Promotion of nature protection and
sustainable nature tourism in the Inari-Pasvik area
EU Interreg III A North Kolarctic neighbourhood programme
/Tacis programme project

Action Plan for Nature Protection and Sustainable Nature Tourism in Pasvik-Inari Area

2008

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Action Plan for Nature Protection and Sustainable Nature Tourism in Pasvik-Inari Area

Pasvik Inari
Trilateral Park

METSÄHALLITUS

Action Plan for Nature Protection and
Sustainable Nature Tourism in Pasvik-Inari Area

24.1.2008

Photo: Tanja Kyykkä: Finnish bird watchers in Pasvik

The Trilateral Advisory Board:

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	Lapland Regional Environment Centre
	Inari Municipality
NOR	The Office of Finnmark county Governor
	Sør-Varanger Municipality
RUS	Pasvik Zapovednik
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Abstract

Action Plan for Nature Protection and Sustainable Nature Tourism in Pasvik-Inari Area

In this Action Plan the background of the international cooperation and the mutual visions and development ideas of the cooperation partners are documented as well as the objectives of the cooperation and the mutual strategies through which the goal can be achieved. This plan is considered as an advisory plan focusing in common long-term guidance.

The vaste cooperation area referred to as the Pasvik-Inari Trilateral Park comprises five protected areas in Pasvik River vicinity and their close surroundings in three countries, Finland, Norway and Russia. The protected areas are Wilderness Area in Finland, Øvre Pasvik National Park, Øvre Pasvik Landscape Protection Area and Pasvik Nature Reserve ini Norway and Pasvik Zapovednik in Russia.

Trilateral cooperation between the management authorities in the three countries has been vivid ever since the establishment of the protected areas. The Advisory Board consists of members from following organisations: Metsähallitus (Natural Heritage Services, Lapland), Lapland Regional Environment Centre, Inari Municipality, the Office of the Finnmark County Governor, Sør-Varanger Municipality, Pasvik Zapovednik, Pechenga Administration and the Regional Committee of the nature resources and environmental affairs in Murmansk region. In recent years, this cooperation has intensified and the partners are currently mapping the possibilities to apply for an internationally acknowledged Europarc certificate for transboundary cooperation (Europarc 2007).

This Action Plan was compiled by the cooperation partners as a co-product of the project Promotion of nature protection and sustainable nature tourism in the Inari-Pasvik area (2006-2008). The project received funding from the EU Interreg III A Kolarctic neighbourhood programme/Tacis programme (Kolarctic 2006) and national funding from various organisations.

Contents

1 Introduction

This document presents the background and the future of the trilateral cooperation in sustainable nature tourism and nature protection within the cooperation area referred to as the Pasvik-Inari Trilateral Park. The area comprises five protected areas and their close surroundings in three countries, Finland, Norway and Russia. The protected areas are located in close vicinity of the Pasvik River valley. In this Action Plan, the background of the cooperation and mutual visions and development ideas of the cooperation partners are documented. Moreover, the strategies and actions needed to achieve the aspiration level are presented. This plan is considered as an advisory plan focusing in common long-term guidance.

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Planning of the future activities requires mutual understanding of the goals and adequate knowledge of the background. By compiling the information an attempt was made to provide a manual for those involved in this cooperation. The basic information concerning the area has been compiled so that it will benefit not only the authorities but also be of use for anyone who wishes to learn more about the area.

Part A of this Action Plan presents the characteristics specific to the area. This includes basic information about the nature, culture and history and information about the legislation, land use and management of the areas. Different laws and practices guide the use and management of the areas and the level of protection differ according to the area. The management plans, area plans, regional plans etc. must be considered when planning the sustainable nature tourism and nature protection in each country. Knowledge of the international agreements, legislation, practices and planning in each area is needed when mutual actions are planned.

In part B the focus is in the future. The 10-year vision was written down to actualise what the cooperation has been aiming at since the beginning. Intense cooperation is needed to achieve the level of aspiration by 2018. The mutual strategies through which the goal can be achieved are presented in this plan concerning each field of work: cooperation, nature monitoring, dissemination of information and nature tourism. Additionally, concrete actions are suggested. More concrete plans can be made in the future to guide the short-term planning.

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1.1 History of the trilateral cooperation

The Norwegian part of Lake Höyhenjärvi (Fjærvann) in the Pasvik River was proposed as a nature reserve for the first time in 1978 due to its great nature value. In 1989, when Russia and Norway signed their first bilateral agreement on environmental issues, the idea of a common Russian-Norwegian nature reserve was born. This idea was discussed in a meeting between the the Office of the Finnmark County Governor and the Environmental Committee in Murmansk. Later superior authorities on both sides gave their approval for further work towards a concrete proposition and the Norwegian-Russian Comission on Environmental Issues agreed on the proposition. After the first Norwegian-Russian inspection of the area in the summer of 1990, the Russian experts proposed that large tracts of pine forest on the eastern bank of the Pasvik River should be included in the reserve. Therefore, on the Russian side, the reserve covers much more than just Lake Höyhenjärvi (Fjærvann). The first joint inspection was followed up by a number of Norwegian-Russian registrations and meetings.

In an intentional agreement between Norway and Russia in 1990, nature protection in the border areas was considered in a broader perspective where also Finland was seen as a natural partner. In 1991, environmental authorities from Russia, Norway and Finland met in Kirkenes and again in Nikel. The conclusion was that the three countries at the local level should cooperate on nature protection and nature management in the Pasvik-Inari region. Furthermore, the parties aimed at protection of a large intact nature area as a common entity. Vätsäri Wilderness Area was established in Finland through the national Wilderness Act the same year.

Since 1991, annual trilateral meetings have been held about nature management and protection in the Pasvik-Inari region, between the Office of the Finnmark County Governor and the Directorate of Nature Management from Norway, Metsähallitus and the Ministry of Environment and later also Lapland Regional Environment Centre from Finland and the State Committee on Environment, later the Committee on Nature Resource, and administration of Pasvik Zapovednik from Russia.

Pasvik Nature Reserve/Pasvik Zapovednik was formally founded through a resolution in the Russian government July 16 1992, whereas the Norwegian part of Pasvik Nature Reserve was formally founded through regal resolution in October 15 1993. To distinguish the two parts, it is common to identify the Russian part as Pasvik Zapovednik and the Norwegian part as Pasvik Nature Reserve. In 1996, the Norwegian part received international protection status as a Ramsar area due to its rich and characteristic water bird fauna. Also the Russian part of the area is proposed as a Ramsar area.

In 1999, the municipalities of Pechenga, Inari and Sør-Varanger were included in the trilateral cooperation on a permanent basis. The area of these municipalities delimits the actual area of the trilateral cooperation. At the 2002 trilateral meeting, it was decided to promote a common trilateral nature protection area in Pasvik-Inari. Such a protection area could be established by connecting adjacent nature protection areas in Pasvik-Inari which are already founded. A working group was appointed to develop this idea. In 2003, Øvre Pasvik National Park was extended. At the same time, Øvre Pasvik Landscape Protection Area was established. Finally a continuous nature area from Finland via Norway to Russia was protected.

In March 2006, a jointly planned EU financed project (Interreg IIIA North Kolarctic Neighbourhood Programme/Tacis programme) started in the Pasvik-Inari area. The idea was supported by the Barents Council of Environment in the Declarations from the meetings held in 2003, 2005 and 2007. The project called Promotion of nature protection and sustainable nature tourism in the Inari-Pasvik area aimed at creating a more stable basis for the trilateral cooperation. During the project the nature tourism facilities and networks between the authorities and various interest groups were developed. In nature monitoring, the intensified cooperation led to testing harmonised monitoring methods. In addition, information material about the area was developed. More stable basis was established for achieving

the-status as a Europarc Transboundary Protection Area to ensure long-term, high quality cooperation in nature protection and management in Pasvik-Inari. The project period ended in January 2008.

In January 2008, a cooperation agreement (annex 1) was signed by the main partners in cooperation. In this agreement the focal fields of cooperation were identified as well as the organisations involved in the cooperation. The operative guidelines for the cooperation are also attached in this Action Plan (annex 2).

1.2 The Action Plan process

The Action Plan has been jointly compiled by the main partners in the cooperation, Metsähallitus, the Office of the Finnmark County Governor and Pasvik Zapovednik. The actual writing process started in January 2007 on the basis of the vision agreed on by the decision-making body of the cooperation, the Advisory Board. A SWOT analysis (Adams 2005) was made in February, in which the strengths and weaknesses of the cooperation mentioned by the participants were mapped (annex 3). The Advisory Board, was consulted during the writing process. The Advisory Board passed the proposal in January 2008.

To get a wide perspective on the issues related to nature tourism and the area, a participatory approach was used to compile the ideas and opinions of the various stakeholders in the area. Participatory approach is an attempt to integrate all interest groups in the planning process. When the divergent opinions of all interest groups are recognised, possible controversies are avoided. Especially in drafting the general principles, the comments from the interest groups have been essential. Moreover, the planning process was introduced to the local authorities in several meetings and seminars.

In Finland, contacts with the local interest groups have been lively, and the local entrepreneurs have provided the authors with plenty of ideas and opinions. Preliminary meeting with local tourist entrepreneurs was held in April 2006 in Ivalo. Before initiating the writing process, the idea of the planning process was introduced in village meetings held in Sevettijärvi and Nellim in May 2006. Several remarks were made concerning especially nature tourism, including the need for short paths in the close surroundings of the Nellim village, the need for creating recreation possibilities for disabled people and the need for more signs and guiding material was assessed.

Later, the planning process was introduced in several meetings in Nellim and in Ivalo. Especially the nature tourism part of the work awoke interest. A practical workshop with Metsähallitus representatives and the representatives of the Nellim Village society was arranged in August 2006 where the possibilities to establish nature paths in the village surroundings was discussed. Moreover, opinions and ideas from the visitors and entrepreneurs area was gained by conducting a visitor survey (2006-2007) associated with the visitor survey in the Inari Recreation Area. In Norway, a visitor survey was carried out in the summer of 2006.

In February 2007, the planning process was introduced in a nature tourism seminar arranged by the cooperation project in Svanvik, Norway. In this meeting the proposed principles of sustainable nature tourism were widely accepted. In October 2007, a constitutive meeting of a trilateral working group in nature tourism was held in Nellim, Finland. The strategies and actions were introduced to the participants and the additions and comments were included in the final version. In October 2007, the strategies and the actions were discussed also in the project Steering Committee meeting composed of the members of the Advisory Board.

PART A

2 The Pasvik-Inari area

The lush valley of the Pasvik River stretches from the largest lake of Finnish Lapland, Lake Inari, towards the Barents Sea on the border of Norway and Russia. The valley is known for its great nature values. The Pasvik River and the surrounding wilderness comprise a unique nature system where the European, Asian and Arctic species meet. Some of these species reach here the ultimate limits of their existence. The valley forms a diverse habitat for various plant and animal species. In the surrounding wilderness areas, the species inhabiting the rugged, rocky wilderness are required adaptations to extreme conditions.

Fig 1. The Pasvik-Inari area.

The historically remarkable Pasvik region is also a meeting point of different cultures. The riverbanks have been inhabited for centuries. The river was an important channel from inlands to the Barents Sea along which trades were transported. Later the battle for nickel found in Pechenga brought changes to the area when the rapids of the Pasvik River were needed for energy production to melt the nickel. Despite the changes the area has undergone, the river valley with its surroundings has preserved its natural values and the diversity of species. The specific features of the area make it an attractive nature and culture destination.

2.1 Protected areas in Pasvik and Inari

The planning area comprises the 5 protected areas and their surroundings in Finland, Norway and Russia. Vätsäri Wilderness Area in Finland is located in the Inari Municipality in the county of Lapland. In Norway, altogether three protected areas are situated in the area: Øvre Pasvik National Park, Øvre Pasvik Landscape Protection Area and Pasvik Nature Reserve. The protected areas are located in the Municipality of Sør Varanger, in the County of Finnmark. Pasvik Zapovednik in Russia is situated in Municipality of Pechenga, Murmansk Region.

The Pasvik-Inari area is part of the Green Belt of Fennoscandia, a chain of protected areas from the Barents Sea to the Baltic Sea. The Green Belt idea dates back to early 1990s when the Russian border zone of the 1,250 km borderline between Finland and Russia narrowed and, at the same time, extensive loggings were planned in valuable, intact forest landscapes in the border area. The Green Belt of Fennoscandia aimed at protecting biodiversity and promoting cooperation in nature conservation, research and culture, as well as creating an extensive protected area network on both sides of the border. The idea has been actively promoted by scientific institutes and non-governmental organisations in both Finland and Russia. The Green Belt is not a continuous area but a network of existing and planned protected areas.

2.1.1 Finland

Vätsäri Wilderness Area (1550 km²) is one of twelve wilderness areas in Finland. The wilderness areas were established in 1991 to protect the wilderness characters of the areas, to safeguard Sámi culture and traditional subsistence uses and to develop the potential for diversified use of nature. The combined area of Finland's wilderness areas measures 14 890 km². The wilderness areas are managed by Metsähallitus Natural Heritage Services.

The wilderness areas in Finland were designated under the Wilderness Act of 1991 (62/1991). Although the areas are not directly designated under the Nature Conservation Act, they do serve the conservation aims. Vätsäri Wilderness Area is also part of the Finnish Natura 2000 network (FI1300204), which places the wilderness area under sections 65 and 66 of the Nature Conservation Act (1096/1996). Vätsäri Wilderness Area includes the northeastern part of Lake Inari. The southern/southwestern part of the lake, measuring ca 900 km², is also part of Finland's Natura 2000 network (Lake Inari FI 130 0212).

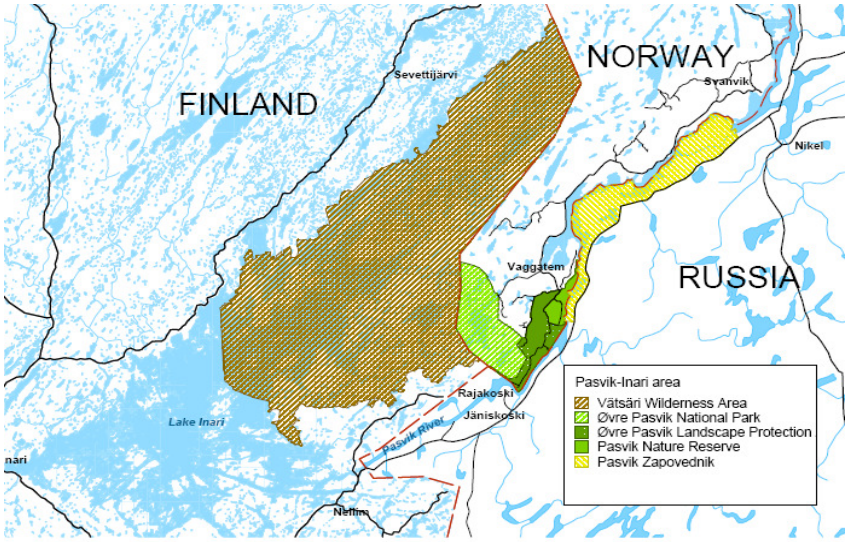

Fig 2. Protected areas in Pasvik-Inari

2.1.2 Norway

There are three nature protection areas that belong to the Norwegian part of Pasvik-Inari Trilateral Park: Pasvik Nature Reserve, Øvre Pasvik National Park and Øvre Pasvik Landscape Protection Area. All areas are established through the Nature Conservation Act and managed by the Office of the County Finnmark Governor.

Øvre Pasvik National Park is one of 28 National Parks in Norway. The national park was first established in 1970. In 2003, it was extended from 66 km^2 to 119 km^2. National parks in Norway are established in order to protect large areas without major infrastructure development with characteristic nature conditions or beautiful landscape. Consideration for outdoor life may also be a part of the aim of the protection. In national parks, the landscape is protected with its plants, animals and relics of culture.

Øvre Pasvik Landscape Protection Area was established in 2003 at the same time that Øvre Pasvik National Park was extended. The area is 54.2 km^2. Landscape Protection Areas in Norway are established in order to protect characteristic and beautiful natural or cultivated landscapes. Protection of the overall landscape is important here, and activities that may change the character of the landscape are usually prohibited.

Pasvik Nature Reserve was established in 1993. The area is 19.1 km^2. The nature reserve has a twin reserve on the Russian side of the border, Pasvik Zapovednik. Nature reserves in Norway are established in order to protect certain characteristic nature types that are intact or nearly intact, and also areas that are important for educational and scientific surveys. Nature reserves may be protected for certain objects such as forest reserves, mire reserves and bird reserves. Nature reserve is the strictest form of protection in the Nature Conservation Act. Pasvik Nature Reserve is also included in the Ramsar List of Wetlands of International Importance.

2.1.3 Russia

Pasvik Zapovednik was established in 1992, by two governmental decisions: Resolution of the Government of the Russian Federation No 493, from 16.07.1992 and Order of the Ministry of the Nature Resources No 202 from 08.09.1992. The whole territory of Pasvik Zapovednik is under the supervision of the Ministry of the Nature Resources of the Russian Federation. The total area is 147.27 km^2. This land was excluded from the territory of Pechenga Forestry (Act No 283 from 27.08.1993) and handed over for the lifelong and free use within the frames of Pasvik Zapovednik.

The main goals of the Pasvik Zapovednik are: protection of the aboriginal northern pine forests in Europe and Russia, complex monitoring of the northern ecosystems, protecting the wetlands of global importance, protection of the northern micropopulation of the elk and protection of the cultural heritage of global importance. The brown bear population, golden eagle and the waterfowls are included in complex monitoring.

2.2 IUCN categories of the protected areas

In IUCN (World Conservation Union) protected area management categories, Vätsäri Wilderness Area is classified in category VI: “Managed Resource Protected Area: protected area managed mainly for the sustainable use of natural ecosystems”. The areas belonging to this category are defined as: “Area containing predominantly unmodified natural systems, managed to ensure long-term protection and maintenance of biological diversity, while also providing a sustainable flow of natural products and services to meet community needs.” (IUCN 1994.)

Øvre Pasvik National Park is classified in category IUCN II: “National Park: protected area managed mainly for ecosystem protection and recreation”. The areas belonging to this category are defined as: “Natural area of land and/or sea, designated to (a) protect the ecological integrity of one or more ecosystems for present and future generations, (b) exclude exploitation or occupation inimical to the purposes of designation of the area and (c) provide a foundation for spiritual, scientific, educational, recreational and visitor opportunities, all of which must be environmentally and culturally compatible.” (IUCN 1994.)

Øvre Pasvik Landscape Protection Area is classified in category IUCN V: “Protected Landscape/ Seascape: protected area managed mainly for landscape/seascape conservation and recreation”. The areas belonging to this category are defined as: “Area of land, with coast or sea as appropriate, where the interaction of people and nature over time has produced an area of distinct character with significant aesthetic, ecological and/or cultural value, and often with high biological diversity. Safeguarding the integrity of this traditional interaction is vital to the protection, maintenance and evolution of such an area.” (IUCN 1994.)

Pasvik Nature Reserve is classified in category IUCN Ib: “Wilderness area: protected area managed mainly for wilderness protection”. The areas belonging to this category are defined as: “Large area of unmodified or slightly modified land and/or sea, retaining its natural characteristics and influence, without permanent or significant habitation, which is protected and managed to preserve its natural condition.” (IUCN 1994.)

Pasvik Zapovednik is classified under the IUCN category Ia: “Strict nature reserve/wilderness protection area managed mainly for science or wilderness protection”. The areas belonging to this category are defined as: “An area of land and/or sea possessing some outstanding or representative ecosystems, geological or physiological features and/or species, available primarily for scientific research and/or environmental monitoring.” (IUCN 1994.) All tourism activities are prohibited. The only part of Pasvik Zapovednik territory which can be used as an ecological tourism route is in Varlam Island (Regulation act of Pasvik Zapovednik item No.6.4).

3. Background

3.1 Landscape and nature

The Pasvik River and the surrounding wilderness are located in the northwest edge of the taiga, boreal forest zone, from where the subalpine mountain birch forest extends towards the north. Large marshes surround the river and the continuous pine forest fragmented by small bogs and lakes covers a large area from Lake Inari to Pasvik Zapovednik.

3.1.1 Climate and geology

The climatic conditions of the northern Europe are harsh both for plants and for animals. The summer is short and the winter lasts for months. The growing season lasts for 110–120 days. The difference between the average temperature of the coldest and warmest month is ca 28°C. The annual precipitation in the Pasvik River valley is ca 500 mm. Approximately half of the rain falls during the growing season.

Traces of the latest glacial period are evident. When the thick ice cover started to melt 10 000 years ago, a massive ice blockage on the upper course of the present Pasvik River blocked the melted water and created a vast basin. When the blockage melted, the water burst along the new course towards the Barents Sea. When the weight of the ice cover was eased, the earth's crust arose and the water connection to the sea was diminished to what it is today.

The moving ice bulk carried rocks and stones with it. The moving ice cover rubbed off the rock material and uncovered the bedrock from some areas and formed gravel mounds in other places. Today one can see remnants of the deposits of the glacier streams as eskars, moraine mounds and large boulders which are usually caused by waves or frost heaves.

3.1.2 Vegetation

Vegetation in the barren wilderness is modest due to the barren ground and harsh climatic conditions. In the vast pine forests surrounding the Pasvik River, Scots pine (*Pinus sylvestris*) dominates. Birch (*Betula pubescens*) is the most common deciduous tree, but in addition goat willow (*Salix caprea*), aspen (*Populus tremula*) and rowan (*Sorbus aucuparia*) grow in the forest. Bird cherry (*Prunus padus*) is found at lush river shores.

In the core of the wilderness, the pine forest has developed without great impact from human activities. In addition, the Russian border district has been partly unreachable by people. Øvre Pasvik National Park is the largest old growth forest in Norway. Old, thick and short pines grow in the surroundings of the highland of Vätsäri. The birch forest of the Vätsäri highland never recovered from the defoliation caused by the outbreak of the autumnal moth (*Epirrita autumnata*) larvae in the 1960s and other areas were also partly damaged.

Typical ground vegetation of the pine forest consists of coarse brushes. The closeness of the sea affects the flora especially in the northeast part of the area where the snow cover is thin and the temperatures are lower during the winter. Dwarf cornel (*Cornus suecica*), oak fern (*Gymnocarpium dryopteris*) and mosses are common. Species typical of alpine heath are few.

The Pasvik-Inari area lies between vegetation zones where both eastern and southern influences affect the vegetation. Some species common in other parts of Finland and Russia, such as the silver birch (*Betula pendula*) and arctic raspberry (*Rubus arcticus*) are less abundant in Pasvik. Examples of the eastern influences are Siberian spruce (*Picea abies spp. obovata*), and red cottongrass (*Eriophorum russeolum*), which are less common elsewhere in Norway.

Special vegetation grows on the shores of the springs and ponds and on the rims of the swamps. On the wetlands in the Pasvik River surroundings, one may find interesting sedge species like Lapland sedge (*Carex lapponica*) and weak sedge (*Carex laxa*). Orchids are typical wetland species. The most typical orchids on bogs are spring's early purple orchid (*Dactylorhiza maculata*) and the southern creeping lady's tresses (*Goodyera repens*).

3.1.3 Fauna

The Pasvik River and the surrounding wetlands comprise an important habitat for several bird species. The rich bird fauna is concentrated on the wetlands near the Pasvik River. The core of the Pasvik Nature Reserve is Lake Höyhenjärvi (Fjærvann), the most untouched area of the Pasvik River. The ice melts early in the spring and the lake freezes late in the autumn. This is an important resting place for several migratory birds. Also nesting birds, such as ducks and waders, are abundant.

Several eastern species nest in the forests near the Pasvik River, for example the Siberian tit (*Parus cinctus*), the Siberian jay (*Perisoreus infaustus*) and the waxwing (*Bombycilla garrulus*). The pine grosbeak (*Pinicola enucleator*), the brambling (*Fringilla montifringilla*) and the three-toed woodpecker (*Picoides tridactylus*) are also common. The most abundant grouses are capercaillie (*Tetrao urogallus*) and willow grouse (*Lagopus lagopus*).

The abundance of many predators, such as the most typical bird of prey, the rough-legged buzzard (*Buteo lagopus*), depends on the abundance of voles. Vole stock varies periodically, and if the voles are few in number, the buzzards do not start nesting. Efforts are made in all three countries to find the nesting territories of the rare northern species, golden eagle (*Aquila chrysaetos*).

The fauna has changed over the years. Beaver (*Castor fiber*) was a valuable trade commodity, and therefore is today extinct. Before the Second World War, wolf (*Canis lupus*) was common but today only some wandering individuals cross the area yearly. The elk stock (*Alces alces*) has grown due to the logging.

The brown bear (*Ursus arctos*) population is lively. The greatest brown bear population of Norway inhabits the Pasvik Valley. The bear stock in Pasvik is part of a greater Russian bear population. One third of Norwegian bears live in Pasvik and research of the species is centralised in Øvre Pasvik.

Wolverine (*Gulo gulo*) used to be abundant, but despite protection it is a rare visitor today and does not reproduce in the area. A wolf or a lynx (*Lynx lynx*) is seldom seen. The most abundant predators are fox (*Vulpes vulpes*), stoat (*Mustela erminea*) and pine marten (*Martes martes*). Mink (*Mustela vison*) familiarised in the Pasvik River surroundings but is less abundant in the wilderness. Of the southern species also racoon (*Nyctereutes procyonoides*) has been observed rarely.

Reindeer (*Rangifer tarandus*) economy is one of the main sources of livelihood in the north. The wilderness is a huge pasture. Approximately 6000 reindeer pasture in the forests of Vätsäri and Øvre Pasvik. The herds pasture on different areas depending on the season and availability of food. A fence prevents the reindeer form wandering across the national borders. The fence limits also the distribution of other big animals but does not completely prevent crossing the border. In Pasvik Zapovednik, the

reindeer are not allowed to pasture. However, some herds cross the Norwegian-Russian border to enjoy the lichen but they are banished to Norway.

3.1.4 The catchment area

The catchment area of the Pasvik River is wide. Most of the streams in Vätsäri flow into Lake Inari and end up in the Pasvik River. The distance from the headwaters of the River Ivalo, which flows into Lake Inari, to Bøkfjorden at the Barents Sea is 380 km. The Pasvik River is 147 km long, at an altitude of 119 meters.

Fishing is practised both for living and for leisure. Today, the most important catch in the Lake Inari is whitefish (*Coregonus sp.*), although plenty of vendace (*Coregonus albula*) is also caught. The vendace became accidentally naturalised in the lake, and became so abundant that trawls were used to catch the fish. This proved not to be profitable in the long run. The whitefish is caught also in the Pasvik River, where also pike (*Esox lucius*) and perch (*Perca fluviatilis*) are important catches. Trout (*Salmo trutta*) is a well-respected catch of the small streams.

3.1.5 The effects of nickel industry and regulation

The Pasvik River is rich in waterfalls and energy. Melting the nickel from Pechenga in a factory at the Kolos River required great amount of energy. Jäniskoski rapid was harnessed already in 1942. This first hydroelectric plant was bombed by the German troops withdrawing from Pechenga in 1944. New hydroelectric plants were built after the war, and altogether seven plants have been built along the Pasvik River; five Russian and two Norwegian.

Regulation has brought several changes to the environment. The stations block fish migration routes, and therefore the local fish populations have been formed between the stations. In addition, the river flows more slowly, which has caused overgrowth in the shallow areas. The fish thriving in the rapidly flowing water, such as brown trout (*Salmo trutta*) and grayling (*Thymallus thymallus*) have suffered from the changes while pike, perch and whitefish have benefited from it. (Inari-Pasvik 1996.) According to the recent studies have the level of the water surface has affects spawning of the pikes. Decrease in water level at some spawning areas causes fish egg drainage. (Paul Eric Aspholm, phone conversation.)

Flooding is prevented and the vegetation on the shores is threatened because of the damming and earthwork. The disappearance of the grasslands on the shore shrinks the habitats typical of several plant species. For example the bluntleaf sandwort (*Moehringia lateriflora*) has vanished from the shores.

In Lake Inari, the regulation changed the natural rhythm of water level. Now the water level is highest during the autumn and is lower during the winter. The water level is very low when the ice starts to melt during the spring. In shallow waters, the ice stuck in the bottom destroys vegetation and harms the fauna, for example the reproduction of those fish that spawn in the autumn. Due to the regulation of the waters the highest water level is half a meter higher than naturally. (Puro & Maunuvaara 1997.)

The fish in Lake Inari were affected by the regulation so strongly that new species were planted in the lake. Such planted species were lake trout (*Salvelinus namaycush*), muksun (*Coregonus muksun*) and vendace (Coregonus albula). (Puro & Maunuvaara 1997.) Other animals have also been affected by the changes. The otter (*Lutra lutra*) has not been seen for years

The changes in the environment are reflected by the changes in the bird fauna. White-throated dipper (*Cinclus cinclus)* for instance, is rarely seen today. The regulation of Lake Inari has presumably affected

nesting of the black-throated diver (*Gavia arctica*). When the water level rises towards the end of summer, the nests drown under water.

Also the emissions from industry have caused problems in the aquatic and terrestrial environments. In Russia, the environmental effects have been massive. When the wind has blown from the east, the pollutants have increased also in the surroundings of the Pasvik River and in Inari. According to the previous studies on pollution, the emissions have affected for example the lichen cover and the needles and roots of the pine trees. Although the emissions are now lower than in the 1980s, the measured SO^2 concentrations in the Nikel area are still above the critical level for sensitive biota. The heavy metal concentrations in Svanvik are significantly higher than those in the southern part of Norway and Russia.

3.2 Cultural heritage

3.2.1 Inhabitants

Finns, Norwegians and Russians
Since prehistoric times, the Pasvik River Valley and Inari area has been the meeting place of different tribes and cultures. Through the centuries, a multi-cultural population has formed in the area. The Skolt Sámi and Inari Sámi are the indigenous people of the Pasvik River and Lake Inari. Before the Middle Ages, the evasive Finnish, Norwegian and Russian tradesmen had vivid trade contacts with the Sámi population living in the area. At first, the tradesmen had also a right to collect taxes from Sámi people, but eventually taxation was totally organised by states of Sweden-Finland, Denmark-Norway and Russia. From the 17th century onwards, the laws and acts were made in each country to promote the spreading of peasant settlement northward. Gradually the border between the Sámi and other settlers vanished. Also, the immigration of Finns to the Norwegian Pasvik Valley and Varangerfjord took place between 1850-1870. Nowadays, the majority of inhabitants in Finland are Finns, in Norway Norwegians and in Russia Russians.

Sámi
At present Inari Sámi, Skolt Sámi and also Northern Sámi are living in three different countries: Finland, Norway and Russia. Sámi have the status of indigenous people in Finland and Norway. In Finland, the Sámi have a self-government body, the Sámi Parliament (Sámediggi), the existence of which was certified by the Act of the Sámi Parliament (974/95). In Norway, there is also a Sámi Parliament (Sámediggi), established in 1989 by the Act of the Sámi Parliament based on Sámi rights.

Inari Sámi have lived in one state and within one municipality surrounding Lake Inari, throughout the historic era. Other Sámi groups and Finns have settled in the Inari region later on. According to historic and remembered information as well as place names, the original living area of Inari Sámi was once more extensive.

The traditional living area of Skolt Sámi in the Kola Peninsula has extended from Neiden to Pechenga and to Tuuloma Lapland. The setting of boundaries between three empires has many times brought difficulties to the Sámi way of life. An enormous change for Skolt Sámi was caused after the Second World War, when Finland lost the area of Pechenga. As a result, Skolt Sámi lost their native lands in Pechenga, and they were resettled in the villages of Sevettijärvi and Nellim with the help of the Finnish Government in 1949. Skolt Sámi are Orthodox in religion. Most Skolt Sámi live in the so-called Skolt Sámi area, which is situated in the eastern parts of the municipality of Inari and to the south, south-east and north-east of Lake Inari. In Russia, most of them have been colonised by the state in the area of

Lovozero. In Norway, Skolt Sámi live around Neiden and Pasvik, but most of them are blended into the majority population.

Northern Sámi – also called as the reindeer or fell Sámi – have lived a nomadic life, migrating along with the reindeer herds. Reindeer economy spread to Lapland in the 17th century. The reindeer Sámi of Varanger area had their winter pastures in the surroundings of Lake Inari. In 1852, the closing of the border between Norway and Finland caused dramatic changes to the migrating life. Since the 1860s, many reindeer Sámis moved to the Finnish side of the border with their herds and gradually multiplied the amount of reindeer in Utsjoki and Inari.

3.2.2 Sources of livelihood

Hunting, fishing and gathering were the only means of survival during prehistoric times in harsh conditions. The life of hunter-gatherers followed the regular events of nature and moved after the game and good fishing places. Cultural features of these small societies have been impacted by the most dominant source of livelihood.

Reindeer economy and agriculture

Reindeer economy is a circumpolar culture element which has strongly influenced the native societies. The Sámis' reindeer economy has developed during centuries since the Middle Ages. People have moved along with the herds, and the life of the reindeer has determined the yearly cycle. Despite the border lock beginning in the 19th century, the herds passed across the country borders until the 1950s, when the border fences were built. It influenced strongly the reindeer economy, and some areas were divided into summer and winter pastures.

In Finland, the reindeer herding is controlled by the Reindeer Herding Act (848/1990) and the reindeer owners' association is the highest governing body in reindeer economy. Vätsäri Wilderness Area is divided between four reindeer associations: Muddusjärvi. Näätämö, Paatsjoki and Vätsäri. In Norway, the Reindeer Management is the highest governing body in reindeer economy. In the Norwegian part of Pasvik, one reindeer grazing district remains: the Pasvik reindeer grazing district. In Russia, the reindeer economy vanished gradually following the Russian revolution. Reindeer were gathered to collective ownership, for which reason there are no reindeer on the Russian side of the Pasvik River Valley anymore.

On the Norwegian coast, sheep, cows and goats were known already in the Middle Ages when the permanent Norwegian settlement had spread to the fjords and islands. In the inland areas of Russia and Finland, animal husbandry and agriculture spread northwards along the Finnish settlement in the 17th century. Nowadays, the agriculture in Russia and Finland has minor importance. In Finland, mostly hay fields are made for the reindeer. In Norway, there are active farms left in Pasvik.

Timber works and the wood industry

Forests of the Pasvik-Inari area were harvested already in the 17th century, when the Norwegian Arctic Sea coast needed wood for firewood and for building boats and houses. In spite of the fact, that Metsähallitus was established in 1859 to administer and manage the state-owned forests, there were wild loggings in Vätsäri Wilderness Area in the 19th century. The situation did not settle down until 1913.

During the 19th century, the sawmill industry spread rapidly from the south towards the intact raw material sources of the north. In Russia, sawmills were erected at first along the Arctic Sea coast and, later, in Finland. In the Government of Archangel, there were 8 mills in 1861, and by 1900 the amount of sawmills was increased to 34. The opening of the A/S Sydvaranger iron mine in Kirkenes intensified sawmill and logging activity in the area in the beginning of the 1900s.

In Finland, massive logging started in the 1920s when Metsähallitus sold 2 million logs to a Norwegian-English company, Atif. It delivered the timber to the sawmill of A/S Pasvik in Jakobsnes on the Pasvik River. The loggings and timber floating employed many people in the 1920s and 1930s. In the early 1940s, German and Austrian solders cut down forests in order to get firewood around Pechenga. Also building of the Nikel smeltery and mine on the Kolosjoki River and erecting of the Jäniskoski power station with its rationing dam needed raw material. The German exploitation of firewood brought about large clearcuts in the Norwegian parts of the Pasvik Valley. Timber was floated for the last time from Lake Inarijärvi along the Pasvik River in the summer of 1945.

Nowadays, the forest cuttings are possible only on the commercial forest area of Metsähallitus and on the private land in Vätsäri Wilderness Area. The cuttings are defined in the natural resource plan. No cuttings are planned in Vätsäri (Sihvo et al. 2006). In the Norwegian part of Pasvik, forestry is allowed only outside the protected areas. There are some commercial forest areas in the Russian Pechenga district, but they are neither in use today nor planned to be used in the near future.

Mines, foundries and hydroelectric power stations

The establishment of an iron mine in Kirkenes the beginning of the 20th century gave an impetus for industrialisation. The Kolosjoki River smeltery in Pechenga was opened at the beginning of the 1940s. As a result of industrialisation, the Pasvik River was harnessed to produce electricity and extensive areas of forests were felled on the shores of the river and in the southern part of the Vätsäri Wilderness Area from the beginning of the 20th century until the Second World War.

After the Second World War, there was a standstill due to the Cold War. In spite of that Finland, Norway and Russia made an agreement in 1959 about the regulation of Lake Inari and the Pasvik River which is valid even today. Seven hydroelectric power stations have been constructed on the river. Power stations had positive effects on the local economy and daily life by ensuring delivery of electricity and employing local inhabitants. On the other hand, damming caused loss of territory along the river banks. Many people had to leave their houses, and archaeologists had to evacuate also one Skolt Sámi cemetery. Subsequent, studies have indicated that regulation has had negative effects on such species which need strong flowing water. In Lake Inari, the regulation has also caused erosion of the shores, reduction in the propagation of lake-bottom animals and decline in the natural fish populations.

Present situation

Nowadays, the sources of livelihood in trilateral Pasvik-Inari area vary a lot. Many people earn their living from different kinds of service trades, and many of these trades are connected with tourism. As there are many reindeer herders and some farmers in the area, the extractive industry also employs local inhabitants. The number of construction sites varies from place to place, and skilful construction workers are wanted in all countries. On the Finnish side, the electric, water and gas power supply and industry are in minor importance, but on the Norwegian and Russian side, they employ a large amount of population.

3.3 The regulations, acts and management plans in the protected areas

Various practices and laws, rules and regulations guide the use and management of the protected areas. Since the legislation in the three countries differs and the areas have a different protection basis, an attempt was made to compile the adequate information concerning the management and legislation in order to recognise differences and avoid misinterpretations. International agreements related to the area and cooperation area described in annex 4.

3.3.1 Finland

Vätsäri Wilderness Area

According to the **Wilderness Act** (62/1995) the aims of wilderness areas are to protect the wilderness characters of the areas, to safeguard Sámi culture and traditional subsistence uses and to develop the potential for diversified use of nature.

The Wilderness Act prohibits heavy development that would cause significant changes in the nature, yet it aims at improving possibilities for traditional uses of nature. Wilderness legislation explicitly prohibits mining, building permanent roads, giving or renting land for purposes other than reindeer herding, fishing, hunting or picking berries and mushrooms, unless permission isgranted by the Council of State. In addition to the Wilderness Act, numerous other laws and statutes relating to hunting, fishing, reindeer herding, off-road traffic, etc. regulate the management and use of the wilderness areas. Cross-country traffic for example is guided by the Off Road Traffic Act (1995/1710).

The second aim, safeguarding Sámi culture and natural livelihoods, stipulates that the wilderness areas support reindeer herding, hunting, fishing and collecting. The guidance of these livelihoods is based on other legislation (Reindeer Husbandry Act 848/1990, Hunting Act 615/1993 and Fishing Act 286/1982).

The third aim, developing the potential for diversified use of nature, may be understood as developing the preconditions of recreational use and hiking. The forests are preserved in the natural state, only limited forestry is allowed. The instructions for forestry are considered when compiling the management plan (HKS 2007).

Vätsäri Wilderness Area is part of the Finnish **Natura 2000 network** (FI1300204). This places the wilderness area under sections 65 and 66 of the Nature Conservation Act (1096/1996), according to which an impact assessment is needed when planning projects with possible significant adverse effects on the ecological value of the area. The same shall correspondingly apply to any project or plan outside the site, which is liable to have a significantly harmful impact on the site. The authority in charge of granting the permit or approving the plan shall see that the assessment is carried out.

The Wilderness Act guarantees the maintenance of the favourable conservation status. The favourable conservation status for natural habitats and species is defined in Article 6 of the Habitats Directive (92/43/ETY). The use and management of the area is defined based on the Wilderness Act and the management plan. The use and management of the wilderness area is planned by Metsähallitus and the plan is ratified by the Ministry of Environment.

The legal guarantees regarding the position of **legal residents and the Sámi** have been incorporated into the Act on Metsähallitus (1378/2004) and according to the Degree on Metsähallitus (1380/2004) Metsähallitus may appoint cooperation groups to the Sámi homeland with representatives of the local

population. Rights of the local residents are acknowledged and special permissions are granted according to the legislation. According to the Skolt Act (253/1995), the Skolt Sámi are given exemptions concerning the use of the area. The Skolt Sámi village meeting (kolttien kyläkokous) or Skolt Sámi Council (Kolttaneuvosto) may comment issues concerning the Skolt Sámi area. The Act on Sámi Parliament (974/1995) states that the authorities shall negotiate with the Sámi Parliament in all far-reaching and important measures which may directly and in a specific way affect the status of the Sámi as an indigenous people and which concern the far-reaching matters in the Sámi homeland.

The **Management Plan for Vätsäri Wilderness Area** (HKS 2007) guides the actions planned by the authorities. In the management plan the guidelines have been drawn for the use and management of the area as a result of several meetings and discussions between the different stakeholders. The plan was ratified by the Ministry of Environment in October 2007.

In the management plan, an attempt to match the various aims of the Wilderness Act is made by proposing the zonation of the Vätsäri Wilderness Area. The zonation does not affect the rights of the local people, concerning for example fishing or hunting but guides the management of the area. The area is divided into four zones in which different aims are emphasized. The diverse use is concentrated on the first zone, which consists mostly of water and where the recreational use is vivid. This first zone is limited to the shores of Lake Inari. At the other end of the continuum is the fourth zone, the core area where wilderness preserving values are emphasized. The fourth zone is used only for traditional livelihoods and no recreational structures will be built there. This regulation is valid also on third and second zones with more flexibility. The concept of recreational use has no implication of business activities. Preconditions for nature tourism are developed in the wilderness area. However, the preconditions for recreational use may be developed in the first and second zones. The participatory approach will be used when planning new routes. (HKS 2007.)

The land use of the state-owned areas surrounding the Vätsäri Wilderness Area is defined in natural resource planning. **The Natural Resource Plan** of the area (Sihvo et al 2006) was recently updated. The main principles in future development are to maintain the existing structures, preserve their good quality and direct new investments to the priority areas, defined in the plan. One of the priority areas is the planned Inari Outdoor Recreation area that extends to the eastern shores of Lake Inari and overlaps partly with the Pasvik-Inari covering the village of Nellim. Also the surroundings of the Sevettijärvi village have potential for nature tourism and the future development depends largely on the interests of the local inhabitants.

3.3.2 Norway

The three Norwegian nature protection areas included in Pasvik-Inari Trilateral Park are all established through the Nature Conservation Act. Although the detailed protection rules and regulations differ, some rules and regulations are common for all of the areas. The area-specific rules and regulations are described in the respective sections.

The use and management of the National Park is planned by the Office of the County Finnmark Governor, and the management plan ratified by the Directorate for Nature Management. The Office of the Finnmark County Governor is a state-run public office whose tasks are primarily budget-funded public administration duties. The State Nature Inspectorate's (SNO) office in Kirkenes is responsible for inspection of the National Park and other nature protection areas in Pasvik. The tasks are described in the Act of Nature Inspection and include information tasks, guidance and practical work concerning maintenance of information material and signs in the protected areas.

The protection rules for the protected areas are to be observed when making administrative decisions concerning the national park. No authority is empowered to grant a permit for the implementation of a project, or to adopt or ratify a plan, if the assessment procedure indicates that the project or plan would have a significant adverse impact on the particular ecological value for the protection. The use and management of the area is defined based on the protection rules and a management plan.

The age-old concept of everyman's rights gives everyone the basic right to roam freely in the countryside, without need to obtain permission when further restrictions due to other legislation are not in force.

Fishing is allowed in the entire area according to the Act of Salmonid and Inland Fish. However, special rules apply to foreigners; foreigners are not allowed to fish in the main river of Pasvik. Foreigners may fish in tributaries and lakes in a zone up to 5 km away from classified roads. Local nature tourism enterprises may be given permission to organise fishing trips outside the 5 km zone. Fishing with nets is only allowed for citizens of Finnmark County.

Hunting is forbidden in Pasvik Nature Reserve (except for elk hunting) and in a part of Øvre Pasvik National Park. Elsewhere hunting is allowed according to the Wildlife Act.

A number of other acts regarding reindeer herding, pollution, relics of culture, etc. also apply in the management of the protected areas.

3.3.2.1 Øvre Pasvik National Park

According to the Nature Conservation Act, the main aim of establishing **national parks** is to protect untouched nature for ourselves and for our descendants. The parliament has repeatedly underlined that establishment of national parks is also motivated by an aim of ensuring public access to recreation and outdoor life in an untouched or beautiful nature. The aim of the protection is often many-sided: scientific, aesthetic and recreational. Furthermore, national parks must comprise state own land. National parks are distinguished by their size, and by mainly comprising untouched wilderness without major technical disturbance. The Nature Conservation Act demands that the landscape with plants, wildlife and relics of culture are to be protected against development, construction, pollution and other disturbances. Cutting, planting, road construction, motorised traffic and construction of cabins, boat houses etc. is usually strictly regulated. Livestock grazing and reindeer grazing, simple outdoor life, hunting and fishing, and picking of berries and mushrooms are examples of activities which are usually not restricted in national parks. Neither are use and maintenance of lodging and other buildings. Management of large carnivores is not affected by national park protection.

The specific aim of Øvre Pasvik National Park is: "– – to protect a large continuous coniferous forest area that is essentially untouched by technical disturbances, to protect a forest ecosystem with a distinct and varied biological diversity, to safeguard the range of distribution of nature types in the region and to conserve landscape formations, characteristic geological formations and relics of culture. To attend to the nature resources inside the national park is important for Sámi culture and trade. The area can be used to reindeer herding, nature experience and traditional and simple outdoor life with little extent of technical preparation."

In the **Management Plan for Øvre Pasvik National Park and Øvre Pasvik Landscape Protection Area** (in prep.), the protection rules of the areas are elaborated and concretised.

The management plan is made by the County Governor in step with local users and stakeholders of the areas. A consultative committee has been appointed with representatives from Sør-Varanger municipality, the reindeer herder district, tourist organisations and other stakeholders. The consultative committee has assisted the County Governor with the making of the management plan through a number of meetings.

The management plan aims at increasing the predictability for users in questions regarding management of the protected areas. The overall aim with the management of the areas is to save the natural qualities for the future according to the aim of the protection. It is, thus, important to base the management on long term guidelines such that the protected areas are saved in best possible manner for our descendants. The main challenge is to practice a management that saves the natural qualities and at the same time allows the area to be used for reindeer herding, hunting and fishing, outdoor recreation and nature tourism within the scope of the protection rules.

In order to avoid traffic in the most vulnerable areas, a key issue in the management plan is to channel traffic towards certain areas that are prepared for visitors; e.g. boardwalks, information signs and open cabins.

In Øvre Pasvik National Park, one may hike, ski, row and paddle all over. Organised tourist activities and organised tent camps, however, need to apply for permission.

Picking berries, mushrooms and flowers is allowed, unless they are protected species. Everyman's rights also allow to stop and rest, swim or sunbathe. Camping for short periods is allowed as long as it causes no disturbance. Use of fallen trees and branches and dry branches for fire is allowed, except from dry pines.

3.3.2.2 Øvre Pasvik Landscape Protection Area

According to the Nature Conservation Act, the main aim of establishing **landscape protection areas** is to protect distinctive or beautiful nature or cultural landscapes. The levels of restrictions are on the whole lower than for other forms of protected areas. In a landscape protection area, activities or actions that may considerably change or affect the nature or character of the landscape are prohibited. Examples of this are road construction, change of tree species composition and construction of cabins. Traditional agriculture may on the whole continue. Activities that to a large extent may affect the landscape such as large-scale clear cutting and tree planting may all the same be prohibited. A number of other acts regarding fishing, hunting, reindeer herding, outdoor life, pollution and relics of culture also apply in the management of the Landscape Protection Area (LPA).

The specific aim of Øvre Pasvik LPA is: "– – to protect a characteristic natural landscape and cultural landscape with a rich and varied biological diversity, to safeguard the range of distribution of nature types in the region and to conserve landscape formations and characteristic geological formations. To attend to the nature resources inside the landscape protection area is important for Sámi culture and trade. The area can be used to reindeer herding, nature experience and traditional and simple outdoor life with little extent of technical preparation."

The use and management of the LPA is planned by the Office of the County Finnmark Governor, and the management plan ratified by the Directorate for nature management.

In the **Management Plan for Øvre Pasvik National Park and Øvre Pasvik Landscape Protection Area** (in prep.), the protection rules of the LPA are elaborated and concretized.

Logging in Øvre Pasvik LPA may be carried out in accordance with the current protection regulations in the Forestry Act. All logging have to be approved in advance by the local forestry authorities and the management authority. Motorised traffic is regulated by the act of motorised traffic in outlying lands and waterways. According to this Act motorised traffic outside built up roads is prohibited as a rule. Use of snow mobiles along public snowmobile trails and necessary use of snowmobiles in connection with reindeer herding is allowed.

In Øvre Pasvik LPA, one may hike, ski, row, paddle as well as ride or cycle on established roads. Organised tourist activities and organised tent camps, however, need to apply for permission. Picking berries, mushrooms and flowers is allowed, unless they are protected species. Everyman's rights also allow to stop and rest, swim or sunbathe. Camping for short periods is allowed as long as it causes no disturbance. Use of fallen trees and branches and dry branches for fire is allowed, except from dry pines.

3.3.2.3 Pasvik Nature Reserve

Nature Reserve is the strictest form of protection in the Nature Conservation Act. Nature Reserves in Norway are established in order to protect certain characteristic nature types that are intact or nearly intact, and also areas that are important for educational and scientific surveys. Nature Reserves may be protected for certain objects such as Forest Reserves, Mire Reserves and Bird Reserves. The regulations in the Nature Reserves are "tailored" to protect concrete, described nature values. A number of other acts regarding fishing, hunting, reindeer herding, outdoor life, pollution and relics of culture also apply in the management of Pasvik Nature Reserve.

The specific aim of Pasvik Nature Reserve is: "– – to protect:

- A wetland area that is a very important breeding and resting area for many species of ducks, geese, waders and whooper swan.
- Parts of the Pasvik River where the original riverbed is intact.
- A classical locality with a rich history of nature and culture and great scientific and educational value, and to develop the cooperation on nature protection with Russia."

The use and management of the Nature Reserve is planned by the Office of the County Finnmark Governor. No management plan has been made for the reserve.

In order to avoid traffic in the most vulnerable areas, a key issue in the management is to channel traffic towards certain areas that are prepared for visitors; e.g. roads, boardwalks, information signs and a birdwatching shelter.

In Pasvik Nature Reserve, one may hike, ski, row and paddle. Organised tourist activities and organised tent camps, however, need to apply for permission. Picking berries, mushrooms and flowers is allowed, unless they are protected species. Everyman's rights also allow to stop and rest, swim or sunbathe. To camp and put up tents are not allowed. Use of fallen trees and branches and dry branches for fire on the spot is allowed. Motorised traffic is allowed on roads only.

3.3.3 Russia

The Federal State Nature Reserve Pasvik (Pasvik Zapovednik) is a conservative, research, ecological and enlightening institution aimed at conserving and studying natural processes and phenomena, genetics and biodiversity of flora and fauna, individual species, typical and the unique ecological systems. All human activities, such as hunting, fishing, road building, geological works, etc., are forbidden. The territory can be visited either by Zapovednik staff or scientific specialists with the research purposes. In its activity, the reserve is guided by the Russian Federation Constitution, federal laws, decrees and regulations issued by the Russian Federation Government.

Establishing documents of the Pasvik Zapovednik are:

- Regulation of Russian Federation Government - ¹493 on 16.07.1992;
- Regulation of Murmansk region Administration - ¹238 on 29.04.1992;
- Order of Ministry Ecology and Nature Resources of Russian Federation – ¹202 on 08.09.1992.

Leading documents are:

- Federal Law "About Environmental protection" - ¹07-FL on 10.01.2002;
- Federal Law "About special protected areas" - ¹33-FL on 14.03.1995;
- Forest codex of Russian Federation

The main document, **Regulation of Pasvik Zapovednik**, is the base for management and planning. According to these regulations, nature managers and visitors should be aware that the reserve is committed to (extractions):

- conservation of natural territories in order to keep their biodiversity and maintenance of the protected natural complexes and objects in their natural state;
- organisation and carrying out of research, including the keeping of the Chronicle of Nature;
- ecological monitoring;
- ecological enlightenment;
- participation in state ecological expertise for projects, household schemes and other installations;
- training of researchers and environmentalists;
- testing and duplication of a rational nature management methodology (free from environmental impact and depletion of natural resources) in the task plots of the reserve;
- promotion of international cooperation in the field of nature conservation, environmental studies and rational nature management.

Land and its depth, water, flora and fauna have been given to the reserve for permanent (unlimited) use on terms provided by the federal laws. Their withdrawal or deprivation of the reserve's title is prohibited.

Any activity conflicting with reserve's objectives and conservation regulations is to be prohibited in its territory, including:

- Activities changing hydrological regime of soil;
- Survey work and mining operations, top-soil dislocation, prospects and rock exposure;
- Wood chopping except stipulated by the established order; provision of turpentine, wood juice and medicinal herbs as well as forest management unless otherwise stipulated by the present Provisions;
- Haymaking, grazing, beekeeping, collection of wild fruit, mushrooms, nuts, seeds, flowers and other use of flora unless otherwise provided by the present Provisions;
- Organisation and building of farms, installations, premises, roads, overbridges, power lines and other communications apart from those necessary for the reserve's operation; construction permits for the objects provided by the Master plan are to be licensed under the RF law on local government and the Russian Federation town-planning code;
- Commercial, sports and non-commercial hunting, fishing and other use of fauna apart from the cases provided by the present Regulations;
- Trade and household pollution;
- Transit driving of domestic animals;
- Unauthorized presence, hiking and driving beyond the common use objects such as roads and waterways;
- Organisation of zoological, botanical, mineralogical and other collections except those provided by the reserve's research plan;
- Low level flights (lower than 2000 meters) and breaking in the territory of the reserve without getting authorization from its management or the Ministry for Natural Resources.

Activities permitted in the territory of the reserve:

- Conservation of natural complexes, their rehabilitation, prevention of changes within the natural complexes and their components as a result of man's impact;
- Provision of sanitary and fire safety for people, animals, natural complexes and objects;
- Prevention of hazardous natural phenomena (avalanches, stone falls, mudflows etc.) critical for people and settlements;
- Organisation of research and ecological monitoring;

- Ecological enlightening;
- Audit.

People who are not employed by the reserve and are not the civil servants of the agency in charge of the reserve are to stay in the territory of the reserve provided they have permission issued by this agency or by the reserve's administration.

Being a subdivision of the reserve, the state conservation inspection and its personnel are in charge of conservation of natural complexes and objects in the territory of the reserve and in the protected area.

The research in the reserve, its protected area and the national park area is aimed at investigating natural complexes, conducting a long-term monitoring of natural process development in order to make ecological evaluation and forecasts; working out scientific principals of nature conservation, keeping biodiversity and reproduction and using natural resources rationally. Research is carried out in accordance with provisions on research for state nature reserves of the State ecological committee of Russia, authorized by order of the State ecological committee on 10.04.98 N 205. The Deputy Director of science (1st Deputy Director) is in charge of organisation and implementation of the research in the reserve; the Deputy Director is appointed by the director under agreement with Administration for specially protected territories and objects, Ministry for Natural Resources of Russia.

Ecological and enlightening activity of the reserve is executed in accordance with the recommendations on organisation of ecological and enlightening activity in state nature reserves adopted by the Chairman of the State ecological committee of Russia on August 3, 1999.

3.3.4 Access to the border zones

The **Norwegian-Russian** border may only be crossed at the Storskog-Borisoglebskiy Border Checkpoint. Permission for crossing the border in another location must be applied for from the border commissionaires. The **Norwegian-Finnish** border may be crossed on foot anywhere, but due to Norwegian custom regulations no motorised vehicles may cross the border other than at the checkpoints. The closest checkpoint is Näätämö-Neiden. The **Finnish-Russian border zone** is restricted. A special permit is needed from the border office to enter the area. The Virtaniemi border station is not open for regular border crossing. The closest border checkpoint is located in Raja-Jooseppi.

Surveillance of the border between Norway and Russia is carried out on both sides by military border units. Both countries' border units are under instructions to ensure that the **Border Agreement**, 29 December 1949, is observed.

The Norwegian-Russian border is marked by posts in pairs opposite each other. Where the border passes overland, the posts are standing 4 m apart, and the borderline is midway between the posts. Where the border is formed by rivers, the posts stand on the banks of the rivers and the borderline follows as a rule the deepest channel.

Boats or vehicles to be used on border rivers have to be registered with the Norwegian Border Commissioner in Norway or the State Inspection of Small Sixe water crafts (in Russia). Registration plates must be fitted on the craft. The craft may only be used in border rivers during the hours of daylight. In the narrow parts of the Pasvik River, a craft is entitled to follow the main course without hindrance (even though the borderline does not follow it), on condition it is only passing through the Russian part of the river. All boats or vehicles must have official number and state flags.

The Schengen Agreement was signed in 1985 in Schengen, Luxembourg. The agreement refers to, among other things, abolishing passport control between the borders of certain European countries. In 2001 Norway and Finland became members of this agreement. The borders between the Schengen states may normally be crossed anytime, anywhere without person control.

As a consequence of entering the Schengen agreement, Norway also became obliged to sharpen the guarding and security of the border. Both the police and the military defense have thus received extra resources in order to take care of Norway's obligation. This has led to the construction of several border surveillance cabins and quays for patrolling boats, inside Pasvik Nature Reserve and Øvre Pasvik Landscape Protection Area. Also, a number of trails for military border patrolling 4WD motorcycles have been established in Øvre Pasvik Landscape Protection Area.

The border guard regime zone in Pasvik Zapovednik and surroundings was expanded in 2007. Pasvik Zapovednik and the surroundings are situated inside the border protection zone (Order of Federal Security Service (FSS) director No 452, from 28.09.2006, consummated from 01.01.2007). This means that one must obtain a permit from the Border Guard Office to enter the area. There are no precise rules for the foreigner visitors.

The licence to access the area must be obtained from the central office of Federal Security Service (FSS) of the Murmansk region. In the application form one must point the places of Pechenga district which he/she want to visit beforehand. The best way to apply for the licence is to do this with the help of tourism companies of Pechenga district (Boreas, VIS-tour, SLD).

The presence of Russian and foreign researchers and their activities in the Pasvik Zapovednik territory and the surroundings are to be agreed with the Russian Border Comissioner. Access is to be provided by the border guards in accordance with established procedure and permissions issued by the management of the reserve. Delegations and specialists need to cross the border at the Storskog-Borisoglebskiy checkpoint. Border guards are to accompany the personnel of the reserve.

Preparing the border permit for visit in Pasvik Zapovednik takes some time. All information needed (passport and visum data) must be sent to Pasvik Zapovednik administration in advance.

3.4 Laws and organisations concerning cultural heritage

3.4.1 Finland

The National Board of Antiquities preserves material cultural heritage in Finland; collects, studies and distributes knowledge of it. The board is a cultural and research institution, but it is also a government authority charged with the protection of archaeological sites, built heritage, cultural-historically valuable environments and cultural property, in collaboration with other officials and museums. The National Board of Antiquities of Finland is attached to the Ministry of Education. Also, Metsähallitus manages the territory of the Finnish Government and allows licenses to accomplish field investigations in that territory.

All ancient monuments and sites in Finland are protected under the provisions of the **Antiquities Act** (1963/295). Under the act "fixed antiquities are protected as reminders of Finland's past settlements and history. Without permission granted under this act it is prohibited to dig, cover, modify, damage, remove or physically interfere with antiquities". The act protects automatically without separate measures antiquities which are within definition of the act and prohibits action that might endanger the preservation of the relic. The act refers to both prehistoric and historic objects. Fixed relics do not have any age limit, and the most recent conservation measures concern defence works from the Second World War. The protection of prehistoric relics and antiquities is carried out by the Department of Archaeology of the National Board of Antiquities; the historical relics and sites are protected by the board's Department of Monuments and Sites; and the underwater relics by the Maritime Archaeology Unit.

The National Board of Antiquities has published an updated book with the Lapland Regional Planning Authority *The Fixed archaeological sites in Northern Lapland* (2005). In the area of Inari municipality there are a total of 852 known archaeological sites and around 450 of them are listed in this book. In Vätsäri Wilderness Area, there are only a few known cultural heritage or archaeological sites because the area has not been surveyed comprehensively. The known archaeological sites are situated around the villages of Nellim and Sevettijärvi, as well as on the shores of Lake Inari.

Three sites on the surroundings of Vätsäri Wilderness Area are mentioned as locally important traditional biotopes in the publication *Heritage landscapes of Lapland* by Metsähallitus and Lapland Regional Environment Centre. (Kalpio & Bergmann 1999). Also, Nellim village and the Skolt Sámi settlement of Lake Nellimjärvi are listed among the valuable provincial cultural landscapes in Finnish Lapland.

3.4.2 Norway

The Directorate of Cultural Heritage preserves material cultural heritage at the national level in Norway. The directorate is attached to the Ministry of the Environment. At the regional level, management of cultural heritage issues is divided between the County Municipalities and the Sámi Parliament, where the Sámi Parliament is responsible for Sámi relics of culture.

All ancient monuments and sites in Norway are protected under the provisions of the Act of Cultural Relics. This protection also applies to the relics of culture that are yet undiscovered. It is forbidden to damage, destroy, dig up, change, cover, hide or in other ways ruin these relics of culture. It is possible to be given dispensation from this protection for development purposes. This requires an archaeological survey by professional archaeologists paid for by the developer.

3.4.3 Russia

The National Institution preserves the cultural heritage in Russia. It collects, studies and distributes knowledge of the Russian cultural heritage and acts as a department of the Ministry of Culture in the Russian Federation. The protection of archaeological sites, built heritage, valuable environments of cultural history and cultural property, according to Russian cultural state regulation is divided into two categories: federal and regional or municipal. Their responsibility is regulated by the federal and regional laws. The federal and regional authorities publish an updated list of historical, cultural and environmental sights. It is not allowed to dig, cover, modify, damage, remove or physically interfere with the monuments and sights without legal permission which gives based on conclusion of special experts commission.

3.5 Sustainable nature tourism in Pasvik- Inari

Tourism is not a modern phenomenon, but due to the growing interest in travelling it has become one of the most important branches of industry in the world. Growing tourism industry operates on several levels which also makes the concept of tourism complex. An attempt is made here to clarify the terminology.

In international terminology, nature tourism in its broader definition often contains all forms of tourism directed to the nature irrespective of the effects on the environmental or cultural values. Nature tourism includes not only environmentally-friendly transportation such as hiking, bicycling or paddling, but also motorised means of transportation are increasingly favoured. Bird watching tours and adventure tours, such as climbing and diving, are examples of modern nature tourism. In a slightly narrower definition, nature tourism is tourism that involves recreation in natural surroundings. Nature tourism combines recreational use of nature and tourism. (Ympäristöministeriö 2002.) The concept of nature tourism does not necessarily include ecological sustainability but it often does.

The concept of sustainable tourism has been derived from the sustainable development concept in which the present needs are fulfilled without endangering the opportunities for future generations. Tourism stands on a sustainable basis ecologically, economically and socially. (Borg 1997).

Sustainable tourism comprises all forms of tourism including nature-based tourism. An early definition for sustainable nature tourism was made in 1988 by the World Tourism Organisation (UNWTO/UNEP 2002). Sustainable nature tourism was seen as “envisaged as leading to management of all resources in such a way that economic, social and aesthetic needs can be fulfilled while maintaining cultural integrity, essential ecological processes, biological diversity and life support systems”.

The also the widely used term ‘ecotourism’ is generally seen as sustainable, small-scale tourism. The environmental, cultural and social awareness is emphasised. (Bangs 1992.) UNWTO/UNEP (2002) summarises ecotourism as: (1) All nature-based forms of tourism in which the main motivation of the tourists is the observation and appreciation of nature as well as the traditional cultures prevailing in natural areas. (2) It contains educational and interpretation features. (3) It is generally, but not exclusively organised for small groups by specialised and small, locally owned businesses. Foreign operators of varying sizes also organise, operate and/or market ecotourism tours, generally for small groups. (4) It minimises negative impacts upon the natural and socio-cultural environment. (5) It supports the protection of natural areas by generating economic benefits for host communities, organisations and authorities managing natural areas with conservation purposes, providing alternative employment and income opportunities for local communities and increasing awareness towards the conservation of natural and cultural assets, both among locals and tourists.

In this plan the concept of **sustainable nature tourism** is used. The definition of the term corresponds to the international definition of ecotourism but is considered broadly, having more emphasis on recreational use. The cooperative partners have agreed on the principles of sustainable nature tourism (annex 5) which include characteristics of sustainable development and ecotourism. The principles bound all cooperation partners in planning and implementing nature tourism in the area.

3.5.1 Visitors in Pasvik-Inari

The cooperation on tourism section has been intensive between the municipalities of Inari, Sør-Varanger and Pechengaand; for example, mutual projects have been organised. In the Orthodox trail project (2004-2005), the services related to Orthodox cultures were developed. The project promoted also the strengthening of local cultures, culture exchange and networking of the service facilities. The Northernmost Europe project (2002-2006) promoted the recognition and international marketing of arctic nature tourism. The Northernmost Europe Networks project (2005–2008) aims at certifying the continuation of the previous project. The Destination Northernmost Europe exhibition was produced by a Finnish-Norwegian cooperation project and the exhibition is currently (2006–2007) expanded with a Russian part. In addition, a DVD- and Internet-information package for travellers and travel marketing experts about nature and natural phenomena in North Calotte and Northwest Russia is currently (2006–2007) in process. (Inarin kunta 2006.)

The importance of the national parks, hiking areas and wilderness areas as a source for emotional and economic well-being is increasing. The areas are important for recreational use for local inhabitants and travellers who come from a distance. Both national and international tourism is increasing. For example, border crossings at the Finnish-Norwegian cross point (Näätämö-Neiden) are increasing yearly. This not only creates opportunities for economic development of the area but also creates new demands in terms of sustainability.

Russia is considered an extremely interesting tourism destination, but at present the formalities are time-consuminig and careful planning is needed in advance. The Northern Lapland Tourism Ltd has several times expressed a wish that the municipality would actively promote the development of the border crossing points. Moreover, a straight road connection from Ivalo to Nikel via Virtaniemi has been proposed. This would mean that a possibility to passe through the Virtaniemi crossing point should be provided. Possibilities to contruct a road from Nellim to Nyrud have also been mapped. (Inarin kunta 2006.)

3.5.1.1 FINLAND

A **visitor survey** was carried out by Metsähallitus in the planned Inari Outdoor Recreation area in 2006-2007. Altogether 581 visitors answered the questionnaire during the summer season 2006. 29 respondents informed they had visited the Vätsäri Wilderness Area. Nature is the most important attraction in the area. The main activities practised were nature observing, walking or hiking fishing and photographing. In addition, familiarising with the history and culture in the area were considered important.

The surroundings of the village Nellim attract visitors and 39 questionnaires were collected from Nellim. According to a visitor calculation 3790 persons had visited the renovated timber slide in Nellim during the summer 2006. The path leading from Kessi to Piilola wilderness hut proved also to be surprisingly popular; 293 visitors were counted. The figure may include also shorter fishing or hunting trips to Kessijärvi surroundings and returns and it may, therefore, be inflated. Marking the Piilola trail and

building modest facilities has ben planned. The new route would then continue to the Nowegian side and be connected to the path in Øvre Pasvik National Park.

Twelve visitors had answered the questionnaire at Piilola wilderness hut in Vätsäri. Most of the respondents travelled alone or with small company and stayed overnight in Vätsäri in a tent or in a wilderness hut. Hiking and camping were naturally the main activities practised during the stay. The motives for visiting the area are described in figure 3.

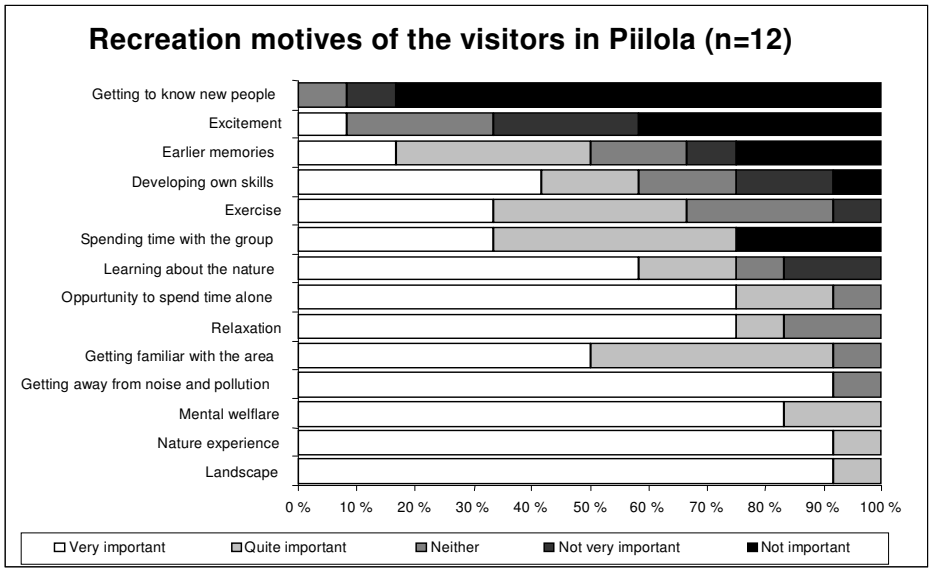

Fig. 3. Recreation motives expressed by the visitors in Piilola

The quantity and quality of the facilities was evaluated mostly as sufficient and good. Since there are very modest facilities in the area, the interpretation is, that the hikers are self-active and do not expect to find developed facilities. Some visitors (2), however, requested for more and one respondent requested for route markings.

Furthermore, a **company analysis** questionnaire was sent to local entrepreneurs. The survey focused on the nature tourism facilities, the principles of sustainable nature tourism and the future prospects of the entrepreneurs. Altogether 57 questionnaires were sent of which 15 was received. Nearly half of the 15 entrepreneurs operate in Vätsäri/Nellim area and additionally, most entrepreneurs have some activities in the eastern Inari.

According to the company analysis, nearly half (45 %) of the customers are other than Finnish. The main activities carried out are fishing, snowmobiling, cross country skiing and tailored boating products. Also trekking, snow shoe walks, reindeer drives and boat rental attract the visitors.

The entrepreneurs were fairly satisfied with the quantity of the facilities. However, the path and skiing trail network was evaluated as insufficient. More than half of the respondents expressed a need for extra markings on paths and skiing tracks. Signposts were requested for the trails. The quality of the facilities was considered mainly as good. Improvements could be made concerning facilities for special groups (elderly/disabled people). Many respondents indicated that the wilderness characters of the area must be preserved. Simultaneously, more bases for tourism entrepreneurs were requested for as well as easy landscape routes for skiers. The tourist operators in Nellim required for more facilities in the village surroundings. Snowmobiling is important for Finnish operators and more tracks were requested for.

3.5.1.2 NORWAY

During the summer of 2006 the Office of the Finnmark County Governor carried out a visitor survey in Øvre Pasvik National Park. The aim of the survey was to gain a better understanding of the area, and through this gain a better foundation for prospective planning concerning improved facilities in the area, additional information and the prevention of wear and tear. Questionnaires were placed at the information boards found in Sortbrysttjern and Grensefoss, as well as Vaggatem Camping and Øvre Pasvik National Information Park Centre.

Out of the 85 responses, 14% were from Sør-Varanger, 40% international visitors (Europeans, mostly German), while the rest came from other areas of Norway. This distribution is most probably not an accurate reflection of visitors, as it was expected that local visitors should have been a much higher percentage of the overall visitors to the park. Local visitors were less likely to complete the questionnaires, hence the distribution. These visitors came, as a rule, either alone or in small groups and preferred to take daytrips or stay for a single night. The area around Sortbrysttjern and Ellenvann, as well as Treriksrøysa were the most commonly frequented walking tracks.

The objective of the majority of visitors was to simply go for a walk and admire nature. There were also a number of nature photographers and ornithologists who came to Pasvik. The majority of them remarked that they had not felt disturbed during their trips; either by other visitors, garbage or general wear and tear, and were satisfied with the conditions of things in the park. These visitors had various interpretations concerning ‘improvements’ in the national park. Many of them mentioned that it is the serenity which is the greatest quality in Pasvik. The conditions may change as steps are taken to ‘improve’ the area. Other discussion centred on the wish for more marked walking tracks, better information boards, more accommodation possibilities in the area and improvement of roads.

3.5.1.3 RUSSIA

The visitor dynamics in Russian part of the area show some progress as presented in Table 1. However, few people managed to enter the nature reserve. The low amount of visitors is due to the excessively strict border rules and unstable situation with permission obtaining.

Table 1. Visitors dynamics in Pasvik Zapovednik (data from full annual reports of Pasvik Zapovednik 2003-2006).

Year	Quantity of groups		Quantity of visitors of the Pasvik Zapovednik territory	Total quantity of all visitors*
	Total	International		
2003	7	3	215	260
2004	12	3	111	280
2005	15	3	85	200
2006	18	2	130	600

* Including Varlam Island visitors

For several years the development of the region was based on resources and heavy industry. Few people paid attention to the potentially interesting and culturally rich place. At the same time, the situation in Finland and Norway was rather different. Nevertheless, the tourism activities on the Russian side grew from year to year. The foundation of Pasvik Zapovednik and further ongoing activities of its staff are the best confirmation of the irreversible process of nature tourism development. The whole territory of Pechenga district lies inside the strict border zone, and a permit is needed to access the area.

3.5.2 Nature tourism facilities

The Pasvik-Inari area has not been developed much for tourism. However, modest nature tourism facilities exist in each country. Also nature tourism entrepreneurs operate in each country, many of them have contacts across the borders. The facility map (annex 6) of the area presents the facilities in the area.

3.5.2.1 FINLAND

The facilities for travellers are few in Vätsäri Wilderness Area. Several paths have been formed in the area by inhabitants, fishermen and hunters but no marked hiking paths exist. The boating routes of Lake Inari extend to the wilderness area as well as the canoeing route leading to Sevettijärvi village. During the winter, two snowmobile tracks pass the area. The routes cross at Lake Inari.

Three open wilderness huts exist in the wilderness area, Piilola, Suolistaipale and Pisteri. In addition, the Rajapää wilderness hut is open during the summer season. The huts are maintained by Metsähallitus Natural Heritage Services and firewood and waste disposal are provided. The travellers may overnight, but prolonged stay is not allowed. In Kessijärvi, there is an open wilderness hut which lies on a private property.

Some marked paths exist north of Vätsäri. A hiking path from Sevettijärvi to Näätämö is marked as a part of the old Sámi route, Inarinpolku Trail, leading to Karlebotn in Norway. There are three reservable wilderness huts in close vicinity. Moreover, a path leads from Näätämö to Pakanajoki (Jankkila) reservable wilderness hut which is a forest ranger's former residence. The surrounding field meadow is of local importance as a traditionally pastured area, and the area is valuable in terms of cultural history (Kalpio & Bergmann 1999).

The Skolt Sámi Heritage House in Sevettijärvi is open during the summer. Skolt Sámi handicrafts and other small products are sold there and guidance and information on hiking is provided. The old Orthodox Church was renovated in 1991. There are no hotels at the village, but a few village resorts in the surroundings provide accommodation. There is a shop/bar where it is possible to buy a meal or groceries.

Moreover, a covered fireplace is in use near Nellim village (Lusma). South of the village, along a skiing path following Haapakuru, there is a fireplace maintained by the Village Society. Another fireplace has been built east of Nellim, at an old timber slide.

The sights in Nellim include the beautiful Orthodox Church and renovated old timber slide which tells about the logging history in the area. The path leading to the timber slide presents the war history. Rautaportti bay, sheltered by steep cliffs, was built as a defensive fort during interim peace in the Second World War to hold off enemies coming from the direction of the Barents Sea. The Nellim harbour is of major importance to the boaters travelling at Lake Inari.

In Nellim, there is a hotel and several accommodation and tourism services. At the village there is also a shop/bar where one can buy a meal or supplies.

Metsähallitus customer service points provide up-to-date information on hiking destinations, sights, tour operators and accommodation possibilities. Customer service points can be contacted also to request licenses needed for fishing, hunting and snowmobiling. The Sámi Museum and Northern Lapland Nature Centre Siida in Inari with its cultural and nature exhibitions, is both a meeting place and an exhibition center.

3.5.2.2 NORWAY

There is a National Park Information Centre at Bioforsk Svanvik, where one can learn about the area's culture and nature and get tips about things to see and do in Pasvik. Here one can also admire the diversity of northern plant species in a botanical garden. Bioforsk Svanhovd also offers accommodation and meals. At Svanvik, there is a combined petrol station, shop and a café. The longest 'gamme', a Sámi turf hut, in the world was reconstructed in 1922, and today it functions as a border history museum maintained by the Border Guard Service. The Svanvik chapel, built in 1932, is a landmark in the village. At Skogfoss, there is a combined petrol station and shop as well as a restaurant.

A tower at "96 Høyden" just south of Svanvik, a former military observation tower, provides a view of the landscape, and one can even see far into Russia from here. A small café operates in the tower from June to August.

There are two bird-watching towers along the Pasvik River, one at Skrøytnes and one at Gjøkbukta. One can also visit a real bear den near Strand.

Øvre Pasvik National Park is easily reached via the gravel road to Sortbrysttjern. At Sortbrysttjern there is a parking lot with a fireplace, information board and an outside lavatory. From here, there is a marked trail with information boards to Ellenkoia, an open cabin available for overnight stays. The path continues to the Piilola gate between Norway and Finland. Near the border on Norwegian side there is another cabin available for overnight stays (the Piilola cabin).

Another way to reach the National Park is by the gravel road to Grensefoss, which goes through Øvre Pasvik landscape protection area. At Grensefoss, there is also a fireplace, information board and an outside lavatory. The border mark, Treriksrøysa, at Muotkavaara is only five kilometres away along a marked trail established for border patrolling purposes, but available for everyone. In winter, a snowmobile track goes through the landscape protection area all the way to Treriksrøysa.

There are two museums in Pasvik, the Strand Museum and Bjørklund Gård, which present the wildlife, history and culture of the area.

At the small village of Vaggatem, there is a camping site with cabins and a small shop. The camping site has rental canoes and bicycles. There are several rental cabins throughout the Pasvik valley which are situated outside the protected areas.

3.5.2.3 RUSSIA

Pasvik Zapovednik is a territory of untouched nature, and most of the area is only used for scientific research. The infrastructure has not been developed for the tourism purposes. There is no waste disposal service, and everybody is responsible to collect his/her litter.

An important cultural heritage site, Varlam Island (Vaarlamansaari) in the southern part of the area, is open to visitors. There one can visit the reconstructed house of the famous Norwegian ornithologist Hans Schaanning, as well as the reconstructed observation tower.

Although the core of Pasvik Zapovednik is for research purposes, the surrounding areas are easier to access. Settlement is concentrated in the villages. The office of the nature reserve is situated in Rajakoski, where one of the hydroelectric plants of the Pasvik River is located. Accommodation is available in Rajakoski, where there is a small hotel, sauna, community centre, shop, medical station and post office. The village of Jäniskoski can be reached by a car or a motorboat from Rajakoski.

Most visitors arrive to the Russian part of the Pasvik River Valley through the industrial towns of Nikel or Zapolyarny. The museum of history in Nikel presents the area's rich culture and history. In Suonijoki one can visit a beautiful waterfall.

3.5.3 Restrictions and opportunities

The restrictions and opportunities for private visitors and nature tourism operators vary in the protected areas in each country. In the following sections the main guidelines are described briefly.

3.5.3.1 FINLAND

People of all nationalities have the right to enjoy the Finnish countryside freely under the traditional Finnish legal concept known as everyman§ right. However, together with these wide-ranging rights comes the responsibility to respect nature, other people, and property. Special regulations in different protected areas limit activities such as camping, hunting, the use of motor vehicles, and access to sensitive areas during the nesting season. Such restrictions are listed separately for each area.

According to the everyman's rights people can walk, ski or cycle freely; camp out temporarily; pick wild berries, mushrooms and flowers, as long as they are not protected species; boat, swim or bathe in inland waters and the sea; walk, ski, or drive a motor vehicle or fish on frozen lakes, rivers and the sea. For private persons, no licence is needed for using the hiking and skiing routes or using the campfire sites or open wilderness huts. Reservable wilderness huts are charged for and need to be booked in advance. For hunting, fishing, off road traffic or cutting firewood in Vätsäri a licence or permission is needed. Snowmobiling is licenced. Local inhabitants have legal rights concerning the activities listed above.

Licence is needed, however to use the structures for business activities. Nature tourism operators need a licence or an agreement for using the wilderness huts and campfire sites. A fee (1,5 • / customer / visit in 2007) is charged for usage. The licence gives no right to accommodate. For skiing groups the licence is needed if the service structures are used. Camping is possible for 2-3 nights/place but no permanent camps may be built in the wilderness area without permit. The firewood is provided for a fee. Licence is also needed for using the snowmobile tracks. Off road safaris need a lisence. Admission is needed also for husky safaris. Boat places are charged (30-150 euros/year in 2007). Renting of land for business activities is not possible in Vätsäri.

3.5.3.2 NORWAY

Norway's legal concept of everyman's rights gives everyone a chance to enjoy outdoor pursuits with few restrictions. With the freedom to enjoy the nature comes the obligation to leave the environment undisturbed. The age-old concept of everyman's rights gives everyone the basic right to roam freely in the countryside, without need to obtain permission when further restrictions due to other legislation are not in force.

In the nature protection areas, one may hike and ski. One may also ride or cycle along roads. Private husky sledges are allowed in the area and also rowing and paddling is allowed. Picking berries, mushrooms and flowers is allowed, unless they are protected species. Everyman's rights also allow one to stop and rest, swim or sunbathe. Camping for short periods is allowed as long as it causes no disturbance, except in Pasvik Nature Reserve. Making of fire from twigs and branches is allowed.

Organised traffic in the protected areas, such as guided tourist tours, need special permission from the County Governor.

No license is needed for using hiking and skiing routes or using the campfire sites or open wilderness huts. Open wilderness huts are freely available while bookable wilderness huts are reserved. For hunting and fishing, a license or permission is needed.

Use of snowmobiles is only allowed on public snowmobile tracks. These tracks are free of charge. Off road safaris are not allowed.

The Norwegian-Russian border may only be crossed at the border station at Storskog. Special permit is needed from the border office to cross the border. Hikers may cross the Norwegian-Finnish border, but no motorised vehicles may cross the border elsewhere.

3.5.3.3 RUSSIA

Pechenga district has good possibilities to attract national and international visitors: picturesque landscapes, exotic nature, clear rivers and brooks. Vulnerable northern nature needs a sustainable approach towards the tourism development and nature recreation. Pechenga district has a lot of interesting sites, natural and man-made. Possible sites for visits are Rybachiy peninsula and Ainovy islands with their bird communities and cliffs, lush Pasvik Valley, Pasvik Zapovednik and surroundings, the Suonijoki River waterfall, Lake Nautsi district and the industrial landscapes of Nikel and Zapolyarny.

Heavy industry in Nikel and Zapolyarny brings much pollution, but the region that spreads to the south from these towns still has nearly intact nature habitats. Plenty of forest roads and foot tracks exist. Natural and cultural values are enormous.

The southern part of Pechenga district is naturally cleaner in comparison with the northern one. So prospects for tourism development are enormous. The territory of Pasvik Zapovednik surroundings is rather good place to attract the people with ecological conscience, those who want to visit intact nature. Developing the infrastructure in Rajakoski and Jäniskoski villages would promote the revival of these villages, create additional work places, thus promoting the development of the area.

According to the principles of sustainable nature tourism, the effects on nature are minimised. Some difficulties exist in increasing visitor activity in the area. After strengthening of the border regime, the time for permit obtaining will be longer (10 days for Russian citizens, 1 month for foreigners).

The New Tourism Law (enacted on 01.01.2007) brought changes in requirements towards tourism entrepreneurs. The company's bank guarantee must be at least 10 million rubles (290 000 •). Authorized capital stock not less than one million rubles is required. Furthermore, there must be 7 specially educated persons with appropriate licenses working in the companies. The requirements can only be fulfilled by big tourism companies, while small entrepreneurs cannot operate in the area.

3.6 Nature protection and monitoring in Pasvik-Inari

The cooperation in nature monitoring has roots in Pasvik-Inari. Several joint monitoring projects have been conducted in the area. Fauna research and monitoring on the Norwegian side of the Pasvik River and Pasvik Zapovednik has a long history. Mammalian studies focusing on brown bear, elk, muskrat and small mammals (mice, voles and shrews) have persisted since the late 1980s (Aspholm et al 2006, Wikan 2000a, Wikan & Aspholm 2006, Wikan 2000b, Wikan et al 2007). The annual registration of waterbirds has been ongoing since the beginning of 1990 (Günther 2006a). Research and monitoring of the freshwater pearl mussel in a few tributaries of the Pasvik River, have been carried out since 1997-1998. The species is included in the national monitoring program for endangered species in Norway (Larsen 2005a, Larsen 2005b). Phenology and growing season studies both from satellite images and in the field have persisted since 1990, in the transboundary area and for over 40 years on the Russian side in the Kola Peninsula (Shutova et al 2006).

During the recent years the monitoring work intensified and harmonised monitoring systems were tested for several species/groups. In addition, information has been exchanged between the partners about past and present research and monitoring activities. The first subchapter presents the protection basis of the areas in Pasvik-Inari. The IUCN Red List Categories and Criteria were used. IUCN categries provide an easily and widely understood system for classifying species at high risk of global extinction. The second chapter presents briefly the recent monitoring activities and the harmonised monitoring methods tested.

3.6.1 Rare species, habitats and monitoring

3.6.1.1 Vätsäri Wilderness Area

Vätsäri wilderness was proposed to the Finnish Natura 2000 network based on the occurrence of natural habitat types (SCI areas) and species defined as in need of protection in the Habitats Directive (92/43/EEC). 22 bird species listed in Annex I of the Birds Directive (79/409/EEC) were observed in the area. The bird species list of Vätsäri was later updated by Osmonen (2002). The natural habitat types in Vätsäri were surveyed as part of the biotope inventory mapping conducted in Lapland 1996-2000 and altogether 14 natural habitat types listed in Annex I of the Habitats Directive have been recorded in the area. Information on natural habitat types in Vätsäri exists in the SutiGIS information system of Metsähallitus. The habitat information presented here is based on information from 2006.

Previous studies from Vätsäri are few. The vascular flora has been mapped as part of a long term project referred to as Vascular Flora of Inari Lapland covering the whole zoogeographical area of Inari Lapland. Few occurrences of rare species are known.

The Finnish-Norwegian Transboundary Water Commission initiated a survey on the Pasvik River in 1991. In the survey, also suggestions on multiple uses of the area were made. (Puro & Maunuvaara 1997, Fylkesmannen i Finnmark 1997.) The status of the freshwater pearl mussel (Margaritifera margaritifera) has been mapped in a recent trilateral Interreg project (Oulasvirta 2006). The Pasvik monitoring programme (2003-2007) focused on the status of the environment and on developing comparable environmental monitoring methods. The work was coordinated by the Lapland Regional Environment Centre in Finland, the Office of Finnmark County Governor in Norway and the Murmansk Department for Hydrology and Environment Monitoring in Russia (Pasvik monitoring 2007, Stebel et al 2007) In addition, evaluations of environmental and economical impacts of the possible road connection from Nellim to Øvre Pasvik have been made (Kuvaja & Piippo 2005, Tømmervik et al 2005, Jacobsen et al 2006). Polypores have been studied by Metsähallitus as a part of a wide mapping project during 2005-2007. Information on the bird fauna of Lake Inari has been compiled in detail by

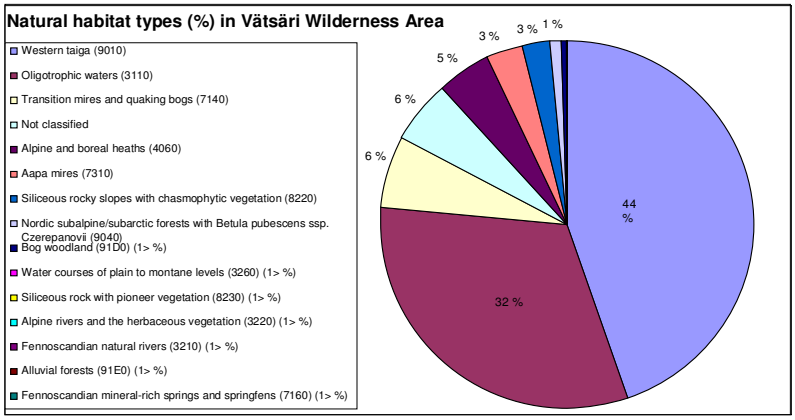

Fig 4. The proportional surface of the natural habitat types found in Vätsäri Wilderness Area.

Metsähallitus (Leppänen et al 2007) and the bird fauna of the mouth of the River Ivalo has been clarified as part of a recent Life-project (Kuukasjärvi 2002) and the observations have been compiled in a publication (Osmonen & Karhu 2002). Certain species, such as the golden eagle, are monitored nationally.

Red list species

Information on threatened species is updated in the state administration database, Hertta, where limited access is permitted to environmental authorities.According to the Natura 2000 data sheet, two protected species of Annex II of the habitats directive exist in the area, the endangered wolverine (*Gulo gulo,* EN) and near threatened otter (*Lutra lutra*, NT). In addition, the brown bear (*Ursus arctos*, NT) has been recorded and the area is considered as an important route for the critically endangered arctic fox (*Alopex lagopus,* CR) from Kola to Fennoscandia (Matti Mela, phone conversation). Furthermore, observations of vulnerable wolf (*Canis lupus,* VU) and nearly threatened lynx (*Lynx lynx*, NT) are recorded yearly.

Table 2. Bird species of Birds Directive (79/409/EEC) in Vätsäri Wilderness Area according to the updated list by Osmonen (2002).

Species	Scientific name	Status (IUCN)*
Merlin	*Falco columbarius*	VU
Hawk owl	*Surnia ulula*	LC
Eagle owl	*Bubo bubo*	LC
Red-throated diver	*Gavia stellata*	NT
Dotterei	*Charadrius morinellus*	NT
Black-throated diver	*Gavia arctica*	LC
Crane	*Grus grus*	LC
Arctic tern	*Sterna paradisaea*	LC
Whooper swan	*Cygnus cygnus*	LC
Wood sandsniper	*Tringa glareola*	LC
Capercaillie	*Tetrao urogallus*	NT
Black woodpecker	*Dryocopus martius*	LC
Three-toed woodpecker	*Picoides tridactylus*	NT
Bar-tailed godwit	*Limosa lapponica*	NT
Hazel grouse	*Tetrastes bonasia*	LC
Bluethroat	*Luscinia Svecica*	LC
Ruff	*Philomachus pugnax*	NT
Osprey	*Pandion haliaetus*	NT
Black grouse	*Tetrao tetrix*	NT
Smew	*Mergus albellus*	LC
Red-necked phalarobus	*Phalaropus lobatus*	LC
Endangered species (3)		EN, VU

* EN = endangered, VU = vulnerable, NT = nearly threatened, LC = least concern.

Some vascular plant species of IUCN threat categories are found in the area. Such species are vulnerable (VU) *Botrychium boreale* and several near threatened (NT) species: Gieseck's bellflower *(Campanula rotundifolia* ssp*. gieseckiana), Carex arctogena,* Weak sedge *(Carex laxa),* and moonwort (*Botrychium lunaria)*. One of the directive species, the Lapland buttercup (*Ranunculus lapponicus*, LC=least concern), grows in the area.

3.6.1.2 ØVRE PASVIK

Øvre Pasvik is a part of the northern boreal coniferous forest. The forest is characterised by species of lichen and ericaceous species on dry ground. A typical feature is extensive tracts of mires, with domination of sedges (*Carex* sp) stands in minerogenic parts. Of particular interest are the well-developed structures of permafrost phenomenon called palsamires that include permanently frozen parts of the mire. Dense thickets of willow (*Salix* sp) can be found along the Pasvik River. In the river, rich stands of pondweed (*Potamogeton* sp) dominate, while in more shallow parts bur-reed (*Sparganium* sp) and pond water-crowfoot (*Ranunculus peltatus*) dominate. Several other interesting species can be found along the shore. Øvre Pasvik is a geographically interesting area with a number of eastern species like meadow starwort (*Stellaria palustris*) and Lapland sedge (*Carex lapponica*). Some species such as silver birch (*Betula pendula*) are rare in this northern climate. The rich and varied aquatic vegetation found in the Pasvik River is rare for rivers draining towards the Barents Sea.

The **Ramsar Convention** is an international treaty for the conservation and sustainable utilization of wetlands, especially wetlands that are important for waterfowls. In total, 154 countries have ratified this treaty, and 1642 wetland areas are on the Ramsar list.

The Pasvik Nature Reserve was designated as a Ramsar area in 1996. The reserve includes a part of the Pasvik River, characterised by many bays, islets of shallow waters. The river is surrounded by Scots pine (*Pinus sylvestris*) forests and extensive mires. This area is especially important for breeding, resting and migratory wetland species.

Important Bird Area

In 2000, BirdLife International published a list of areas in Europe of special importance for birds, the list includes 3 619 areas. The purpose of this list was to protect and identify a network of important European bird areas. The areas on this list are international important based on these criteria:

- Large concentrations of birds (generally during migration)
- Presence of endangered species
- Presence of species of limited extensiveness

Øvre Pasvik is designated as an important bird area because of the presence of a wide range of boreal species. Some of these species are smew (*Mergus albellus*), broad-billed sandpiper (*Limicola falcinellus*), northern hawk owl (*Surnia ulula*), great grey owl (*Strix nebulosa*), Bohemian waxwing (*Bombycilla garrulus*), arctic warbler (*Phylloscopus borealis*), Siberian tit (*Parus cinctus*), Siberian jay (*Perisoreus infaustus*), brambling (*Fringilla montifringilla*) and pine grosbeak (*Pinicola enucleator*).

Red list species

The new Norwegian Red list was launched in December 2006. 78 bird species on the mainland of Norway are redlisted. Out of these 78 bird species, 55 occurs in Pasvik (70 %), 33 of them are nesting (38 %) and at least 30 occur on a yearly basis (38 %).

Some species on the red list that occur in Pasvik are bean goose (*Anser fabalis*), crane (*Grus grus*) and osprey (*Pandion haliaetus*). Examples of rare species are: northern pintail (*Anas acuta*) (common),

smew (*Mergus albellus*), arctic warbler (*Phylloscopus borealis*), little bunting (*Emberiza pusilla*) and Lapland owl (*Strix nebulosa*).

More common species are: mallard (*Anas platyrhynchos*), common teal (*Anas crecca*), Eurasian wigeon (*Anas penelope*), tufted duck (*Aythya fuligula*), goldeneye (*Bucephala clangula*), goosander (*Mergus merganser*), red-breasted merganser (*Mergus serrator*), whooper swan (*Cygnus cygnus*), bar-tailed godwit (*Limosa lapponica*), jack snipe (*Lymnocryptes minimus*), and wood sandpiper (*Tringa glareola*). A number of bird species migrate through the area. Brown bear (*Ursus arctos*) and moose (*Alces alces*) have a stable occurence in the area.

Table 3. Species of waterbirds occuring in Pasvik and listed on the 2006 Norwegian Red List (Günter 2006).

Species	Scientific name	Status (IUCN)*
Lesser white-fronted goose	*Anser erythropus*	CR
Common guillemot	*Uria aalge*	CR
Slavonian grebe	*Podiceps auritus*	EN
Garganey	*Anas querquedula*	EN
Smew	*Mergus albellus*	EN
Black-tailed godwit	*Limosa limosa*	EN
Bean goose	*Anser fabalis*	VU
Gadwall	*Anas strepera*	VU
Shoveler	*Anas clypeata*	VU
Greater scaup	*Aythya marila*	VU
Black-throated diver	*Gavia arctica*	VU
Broad-billed sandpiper	*Limicola falcinellus*	VU
Kittiwakes	*Rissa tridactyla*	VU
Common tern	*Sterna hirundo*	VU
Whooper swan	*Cygnus cygnus*	NT
Northern pintail	*Anas acuta*	NT
Velvet scoter	*Melanitta fusca*	NT
Common moorhen	*Gallinula chloropus*	NT
Northern lapwing	*Vanellus vanellus*	NT
Eurasian curlew	*Numenius arquata*	NT
Great snipe	*Gallinago media*	NT
Arctic skua	*Stercorarius parasiticus*	NT
Black-headed gull	*Larus ridibundus*	NT
Ruff	*Philomachus pugnax*	DD

* CR = critically endangered, EN = endangered, VU = vulnerable, NT = nearly threatened, DD = data deficient.

3.6.1.3 Pasvik Zapovednik

Pasvik Zapovednik (the State Nature Reserve Pasvik) is part of the Russian Zapovedniks network, the Special Protected Natural Areas (SPNA). Pasvik Zapovednik is based on Russian nature protection legislations, such as Russian Federal Law About Environmental protection (¹07-FL on 10.01.2002), Russian Federal Law About special protected areas (¹33-FL on 14.03.1995), Forest codex of Russian Federation, bilateral agreements, etc. The main program for Zapovedniks in Russia is publishing the Chronicles of Nature (Annals of Nature). This is an annual report about scientific work and results on several positions.

The first step for Pasvik Zapovednik was the inventory stage. Some groups of plants and animals were observed during this period, and main lists of species were prepared and published such as *Cadastre of vertebrate animals* (Makarova et all, 2003), *Flora of Pasvik Zapovednik* (Kostina 1995, 2003). By 2007, ten volumes of the Chronicles of Nature have been published. The first book (1992-1994) was published also in English.

During the inventory period, some lists of species were made. Plants list include 362 species found in Pavik zapovednik territory and more than 80 species found in the outskirts (Kostina, 2003). Common plants are: interrupted clubmoss (*Lycopodium annotinum),* wood horsetail (*Equisetum sylvaticum),* tufted hair-grass (*Deschampsia caespitosa),* hare's-tail cottongrass (*Eriophorum vaginatum),* downy willow (*Salix lapponum),* globeflower (*Trollius europaeus),* rosebay willowherb (*Epilobium angustifolium),* grass-of-parnassus (*Parnassia palustris*). The more rare species not included in red lists are: alpine gentian (*Gentiana nivalis*) and alpine bistort (*Bistorta vivipara/Polygonum viviparum*).218 bird species inhabit Pasvik Zapovednik, 14 species of these being rare (included in different Red Books). Common waterfowls are: whooper swan (*Cygnus ñygnus),* bean goose *(Anser fabalis),* mallard *(Anas platyrhynchos),* green-winged teal *(Anas crecca),* pintail *(Anas acuta),* common goldeneye *(Bucephala clangula),* smew *(Mergus albellus),* wood sandpiper *(Tringa glareola),* common sandpiper *(Actitis hypoleucos),* whimbrell *(Numenius phaeopus)* and other ducks and waders.

Pasvik Zapovednik bird fauna includes several forest and predatory birds, some of which are common: rough-legged buzzard *(Buteo lagopus),* merlin *(Falco columbarius),* common crane *(Grus grus*), northern hawk-owl *(Surnia ulula),* great gray owl *(Strix nebulosa),* northern three-toed woodpecker *(Picoides tridactylus*), yellow wagtail *(Motacilla flava)* redwing *(Turdus iliacus*) and bluethroat *(Luscinia svecica).*

More than 30 mammals species inhabit Pasvik Zapovednik, 9 of which are rare. Common mammals are: common shrew *(Sorex araneus),* gray-sided vole (*Clethrionomys rufocanus)*, muskrat *(Ondatra zibethica), red squirrel (Sciurus vulgaris),* blue hare (*Lepus timidus*), red fox (*Vulpes vulpes*), brown bear (*Ursus arctos*), stoat (*Mustela erminea*) and moose (*Alces alces*).

The second step of scientific work was monitoring and cartography. This work included phenological observation and registrations of different groups of birds, mammals, soil studies, air and water pollutants and landscape research. During 2002-2006, a landscape map of Pasvik Zapovednik territory on Russian side was made. The landscape map is used as a base for all kinds of monitoring research in Pasvik Zapovednik; for planning, management and scientific work. In the research on natural complexes each complex is defined according to certain characteristic (elevation, vegetation, soil etc.). Total amount of complexes is 46, of which 11 are antropogenic. The complexes form groups, which are interpreted on the landscape map. (Polikarpova 2006a, 2006b.)

Table 4. Rare bird species in Pasvik Zapovednik.

Species	Scientific name	Status (IUCN)*
Lesser whitefronted goose	*Anser erythropus*	VU
Great snipe	*Gallinago media*	NT
Black-tailed godwit	*Limosa limosa*	NT
Ivory gull	*Pagophila eburnea*	NT
European roller	*Coracias garrulous*	NT
Yellow-breastedbunting	*Emberiza aureola*	NT

* VU = vulnerable, NT = nearly threatened

Red list species

Pasvik Zapovednik was a coordinator of Red Data Book of Murmansk Region during several years. This Red Data Book presents the instructions for Zapovedniks of Kola Peninsula. Different data of Pasvik Zapovednik nature ecosystems is included in databases. Lists of rare species are included in a database in the Ministry of Nature Resources of Russia. Other internal data is included in Pasvik Zapovednik's database.

Inventoring the rare species is rather complete, and today Pasvik Zapovednik has a list of rare species which are included in different Red Data Books, such as Red Data Book of East Fennoscandia, Murmansk region, Russia, IUCN. Pasvik Zapovednik has suggested unifying all categories and status of rare

species of Pasvik Valley in the future, as well as preparing Red Data Book of Barents region and Red Data Book of Pasvik-Inari region. In nearest future Pasvik Zapovednik plans to start monitoring process of some rare species of plants and animals.

The main basis of the international cooperation is the IUCN Red Data list in Russia. In Pasvik Zapovednik, there are three vascular plant species included in this list: lake quillwort (*Iso¸tes lacustris),* livid sedge *(Carex livida)* and narrow-leaved marsh orchid *(Dactylorhiza traunsteineri).*

Six species of birds included in IUCN listing are found in Pasvik Zapovednik (Table 4). Moreover some other species included in Red Data Book of Russia as endangered *Bubo bubo*, vulnerable *Anser erythropus* and *Falco peregrinus*, rare *Phalacracorax aristotelis, Pandion haliaetus, Haliaeetus albicilla, Aquila chrysaetus* and *Lanius excubitor*. The otter (*Lutra lutra)* is included having bioinspector‘s status. Most of these species, and additionally wolverine (*Gulo gulo*) and lynx (*Lynx lynx)*, are included in Red Data Book of East Fennoscandia.

3.6.2 Cooperation in nature research and monitoring

The cooperation in nature research and monitoring in Pasvik-Inari has been intensive. The partner organisations have taken part in several joint monitoring projects conducted in the area.

During the project period 2006-2008, the cooperation partners focused on harmonising the monitoring methods of certain important species in the Pasvik-Inari area. This proved to be important because the practices and methods in monitoring and research vary in each country. To be able to estimate the comparability of data in different areas, it is essential to exchange information on the methodologies.

The first step was to choose the focal species/groups for harmonising the monitoring methods. Brown bear, golden eagle and waterfowl were first chosen as target species. Later, ants were chosen as a focal insect group in monitoring. Additionally, data on monitoring the natural habitat types and landscapes was exchanged. Information about the natural biotopes, forest age structure and the species inhabiting the areas is needed in management planning. Also the possibilities for compiling the data in common database have been mapped. The background and methodology used for monitoring the species/groups is briefly introduced in following sections.

3.6.2.1 BROWN BEAR

The Inari-Pasvik region has a vital brown bear (*Ursus arctos*) population which is part of the large Russian bear population. About one third of the Norwegian bears live in the valley of the Pasvik. The bear population is common for the three countries since bears cross the national borders.

In **Finland**, the brown bear observations are compiled yearly via contact person network thorough the country by the Finnish Game and Fisheries Institute. Additionally, tracks on the snow are recorded during winters and hunted bears are recorded. The brown bear observations are found in the database of the Finnish Game and Fisheries Institute. The Finnish stock estimate is 800-1000 individuals. During recent years, the DNA methodologies have been used especially in research focused in Eastern Finland. Research is based on faeces collecting and trapping hair with hair snares. Faeces samples have been collected also from Vätsäri surroundings in 2005 and 2006 for DNA analysis conducted in Norway at Bioforsk Svanhovd.

In **Norway**, the comprehensive monitoring of the brown bear populations began as early as 1968. During this period various methods have been used for monitoring of the bears, these include snow tracking in springtime, systematic registration of bear sightings, bear tracks, forensics, carcasses, and

registration of domestic animal attacks (Eiken et al 2006). In 2004, Svanhovd Environmental Centre started a pilot project with collecting faeces of brown bear in Pasvik. The aim was to implement a new method for identification of the individual bears and to be able to determine their sex. The method used is similar to the one used in forensic science and implies the analyses of DNA at the laboratory in Pasvik. This work was already a success and from the limited material of 100 faeces samples collected in 2004, 20 different individuals were identified. The method also made it possible to define the family relations between the bears, and the results so far show quite close relations between most individuals tested. Since 2005, Svanhovd has received samples from Finland and Russia for analysing bear-DNA from these countries as well (Smith 2007).

In **Pasvik Zapovednik** surroundings, the brown bear monitoring area covers the Pasvik River valley from Kaitakoski to northern part of the Zapovednik. Research includes continuous observationing. In the spring, the observations of bears or tracks and other sketches are collected from fishers and field workers. Border authorities provide additional information.

Size of stock and distribution of species is reported yearly in the Chronicle of Nature as well as the activities implemented each year. Distribution of results is for environmental authorities use only. All information about the stock in Pechenga district and Murmansk region for is available in Regional Hunting Department.

In 2005, Pasvik Zapovednik took part in a mutual project of researching brown bear population. This was the first instrumental experience after a long observation period. The fieldworkers collected the faeces samples for DNA analyses conducted in Norway at Bioforsk Svanhovd.

In 2006-2007, hair snares were introduced in Pasvik-Inari as a new non-invasive method to obtain samples for genetic analysis. The methodology provides possibilities to aquire more detailed information on the status of our common brown bear population. The snares were first tested in Finnish and Norwegian part of the area in 2006 but no samples were caught due to very small amount of traps. In 2007 the method was tested with conciderably larger experimental design and altogether 56 hair snares were built in the cooperation area.

A snag station consists of a pile of rotten wood doused with non-rewarding liquid lure, prepared from aged cattle blood and rendered fish oil. Barbed wire spanned around the station is used to collect hair from bears that cross under the wire to investigate the lure. Bears do not get hurt or injured when scratching the wire. The scientific nature of this method requires using a non-rewarding lure, which is also a great advantage of this method: bears do not stay at the site. The lure used degrades naturally and will not create a long-term attractant to the animals.

In 2007, the hair snares were tested more intensively in each country. The principle was to obtain population data in a statistically acceptable manner uniformly throughout the study area. The area was divided into 5x5 km grids independent of international boundaries and establishing one hair snare within each of these grids. Altogether 56 traps were placed in the area, 23 in Finland, 23 in Norway and 10 in Russia. The snares were first checked after two weeks, after another two weeks, the snares were relocated within the 5x5 km square, and checked again after two weeks and finally removed after 2 month total trapping period. Remote cameras were also used at some of the sites (Smith 2007).

The hair sampling proved to be successful, yielding 196 hair samples in total. The samples were analysed at Bioforsk Svanhovd. From 129 samples a positive DNA-restriction was successfully made and 24 bears were identified. (Smith 2007.) The data was compared with the previous data from the faeces samples. In 2004-2007, altogether 85 brown bears have been identified in the area.

3.6.2.2 GOLDEN EAGLE

The golden eagle (*Aquila chrysaetos*) is one of the great birds of prey in the northern hemisphere. It is distributed across North America, Europe and Asia but disappeared from many of the more heavily populated areas. International cooperation in golden eagle monitoring has been lively between the Nordic countries. Criteria for monitoring and surveillance of golden eagles in Finland-Norway-Sweden was drafted in 2004 by a working group with representatives from Finland, Norway and Sweden (Naturvårdsverket 2004).

In **Finland** the distribution of golden eagle is northern. In 2007, the total amount of known golden eagle territories was 435, 80 percent of the territories were located in Northern Finland. The golden eagle monitoring in Pasvik-Inari is part of the national survey implemented in the country.

Golden eagle is monitored throughput Finland in its distribution area. The country has been divided into sections of monitoring and the results are reported from each area. The Inari monitoring area is part of the Northernmost Lapland monitoring section and covers the Vätsäri Wilderness Area, Lake Inari and Sarmitunturi Widerness Area. The area extends to several reindeer herders association's pastures: Näätämö, Vätsäri, Paatsjoki, Hammastunturi and Muddusjärvi. In Finland, the monitoring guide of Fennoscandian Golden Eagles is used as a level B annually (Naturvardsverket 2006). In addition, new territories are searched according to observations. Information is stored in a Metsähallitus database.

Compensation to reindeer husbandry is paid for damages caused by the golden eagles. The size of the payment depends on how many territories are occupied each year by golden eagles and produced offspring within the area of each herding association.

In Lapland (including the Vätsäri Wilderness Area), the nesting success was lower in 2005-2006 than it has been in average for a long period. In 2007, the nesting success was good in the southern parts of the county of Lapland but poor in the northern part.

In **Norway**, the golden eagle is also a part of this national monitoring programme. The nesting population of the species in Norway is being mapped in 2006-2007. To territories are registered in the Pasvik-Inari area. In 2001-2006 there was a comprehensive study emphasising the behaviour, reproduction, diet, habitat use and migration patterns of the golden eagle in the western and central parts of Finnmark County. The breeding population in the whole of Finnmark is estimated to be approximately 100 pairs (Systad et al 2007).

In the Pechenga district in **Russia,** reindeer economy is not developed. Wild reindeers inhabit only the central part of Kola Peninsula, Laplandsky Zapovednik. The golden eagle populations are not as dense as in Finland and Norway. The monitoring in Russia has been implemented using Russian methods and the results are not comparable with Finland and Norway.

In 2006-2007, using the Nordic criteria for monitoring was discussed between the partners and the method was concidered as adequate by the partners and tested in each country. In Russia, the method was extended so that some parameters of the Russian methods were also observed.

In Finland, the known territories were surveyed according to the criteria and unknown territories were searched for. In 2007, the monitoring period lasted from 20.6. to 30.6. Four workers of Metsähallitus and two volunteers took part in the work. A helicopter was used, and only five territories were monitored in the traditional way.

The nesting result was bad: the number of occupied territories was nearly normal but the number of successful breedings (27 % of the occupied territories) was lower than normal. Also the number of

nestlings per successful breeding (1,16) was poor. There are still unknown territories and unknown alternative nests in the known territories.

In Norway and Russia, only a few golden eagle territories were known and the searching for territories was more emphasised. Expeditions were organised in the Pasvik Zapovednik territory and surroundings, especially to the slopes with southern exposure. In 2006, Pasvik Zapovednik placed an announcement in a local newspaper and requested for observations and one nesting site was found. In 2007, the golden eagle nests were searched for in Pasvik Zapovednik surroundings.

Table 5. The Golden Eagle monitoring results 2007.

The Golden Eagle in the Finnish part of the Inari-Pasvik monitoring area	
Year 2007	Total
Territory	
Known territories	32
Occupied during last 5 years	24
Unoccupied during last 5 years	8
Occupied territory with known nest	22
Occupied territory without known nest	0
Visited territories	32
Pairs	22
Breeding	
Failed breeding	0
Successful breeding	6
Youngs	7
Successful breeding with two youngs	1
Youngs/successful breeding	1,17
Youngs/occupied territory	0,32
Youngs/pair	0,32
Percentage	
Percentage of visited territoris with pair	69
Percentage of occupied territory with successful breeding	27
Percentage of occupied territory with unsuccessful breedings	
Percentage of visited territoris with successful breeding	19
Percentage of visited territory	100

3.6.2.3 WATERFOWLS

In **Finland,** birds of Lake Inari have been observed by several researchers and bird enthusiasts. Information on waterfowl is compiled in Metsähallitus database and in the database of the Finnish Museum of Natural history. The most recently updated information can be found in the internet-based information system Tiira, maintained by BirdLife Finland (BirdLife Suomi 2007).

The oldest published observations on the birds of Lake Inari are from 19th century. The first systematic research expedition was made in 1959. Since then, several studies on the nesting bird fauna of Lake Inari have been conducted. The first systematic compiling of information was done for Inarin Lapin linnut publication (Karhu & Osmonen 2000).

The national Atlas-mapping of bird fauna in Finland aims at clarifying the distribution of the birds nesting in the country and study the changes in the distribution. Also the nesting birds of Lake Inari have been surveyed for Atlas-mapping in 1974–1979 and 1986–1989. (Hyytiä et al 1983, Väisänen et al 1998.) The third Atlas-mapping was initiated in 2006.

In 2004-2005, Metsähallitus conducted surveys on the Lake Inari using the Finnish method (Luonnontieteellinen keskusmuseo 2006). The bird fauna of the mouth of the River Ivalo has also been clarified (Kuukasjärvi 2002) and observations from the area have been compiled (Osmonen & Karhu 2002). The data from the previous and more recent surveys was compiled in the publication *Inarijärven linnut* (Leppänen et al 2007). Altogether, 209 bird species have been observed in Lake Inari, 107 of these nesting birds. The most common waterfowl are red-breasted merganser (*Mergus serrator*), black-throated diver (*Gavia arctica*) and goldeneye (*Bucephala clangula*).

In **Norway and Russia,** the waterfowl nesting in Pasvik valley have been observed yearly since 1995. Waterbird registration began gradually in 1987, with periodic recordings of birds at specific locations. More systematic monitoring was launched in 1991 and was followed by the expansion and standardisation of the project in 1996. Since 1996, annual registration of waterbirds has taken place in the Pasvik Nature Reserve, as a joint Norwegian-Russian monitoring program. Finnish ornithologists have participated for several years. In addition to these annual registrations in the Pasvik Nature Reserve, research is also being carried out on various species of birds found in the area. In 2002-2003, an extensive bird registration study was completed in the Salmijärvi area, identifying a habitat of great importance to the waterbirds, and therefore a site of conservational interest (Günther 2003, 2006a, 2006b).

In **2006-2007,** the differences and similarities in methodologies used in waterfowl monitoring in Finland, Norway and Russia were analysed. Some small differences in recording the results were found. The Russian partner compiled the information into a fieldguide. The registration was conducted on the Pasvik River and in the mouth of the River Ivalo in Finland. The main objective of the registration is to observe the occurences of each species and to compile information on the variability, and development of the bird populations. Both the breeding species breeding in the area and the species using the area for resting during their migration are documented.

In Pasvik the registration is done as one continuous transect, but with stopping points at large lake surfaces with high density of birds. During the registration, all visual or auditory observations of wading and water birds are registered.

The study area covers Pasvik River from Hestefoss to Jordanfoss, includig Gjøkbukta, Höyhenjärvi (Fjærvann) and the bays and lagoons on the Russian side. The registration takes place twice in Spring (May-June) and once in Autumn (September). The registration is normally made within 6 hours depending on water level, weather conditions and the occurrence of birds. The border opens at 8 o'clock and the staff meets at Vaarlamaasaari to organise boats and staff and briefing of the task. One of the main tasks is to avoid double counting by the two crews in the boats. The boats must be synchronised in movement and the crews need to discuss possible double counting during the registration. The area is divided into four zones. By using the different zones, it is possible to tell differences in the area use. The transportation is carried out by smaller boats (12-14 feet long) equipped with a small outboard engine (10 hp) and subsequently by oars. In each boat, there is one driver and at least one bird observer, preferably one observer from each country. The optimal registration is made by two boats driving parallel; one on the Russian side and one on the Norwegian side of the border.

In Finland, the surface of Lake Inari is wide and the waterfowl counting cannot be conducted yearly in the whole area. Therefore, a smaller area of interest was chosen for monitoring and waterfowl counting was carried out at the mouth of the River Ivalo in June 2007 by three experts. The route is defined so, that it may be counted in similar time as in Pasvik. All birds are observed. A rowboat was used for transportation. The mouth of the River Ivalo is part of Finland's Natura 2000 network based on Bird Directive (79/409/EEC). It is classified also as a nationally valuable destination especially because of the bird fauna. The area is a remarkable resting and nesting place for waterfowl. Additionally, in 2007, a bird counting was conducted in the forests of Vätsäri.

In 2007, data on waterfowl counts has been exchanged between the Finnish, Norwegian and Russian partners. In the autumn registration on the Pasvik River an overweight of ducks and waders had already migrated.

3.6.2.4 INSECTS

Several insect species or groups of species are known to react rapidly on the changes in their environment and therefore several insect groups, such as butterflies, beetles and ants, are considered as an ideal group for monitoring. The methodologies used for monitoring ants and butterflies were exchanged between the partners and ants were chosen as a test group for harmonising the monitoring methods. Ant monitoring method was tested in each country. In addtition, the methodology used in Finland for monitoring day active butterflies was tested in Russia.

In **Finland**, very few inventories of insect species have been made in the area. Some observations from the surroundings have been listed in the national species database, Hertta. Moths have been monitored as part of a national survey by light trapping in Nellim since the early 1990s. One trap has been placed in each habitat observed, cultural and boggy habitats. (Söderman 1994.) National monitoring of day active butterflies collects data on butterflies. Transects can be used for measuring changes in the abundance and variety of butterflies present at a site from year to year. (More information is available from SPS 2007.) In addition, aquatic invertebrates have been studied as part of the Pasvik monitoring programme in 2005. This study took place also in **Russia and Norway**.

Ants are a social component of ecosystems. They play a key role in the terrestrial ecosystems (Zakharov, 2004). Ant hills are found in the forested habitats and on bogs, tundra and mountains. Ants can be used as indicators of certain conditions in their habitat (Dlusskiy & Zakharov 1965, Zakharov & Sablin-Yavorskiy 1991). Ants may also characterise the human impacts on habitats (Dmitrenko & Dlusskiy 1985), and they have been used as bioindicators in forested ecosystems. The biomass of ants is the important source of forage for many species of birds and mammals in the northern taiga and mountain birch forests. Red wood ants (*Formica rufa* group) have strong influence on multispecific associations of ants in taiga and on invertebrate community structure. In the Pasvik Zapovednik surroundings, 17 species of ants have been observed.

In 2007, ants were studied in Pasvik-Inari along transects in each of the three countries. Simultaneously, possibilities in exchange of expertise were mapped. The study was conducted in all countries by a Russian expert. The total length of the transects studied in 2007 was 69,05 km (38 km in Finland and31,05 in Norway).The routes passed through forest and bogs. 16 species were found in Finland, four Myrmicini species and 12 Formicini species, most of the latter belong to Formica genus. In Norway, 14 species were identified, four Myrmicini species and 10 Formicini. During 2005-2007 inventories in Russia, 17 species have been identified, four of them Myrmicini and 13 Formicini (12 in Formica genus).

Altogether, 17 ant species were identified in the Pasvik-Inari area. Most of the species belong to Formica-genus. The diversity of ants in Pasvik valley is limited by aboiotic factors rather than biotic. The main limiting factor is the duration of high temperature period needed for forage and reproduction. The sensitivity to temperature variates and the more tolerant species dominate. Distribution of hydrophilic species is limited by high soil humidity and low soil temperature.

PART B

4 Future of the cooperation

TThroughout the years of cooperation, mutual development ideas have been formed gradually. To concretise what the cooperation partners have been aiming at, these shared ideas have been written down in this plan. A SWOT analysis (Adams 2005) was carried out in order to clarify the strengths and weaknesses in the cooperation. By defining the threats and weaknesses, it is possible to identify the fields of work where actions are needed. The form was sent to all working group members of the cooperation project in January 2007. The participants were asked to list the internal strengths and weaknesses of the cooperation and the external opportunities and threats concerning the future of the area. Complete answers are compiled in annex 3 and the answers were taken notice of when writing the future strategies and actions.

The partners were unanimous in defining the strengths of the cooperation. The long-term cooperation was seen as the most important strength. People are familiar with each other and familiar with the expertise of other partners. The established tradition of yearly trilateral meetings forms a stable basis for future work. However, internal weaknesses were also recognised. The differences in legislation and management of the areas along with non-uniform restrictions were seen as problematic. The differences in operational cultures are recognised and a need for external funding is noticed. More interest in local cooperation and involvement of local interest groups were considered as an asset. Internal exchange of information is affected by lack of mutual language and more attention should be paid to external information.

According to the survey, the opportunities for developing the cooperation are many. The wilderness nature and the natural and historical values are seen as remarkable opportunities. In addition, the great interest in cooperation of the active local interest groups is seen as an advantage. Several possibilities for future development are present. Especially the possibilities in Russia are of major interest, but on the other hand, the unpredictability in policies concerning tourism and the border zone area is considered as main obstacles. Conflict between the different interest groups are possible, but the partners consider that with open dissemination of information and involvement of the locals, this problem may be avoided. The telecommunication and transportation connections between the countries and accessibility of some areas are problematic and the need for new connections and changes in border formalities is recognised.

4.1 Vision of the area

The vision of the Pasvik-Inari Trilateral Park was created in cooperation on the basis of the partners conceptions. The wilderness characteristics and the diverse natural, cultural and historical values are seen as main attractions of the area. Preserving these values and raising the profile of the area as a destination for travellers are the main focus areas in cooperation. The following vision has been approved by all cooperation partners. The aspiration level can be achieved within 10 years.

> Pasvik-Inari Trilateral Park is an internationally recognised sustainable nature tourism destination known for its wilderness characters and natural, cultural and historical values. Promotion of nature conservation and sustainable nature tourism preserves the core values and contributes to the sound development of the area.

4.2 Strategies and actions

To achieve the level of aspiration described in the vision, several strategies and actions are needed. In order to clarify and classify these strategies and actions, the vision was split into five main objectives. The strategies and actions are categorised under each main objective. The actions described here have been defined on short term (ST = 1-3 years), mid term (MT = 3-5 years) and long term (LT = >5 years) basis.

> The main objectives of the cooperation are to:
> 1 promote transboundary cooperation and contact at all levels, between nature managers, researchers, border authorities, municipalities, stakeholders, nature tourism entrepreneurs and local people,
> 2 preserve the natural and cultural values of the area on a long term basis through sustainable management and monitoring of the environment,
> 3 present and distribute knowledge about the area and promote the area recognition,
> 4 improve the facilities and infrastructure of the area to make it more accessible and user-friendly and
> 5 contribute to strengthening the economic development of the area by promoting sustainable nature tourism.

MAIN OBJECTIVE 1

Promote transboundary cooperation and contacts at all levels, between nature managers, researchers, border authorities, municipalities, stakeholders, nature tourism entrepreneurs and local people.

STRATEGIES

1. Transboundary cooperation is carried out in a regular and well-structured manner with a long-term perspective

Action (ST)
Mutually agreed cooperation rules guide the cooperation work and the fields of responsibilities are acknowledged.

Action (ST)
Information is exchanged about the organisation structure, personnel and working culture in each participating organisation to make the operational environment known to people involved in the cooperation and to ensure that the cooperation between the partner organisations is vivid at all levels.

Action (ST)
Adequate means to develop the cooperation are applied. Possibilities to apply the model based on Europarc Federation Transboundary Parks -concept are mapped.

Action (ST)
A list of contact persons is made and frequently updated.

2. Knowledge of the prevailing border formalities is obtained and information about possibilities and restrictions is exchanged between the cooperative partners

Action (ST)
Border authorities are invited to meetings in order to exchange information about activities related to nature tourism and possibilities to advance sustainable nature tourism in the area.

Action (ST)
The Advisory Board can make proposals to other instances about the issues concerning tourism in the area.

3. Knowledge of the current issues concerning the nature and culture is regularly exchanged between the cooperative partners

Action (ST)
Information is exchanged via both the internal web site and the public web site.

Action (ST)
Information about the species inventories and monitoring, such as methodological issues, analyses and results, is exchanged in the annual meetings and via Internet pages using modern technology such as GIS.

Action (ST)
All cooperative partners establish links to the Pasvik-Inari Internet pages from their own web sites and vice versa.

MAIN OBJECTIVE 2

Preserve the natural and cultural values of the area on a long term basis through sustainable management and monitoring of the environment

STRATEGIES

4. The most wilderness-like areas, such as the core areas of Vätsäri Wilderness Area, Øvre Pasvik National Park and Pasvik Zapovednik, are maintained as demanding hiking areas or areas reserved to research activities

Action (ST)
The trilateral working group in nature tourism promotes focusing the facilities and services are centralised in the core areas such as village surroundings and road sides.

Action (ST/MT)
Management planning has been carried out in each country and the topical principles concerning management planning are known to the partners involved.

Action (MT)
The core areas where facilities are not developed are defined in the management plans.

5. Mapping of biodiversity and cultural heritage is promoted in order to improve the basis for sustainable management and decision making

Action (ST)
Cooperation with research institutions and specialists is promoted by exchanging information about the planned and ongoing studies and inventories, by providing contact information and by creating opportunities for exchange of expertise.

Action (ST)
Special attention is paid to the distinct cultural features of the area, especially the Sámi cultures.

Action (MT)
A common unifying red list of species is compiled.

Action (LT)
Inventories of the cultural heritage are carried out.

Action (LT)
A complete list of publications on relevant studies and inventories carried out in the area is compiled.

6. Research and monitoring concerning the visitor impacts, such as littering and disturbance of wildlife, is promoted

Action (MT)
Information about different practices in monitoring visitor impact is exchanged to form a basis for using harmonised methodology in the future.

7. Research and monitoring of other human induced impacts on the environment, such as effects of hydroelectric power stations, nickel industry and climate change, is promoted

Action (ST)
The cooperation partners search for opportunities to arrange meetings, possibly in connection to the annually arranged meetings of the power station companies, in order to exchange information about the environmental issues.

Action (ST)
The regulation process of Pasvik River and Lake Inari is observed and recommendations can be made to authorities by the Advisory Board.

Action (MT)
The partners search for opportunities within their own country perspective to future cooperation with the hydroelectric power companies to form a basis for information exchange about the environmental issues and better management of the water course.

8. Long- term monitoring of important species and groups of species in all three countries is harmonised and implemented

Action (ST)
Long-term monitoring of brown bear is harmonised and implemented.

Action (ST)
Long-term monitoring methodology of the golden eagle is harmonised and implemented.

Action (ST)
Long-term monitoring methodology of waterfowl is harmonised and implemented.

Action (ST)
The possibilities to use harmonised monitoring methodology concerning other species/groups (insects etc.) of importance are sought.

Action (MT)
The terminology and methodology in research and mapping of the natural habitat types and landscapes are harmonised.

Action (MT)
The possibilities for creating a common database for keeping and analysing research results are sought.

Action (MT)
The results of research can be publish in each country like reports, articles, books and common proceedings of trilateral research can be publish in future.

9. Environmental monitoring forms a basis for nature tourism management and for evaluation of the state of the environment of the area

Action (ST)
The cooperation partners and working group members inform the Advisory Board about the state of the environment of the area and the sustainability of the implemented actions in the annual meetings. The Advisory Board can make proposals for measures needed to prevent degradation of the area.

Action (LT)
National practices in reporting the status of the area are analysed to evaluate possibilities to have harmonised system in status reporting.

MAIN OBJECTIVE 3

Present, distribute and exchange knowledge about the area externally and promote the recognition of the area

STRATEGIES

10. Regularly disseminate information to the public about the transboundary cooperation, including actions taken and results gained

Action (ST)
Publish relevant information via the jointly maintained Pasvik – Inari web site and by distributing newsletters and press releases.

Action (ST)
Update the Pasvik-Inari web every year. Responsible for this is the Office of the Finnmark County Governor in Norway. Metsähallitus in Finland and Pasvik Zapovednik in Russia provide material for the pages.

Action (ST)
Translate all published information at the Pasvik-Inari web site into Russian, Finnish, Norwegian and English.

Action (ST)
Jointly produced information material about the Pasvik – Inari cooperation area, such as the common brochure, is distributed at events, seminars etc.

Action (ST)
Promote locally arranged trilateral events and activities such as the Barents Ski event by distributing information about the events and providing information about Pasvik –Inari Trilateral Park for the participators of the events.

Action (ST)
The common name and logo for Pasvik –Inari Trilateral Park are used as a part of the regular national dissemination of information.

Action (LT)
Make a moving exhibition about the area and the transboundary cooperation to be exhibited in all three countries.

11. Environmental education is promoted by encouraging various collaborators, schoolchildren and students to take part in the studies or inventories carried out in the area

Action (ST)
Promote and support the Barents Environmental School in Rajakoski.

Action (ST)
Promote and support the ongoing "Phenology of the North Calotte" project.

Action (MT)
Invite local people, entrepreneurs and other stakeholders to participate in educational events annually, for instance bird watching tours.

Action (MT)
Produce information material about Pasvik –Inari Trilateral Park for schoolchildren.

MAIN OBJECTIVE 4

Improve the facilities and infrastructure of the area to make it more accessible and user-friendly.

STRATEGIES

12. The cooperation partners contribute in advancing the communications and infrastructure between the countries

Action (MT)
Organisation of tourist transportation between Finland and Norway concerning Piilola Wilderness Trail is promoted.

13. The facilities for visitors are maintained and developed

Action (ST)
The existing facilities are maintained and developed.

Action (ST)
A hiking path called "Piilola Wilderness Trail" will be established between Finland and Norway with adequate facilities (route markings, information boards, signposts, fire places) and the Piilola cabin in Øvre Pasvik National Park is prepared for public use.

Action (ST)
In the Nellim village surroundings in Finland, a logging cabin will be constructed with information boards telling about the logging history. The cabin will be built in association with the already existing historical destinations; the restored timber slide and the Iron Gate war history path.

Action (MT)
A border zone museum will be established in Rajakoski.

Action (LT)
One path will be established at the River Nautsi in Russia and one river route will be established from Rajakoski to Jäniskoski with adequate facilities. The old military remains in the area will serve as an open air museum.

MAIN OBJECTIVE 5

Contribute to strengthening the economic development of the area by promoting sustainable nature tourism.

STRATEGIES

14. Development of locally based sustainable nature tourism entrepreneurs is promoted

Action (ST)
The cooperative partners organise pilot tours to examine the possibilities for future nature tourism activities across the borders, for example a round trip in the three countries.

Action (ST)
The permanent, trilateral working group in recreation and nature tourism established by the cooperative partners meets annually to discuss the possibilities to further develop sustainable nature tourism in the area.

Action (ST)
The authorities and nature tourism entrepreneurs accept and apply the principles of sustainable nature tourism.

Action (ST)
Rules for using the common name of the area (Pasvik-Inari Trilateral Park) and the common logo when presenting and marketing nature tourism activities are defined nationally by the main partners.

Action (ST)
A list of contact persons operating in the area, including the nature tourism entrepreneurs and other stakeholders, is compiled and frequently updated.

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Annex 1. Trilateral cooperation agreement

COOPERATIVE AGREEMENT

Between Lapland Natural Heritage Services of Metsähallitus (Finland), Pasvik Zapovednik (Russia) and the County Governor of Finnmark (Norway)

I GENERAL MATTERS

In Finland, Lapland Natural Heritage Services (NHS) of Metsähallitus is responsible for management of the Finnish Governmental protected areas in Lapland.

In Russia, Pasvik Zapovednik (PZ) of Rosprirodnadzor MNR Russian Federation is responsible for management and research in Pasvik Zapovednik.

In Norway, the Office of the Finnmark County Governor (CGF) is responsible for management of nature protection areas in the county of Finnmark.

NHS, PZ and CGF have joint long-term objectives in the fields of nature protection and management of protected areas. These objectives are listed in article III.

By this agreement NHS, PZ and CGF will promote their cooperation for achieving these objectives.

Cooperative actions will be defined in detail in an annual trilateral meeting of the advisory board.

II GROUNDS OF AGREEMENT

The cooperation considers central themes involved in the activities of the contracting parties, such as protection of endangered and rare species, management of protected areas, research and monitoring promoting nature protection, information about nature protection, environmental education, nature guidance, dissemination and sustainable nature tourism.

The agreement consists of the following articles: Objectives of the agreement, Principles for cooperation, Organisation of the cooperation and Application and validity of the agreement.

III OBJECTIVES OF THE AGREEMENT

The objectives of the agreement between NHS, PZ and CGF are:

- to promote the achievement of the objectives of nature protection in the protected areas,

- to promote protection of endangered and rare species and biotopes,

- to create a joint entity of transboundary protected areas (Pasvik-Inari Trilateral Park) consisting of Vätsäri Wilderness Area, Pasvik Zapovednik, Øvre Pasvik National Park, Øvre Pasvik Landscape Protection Area and Pasvik Nature Reserve and to develop the cooperation of this joint entity of protected areas according to the Europarc Federation's certification system "Transboundary Parks – Following Nature's Design" for exemplary transboundary cooperation between protected areas in Europe,

- to develop the trilateral cooperation between the protected areas further,

- to develop the interaction and exchange of personnel between the cooperative parties,

- to develop and harmonise species monitoring methods in the protected areas,

- to promote nature guidance, publications and dissemination about nature protection,

- to promote sustainable nature tourism,

- to utilise different possibilities for funding and accomplishing joint projects, and

- to ensure consideration of mutual assets in cooperative projects.

IV PRINCIPLES FOR COOPERATION

NHS, PZ and CGF will pay their part of co-operative project costs individually, unless otherwise stipulated. However, funding can also be done through joint projects.

NHS, PZ and CGF may utilise each others databases and expertise agreed in separate agreements or contracts.

NHS, PZ and CGF may use each others premises and human resources agreed in separate agreements or contracts.

V ORGANISATION OF THE COOPERATION BETWEEN NHS, PZ AND CGF

The cooperation will be coordinated by a joint trilateral advisory board consisting of representatives of NHS, PZ and CGF together with other local authorities, such as the municipality of Inari and Lapland Regional Environment Centre in Finland, the municipality of Pechenga and Regional committee of the Nature Resources and Environmental Affairs in the Murmansk Regional Government in Russia, and the municipality of Sør-Varanger in Norway.

The trilateral advisory board will meet annually. The date of meeting will be agreed on mutually. The trilateral advisory board will confirm the annual cooperative program and work towards fulfilling this.

The trilateral advisory board can also discuss other essentials concerning cooperation. It may also invite other representatives of authorities or scientific personnel to their meeting if needed.

Essentials discussed at the annual meetings will be openly distributed to the local stakeholders.

VI Application and validity of the agreement

Questions and other possible controversies, as well as demands for amendments concerning the application of this agreement will be discussed in the meetings of the trilateral advisory board.

The agreement can be terminated in writing, with one years notice.
The agreement will become valid at the moment of signing.
This agreement exists in four different language versions; English, Finnish, Russian and Norwegian.

Inari/2008	Inari/2008	Inari2008
Metsähallitus Natural Heritage Services	Rosprirodnadzor Pasvik Zapovednik	County Governor of Finnmark Department of Environmental Affairs
Jyrki Tolonen Regional Director	Vladimir Chizhov Director of Zapovednik	Bente Christiansen Head of Department

Annex 2. Guiding rules for cooperation

1. Cooperation is coordinated by an Advisory Board (Trilateral meeting)
2. The members of the Advisory Board are nominated by the participating organisations
3. The level of involvement in the cooperation is defined internally by each partner according to the current resources
4. The Advisory Board holds annual meetings
5. A chairperson and a secretary of the Advisory Board are chosen for one year period and the place of the annual meeting is rotated between Russia, Finland and Norway every year
6. The hosting country keeps record of the meetings
7. The official working language is English, essential documents are translated to national languages
8. The Advisory Board is a decision-making body in international cooperation actions in area concerning issues mentioned in the Action Plan
9. The Advisory Board can give statements and recommendations regarding development and nature protection to the national authorities
10. Topical working groups are assigned by the Advisory Board when considered necessary
11. Chief and secretary of the working groups are chosen for two year period and the hosting country is responsible for record keeping
12. The working groups make recommendations to the Advisory Board
13. Each country has one nominated person responsible for each action planned within the trilateral cooperation

Annex 3. SWOT analysis

The SWOT analysis form was filled in by the Pasvik-Inari cooperation partners in 2007. The table presents the compiled answers. The upper half of the table reflects the present status and internal strengths and weaknesses while the lower part contains the future prospects and external issues. Positive ideas are on the left and negative ones on the right. The most frequent answers are written in bold.

Strengths: **- long traditions in cooperation** **- good knowledge of the area** **- network of experts in the area** **- tradition of yearly meetings** **- stable partner organisations** **- mutual vision** *- long traditions in research* *- diversified expertise in nature and cultural heritage protection* *- the development of the areas close to the protected areas is seen positive* *- growing tourism activity* *- growing interest towards the Northern areas*	**Weaknesses:** **- different legislation and different levels of restrictions in the areas** **- lack of mutual language and uniform use of terminology and multilingual interpreters** **- administrator-focused approach, lack of participation of local interest groups** **- differences in operational cultures and operational environments** **- external funding needed for implementation** **- non-open dissemination may cause misinterpretations and prejudices** *- difficulties in decision making (responsibilities)* *- heavy structure in organisations makes it not easy to react quickly* *- changes of personnel in the cooperating organisation* *- long traditions may lead to preserving the old operations models* *- short periods in external funding weaken commitment to the cooperation* *- lack of mutual interests and will and negative attitudes towards cooperation, when long term benefits are not recognised* *- if the duties in international cooperation and applying for external funding are not included in the work of the permanent staff, no-one will take the steps further*
Opportunities: **- unique wilderness nature** **- diverse cultures** **- shared history** **- active municipalities and active local entrepreneurs** **- networking with the authorities, researchers, locals etc.** **- involvement of the local level in cooperation and recognising the traditional livelihoods** **- recognition of the area increases via certification** *- strengthening of the cooperation enables more efficient use of the existing dissemination channels* *- possible new opportunities in Russia in terms of tourism investments and relieved border formalities* *- possible opening of the Virtaniemi border station* *- open dissemination enables avoiding conflicts* *- possibilities created by EU to promote cooperation in remote areas across the borders* *- acknowledgement of the diverse culture supporting the natural, historical and cultural values* *- international agreements, for example Schengen agreement* *- possible road and snow mobile connections* *- interesting projects, old and new, to cooperate with possible joint wilderness routes*	**Threats:** **- border restrictions and unpredictability** **- unstable connections to Russia** **- conflicts with different interest groups in each country** *- slow decision processes due to legislation* *- remoteness of the area* *- poor involvement of local people* *- interest of local people in cooperation and its opportunities* *- lack of straight road connections* *- pollution* *- migration to town of the innovative people* *- increasing control in data-communication* *- Norwegian custom regulations, crossing the border from unofficial crossing points is not possible for example by snowmobile* *- political instability*

Annex 4. International agreements concerning the Pasvik-Inari area

INTERNATIONAL AGREEMENTS

1 Bilateral agreements between Finland and Norway
Agreement between Norway and Finland on the fisheries in the Neiden River area (1977, revised 1984)
Agreement between the Kingdom of Norway and the Republic of Finland on mutual regulations concerning the fisheries in the Tana River fishing area (1990)
Agreement between Finland and Norway on a Finnish-Norwegian Transboundary Water Commission (1980)
Agreement between the Government of the Republic of Finland and the Kingdom of Norway on management of the mutual national frontier (2007)

2 Bilateral agreements between Finland and Russia
Finnish-Russian agreement on the use and protection of transboundary waters (1964)
Agreement on Scientific-technical cooperation (1970)
Agreement between the Government of the Republic of Finland and the Government of Russian Federation on Cooperation between Russia and Finland in Murmansk Oblast, Karelia, Saint Petersburg and Leningrad (1992)
Agreement between the Government of the Republic of Finland and the Government of Russian Federation on Fundamentals of interests (1992)
Agreement between the Government of the Republic of Finland and the Government of Russian Federation on Cooperation in Culture, Education and Research (1992)
Agreement between the Government of the Republic of Finland and the Government of Russian Federation on Cooperation in Science and Technology (1992)
Action Programme on the Reduction of Pollution and the Implementation of the Protection of the Marine Environment in the Baltic Sea and in other Areas close to the Common borders of the Republic of Finland and the Russia Federation (1992)
Agreement between the Government of the Republic of Finland and the Government of Russian Federation on Cooperation in the Field of Environmental protection (1992)
Action Programme for the Purpose of Limiting and reducing the Deposition and Harmful Effects of Air Pollutants Emanating from Areas near Their Common Border (1992)
Agreement between the Government of the Republic of Finland and the Government of Russian Federation on Crossing points of mutual Finnish-Russian national frontier (1994)

3 Bilateral agreements between Norway and Russia
Border Agreement (1949)
Agreement on the sea frontier in the Varangerfjord (1957)
Convention between Norway and the Soviet Union regulating the fishing and conserving the fish stocks in the Grense-Jakob River (Voriema) and Pasvik River (Paatsojoki) (1971)
Agreement between Government of Russian Federation and Norwegian Government about mutual return crossing state border reindeers (1977)
Protocol about Russian and Norwegian Border Commissar meeting about order execution and Agreement between Government of Russian Federation and Norwegian Government about mutual return crossing state border reindeers (1977)
Agreement on Environmental Cooperation (1988)
Agreement between Russia and Norway on cooperation in the sphere of the environment protection (1992)
Agreement between Norway and Russia on environmental cooperation in connection with the dismantling of Russian nuclear powered submarines with drown from the navy's service in the northern region, and the enhancement of nuclear and radiation safety (1998)
Agreement between Norway and Russia on the modernization of the Kola mining and metallurgical company Ltd. (2001)
Agreement between the County Administration of Murmansk Oblast and the County Governor of Finnmark regarding implementation of the project "Pasvik-Inari Friendship Park" (2006)
Agreement on maritime delimitation of a coastal area at the mouth of the Varangerfjord (2007)

4 Multilateral agreements between the Nordic Countries
Convention on the Protection of the Environment between Denmark, Finland, Norway and Sweden (1974)
Agreement between Denmark, Finland, Iceland, Norway and Sweden on Cooperation in Combating Pollution of the

Sea caused by Oil or Other Harmful Substances (1993)
Agreement on Nordic Environment Finance Corporation NEFCO (1998)

5 Multilateral agreements
Ramsar Convention on Wetlands (Finland 1975, Norway 1975 and Russia 1977)
Convention for the conservation of salmon in The North Atlantic Ocean (1982)
Convention on Environmental Impact Assessment in a Transboundary Context (Finland, Norway and Russia 1991)
United Nations Framework Convention on Climate Change (Finland, Norway and Russia 1992)
Kirkenes Declaration, establishing the Barents Euro-Arctic Council (Finland, Norway and Russia 1993)
Convention on Biological Diversity (Norway 1993, Finland 1994 and Russia 1995)
Schengen Agreement (Finland 1996, Norway 1999)
European Landscape Convention (Finland and Norway 2000)
Agreement on an international Barents secretariat in Kirkenes (2007)

6 International joint commissions and working groups
Joint Finnish-Russian Working Group on Nature Conservation (1985)
Joint Norwegian-Russian Commission on Co-operation in the Field of Environmental Protection (1997)
Bilateral Norwegian-Russian Working Group on Biological Diversity (1997)

INTERNATIONAL DECLARATIONS AND SUMMITS

1 Barents Euro-Arctic Council (BEAC)
Cooperation in the Barents Euro-Arctic Region, Conference of Foreign Ministers, Declaration (Kirkenes, 1993)
BEAC – Foreign Ministers meetings 2nd- 11th; Tromsø 1994, Rovaniemi 1995, Petrozavodsk 1996, Luleå 1998, Bodø 1999, Oulu 2000, Murmansk 2001, Umeå 2003 and Harstad 2005, Rovaniemi 2007.
BEAC - Prime Ministers Meeting, 10 year anniversary Summit Declaration (Kirkenes 2003)

2 Barents Euro-Arctic Council (BEAC) – Environment Ministers Meetings
BEAC – Environment Ministers Declaration (Bodø, 1994)
BEAC - 2nd Environment Ministers Declaration (Rovaniemi, 1995)
BEAC - 3rd Environment Ministers Declaration (St. Petersburg 1997)
BEAC - 4th Environment Ministers Declaration (Umeå, 1999)
BEAC - 5th Environment Ministers Declaration (Kirkenes, 2001)
BEAC - 6th Environment Ministers Declaration (Luleå, 2003)
BEAC - 7th Environment Ministers Declaration (Rovaniemi 2005)
BEAC - 8th Environment Ministers Declaration (Moscow 2007)

3 St. Petersburg Summit in May 2003, Roadmap for the Common Economic Space – Building Blocks for Sustained Economic Growth

4 Terms of reference for establishing a Dialogue on Environment between the Ministry of Natural Resources of the Russian Federation and the Directorate General for Environment of the European Commission, 10.10.2006

5 Political Declaration on the Northern Dimension Policy, 24.11.2006

Annex 5. Principles of sustainable nature tourism in Pasvik-Inari

1. Nature values are preserved and the tourism activities promote nature protection

- Nature is an important reason for travel
- Visitors are informed about nature and nature conservation
- Tourism does not disturb nature - all areas are not suitable for tourism
- Visitor groups are small and trails are used whenever possible
- Tourism is channelled with the help of information and by placing of facilities
- Facilities are constructed without harm to the environment and areas of natural beauty are left in their natural state
- Degradation of nature and other impacts are monitored and, if necessary, measures are undertaken
- Marketing supports sustainable nature conservation

2. All activities are environmental friendly

- Minimum loading of the environment is assured
- The objective is rubbish-free hiking with minimum stress on environment
- Transportation systems with minimised impact on environment are given preference
- Motorised transportation is guided to the areas best suitable
- Firewood is used frugally
- Emissions into water and air are minimised, renewable energy sources are favoured
- Visitors are provided with information about best practises for environmental friendly behaviour

3. Local culture and heritage are respected

- Local culture is met open-mindedly
- Local people are involved in planning and implementing of new activities
- Sensitivity, rights and wishes of indigenous people are respected
- Whenever possible, cultural heritage is included in information and experiences are offered
- Historical and scientific sites are respected, and damage of important cultural heritage sites are prevented
- Local guides familiar with culture are used

4. Local economy is supported

- Products and services of local entrepreneurs are always used when possible
- Local people are employed when possible, but also people and ideas from outside the region are seen as a potential
- Involvement and partnerships with indigenous people and local communities are sought and supported

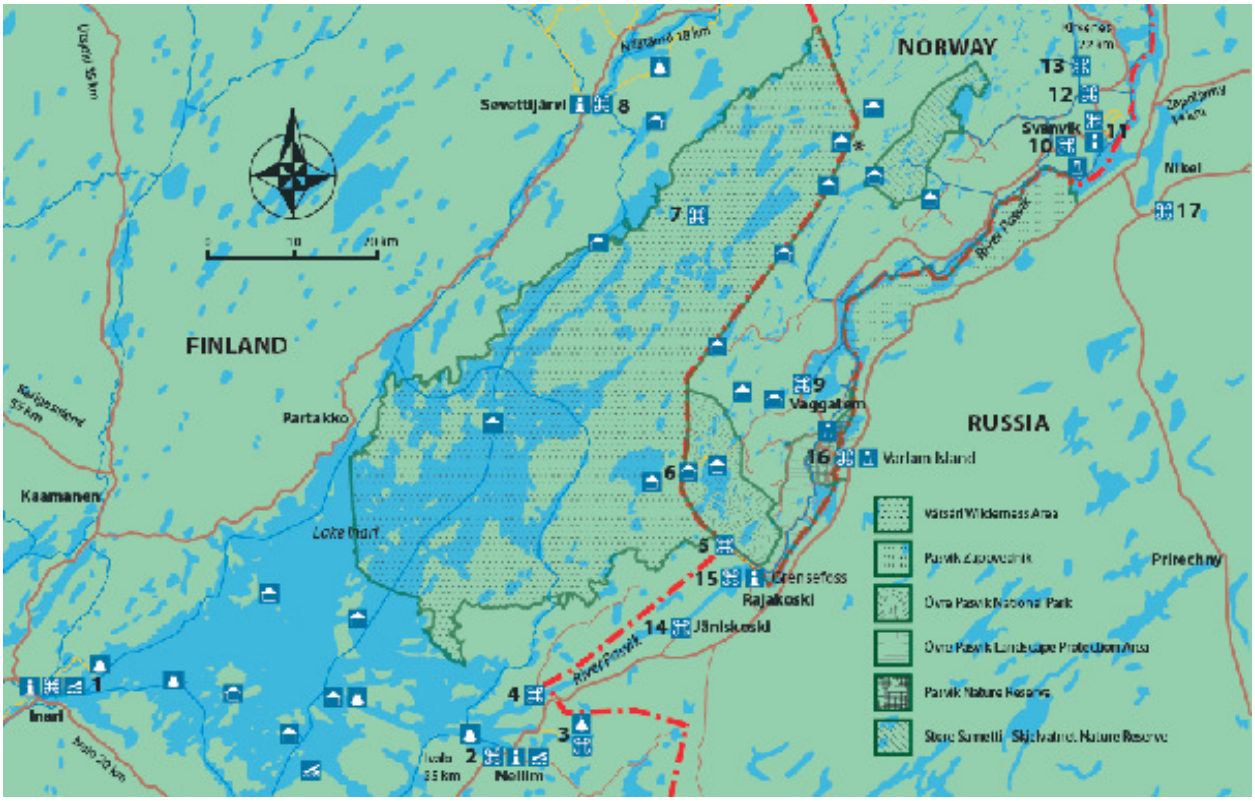
5. Visitors' appreciation and knowledge of nature and culture are promoted

- Information is available beforehand
- Knowledge is easy to find and in an interesting form and content
- Trained guides have knowledge about nature, culture, history, and inspire visitors
- Possibilities are created for feedback to enable participation in the management of the area

6. Quality and safety in all business operations are ensured

- Information is reliable
- Essential safety rules and regulations are followed
- Training is organised in co-operation with entrepreneurs
- Planning is open and interactive, and opinions of the visitors are appreciated
- Priority is given to those wanting to commit themselves to these principles of sustainable nature tourism

Annex 6. Nature tourism facilities in Pasvik-Inari



1 Siida, Northern Lapland Nature Centre and Sami Museum
2 Orthodox Church, Nellim harbour, shop/bar
3 Timber Slide, Iron Gate path
4 Pasvik Bridge
5 Border mark between three countries
6 Pillola gate between Finland and Norway
7 Old reindeer fence of Vätsäri
8 Orthodox Church, Skolt Sámi heritage house, shop/bar
9 Vaggatem prison camp
10 Height 96 (Høyde 96) observation tower, café/souvenirs (open in summer)
11 Øvre Pasvik National Park Visitor Centre, Botanical Garden, Svanvik Chapel, the longest gamme in the world, Sør-Varanger Museum – Bjerklund farm (open in summer)
12 Sør-Varanger Museum – Strand Museum and Bear's Den
13 Sør-Varanger Museum – Namdalen, Norwegian Settler's farm (open in summer)
14 Jäniskoski village
15 Rajakoski village, Office of Pasvik Zapovednik
16 Bird watching tower, house of Schaanning
17 Museum of history
* Rajapää wilderness hut, open 1. 6. – 30.9.

Information
Sight
Bird watching tower
Wilderness hut
Lapp hut
Harbour
Trail
Snowmobile track