. Tourism should stimulate measures to protect the environment and conserve nature, or even substantial enhancement of natural areas so that the visitor’s satisfaction increases. However, most prominence in the literature appears to be given to the negative impacts of tourism over the environment.

In Cadí Moixeró NP in the Catalan Pyrenees the respondents perceived more environmental impacts of tourism, followed by Scotland. The results reveal that tourist development in the Catalan Pyrenees is based on the construction of second residences (with all the services and infrastructures that this requires) and ski sites. This strategy does not seem to be very sustainable either economically or environmentally. In addition, there is a need to put forward tourist enterprises in the area so that visitors have access to organised tourist activities in the area, which cause less damage on the environment.

On the other hand, garbage generation seems to be the most important problem not only in Cadí Moixeró NP, but also in the Cairngorms and Koli NP. Forest degradation appears not to be a significant impact of tourism in any of the sites. There are some concerns in the Cairngorms area about ski developments, overgrazing by red deers and the development of a funicular.

In North Karelia, the amount of forest per capita is very high, population is scarce, and visitors' density considerably low. So, there is less human pressure over the natural resources (and therefore, less environmental impacts) than in the Catalan Pyrenees and Scotland, which are much crowded places.

Nonetheless, protected areas include several measures in their management plans in order to encourage environmental protection in their boundaries, as well as to minimise the negative impacts of tourism.

4.5. Discussion and final remarks

Tourism should be a part of broader development plans, and emphasis should be given to sustainable forest tourism. Sustainable tourism is described as an opposite concept to mass tourism. Issues of small-scaleness, locality, equity, authenticity, environmentally friendly travelling, ecological and physical impacts, social and cultural impacts and education of hosts and tourists are the characteristics of sustainable tourism (Sievänen 1997).

Gartner and Lime (2000) suggest that in the future tourism will take more holistic attitudes rather than purely focusing on a narrow functional promotional emphasis. Also, they point out the growing importance in the future of new ways of planning and collaborative management.

According to the results of their study, there is a need to integrate not only different sectors (tourism, forestry, agriculture, services), but also different spatial scales (local, regional, national and international) in order to obtain successful development strategies. Weber (2000) highlights that isolated development strategies in principle cannot offer efficient solutions for complex systems. Therefore, sustainable forest recreation should be an element of forest management, for instance ensuring that the exploitation of forests for timber does not have negative effects for recreation.

The success of tourist strategies in rural forested areas to promote rural development depends on the availability of specialised education, training and capacity building programmes, as well as on cross-sectoral and vertical collaboration among actors. Also, entrepreneurial networks and co-operation, encouragement of entrepreneurial activities, and strong leading individuals are needed (Hytinen et al. 2000).

Public sector support is important: 794 LEADER local action groups have been trying to implement rural development programmes since 1991 in Europe. More than 80% of these focus on the tourism sector (Long and Lane 2000). Similarly, Pigram (2000) suggests that one way to achieve sustainable tourism development is through the use of partnerships. 'Green' policies should be worked out in collaboration between public policy makers and private sector providers in a more relaxed regulatory regime (Gartner and Lime 2000).

Planning of tourism in protected areas is necessary in order to avoid the degradation of the natural environment, as well as to encourage socio-economic development. Pigram and Jenkins (1999) report that 'it is the absence or weaknesses of planning which allows the development of types of tourism incompatible with natural and other

(economic) systems, and which permits the expansion of tourism at a rate inconsistent with the capacity of the infrastructure and society to cope with the pressure'.

Forests are an important element in the landscape of many rural areas in Europe. The recreational and tourist roles of forests, as long as they are carefully organised, managed and developed, are a significant tool to enhance socio-economic development of rural areas in Europe. Also, the role of enterprises, which need to include appropriate environmental management measures, is essential in order to manage tourist activities in forests. Furthermore, the establishment of protected areas, a part from preserving nature, enhances the development of the area through tourist development. Finally, it is crucial to take into account the characteristics of each area, a holistic approach to development and other necessary requirements (such as capacity building, public-private partnerships, collaboration among parties, raising awareness) in order to maximise the benefits of forest tourism for rural development.

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APPENDIX 1. QUESTIONNAIRE FOR KOLI NP AND NORTH KARELIA

*Before filling in this questionnaire, please keep in mind that Part 1 refers to Koli National Park and Part 2 contains questions concerning North Karelia. Also I would appreciate if you could answer it and email it back (monica.bori@efi.fi) at your earliest convenience, but if possible no later than **the 19th October 2001.***

0. Personal information:

Name	
<i>Institution/ Organisation</i>	
<i>Position</i>	
<i>Job/ Duties</i>	

PART 1. KOLI NATIONAL PARK

1. Please indicate the importance of the following activities at Koli National Park: (Please tick one box for each row in the 1-5 scale, 1= very important and 5= not important)

	1	2	3	4	5
Forestry					
Wood production					
Mushrooms and berries production					
Tourism					
Agriculture					
Trade and commercial activities					
Sports					
Recreation					
Nature conservation					
Research					
Employment provision for locals					
Others (please specify):					
.....					
.....					
.....					

2. How important is the role of forests in the tourist activities at Koli National Park? (Please tick one box for each row in the 1-5 scale, 1= very important and 5= not important)

1 2 3 4 5

3. Is tourism the main source of income for families directly employed at Koli National Park?

Yes, for most of them

No, they normally complement tourist activities with another kind of job, such as: *(please tick the appropriate boxes)*

Forestry

Agriculture

Industry

Commercial activities and services

Others *(please specify)*:

.....

Comments:

4. What are the future expectations of the Park in terms of employment and income generation? (Please tick one option)

	Increase	Stable	Decrease
Employment			
Income generation			

5. How severe are the environmental impacts of tourism on Koli National Park in general? (Please tick one box for each row in the 1-5 scale, 1= very severe and 5= not severe)

1 2 3 4 5

- unstable
- Tourism significantly increases the local revenue
- Tourism helps to promote rural development
- There is a positive cultural exchange between tourists and locals
- Visitors respect the local culture
- Tourism is a benefit for the local society
- Foreign entrepreneurs mostly run tourism activities in the area
- Local people are involved in decisions on forest tourism
- Koli offers very good opportunities for recreation
- Koli offers very good opportunities for sports
- Others (please, specify):
.....
.....
.....
.....
.....

8. What is likely to happen in the future at Koli National Park?

	Very likely	Likely	Not likely
An increase of the number of visiting tourists			
An increase of environmental degradation			
An increase of environmental protection and management measures			
An increase of the enterprises operating at the site			
An increase of the activities offered			
An increase of services available			
An increase of employment opportunities for locals			
Other (please, specify):			

- 9. If there is something else you would like to add about Koli National Park, especially concerning forestry, tourism and development, please write your comments below.**

PART 2. Questions about NORTH KARELIA (Finland)

1. How would you describe the region of North Karelia. (Please tick one or more appropriate boxes:)

- A remote and scarcely populated area
- A rural area adjacent to urban centres
- A basically rural area with a few important urban centres
- A densely populated area
- An area visited by a high number of tourists
- An area with a prevalence of nature and wildlife
- An area occupied significantly by the agriculture sector
- An area occupied significantly by forest production
- An urbanised area
- Others (please specify):

.....
.....
.....

2. What are the main problems of the region? (Please tick one box for each row in the 1-5 scale, 1= very important and 5= not important)

1 2 3 4 5

- Unemployment
- Emigration of young people
- Low incomes
- Very few job opportunities
- Low availability of services
- Ageing of the population

- Forest degradation
- Waste generation
- Water shortage
- Water pollution
- Atmospheric pollution
- Others (please specify):

.....
.....
.....
.....

3. How important are the following sectors in the economy of North Karelia according to employment levels and income generation. (Please tick one box for each row in the 1-5 scale, 1= very important and 5= not important)

Sector	Employment level (1= very important and 5= not important)					Income generation (1= very important and 5= not important)				
	1	2	3	4	5	1	2	3	4	5
Tourism										
Forestry										
Agriculture										
Industry										
Commercial trade and services										
Others (please specify):										

4. What potential is there in North Karelia to promote tourism?

(Please tick one box for each row in the 1-5 scale, 1= very important and 5= not important)

1 2 3 4 5

- Existence of well-preserved forest
- Beautiful landscape
- Unique landscape
- Quietness
- Sporting opportunities
- Recreation opportunities
- Close or good access from urban centres
- Cultural tradition and historic values
- Others (please specify):

.....

5. How important is the role of forests for tourist activities in North Karelia?

(Please tick one box for each row in the 1-5 scale, 1= very important and 5= not important)

1 2 3 4 5

6. What are the main impacts of tourist activities on the environment in North Karelia? (Please tick one box for each row in the 1-5 scale, 1= very important and 5= not important)

1 2 3 4 5

- Degradation of forests
- Loss of biodiversity (flora, fauna)
- Water shortage and pollution
- Increased waste production
- Negative visual impacts
- Increased energy consumption
- Atmospheric pollution
- Road congestion
- Other (please, specify):
-
-
-
-
-

7. Do you agree with the following statements about tourism in North Karelia?

(Please tick one box in each row)

Strongly Agree Neutral Disagree Strongly
agree

- There are too many tourists
- Tourism generates too much pressure on the environment
- Tourism enhances forest and landscape management
- Tourism promotes nature preservation
- Tourism promotes the survival and restoration of historical, cultural or environmental sites
- Tourists are aware of environmental issues
- Local people are aware of environmental issues
- Basic tourist infrastructures already exist in the area
- Tourism helps to increase the availability of services for local people

- Tourism significantly increases the use of local services and transport
- Tourism generates employment for local people
- Incomes from tourism are seasonal and unstable
- Tourism significantly increases the local revenue
- Tourism helps to promote rural development
- There is a positive cultural exchange between tourists and local people
- Tourists respect the local culture
- Tourism is a benefit for the local society
- Foreign entrepreneurs mostly run tourism activities in the area
- Local people are involved in decisions on forest tourism
- Other (please, specify):

.....
.....
.....

8. What is likely to happen in the future in North Karelia? (Please tick one or more appropriate boxes)

- Increase of tourism
- Decrease of tourism
- Increase of employment opportunities in the tourist sector
- Increase of employment opportunities in other sectors
- Decrease of employment opportunities
- Decrease of the population in the area
- Increase of environmental degradation
- Forest management abandonment
- Enhancement of forest and landscape management
- Others (please, specify):

.....
.....
.....

- 9. If there is something else you would like to add about North Karelia, especially concerning forestry, tourism and development, please write your comments below.**

Thank-you very much for completing this questionnaire. I will let you know about the results of this research in the near future.

APPENDIX 2. QUESTIONNAIRE FOR THE PARK MANAGER AT KOLI NP

1. Who owns Koli National Park?

- Public ownership
- Private ownership
- Mixed ownership

2. Are there any private businesses/ companies operating at Koli National Park?

- Yes
- No

If yes, how many are there? *(Please make an estimation as accurately as you can)*

3. What activities are offered at Koli National Park for visitors? *(Please tick all the appropriate options)*

- Hiking
- Climbing
- Cycling
- Skiing
- Orienteering
- Fishing
- Canoeing
- Other sports (please specify):
.....
.....
.....
- Wildlife observation (bird- watching, etc)
- Mushroom and berry picking
- Visitor Centre
- Environmental education activities
- Crafts
- Hotels and restaurants
- Cultural or traditional activities
- Other activities (please specify):
.....
.....

4. What was the approximate number of tourists that visited Koli National Park in year 2000? *(Please make an estimation as accurately as you can)*

--

5. What kind of visitors are there at Koli National Park?

	Most of the visitors	Some of the visitors	Very few of the visitors
Families			
Young people			
Retired people			
Day trip makers			
Nature oriented tourists			
Sport enthusiasts			
Students			
Researchers			
Others (Please specify):			
.....			
.....			
.....			

6. How many people approximately are directly employed at Koli National Park (including enterprises and other businesses that operate in the Park)? *(Please make an estimation as accurately as you can)*

High season:
Low season:

7. How many people are indirectly employed in the Park (for example local shops, transportation...)? *(Please make an estimation as accurately as you can)*

High season:
Low season:

8. What is the level of education of workers at Koli National Park?

	Most of them	Some of them	A few of them
Elementary school			
Secondary school			
University			
Professional school			
Others (please specify):			
.....			
.....			
.....			

9. How important are the various types of jobs according to the number of workers involved? (Please tick one box for each row in the 1-5 scale, 1= very important and 5= not important)

	1	2	3	4	5
Maintenance work					
Guiding					
Sport instructors					
Restaurants/ Hotel					
Others (please specify):					
.....					
.....					
.....					

10. Please indicate whether any of the following measures exist at Koli National Park:

(Please tick one or more appropriate boxes)

- Limitation of visitors over space (marked paths, etc)
- Limitation of visitors over time
- Entrance fee
- Waste management system
- Energy saving system
- Forest management program
- Others (please specify):
-

11. Comments: