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ABSTRACT

The Paanajärvi National Park was established 20.5.1992 by a Federal Decree. At the moment it covers 104 400 ha in the north-western corner of the Republic of Karelia, bordering to the state border just beneath the Polar Circle.

In spite of its northern location, the Paanajärvi National Park forms one of the richest territories in the entire Karelia from the floristic point of view. A combination of several factors results in a high biodiversity value, and the Park establishment has been well justified:

- ❑ Narrow and deep Lake Paanajärvi. Some crayfishes are living in the lake as relicts from the time when the lake was a fjord of the White Sea. Bedrock with a great variety of minerals. Limestone and other basic minerals enrich the flora and fauna of the territory.
- ❑ Great number of small habitats, inhabited by many rare and endangered species, many of which live here in the border of their distribution area.
- ❑ Wide taiga which has never been logged with the exception of the Paanajärvi and Olanga valleys and some minor areas elsewhere. These forests are a central part of the largest spruce forest in Fennoscandia never cut by man.
- ❑ Many typical species for the taiga, as big carnivores, wild forest reindeer, flying squirrel and some bird species with eastern occurrence.
- ❑ Rich fish fauna in lakes and rivers. Brown trout, char and some other salmonid species have many separate, isolated populations in the small lakes.
- ❑ Remnants of former and disappeared cultures, for example Seidas on the fells, house grounds and fields of the old Finnish settlement by lake Paanajärvi, and those of Karelian settlement around Vartiolampi.

Paanajärvi Lake and the surrounding environment has attracted visitors as long as starting from the end of 19th century. However, in the time period from 1940's to the end of 1980's the area was closed except to the Russian frontier guards. After the Park establishment the amount of visitors has again risen and achieved a level of 3000 tourists and 10 000 overnights at the moment. Tourism development is more widely described in Tourism Strategy for the Karelian Part of the Green Belt (Friman and Högmänder 2001).

The Park organisation is quite well established and the Park area well under control in spite of the inadequate financing and facilities. The number of permanent staff is about 40 persons. The Park has constructed first facilities for visitors in most fascinating sites near lake Paanajärvi and along the river Olanga. At present, the Park can accommodate more than 100 visitors in cabins and many more in tents. In the Park, there are seven saunas, the first nature trails as well as routes for snowmobiles.

This Development Plan is the outcome of the TACIS Karelia Parks Project, where Paanajärvi National Park is the main recipient. During the Project many seminars and training courses have been organised in the Park. The analysis of the current situation was one of the key themes and the results are presented in a form of SWOT analysis in this Development Plan. According to the analysis the main challenges of the Park are following:

1. How the Park can prepare itself for the opening of the international cross-border point in Suoperä? Can the Park receive more potential visitors? How to construct new infrastructure and new services avoiding from any damage to the main purpose of the Park, conservation of natural and cultural heritage?
2. How to develop the capacity of the personnel to meet new, demanding tasks? How to train the staff, to recruit skilful staff and to make working circumstances attractive for professional workers?
3. How to improve the control over the territory? How to prevent illegal activities? How to monitor nature and wearing of it in order to avoid damage?
4. How to secure adequate investment and recurrent financing while new budget funding is unsecured and while an increasing number of visitors will demand more personnel, investments and expenses for the maintenance?

The objectives of a national Park are of high importance when planning activities and allocating resources. The main objectives for the Paanajärvi National Park are nature conservation in general, especially the preserving of large pristine spruce forests and many endangered species as well as the protection and sustainable use of local fish populations. Additionally, the history and culture of the area is versatile and together with biological value the area forms a basis to the environmental education and recreation and offers possibilities to researchers. In the remote district, the Park has a high potential to support local livelihood by offering directly and indirectly job opportunities, especially in tourism development, and thus diversify the economy depending on timber exploitation.

The Park vision 2010 is written out to form a tempting but at the same time a realistic and reliable picture of the future prospects. The vision is ambitious and the implementation is a challenge not only to the Park authority but also to federal and regional authorities, local counterparts, international organisations and others interested in developing the Paanajärvi National Park to be one of the best managed Parks in the Europe. The work will be demanding but the vision is achievable if all main stakeholders adopt the development plan and give their support to the Park's activities.

The actual development plan consists of four parts:

1. Working Principles and Policy
2. Administration and Park management
3. Management of natural and cultural heritage
4. Visitor management

Working Principles and Policy forms a basis for the Park's own activities and its relations with partners. The key issues and principles which should be clarified for the working policy are presented. They need to be refined by the Park authority together with local and other stakeholders. Distribution of the Park policy in an understandable form to all visitors and partners is important as the basic code of practices.

The other three parts are formulated into fourteen development goals and totally 69 actions covering all the main elements of the national Park development. The achievement of the goals and the speed of the development is depending not only on the Park but affected by a heap of external factors. The key issue is the availability of resources. The federal and regional financing will be limited and the Park continuously has to seek for an external funding and increase its own income. Financiers wish to determine where the funds are allocated, which often may be contrary to the Park's own priorities. The Development Plan cannot thus be presented in a form of detailed and scheduled activities for a given period.. The scope of this development plan is 5-10 years.

An investment plan together with income scenarios is presented. A business plan was created to help the Park and its financiers to calculate and estimate the profitability of the needed investments mainly for tourism activities. It is clear that without any external financing the Park has no possibilities to implement the investments in time. If the Park does not receive enough funds for investments the number of visitors might have to be limited unlike in the tourism plan or the damages in the nature might amount unbearable. This also means that income generation from tourism for promotion of the real conservation goals is at stake. The success of the Park development needs many sided financing from federal budget, republic budget, the Park's own income and also from the participation of international funding organisations. All these sources have their own status and the Park management will have to prioritise the fund raising.

1. Introduction

The Paanajärvi National Park has been running almost ten years and achieved her own position among Russian national Parks. The Park has been implementing the basic management plan for several years but the changes in the surrounding society have been so enormous that the plan does not meet the challenges the Park will face during the next decade. However, in the Tacis Karelian Park Project it was decided not to aim at revising and modernising the existing management plan but to concentrate more on analysing the current management of the Park and draw guidelines for development.

Strategic development plan of the Paanajärvi National Park includes basic information of the Park nature and its operations for those readers who does not know the Park in detail. Present situation forms the foundation for all development goals and actions which are recommended in this plan. The development plan is not an official plan according to the Russian legislation. This fact has enabled the writers to state also goals which may not be possible to be implemented at the moment due to legislative or administrative instructions. The aim is to present an expansive analysis and development program for an internationally acknowledged position for the Paanajärvi National Park. This means a lot of work to the Park, but it is important to recognise that the Park has no possibilities to achieve this goal without a strong support from all the Russian and foreign partners.

This plan is compiled in order to help the Park staff to develop its operations. However this is not the only goal, because the Park and its director knows very well what to do if financial resources for the Park management would be big enough. This Plan is also targeted to the Russian Federation and its nature conservation administration, the authorities in the Republic of Karelia and in Louhi district, business partners in Russia and abroad as well as international organisations working with nature conservation and financing. The development plan is considered to show the readers that Paanajärvi National Park has a lot of development potential, if all partners will commit to allocate adequate resources to the Park and support the Park according to their own status. The management of the Park started successfully and hopefully this plan will promote its successful continuation in nature conservation.

2. Description of the Paanajärvi National Park

2.1 History of the National Park

The territory of the current Paanajärvi National Park is widely known since the end of the 19th century. Finnish scientists made expeditions to the wilderness and there are many publications of results of scientific work from the beginning of 20th century. The Lake Paanajärvi with its surroundings was a part of the border zone and thereby closed for visitors from 1940s to the late 1980s.

In the end of 1980s a big hydropower plant was planned to be constructed utilising the high latitudinal differences of Nierisjärvi and Paanajärvi in energy production. Somewhat later some Finnish businessmen tried to hire the fell Nuorunen for establishing a ski-centre with numerous slalom slopes, ski-lifts and hotels. However, the territory was maintained by a scientist of Karelian Research Centre, who proposed the establishment of a national Park covering Lake Paanajärvi, the southernmost fells of Karelia, and a large wilderness around them.

With the help of a Russian-Finnish co-operation of scientists and conservationists these threats towards the nature were turned into a victory, as the Paanajärvi National Park was established 20.5.1992 by a Federal Decree. The incidents were also a start for a cross-border co-operation facing advancement and development.

The Paanajärvi National Park was established one fourth smaller than proposed by the scientists. Large valuable territories both in the south and the north were excluded from the Park area. In the Plan for the management of the National Park in 1994, an inclusion of 22 790 ha were proposed to cover the most important gaps in the protection. By a Federal Decree 19.12.1997, only 1054 ha was incorporated in the Park covering the mouth of the river Olanga, water and some islands of lake Pyaozero in the easternmost part of the National Park. The current area of the National Park covers 104 400 hectares.

A buffer zone of 56 200 ha was proposed around the National Park, but the Goskomles of the Republic did not accept it, but proposed a buffer zone of 500 m, which would equal to an area of about 9 000 ha. That proposal is not yet confirmed.

The Paanajärvi National Park is situated in the North-western corner of the Republic of Karelia, bordering to the state border. The distance from the northern tip of the Park to the Polar Circle is only about ten kilometres. The Park is located in a rectangle, the coordinates of which are 66°07' - 66°28' N and 29°35' - 30°42' E.

2.2 Nature of the Park

The valley of Paanajärvi is warm in summer, because the sun warms the southern slopes of the lake valley. Continental climate often brings really warm weather to the northern latitudes here. In autumn the large volume of warm water in lake Paanajärvi keeps the lake open until December. In winter the same low valley is colder than the areas higher up. The temperature can fall lower down than to - 50 degrees. There is lots of snow in winter, as snow-cover can often be deeper than 1 meter. Spruces grow narrow to keep the snow load light. On the upper parts of fells the snow wraps up the spruces forming ghost-like figures.

There are three bare fells in the National Park: Nuorunen (576 m) in the south, Kivakka (499 m) in the east and Mäntyunturi (550 m) in the north of lake Paanajärvi. In addition to these, immediately in the north of the Park there are Sieppitunturi (537 m) and Lunas (495 m). In the north-east visitors can see the profile of Päänuorunen (486 m).

There are 427 lakes in the National Park, and the most peculiar of them has given its name to the Park. Lake Paanajärvi is one of the deepest lakes in Fennoscandia. The deepest points are in 128 meters. The lake bottom is only 4 m higher than the surface of the White Sea, which stretched one of its fjord-like bays here after the latest Ice Age. There are still some relict species living from that time: three shellfishes and smelt. Paanajärvi is 23,5 km long. From the top of Mäntyunturi, the distance is 542 m to the bottom of the lake.

River Oulankajoki - together with rivers Kitkajoki and Kuusinkijoki - brings waters from Finland to lake Paanajärvi. Several smaller rivers run to the lake from the north and the south. From lake Paanajärvi, the water runs down to Pyaozerski along Olanga, almost 20 km long with many beautiful rapids. The most famous of them is Kivakka, which falls 12 meters down.

On the northern shore of lake Paanajärvi, there are several magnificent cliffs, the most famous of them is Ruskeakallio, the vertical slope of which falls 60 m directly to the lake. Many rare plants

decorate the shelves of Ruskeakallio. Once peregrine had its nest there, now ravens raise their young on the cliff.

The Paanajärvi National Park is in the western edge of the taiga forest, the largest coniferous belt in the world. Until 1990s this forest stretched, only slightly touched by cuttings, from Siberia to the Finnish border. Three fourth of the area of the Paanajärvi National Park is covered by forests, 70% of them are spruce forests and 24% pine forests. In the whole Park area 56% of forests are mature or over-mature, it means older than 120 years. In table 2.1 the land categories are shown according to the statistics of forest figures.

Table 2.1

Areas of land categories in the Paanajärvi National Park based on forest figures.

	Land categories	Area, ha
1	Forest of natural origin	77708,8
2	Burnt area	40,8
3	Dead forest	166
4	Glade	5
5	Landscape clearing	30,2
6	Lake	11063,7
7	River	589,8
8	Stream	33
9	Car road with artificial covering	49,6
10	Gravel road	56,4
11	Winter cabin	1
12	Paths	0
13	Compartment openings	113,6
14	Survey line	1,1
15	Private steading	20
16	Other routes	68,3
17	Fire prevention gaps	10
18	Decorative lawns	433
19	Sand-pit	13,7
20	Non-used areas	27
21	Bedrock outcrops	27
22	Mire	12971
23	Bare mountains	1041
	Total, ha	104470
	Age classes of forests	
	Pine forests	
1	Over-mature	2322,9
2	Mature	4345,2
3	Maturing	3560,9
4	Middle-aged	8413,8
5	Young forest	84
	Total, ha	18726,8
	Spruce forests	
1	Over-mature	12107
2	Mature	25852,2
3	Maturing	8903,4
4	Middle-aged	7464,3
5	Young forest	50
	Total, ha	54376,9
	Birch forests	
1	Over-mature	158,3
2	Mature	2120,2
3	Maturing	898,4
4	Middle-aged	1370,1
5	Young forest	56
	Total, ha	4603
	Aspen forests	
1	Over-mature	1,5

North-west of Pyaozerski, between lake Tavajärvi and the border of Murmansk oblast, there are the largest still existing spruce forests born on a natural way to be found. In the National Park most of these forests have never been cut and they are here in safe. Near the Paanajärvi – river Olanga valley selective cuttings have taken place, but no more after 1930s.

Virgin forest have several layers, the trees are of different ages and a visitor cannot see stumps. Even a third of the wood is dead and decaying, in standing or lying position. This decaying wood is the home range of a large group of fungi and invertebrates. Virgin forest is regenerated only through forest fires and wind fells. Due to unchanged circumstances through centuries, the forest can guarantee favourable habitats for many demanding and rare species living only in old-growth forests.

In spite of the northern location, the Paanajärvi National Park is one of the richest territories in the whole Karelia from the floristic point of view. Many factors have an influence on this, leading into a high biodiversity. The most important factors are as follows:

- There is limestone in the bedrock. The basic rocks and soil facilitate intake of nutrients for the plants, which makes the habitat suitable for the presence of rare plants. As examples can be mentioned the beautiful and widely known orchids Lady's slipper and Calypso.
- On the highest tops of the fells there are many mountain species, such as *Loiseleuria procumbens*, *Arctostaphylos alpina*, *Phyllodoce caerulea*
- On the shelves of cliffs many plant species from southern and northern latitudes meet each others and grow side by side. Ruskeakallio is one example of this kind of habitat. For example *Gypsophila fastigata* and *Potentilla chamissionis* live there.
- River valleys have always been migration routes for plants. In the National Park for example *Dianthus superbus*, *Silene tatarica* and *Aster sibiricus* can be found on sand beaches of the river.
- Favourable microclimate in the valleys with the calcareous influence has resulted in lush slope groves, which can be considered unbelievable this close to the Polar Circle. For example, groves dominated by *Diplazium sibiricum* where also *Cicerbita alpina* grows up to waist height.

One of the special features of the Paanajärvi National Park are the sloping fens, which seem to glide down along the hill and fell slopes. At a distance they resemble grazed meadows. Another speciality are rich fens. Some of them also can be sloping fens at the same time. Rich vegetation on fens is caused by the calcareous bedrock and moraine. Typical plants for rich fens are *Eriophorum latifolium*, *Pinguicula alpina*, *P. vulgaris*. Mires and fens totally cover only 12% of the Park area, due to the high relief.

Wild forest reindeer and some predators, like wolf and wolverine, are relatively common in the National Park. Also brown bear, lynx and flying squirrel belong to the wilderness fauna of Park. Some eastern bird species can be met here, such as great grey owl, black kite, red-breasted bluetail and little bunting.

The Paanajärvi National Park is famous for many endangered species living there. So far, scientists have been able to study only a part of the Park territory. Altogether 144 species, endangered in Karelia, Eastern Fennoscandia or whole Russia, have been recorded here. The whole list is given in Annex 1.

2.3 Settlements around lake Paanajärvi

Paanajärvi is surrounded by wilderness, but there have been people living for thousands of years: Saams, Karels and Finns. The border of two strong cultures in west and east has split this territory already for over 400 years. It has brought some tension in people's life living here.

The Saams were the first ones, who arrived already after the retreat of the continental ice. They were fishing and hunting here. They did not leave many remnants of themselves: some knives, arrow heads, stone axes and crocks. Fifteen settlements of them were identified around lake Paanajärvi. They were occupied by Saams during five thousand years, from Stone Age to Iron Age.

On the top of the fell Kivakka, a large sacred site was located at that time. Still today Seids, large stone boulders on smaller ones, can be found here. Pre-historical monuments like this cannot be met anywhere else outside Karelia. A similar, but smaller sacred site was found on the fell Nuorunen. By lake Tavajärvi close to Nuorunen, a cache of silver ornaments, about one thousand years old, was discovered.

The Saams gradually gave place to a permanent settlement since 1670s. Already before that, in 1595 the Russian – Swedish border was set to cross lake Paanajärvi in the middle of the lake. Restless life by the White Sea coast was followed by movement of people to the shores of Pyaozero in 16th and 17th hundreds, the first Karelian dwellers came to Paanajärvi in 18th hundreds. The Swedish King re-

fused Finns to move to the territory of Lapps' villages until 1673. After that the Finns were encouraged, which resulted into new settlements in the Saami area.

The first Finnish house was constructed to Paanajärvi in 1769, when Mr. Henrik Törmänen together with his two brothers bought land in the mouth of Sovajoki, near the western end of Paanajärvi. By the end of 18th century, there were already six houses and about 60 inhabitants in Paanajärvi. In the 19th century trading became a new livelihood: a busy trading route between the city of Oulu and White Sea coast crossed this territory. Natural circumstances for agriculture were, and still are, exceptionally favourable here, due to the warm microclimate.

The border was closed after the revolution in 1922 and in 1939 the whole Finnish settlement, 700 people from the shores of Paanajärvi were evacuated from their homes because of the war. The territory was incorporated in Soviet Union in 1944.

There were two villages on the eastern side of the old border, the village Vartiokylä close to the rapid Kivakka and Oulangansuu by lake Pyaozero. The latter village was drowned in 1960s, when the surface of lake Pyaozero was raised by nine meters as a part of construction of a hydropower plant in Kuma.

During the centuries the state border changed places several times around lake Paanajärvi. Before the year 1922 the border did not separate, but joined people around it. Trading across the border brought wealthy. Since 1990s, after a silent period of fifty years, crossing the border is easier again. On the southern side of the National Park, a cross-border point at Suoperä – Kortosalmi makes it possible for Russians and Finns to give visits to the neighbouring country. It has been planned to be opened as an international cross-border point for all nationalities about 2005. Visiting the Paanajärvi National Park will be facilitated for foreigners.

The main values of the nature and history of the territory, the justification for the national Park, are considered to be following:

- ❑ Narrow and deep Lake Paanajärvi. Some crayfishes are living in the lake as relicts from the time when the lake was a fjord of the White Sea. Bedrock with a great variety of minerals. Limestone and other basic minerals enrich the flora and fauna of the territory.
- ❑ Great number of small habitats, inhabited by many rare and endangered species, many of which live here in the border of their distribution area.
- ❑ Wide taiga which has never been logged with the exception of the Paanajärvi and Olanga valleys and some minor areas elsewhere. These forests are a central part of the largest spruce forest in Fennoscandia never cut by man.
- ❑ Many typical species for the taiga, as big carnivores, wild forest reindeer, flying squirrel and some bird species with eastern occurrence.
- ❑ Rich fish fauna in lakes and rivers. Brown trout, char and some other salmonid species have many separate, isolated populations in small lakes.
- ❑ Remnants of former and disappeared cultures, for example Seidas on the fells, house grounds and fields of the old Finnish settlement by lake Paanajärvi, and those of Karelian settlement around Vartiolampi.

2.4 Tourism in the territory of Paanajärvi

Tourism in Paanajärvi has a history of over 100 years. Paanajärvi with its beautiful nature became famous already in 1890, at that time as a part of Finland, when a Finnish travel agency was advertising this part of Kuusamo as the "Finnish Switzerland". In 1892 Mr. Akseli Gallen-Kallela, an eminent Finnish painter worked there and painted some well-known works as "Herd", "Mäntykoski" and "Black Woodpecker". The same summer photographer I. K. Inha took plenty of pictures of landscapes, settlements and people. Already at that time there was some tourist service. The trade route along Lake Paanajärvi – mainly in use in winter – from Oulu to the White Sea coast and even further north learned people to organise service to visitors. Houses around the lake were used for accommodation and dining. Towards the end of 19th century the annual number of tourists – not including tradesmen - is estimated to be about 2000.

In the beginning of 20th century a national romantic era was prevailing in the Finnish arts. It had also an influence on tourism; it favoured distant, beautiful places as tour destination. Author Ilmari Kianto and many others described their experiences. In 1922 the border was closed in the eastern end of Lake Paanajärvi, that clearly reduced the attraction of the territory in the eyes of tourists. As a result of the Winter War the border was moved in 1940 to the western side of Lake Paanajärvi and the Finnish people were evacuated.

With the breaking up of the Soviet Union, the regulation in areas close to the border was relieved so that both domestic and foreign visitors could visit Paanajärvi again. The Park soon set its own rules for tourism. The number of visitors during the Park history is presented in Table 2.2. The first visitors who found the Park in 1990s were scientists from Finland and Russia, fishermen and Finnish people, who had their roots in the settlement around Lake Paanajärvi. However, the future development of tourism may be based on the same attractions as hundred years ago: wilderness and beautiful landscapes.

Table 2.2
Number of visitors in the Paanajärvi National Park in 1993-2000

	1993	1994	1995	1996	1997	1998	1999	2000
Number of visitors	<100	202	791	897	1536	1533	2140	2850
Share of foreigners			28%	33%	42%	48%	41%	35%
Fishing licenses sold		33	92	226	432	594	899	1278

Hundred years after the first breakthrough of tourism here, in the end of the 20th century, the record of two thousand visitors was crushed again in Paanajärvi.

Attempts have been taken to assess the carrying capacity of the Park. The carrying capacity of a vast area reserved for recreation is strongly related to cultural values as well as to the ways in which tourism is organised. In the plan for the management of the Park (from the year 1996) there is an estimation that the potential tourist volume of the Park could be 100 000 visitors per year. Later on, the Park authorities have reduced the figure to 10 000 visitors. However, harmful indications of tourist flow might be seen on the most sensitive spots already before reaching that limit. Especially, consequences of the concentration of tourism by the river Olanga and pressure of fishermen to the fish populations should be followed carefully. Some parts of the forests belong to the most sensitive and vulnerable ones in the whole Park.

The Tourism Strategy for the Karelian Part of the Green Belt (Friman & Högmänder 2001) introduces an estimation based on experiences from the Finnish Oulanka National Park, that the Paanajärvi National Park could provide services with well planned infrastructure, up to even hundreds of thousands visitor-days. However, caution approach is preferred in the current situation that a goal of 10 000 tourists and 35 000 visitor days are presented for the year 2010. Based on that, a plan for new investments and services is published. This development strategy of the National Park is based on the same vision and plan.

3. Overview of the Paanajärvi National Park Management

The activities of Russian national Parks are regulated by a number of laws, decrees and instructions. Until the year 2000, the administration of national Parks was a part of forest administration, conducted by the Federal Forest Service (Rosleshos) and its organisation in the federal subject, in Karelia by the State Forest Committee, Goskomles. The administration and staff is organised according to the system in use in local forest districts (leshos). Forestry education is dominating among the staff.

National Parks are fairly young institutions in Russia. Many of the Russian National Parks function as a federal structure in remote areas with seemingly thin connections with local administration or the federal subject. The first ones of the 35 national Parks were established in the beginning of 1980s, most of them in 1990s. In spite of the fairly strict administrative control and the formal plans, quite few guidelines and instructions about the practical management of national Parks are instructed. Thus, most of the existing National Parks are developed based on local conditions, personal interests of staff and on many other, external factors. Nevertheless, as federal structures, the Parks have federal funding, which is an existing control system for the Park activities, realised in the first case by the State Forest Committee.

3.1 Plans and regulations

According to the legislation a Plan for the Management of the National Park and, besides that, a medium or long term plan of activities, should be prepared soon after the establishment of the National Park. For the Paanajärvi National Park, this plan, including about 15 books of detailed information and plans, was prepared by the governmental planning authority, Rosgiproles, and it was accepted in 1996. Unfortunately, this plan was made according to very schematic models, it is more theoretical than practical, and gives few guidelines to the current management problems.

Since the year 2000, the administration of the Russian national Parks is under reconstruction. Rosleshos was suspended in May 2000, and the Parks were removed under the Federal Ministry of Natural Resources and, in Karelia, under the State Committee of Natural Resources. Still in the beginning of 2001, the real consequences of this arrangement for the National Parks were unforeseeable.

According to the legislation, every National Park shall issue its own regulation, which gives orders and instructions for the visitors. The prohibitions, published in the regulation of the Paanajärvi National Park are as follows:

- Driving or parking of any power driven vehicle not related with the activity of the National Park
- Hunting or transporting weapons by car without a permission from the Park administration
- Collection of plants or herbs
- Collection of minerals or mountain rocks, harming the soil
- Harming monuments of nature, history and culture, information stands and signs
- Unauthorised drawing on dwellings, trees or stones
- Felling or damage to trees and underbrush, cutting firewood
- Making a fire in a non-designated place
- Delivery of domestic animals and birds
- Net fishing, unauthorised sports and amateur fishing
- Leaving refuse in nature or in non-designated bins

3.2 Main activities of the Park

Tourism is regulated by the natural conditions and by the Park authorities. In 1994, a new road was constructed through the eastern part of the Park in order to prepare forest operations in the wilderness north of the Park. This road opened the Park, especially the fell Kivakka, river Olanga and Lake Paanajärvi within visitors' reach. There is also another old road in the western part of the Park following the border fence, but closed to the visitors. The only access to the Park is through the main gate in south-eastern corner of the Park through which the number of visitors can be controlled.

In addition to the only road, also zoning of the Park is directing tourism. In the vicinity of the Russian-Finnish border in the west, there is a border zone with no access without a special permission from the Frontier Guard. This zone covers about 7% of the Park territory. Between the fell Nuorunen and Lake Paanajärvi there is a large restricted zone (zapovednik zone), and another in the north of Lake Paanajärvi. These closed zones, covering 18% of the Park, are established in order to guarantee

peaceful living conditions for wild animals in those areas. Only Park staff and scientists with permission can enter those zones. The largest zone is a recreational zone, which covers 69% of the Park territory. An access to this zone is possible with a guide from the National Park. A zone for educational tourism takes 5% and the visitor service zone, with an existing and planned tourism infrastructure covers less than 1% of the National Park. This zone is mainly covering areas along the river Olanga from the eastern end of Lake Paanajärvi up to Kivakkakoski.

If the number of visitors is considered somewhere in the Park to exceed the carrying capacity of nature, the Park authorities are allowed to prescribe rules for reduction of the possible burden.

The service offered for tourists in 2000 included following facilities and services:

- 7 large cabins with a capacity of 7-15 persons (altogether 85 beds)
- 5 small cabins, each for 3 persons (15 beds)
- a wooden tepee for temporary stay
- a ranger station at the gate
- 7 saunas
- 9 campsites with room for 47 tents
- 18 rest sites with fireplace
- Nature trail by Lake Astervajärvi (8 km)
- Hiking trail to the fell Kivakka (6 km one way)
- 3 routes for snowmobiles

Most of the facilities are situated by the river Olanga, from the eastern end of Lake Paanajärvi to the mouth of the river. During the first years of the Park, the construction of the facilities was concentrated on the tourist service zone. The reasons to this policy are following: (1) some of the main attractions can be found in this area, (2) road connection, and (3) supervision can be arranged easily.

In summer 1999, 25 guides were working in the Park. Some of them spoke foreign languages: 14 Finnish and 6 English. Visitors arriving in the Park need an entry passport, which is sold at the Park office in Pyaozerski. Groups have to be provided with a guide; one guide is needed for each 6 visitors. Guides ensure safety, inform about the Park rules and prevent of forest fires. Some of the guides are also skilful nature interpreters. Accommodation, transport by car or bus, selling of fishing licences, rent of boat, etc. can be arranged at the Park office.

The first simple leaflets and web-sites of the Park were published in the end of 1990s. New information material was published with the support of the Tacis project in 2000 and 2001, including coloured leaflet in three languages, new web-site and a CD of the National Park.

Most of the Park activities has been concentrated in construction of visitor services and less attention is paid in increasing knowledge of nature and nature conservation. Only one scientist of the Karelian Research Centre worked in the Paanajärvi National Park on half-time basis. Nevertheless, scientific expeditions have been arranged in the Park and co-operation with the Oulanka Research Station in the twin Park of Oulanka National Park in Finland, was active and brought results. Thus geological mapping of the Park was carried out, fish populations were surveyed, information of endangered species is gathered and many other studies are in process. The Paanajärvi National Park has a peculiar nature, which still attracts scientists from different countries. With an increasing amount of information a plan for scientific work in the National Park and tightening of the co-operation with the Karelian Research Centre might be possible in the near future. One of the future challenges is to store all the information of rare and endangered species in the recently created GIS of the National Park.

An ecological education has an important role in the Russian national parks. This work has recently started in the Paanajärvi National Park, and many schools, remote and close, have included an annual tour to the Park in their program. This activity is still under development.

In the year 2000, there were altogether 35 full-time vacancies in the Park administration. Eight persons were working in the administration, seventeen in supervision of the Park territory, forestry officers were four, only one officer worked on tourism and one in scientific research. Some workers took responsibility for communication. In addition, 25 guides were employed seasonally. So far, any own team for construction of houses and facilities in the Park does not yet exist.

Some of the problems in the Paanajärvi National Park are in connection with the personnel policy: it is difficult to find qualified employees to this remote territory, living conditions in Pyaozerski are underdeveloped for families, strict administrative orders are keeping the salaries low and it is not easy to organise training in modern Park management skills.

4. Analysis of current Activities

The SWOT analysis was selected for analyse of the present state of the Paanajärvi National Park. As a method, it is a simple method and very suitable for group work. Based on the information collected and views given, it yields an analysis of the strengths and weaknesses, opportunities and threats of the National Park. The persons involved in preparing the analysis shall be very familiar with all the details and problems of the park activities. Likewise, they have the responsibility to openly bring all the material for the use of the seminar or group of people preparing the analysis.

SWOT analysis is seldom complete if prepared as an internal work. The Park officers usually need external facilitation in preparing it. Alone they can be too close to their problems to be able to see wider perspectives and to outline all the sides of the situation. However, it is extremely important that the obstacles, problems and bottlenecks are recognised. Regarding the future, it is very important the Park administration is familiar with the situation of the Park, otherwise the success of the Park can be jeopardised.

That is the reason why the formulation of this analysis started in two seminars together with the personnel of the Paanajärvi National Park and consultants of the Tacis Karelia Parks Development Project. The seminars were held in Pyaozerski in January and April 2000. The basic information was received from the Park officers, the consultants assisted in prioritising and allocating the facts in the right framework. The approach was to compare the development of the Park with the main tasks set for the park in the legislation. They are – here referred in brief form – protection of natural and cultural heritage, restoring cultural monuments, promoting ecological education and environmental monitoring and careful development of tourism in the park territory (more detailed, see Chapter 5).

Results of the SWOT analysis are presented in a form of a table. It is divided in four fields where the two first ones, strengths and weaknesses, form a view to the recent history and the two latter ones, opportunities and threats, a view to the future. In the table of four fields also the two fields on the right side, weaknesses and threats, are those ones, which need active measures in the development of the park. Contributions and investments are needed in order to turn the weaknesses into strengths and threats into opportunities. In many cases, the reasons to the threats are beyond the reach of the park, as is the case for example with the future development of the Russian economy. Anyway, the Park can try to protect itself against unsuitable development outside the range of its responsibility.

The analysis has formed the base for the vision that clarifies the direction of the future development. From the vision, the headlines for the strategy and measures are then extracted. The table has no room for long explanations. So it has to concentrate on substantial questions, mainly rising from the main tasks of the park. The outcome of the SWOT analysis is provided below.

Strengths	Weaknesses
Extraordinary, untouched nature, high biodiversity and conservation value	Inadequate information on the natural and cultural heritage of the park
Versatile history and cultural heritage	Remote location, poor roads and undeveloped infrastructure and services
Versatile environment, a great variety of sights and subject for visitors	Monitoring of impacts of human activities has not been organised
Almost ten years experience in managing the National Park	Damages in the environment, insufficient tidiness
Strong tourism potential fairly close, beyond the border in Kuusamo	Only a tiny part of the vast park is open for visitors
Good start in international co-operation with Oulanka NP	Fishing has too dominant a role in tourism
Good start in ecological education together with local schools	Crossing the border is strongly regulated between Kuusamo and Louhi
The first successful examples of co-operation with Finnish and international tour operator	Insufficient rescue services
Basic infrastructure constructed at the most visited sites	Insufficient level of knowledge of the staff in all the skills needed in park management
No forestry or other unsuitable nature utilisation in the Park	Difficulty to attract competent experts
GIS and forestry database received as a result of Karelian Parks Development project	Stiff legislation and regulation is impeding the rational development of the Park

Strengths	Weaknesses
Despite poor facilities the response from visitors has already now been mainly positive	NP financing is unstable at the moment in Russia
	No scientific staff in Pääjärvi
	Safety problems in Russia for foreigners
	The Park is internationally poorly known and has no clear image

Opportunities	Threats
Staff is willing to learn more and to develop the park to correspond to high demands of a modern national park	When the Finnish-Russian border will be opened, the park is not ready to welcome the increased number of tourists
Vast wilderness, beautiful landscape and cultural heritage make up an attraction	Increasing utilisation of nature, particularly near the river Olanga
New, modern Visitor Centre of the Park will be opened in 2002 in Pääjärvi	Shortage of resources to develop park so that it could receive more visitors
To adopt environmental principles and practises in time	The Park due to remote location will not attract educated employees
Future opening of the new international Cross Border Point of Suoperä-Kortesalmi	Vast territory of the park is not easy to be supervised and guarded
Collaboration with other Fennoscandian Green Belt protected areas and authorities	The biodiversity conservation might have a secondary role after tourism due to financing problems
Nature and culture can be combined in a sustainable way in developing tourism	Increasing tourism will add risks on forest fires, poaching, over-fishing and criminality
The tourist route White Road increase number of visitors in the area	Development of tourism will one-sided be based on the Finnish enterprises
Joint future with Oulanka NP	Tourism will concentrate only on fishing at Olanga river
The attractions and the development of the Park enables international funding through projects	Tourism business will be monopolised in the hands of the park and the Park authorities regulate tourism too tightly
There are local people with special skills in Pääjärvi	Tour operator will not participate in the financing of the investments
Frontier Guard can facilitate control of the increasing number of tourists	Unstable political and economic development of Russia
Financial support for park development from tourism	The tour operators don't adapt the principles of ecotourism
Mutual partnership with international tour operators	Loosing rare and unique fish populations due to uncontrolled fishing

The Paanajärvi National Park is now, after an active implementation since 1992, in a turning point where the Park can be proud of many achievements, and some of the earlier objectives have been reached and the personnel has learned to apply their education and experience to the everyday work in the national park. The Park has also found its role in a local sphere, even though the start-up can take a long time in almost every new national park.

The analysis supports the impression of a well established and managed national park, which has its main task in protection of biodiversity and cultural heritage as well as developing tourism. The Park is suffering from the current economic crisis prevailing in Russia. So far it has paid less attention to the preservation of cultural heritage issues and is preparing to widen its activities in the field of tourism.

The most important strengths and opportunities can be summarised as follows:

1. The versatile biodiversity and cultural heritage of the area
2. Good start in National Park management and operations as well as in international co-operation, which create a good basement for development
3. Tourism potential and tradition near the park in Kuusamo area, which enlarge the financial possibilities of the park development
4. The resources received from the Tacis project, e.g. visitor centre, equipment, training and GIS-system
5. The concept of Fennoscandian Green Belt

When looking at the weaknesses and the threats together, the main concerns are:

1. the economic crisis in Russia,
2. the remoteness of the park, poor connections to it, and difficulty to find and keep skilful workers
3. the shortage of knowledge on nature, environmental issues and cultural heritage
4. the difficulty in safeguarding the nature for all the risks tourism and illegal activities are bringing
5. the difficulty in finding the right balance between activities of biodiversity conservation and development of tourism concerning the resources the park has at its disposal as well as in combining the role of public authority and an actively operating tourism enterprise
6. lack of the model for co-operation with local stakeholders and tourism companies
7. the rapid change in the working surroundings after the opening of international border crossing point between Kuusamo and Pääjärvi

Any of these concerns seems to be impossible to overcome. Problems created by the economic situation of the country or long distances and remoteness, can only be managed by adjusting the activities to the realities and, at the same time, by taking these phenomena as a challenge for the development. Most of the problems have their roots in people, in the level of their knowledge, skills and awareness. Capacity building through training and information – both for the staff, local people and visitors – is of great importance in developing the national park activities. This is also the way how to ward off the problems based on shortage of knowledge or harmful human interference. Experiences all over the world show that sustained work will result in favourable changes in attitudes and behaviour.

Currently, the status of the Park and its opportunities are changing fairly fast. The working environment in the Louhi district as well as the situation in the whole country are turbulent. In the near future, the main challenges of the Park are following:

1. How the Park can prepare itself for the opening of the international cross-border point in Suoperä? Is the Park ready to receive many more potential visitors? How to construct new infrastructure and new services so that no harm will be caused to the main purpose of the Park, conservation of natural and cultural heritage?
2. How to develop the capacity of the personnel to meet new, demanding tasks? How to train the staff, to recruit skilful staff and to make the working circumstances attractive for professional workers?
3. How to improve the control over the territory? How to prevent illegal activities? How to monitor nature and utilisation of it in order to avoid damage?
4. How to secure adequate investment and recurrent financing to the Park in a situation, where there is only a limited hope for new budget funding, while an increasing number of visitors will create a demand for more personnel, investments and expenses for the maintenance?

5. Objectives of the Park

The objectives of Paanajärvi National Park are as follows:

- ❑ to conserve the territory of the National Park as an example of an extraordinary natural formation with fells, cliffs, ravine lakes and streams,
- ❑ to safeguard the natural succession of old forests, especially the large pristine spruce forests,
- ❑ to protect the flora, in particular the rare and endangered species, which are living here on the extreme conditions far from their normal living range and species, which benefit the basic bedrock
- ❑ to offer refuge for the taiga fauna, which nowadays have only a few islands in natural state available,
- ❑ to protect and utilise on sustainable way the brown trout, char, grayling and other local fish populations, which are vulnerable for environmental changes and over-fishing,
- ❑ to survey the history and culture of the territory, and save information of old living forms and traditions,
- ❑ to promote scientific research, particularly research with practical applications in the park management and interpretation,
- ❑ to develop nature tourism taking into consideration the high demands set for eco-tourism in a protected area
- ❑ to offer directly and indirectly job opportunities for local people through enterprises

6. Vision 2010

The vision 2010 for the Paanajärvi National Park is:

The Paanajärvi National Park is well known because of its untouched wilderness, fields, lakes and rivers where many endangered species take refuge as well as its unique cultural heritage. It has an image of a well directed, modern and internationally oriented national park. The park has a recognised role in conservation of the biodiversity of Karelia and new activities have been developed in this field. It is receiving adequate financing from a diversity of sources

The Paanajärvi National Park is renowned for its transparent working policy and peoples participation as a basement of its collaboration with stakeholders. The information of the Park and its principles and regulations is distributed actively through internet, media, visitor services and guiding. The territory of the Park has been enlarged to its natural and ecological boundaries both in the north and the south and the new areas are well integrated into the Park management.

The Paanajärvi National Park is a famous tourist destination in the Northwest Russia and the Park operates as a major actor in tourism development in the Louhi district. Tourism can be interpreted so that the main objectives of the National Park are safeguarded and respected. The Park and its partners have adopted the principles of eco-tourism as a leading guide in their activities along with environmental principles directing the management of operations.

The Visitor Centre in Pääjärvi has some 15 000 annual visitors. Both the Visitor Centre and the Park itself are combined to the marketing and service network of the White Road in Karelia and abroad. The concept of the Fennoscandian Green Belt promotes the development of tourism in the Park.

There are about 30 000 visitor-days annually in the Park. The number of tourists is restricted because of the conservation of the natural or cultural values such as migrating brown trout, some of the local char or grayling populations, or any other part of the biodiversity. A continuous nature monitoring with the feedback to the management safeguards the nature values against harmful human impact.

The most popular tourist destinations within the Park are the fells Kivakka and Nuorunen, the rapids Kivakka, the old Finnish and Karelian settlements around the lake Paanajärvi and Vartiokylä. Also the western and northern wilderness attracts experienced hikers.

There are well marked tourist routes and nature trails of different lengths and standards for visitors. Water routes are available for canoeists and rafters. Some cross-border canoe tours are arranged annually from the Oulanka National Park to the lake Paanajärvi and further to the lake Pyaozero.

The Park has a tourist base in the eastern end of lake Paanajärvi, where visitors can get information, enjoy picnic lunches, hire sauna or equipment. Also skilful guides can be hired for making acquaintance with the wilderness. In Vartiolampi, the new Ecological Education Centre operates with school children and provides ecological training also for other groups on commercial basis. Participants can stay several days in well planned premises. The main part of tourism is taking place in summer but small groups can stay over night also in winter. Guides and teachers have acknowledged skills in nature and history.

Tourism in the Park generates income directly to tens of people and indirectly to a larger number of people through Russian enterprises. An increasing number of guided tours are organised to the Park around the year by private enterprises. Entrepreneurs offer winter safaris to the Park by dog sledge or snowmobile. Winter fishing is also popular. The Park has an entrance fee for groups, and other services are sold to them as well.

The Park has set up a functioning co-operation with tour operators on mutual benefit. An increasing number of them are Russian. The Park staff is well educated in client oriented service. The Park offers opportunity for local tourist entrepreneurs to participate in training in tourist skills. Souvenirs, postcards and booklets of the Park can be bought in many places.

Developing of tourism is realised through an external support . The connections with Oulanka National Park are numerous and well-established based on a concept of twin parks. The external support is utilised for planning, investments and voluntary work for improving the facilities as well as for training of the staff. Contacts for long-term co-operation are established with many institutions.

Scientists are working actively in the Park and more information is found every year on the Park territory. Even the cultural history of the Park is nowadays well known. The Park has a full scale GIS-database, which is distributed by internet for users. Information on nature and history with some other interpretation activities of the Park has been taken in use in the Visitor Centre . An active nature management, especially in meadows and other cultural habitats, has been established as a normal part of national park operations. A part of the income from tourism is used in supporting scientific research which serves the objectives of the Park.

7. Paanajärvi National Park Working Principles and Policy

The rules and policies of Russian national parks are defined partly in the national legislation and in the instructions for National Parks and also in the management plan of the park. The development and administrative changes in Russia have been so enormous during last ten years that the Park needs to define her policy according to changing social expectations and inputs together with internal development needs.

The Park is an organisation with a dual role: it is a national park authority of the Russian Federation, but on the other hand, it is a conservation and finance actor of local importance maintaining partnerships with a local community together with local, regional and international stakeholders and private enterprises. For all parties the clarity and transparency of the Paanajärvi National Park working principles and policy are important forming foundation for real and sustainable co-operation and partnership. Once they are widely publicised, the Park's commitment will be better secured.

At the moment there is no written, distributed version of working principles and policy of the Park. The Park should initiate a process for defining these together with the stakeholders. The principles should cover at least the following issues:

PUBLIC DUTIES VS. COMMERCIAL ACTIVITIES:

Currently the Park is both regulating the commercial and other activities inside the Park and actively providing commercial tourism services. The government funding is extremely limited, and in the future the Park will also be forced to seek for recurrent funding by selling services and investment funding from external sources. This, however, leads into a situation where the Park is a regulator of her potential competitors. On the other hand, the private tourism operators may regard the Park as a free asset and are unwilling to fully pay for the entry and services. This affects the relations between the Park and the entrepreneurs. All the partners need to be treated in an equal and predictable manner.

The Park's primary task is to manage and monitor the biodiversity conservation in the Park area. The Park plays a significant role in the environmental education. These tasks should in principle be covered from the Government budget. This, however, is not the case at the moment. The involvement in commercial practices can be justified, if it benefits the Park better to perform in implementing the primary task.

The best practice for income generation would be to collect fees from entrepreneurs, and to apply standard, published pricing and regulations. In the near future, the Park, however, will have the best local capacity to provide services, but it will need to maximise her income through direct involvement. This requires a set of standard and transparent practices and regulations, and a clearly defined organisational structure.

As the Park will change the organisation according to the one presented in Chapter 8, tourism services in the field and in the Visitor Centre will be separated from the Park administration, guarding, monitoring and research. If found feasible, parts of these units could form a Park Company, examples of which are already existing in Russia. In the beginning, it is rational for example to have park rangers simultaneously acting as rangers and tourist guides. This functions, if the staff is well trained and follows the rules, thus providing an example to private entrepreneurs.

The income and expenses from tourism have to be kept separate in every case. Also an independent auditing will monitor the money flow. Tourism has to produce a net profit which can be channelled into non-commercial activities and investments. The level of profit is to be compared with a potential income from another alternative, when the Park only charges entry and licence fees from the entrepreneurs and individual tourists.

ENVIRONMENTAL PRINCIPLES.

The Park should aim at further improving her environmental principles and practices to become exemplary to the visitors, Pyaozerski area and Russian national parks. As part of the Tacis Karelia Parks Project, a short "environmental auditing" was undertaken, and the results are given in Annex 2. It is evident that a more systematic approach to environmental management combined with staff training, visitor guidance and regular auditing would ensure a continuous, step by step improvement of the practices.

Metsähallitus parks and other protected areas in Finland apply the ISO 14001 certified environmental management system. It is recommended that Paanajärvi National Park environmental principles are compiled applying Finnish principles where feasible. However, the Park should for the time being not aim at certifying the environmental management as it causes both costs and unnecessary

burden. The principles should be made publicly available. Each visitor should receive a copy of guidelines before entering the Park.

The principles should state the Park approach in at least the following issues:

A. Waste management

- Principles for waste management including sorting of waste, recycling, toilet waste, centralised composting, location of waste collection points, transporting, guiding,
- Responsibilities of individual visitors, tourism entrepreneurs, and the Park
- Cleaning old metal waste from nature
- Collecting oil, fuel and other poisons
- Waste management in Park's own premises including the office and visitor centre
- Development and improvement program

B. Construction

- Architectural image to the Park in line with the local culture and traditions
- Quality, functionality, reparability
- Energy consumption
- Principles for field construction, use of wood and other construction materials from the Park
- Regular maintenance

C. Guiding and information concerning environmental issues, behaviour in nature and with facilities

- Principle of bringing along all non-compostable waste from the Park
- Field interpretation, cabin folders and instructions,
- Use of fire
- Safety regulations
- Park principles to have a wider goal of environmental education of visitors

D. Principles of park management

- Maintenance of Parks own infrastructure machines and equipment, including office and visitor centre
- Principles for fire-wood collection (from where, what kind of, etc.)
- Rules and instructions for visitors and tour operators
- Principles for nature and visitor management as concerned environmental issues

PARTNERSHIPS (PUBLIC AND COMMERCIAL)

The Park should have a policy of establishing and maintaining a network of partnerships, formal and informal, which would benefit all the parties involved. This would enable the Park to concentrate in fulfilling her mission of conservation and environmental education. The Park should continue to utilise the proximity to Finland as its special strength in identifying partners. The natural partners would include:

- Local administration for strengthening the Park's role in local development
- Private tourism enterprises and tourism organisations for developing sustainable tourism where the Park is an essential element. This would require written agreements of the contributions, rights and responsibilities
- Network of protected areas. The Park already is a member of the Association of NW Russian protected areas, and has a well functioning relationship with Oulanka National Park. It should aim at further increasing the international links
- Schools for environmental education. This would include both national and international partners, and links to tourism operators for organising school camps
- Frontier Guard for joint monitoring over the area, and agreeing jointly on the operational principles
- Scientific community to increase the knowledge of the Park and supporting continuous and effective monitoring

PEOPLES PARTICIPATION

The Park should contribute and establish a system for more active participation of local people. The debate between conservation and nature utilisation is affecting the life in Pyaozerski municipality which is established for forest utilisation but is facing the threat of declining resources. To start with, public meetings should be established at least once a year utilising external facilitators. The new Visitor Centre should be widely open to locals and actively utilised for local events. The Park should aim at adopting peoples initiatives where they are not in conflict with the conservation objectives and informing them adequately of the justification of decisions. Later it is recommended to form a local Co-

operation Board to handle the relationship between the park and its local partners. The Board could make recommendations for administration in different levels.

TOURISM PRINCIPLES

The Park should aim at sustainable, well managed tourism providing financial contribution to the Park's conservation objectives as well as to local economy. Tacis Karelia Parks Project has developed the principles for sustainable tourism (Annex 3) which should become the guiding principle. The Tourism Strategy prepared in this Project has the main emphasis on the Paanajärvi Park tourism, and provides a comprehensive programme for application.

Every tourism operator wishing to bring tourists to the Park must have a written agreement with the Park defining the specific conditions, roles and responsibilities as well as the commitment to follow the standard rules developed jointly with tourism operators. Non-compliance with the agreement would lead to a temporary or permanent termination.

The Park's attitude towards the entrepreneurs has to be transparent providing equal treatment. The aim should be to gradually build up the local capacity to function as independent tourism operators, or sub-contractors. The Paanajärvi Park should be one target in the chain along the White Sea Route, and utilise this structure for advertisement.

The key tourism routes in the Park should be safe and accessible with guides. The northern wilderness area could be utilised for extreme travellers wishing to enjoy the wilderness and prepared to assume their own responsibility, and to cover their own risks. The Park does not need to be prepared for providing high level rescue services. But if services are required, the Park shall receive commitment from the tourists to cover the additional rescue costs.

INVESTMENT POLICY

An investment programme mainly for tourism development has been written in the TACIS Karelian Parks Project. It is published and described in details with Tourism Strategy of the Karelian Part of The Green Belt. The Park is expected to be allocated investments funds from national and international sources, and finance part of the investments from tourism income. The Park may utilise grant funding to build up service infrastructure, and use tourism income for financing the public duties. When studying the investment feasibility, the costs of maintenance need to be carefully assessed.

The Park possess all major infrastructure inside its territory, and may rent facilities to individuals or companies. Tourism operators may be entitled to construct and maintain small scale campsites for their own use outside the key routes. Any joint ventures for bigger investments shall be carefully considered in the light of the principles of equality and transparency. Major infrastructure should preferably be located outside the Park.

PRICING PRINCIPLES

The entry fees shall not prevent people from visiting the Park and enjoying its environment in a sustainable manner. It is recommended to formulate a pricing policy which favours firstly the local people, secondly the Russian citizens, and thirdly foreigners. The prices could be set according to the paying capacity.

Commercial tourism should be profitable and mutually beneficial to the partners. When utilising the infrastructure, the user should pay their share of the investment and maintenance. The Park should receive income for her public duties either as fees from tourism operators, or as profit of its own tourism services. The pricing policy should be used in directing the tourism pressure. For example, high licence fees would be used to regulate the number of fishermen in the Park or in the best or most vulnerable spots.

The price structure should include a fixed entrance fee and optional fees for services requested and infrastructure used. The fees per individual tourists should be made publicly available both locally and in the web. The fees to be paid by tourism operators would be negotiated individually, based on real costs and market pricing.

UTILISATION OF NATURAL RESOURCES

The utilisation of natural resources should be based on careful assessment of the risks to the conservation objectives and be well below maximum sustainable levels. The Park should gradually control all nature utilisation including the remote areas. All hunting is forbidden. If needed, the Park administration staff are allowed to kill dangerous animals. Fishing is allowed with special licence, based on prepared management plans, and used for financing the Park management.

RESEARCH PRINCIPLES

The Park should in principle invest more resources and importance into research. The unit responsible for research should invite representatives from Russian and Finnish scientific bodies to form a Scientific Board, which main task would be to define the research goals and principles for the Park. The Park administration should encourage the research organisations to provide resources for undertaking studies, and give them practical support when possible. Every scientific group needs a permission with responsibilities and rights described. There also may be cases, where the Park would charge for the entry and services provided to scientists, when they are not directly linked to the Park's needs. The feedback shall be ensured by agreements including reporting obligation with data species and habitats in spatial form including dates, numbers of individuals, name of observer etc. The researchers should also be involved in participating in the training of the staff.

8. Goals and actions for the development

The actual development plan has been compiled on the basis of the SWOT analysis, objectives, vision, working policy and principles. It is structured as goals and specific actions required for reaching each goal. An outline listing the goals and actions is provided in Annex 4 and they are described by goals in the text. Investment and financing plans are presented in Chapter 9 and 10 and in Annex 5.

The achievement of the goals and the speed of the development are depending not only on the Park but also on several external factors. The key issue is the availability of resources. The federal and regional financing will be limited and the Park has to seek continuously for external funding and increase its own income. Financiers want to determine the usage of the funds which often may be contrary to the Park's own priorities. A planning period for certain actions might be arduous. The scope of this development plan is for 5-10 years.

The goals are structured for three main categories, i) administration and park management, ii) management of the natural and cultural heritage, and iii) visitor management. The goals are given in Boxes below.

Administration and park management:

1. The Park is developed into an internationally acknowledged, efficient organisation
2. Professional skills of the park staff is developed so that the Park can meet the challenges in park management and modern tourism
3. The Park strengthens the co-operation and relations with local, regional and international authorities and partners
4. The park will be expanded to its natural boundaries, which are also ecologically well planned.

Management of the natural and cultural heritage:

1. Scientific research supports the park in achieving its objectives
2. The park together with other actors carries out inventories and updates the geographical information and other information systems
3. The park actively monitors her diverse values
4. The park actively manages habitats and endangered species
5. The park actively manages cultural heritage and characters

Visitor management

1. The park develop her infrastructure and equipment keeping pace with the increasing number of visitors
2. Production of information and park marketing as well as product development will be improved
3. Ecological education will be developed in the park so that program and premises can be offered for school pupils, students and all kind of organisations which want to learn more about the park, its nature and history, environmental protection and good behaviour in nature.
4. Tourism will be developed in the park in a useful co-operation with both foreign and domestic enterprises
5. The Paanajärvi National Park and its Visitor Centre in Pyaozerski will be developed as one of the main attractions and the key centre on intelligence along the White Road and in the Green Belt.

9. Development actions in 2001 – 2010

9.1. Administration and park management

9.1.1. The Park is developed into an internationally acknowledged, efficient organisation

The goal for the development of the Park organisation is to become a modern, efficient and internationally acknowledged National Park authority. For the goal it will need to spell out and apply clear working principles and policy as described in Chapter 7. These should be developed during the first year of implementation and streamlined with the guidance of the federal level. This will also include drafting model contracts for frequently occurring needs and checking the legacy.

The Park has developed her activities and organisation gradually according to the financial possibilities and the development stages. At the moment the organisation chart of the Park is still in the design stage partly due to forthcoming activities, like a new visitor centre and partly due to the lacking resources and the skills of the staff. In the near future, the opening of the crossing border point Suoperä-Kortessalmi will challenge the Park to faster its development and improvement of activities. As the new office building will be completed and as the visitor centre will start its activities in the Spring 2002, the Park has to update and define more precisely her organisational structure and the responsibilities of the key personnel. An organisation proposal is given below and the tasks are presented more precisely in Annex 6. It describes what is seen as the ideal goal at present. The organisation proposal is impossible to be implemented immediately due to the lacking financial possibilities, the managerial staff and the instructions from the federal level, but it should be used as a guide on developing the structure, the recruitment and the training of the staff.

The method of the team work should be applied where the staff members participate in several teams, part of them permanent, part specifically established for a certain project. Team leaders should be delegated adequate responsibility and teams used for building up the staff capacity.

The director has the main responsibility of the Park management and development, contracts with partners, co-operation with stakeholders, the Park administration and the implementation of the management and other official duties. The team leader also has the financial responsibility. The activities of the Park are widened during the past ten years and the forthcoming ten years will bring even a faster extension. The director needs an increasing number of qualified, professional and experienced team leaders for running major units. The director together with the team leaders form a **management team**, which will share the responsibilities described earlier. This arrangement release the director from day-to-day duties and dilemmas and enable him to concentrate on the Park development together with surrounding society, stakeholders and partners.

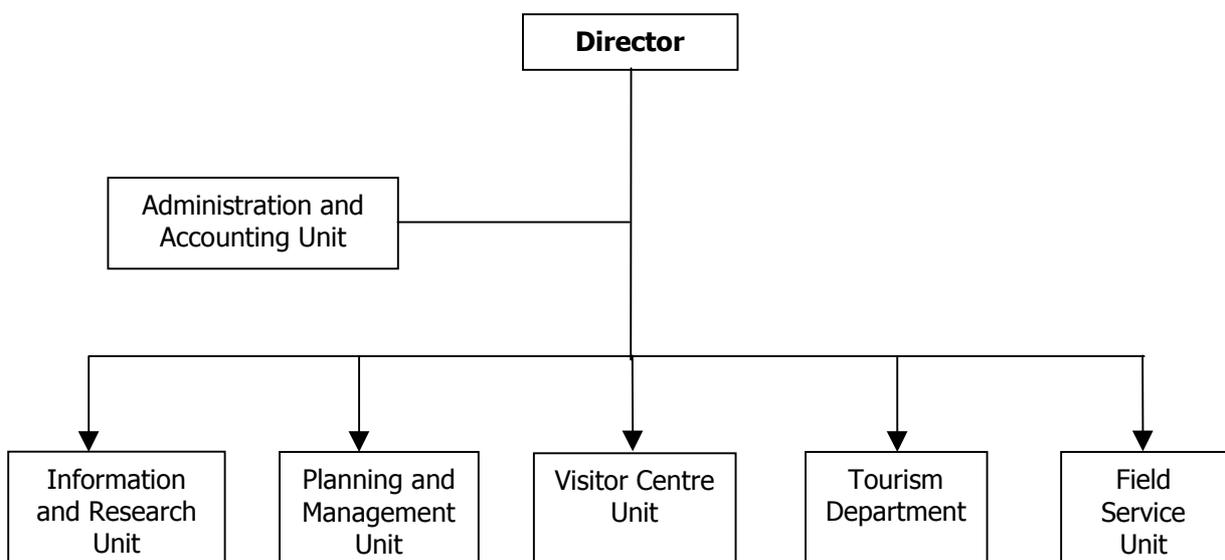


Figure 9.1 The proposed organisational chart for the Paanajärvi National Park

For the successful development of the Park the main unit will be **the Planning and Management Unit**, which works in a very close co-operation with the director. Actually the director could be the team leader of this unit in the beginning. The unit is in charge of implementing and updating Development and Management Plans. Furthermore, it prepares annual operational plans for the Park. This unit will compile financial plans including investment and budget together with Administration and Accounting Unit and other operational units. It will also prepare all rules and regulations for the Park including pricing policy and principles of the tourism development. Capacity strengthening through training and recruitment is also an important part of its responsibilities. Public participation and co-operation with stakeholders in the local, national and international levels will be lead by the Planning and Management Unit. The unit continuously seeks for financing sources, establishes partnerships, and prepares financing proposals.

The Administration and Accounting Unit is in charge of accountancy and the administration and office support for the staff. It also handles personnel administrative matters, organises training, and maintains the inventory lists of vehicles, equipment and materials. The maintenance and security at the office building will also be a task of the unit.

The Information and Research Unit will guarantee and monitor that the Park achieves its basic conservation objectives. The main activities are compiling research programs, nature management planning, monitoring the natural state and human impact as well as inventories on natural and culture heritage. The unit is in charge of the GIS and other information databases including the library services. At the moment, the staff needs nature education and training, which is reasonable to carry out through this unit. Because the Park does not possess enough resources to all inventories and studies needed the help of research institutes is crucial for nature management. For the co-operation with scientific bodies a Scientific Council responsible for research programs needs to be established. Members from the Finnish scientific community are recommended to be invited to the Council. This unit is responsible for environmental impact assessment and preparation of environmental guidelines.

The Visitor Centre Unit will mainly be in charge of all public activities at the new visitor centre. Another main responsibility is environmental education both at the centre and at the Vartiolampi Ecological Centre. The unit will also carry responsibility for training services intended for the staff of other protected areas and tourism companies. The production of interpretation and marketing material including web-site development is also a task of the unit. In these activities the unit has to collaborate closely with Tourism Department and seek for expertise from the Research Unit.

The option of a Park company for tourism services has to be examined and established when feasible in Russian conditions. Before that, a separate **Tourism Department** will be in charge of tourism activities and services in the Park. This department is crucial to be established at its earliest convenience to secure the financial transparency and profitability of park's own tourism activities. The main tasks are marketing and product development. The private tour operators play an important role in the tourism development in the Park and the department will be responsible for the contracts with the enterprises.

The Field Service Unit has the main responsibility for all practical maintenance and construction activities in the Park. The staff is also in charge of nature guiding, guarding and ranging in the area. In the future nature management will play more important role in the Park activities and the implementation of management activities will be a part of rangers work. They are also responsible for all maintenance. The personnel in charge of transportation belongs also to this unit. In the Field Service Unit there are many kinds of activities and the staff has to specialise and concentrate more deeply on their own duties. For example, a permanent team for construction work is necessary. In the beginning, the staff of the unit shall contribute to the production of tourism services, but later it is recommended to keep a specialised full time staff also for visitor services.

9.1.2. Professional skills of the Park staff is developed so that the Park can meet the challenges in the park management and modern tourism

The number of qualified staff is the precondition for the successful future of the Park. The number of the staff is some 40 at the moment and it is estimated to double during next ten years. The exact number of the staff in every stages is not possible to be specified, because many operations are possible to be implemented by internal workforce or external services. The experiences from other countries show that in the beginning the only possibility is to recruit all the staff needed due to the lack of competent service producers available. Later the staff of the Park organisation will concentrate more on planning and managing while practical work will be done by private producers. This kind of

development will progress gradually for example in the tourism development and construction work in Paanajärvi National Park.

At the moment, the director of the Park is involved in practical activities excessively due to the lack of competent professional assistants. Key personnel must be recruited in order to help the director and thus the management of the Park. In the near future the following posts should be filled by externals:

The head of Visitor Centre; the Centre will be opened in Spring 2002 and its fluent start is the main challenge to the Park in next two years.

The head of Information and Research Unit; the Park needs a biologist, who works permanently in Pääjärvi and participates as a specialist to the Park's everyday work. The development of visitor centre activities as well as construction of tourism infrastructure needs a biological specialist to secure the achievements of conservation objectives.

Tourism director; the Park should establish a separate unit for tourism development and the work of the department will be successful if the head of the unit has practical experiences from private sector and has expertise on external financial possibilities for needed investments.

Local architect and construction specialist; the implementation of the heavy investment program requires construction specialists to guarantee the financial efficiency and the quality of the facilities.

Specialist for environmental education; the environmental education is one of the focuses of the Park and the fluent starting of the Environmental Education Centre needs a person concentrating on this issue.

Additionally at least a specialist for GIS development, a publication planner and skilful tourism guides are needed.

The Tacis Karelia Parks Project has offered a significant training package to the staff of the Park. However, a continuous internal and project training is necessary for the existing and future staff. A high quality training is important also for the staff as a bonus of working in a national park. The needed skills can be divided into two categories, on the one hand the awareness of the park and its nature and cultural heritage and on the other hand the skills needed in the management. The first one will be educated and trained to the staff mostly by internal training during and after new inventories and database updating. The researches should also participate in the training as specialists by teaching the field staff, for example, to recognise the most common endangered species and habitats.

The most efficient way of improving the skills is to organise both on-the-job and in-service training with the help of specialised Russian or Finnish institutes. The participation in Russian National Park development projects is also a good way of education. The training should cover all the elements and skills needed in the modern National Park management starting from nature conservation and management issues as well as varied technical and managerial skills. The Park should adopt team work as a basic way of leadership with assistance from external trainers in the beginning. The staff in customer services are in a need of training at least in foreign languages, client oriented services and first aid skills. The use of modern technology in marketing and customer services emphasises the need for computer skills. The heavy investment program requires skills in financing, construction and maintenance.

The image of the Park is crucial when recruiting personnel. Also the structure and the level of salary has to be competitive in comparison with those in local and Karelian spheres. Living conditions in Pääjärvi are peaceful and the cost of living are not as high as in the other parts of Russia if the Park manages to offer housing for the personnel. As a summary, the Park has fairly good possibilities to keep the staff and recruit more professionals if the image of the Park will be innovative and if the Park has financial and legal possibilities for reasonable salaries.

9.1.3 The Park strengthens the co-operation and relations with local, regional and international authorities and partners

The Park has started co-operation with many organisations and stakeholders immediately after its establishment. However, when meeting upcoming challenges the Park still has to widen and strengthen its relations with possible partners. The main reason for this is the fact that increased external financing crucial for the Park development, can be achieved only by an active international co-operation. In addition, the Park can achieve better image and understanding throughout the society, it can develop the staff capacity and create mutually beneficial partnerships. The Paanajärvi National Park already has achieved encouraging results in this field, which makes the forthcoming projects easier to achieve and implement.

The active participation in local, national and international events and meetings will improve the image of the park, which is important in the tourism development and also for the recruitment. An efficient management of the Park requires the models and trends achieved continuously from national and foreign partners. All the staff should participate in international projects to gather information on behaviour and attitude of foreign clientele. The Park has a central role in the future of the Fennoscandian Green Belt, which also emphasises the importance of the Park's international activity. The location of the Park near the Finnish border makes the international co-operation easier than in other Russian National Parks. Paanajärvi National Park has thus a responsibility to actively share the experiences and progress ideas and also the problems and failures with other Russian parks. The most important International partners are all National Parks world wide, Europarc, European Commission and its funds, IUCN, WWF and American Nature Protection associations and research institutes.

The co-operation with the Oulanka National Park has been successful from the beginning of the Paanajärvi National Park history. The Oulanka-Paanajärvi co-operation will continue based on the Twin Parks concept, meaning a closer integration of all the activities in the future. The collaboration has to fulfil the criteria set by Europarc for transfrontier partnership. In visitor management and tourism development the PAN Parks concept will give guidelines for improvement. The goal for co-operation is to achieve a status of internationally well known and well managed Oulanka-Paanajärvi Twin Parks, which have many joint international partners, several joint projects continuously, joint interpretation materials and joint principles in management, nature monitoring and tourism development.

The Park needs to be integrated more closely with the local society and be an active part of its development. In this way, it can contribute to increased environmental standards, innovate and utilise new initiatives e.g. based on the White Sea Route tourism development.

9.1.4. The Park will be expanded to its natural boundaries, which are also ecologically well planned

The Park will prepare a plan for the expanding of its boundaries to natural sites including the nearest fells in the north, namely Lunas and Päänuorunen as well as Kauttio and Sieppitunturi areas in the northwest and Tavajärvi with surroundings in the southwest. The Park will support research of nature in the planned extension territories and monitor the use and changes in natural state. The Park will organise guided tours to the planned extension territories and participate in the public discussion. At an appropriate time, a proposal for the extension of the Park will be submitted.

In the public debate the area between the Park and the Kutsa Nature reserve has risen up as an area where conservation values are high and the plans for logging has been postponed at present. The size and borders of the Paanajärvi National Park is a compromise based on an agreement concluded by Russian authorities in the beginning of 1990's. As a result of this fact, it is difficult for the park to participate in the public debate particularly knowing that the local forest enterprise is the main source of livelihood in the area. It is probable that more inventories will be carried out at that area during next years and the decisions will be made according to the new information. The Park has a possibility to bring the conservation and especially recreational knowledge to the debate when conclusions and decisions will be made even though the final decisions are more or less political.

9.2. Management of Natural and Cultural Heritage

9.2.1. Scientific research supports the Park in achieving its objectives

The scientific research has a long tradition in the Park both in the former Finnish and Russian part of the area and the scientists from both countries had a major role in the Park establishment. However, the involvement of the Park management in directing and utilising scientific work has not been tight enough during the first operating years. Most of the studies is based on the needs of scientists, not the needs of the Park management. The need for a comprehensive Scientific Research Program is actual and urgent. The Park needs easily adaptable information, which is useful for planning the activities and operations and which forms a foundation for environmental education.

The Research Manager, who works as a team leader in Information and Research Unit should have scientific background in biology working permanently in Pääjärvi in the Park office. For the tighter co-operation with research institutes it is recommendable to form a Scientific Council, where all important Karelian and Finnish authorities would have their representatives, at least Karelian Research Centre and Oulanka Biological Station. The main task for the Council is to help the staff of the Park to update and implement the Scientific Research Program and draw resources for the actual work. The

Park together with help of the Council should also form the rules for different kind of research. For basic research the Park can offer logistics, information etc. If the Park does not benefit from the results of the study the researchers should pay for services. The Park should prefer and support applied research, which directly would help the Park to achieve its objectives. In these cases, the Park can offer support free of charge. In the Scientific Research Program, the Park should define the most important needs for both basic and applied research in order to assist the research institutes and universities to allocate their projects to right goals.

The Park and especially its office and visitor centre should become a centre of the versatile information collected from the Park area. To achieve this goal it is necessary to collect all the materials and data from old inventories and include the obligation of handing over the new data immediately after research expenditures with a copy of easy-readable reports on studies for the use of the Park. The staff of the Park should learn to utilise the information as a basis of their work. The role of researchers is essential in this matter and they should be involved in an internal training. Planning and implementing of nature trails and other facilities as well as production of information and environmental education materials have to be based on scientific data and inventories.

9.2.2. The Park together with partners carries out inventories and updates the geographical information and other information systems

There is a lot of versatile information collected from the Park area since the end of 19th century. However, the information is not easily usable and there is no systematic storing of it. The Park should collect the existing material to its library and update it regularly. The main emphasis should aim at first to the data on endangered species. The analysis of existing information should expose the needs for new expeditions. The most urgent needs for inventories are as follows:

- Biotope inventory including GIS update – inventory is based on forest data but is enlarged to cover ecological and conservation issues
- Information (quantity of appearance and range) on rare and endangered species and habitats; the most important are:
 - spruce forests and their characters
 - populations of orchids
 - other endangered species defined on Karelian Red Book
 - birds of prey
 - Quality of water
 - Data on the isolated fish populations in small lakes
 - Old settlements and semi-natural biotopes
 - The old Karelian and Finnish culture

Tacis Karelia Parks Project has produced a Geographic Information System for the Park, and included the Russian forest inventory data into it. The Park should continuously develop the Geographical Information System as a basic tool for the Park management, visitor services and environmental education. The existing information should be recorded in the database and GIS updating has to be a part of all new inventories. Forestry data is quite old from early 1990s. When the updating will take place, the modification of the standard data contents and the inventory work shall be considered carefully in order to improve the usefulness for Park management rather than continue with the federal standards. Also the information of visitor structures and routes should be updated into the GIS continuously according to development projects.

9.2.3. The Park actively monitors her diverse values

The continuous and planned monitoring of nature state of the Park forms the basis of good conservation and management of the area. The monitoring should cover both natural changes and human impacts on nature processes. In Paanajärvi, tourism in general and particularly the risk of harmful influence of expanding fishing requires active monitoring. The Park should urgently make up a monitoring plan and start the implementation of it. The plan should cover also an analyse of threat factors and a description of their harmful impacts. The most important objectives of monitoring are as it can be seen at the moment:

- degradation of nature on trails, habitats and species in danger due to visitors
- char, brown trout, grayling in water with fishing
- birds of prey (eagles)
- large populations of orchids and other populations of endangered species

A direct feedback from monitoring needs to be allocated for use of the Park's activities and management – this is also a part of environmental principles, which the Park has to adopt. At the moment, the resources of the Park are not sufficient to secure exhaustive guarding in the whole area. As far as it is possible the guarding will be intensified particularly in the remote parts of the Park in order to get rid of poaching and illegal fishing. The Frontier Guard could be involved in guarding the illegal activities inside the Park. Their own activities shall be planned in a manner of minimising the negative impacts and making them responsible users of the Park territory.

Fire management is an important factor of boreal forest succession. The Park should aim at monitoring and controlling fires in the territory, and acting rapidly at least in the case of man-made fires. So far, the remoteness and good control of visitors have prevented major fires in the Park. Every visitor should receive guidelines on fire use. The Park should prepare the first fire towers and test the usefulness with an intensive monitoring during dry periods.

9.2.4. The Park actively manages habitats and endangered species

In the beginning of the Park's operational function the active management of habitats or endangered species played only a minor role, which was a reasonable choice. In a wilderness park the need for the management of habitats or endangered species is not that crucial. However, there are cultural or semi-cultural habitats as remnants of the pre-war settlement in the park, which need a recurrent management. The Park should conduct inventories of habitats and compile data according to the results of an active management operations. The co-operation with Oulanka National Park will help the Park to develop suitable methods for management activities and monitoring, because the habitats, like meadows, has similar characters in both areas. The Park should also together with researches draw up an overview of the conservation situation of threatened species and according to the prioritising write out the first conservation plans for the most important species.

The expanding fishing may threaten the local valuable and unique populations of trout, char and grayling. For the purpose of conservation, the Park has to define the sustainable fisheries management, preferably for the entire catchment area in collaboration with actors down and up stream. Kitka-Oulanka-Pääjärvi catchment area formulates an unique area, where human impact has been at a reasonable level for centuries. The area is exceptionally interesting to study the nature state of water ecosystems. The conservation and monitoring plan for water systems both in Russia and Finland could be a fruitful bilateral project with a high international interest.

9.2.5. The Park actively manages culture heritage and characters

The nature is not the only conservation value of Paanajärvi area. The history as well as cultural heritage is an essential part of the image and nature of the Park. The Park, together with research institutes and universities, has to conduct more precise studies on the history of the area. The Park has both former Karelian and Finnish background which enrich the value of the area. The main site for restoring Karelian culture will be around the Vartiolampi, where new ecological education centre is to be developed. The construction style should follow the old style even though it is not possible to use old materials for buildings. The old way of life should be respected in educational programs and packages.

Almost the entire Paanajärvi belonged to Finland until the Second World War, but all dwellings were destroyed during the War. Paanajärvi-Tavajärvi society works more than twenty years aiming at collecting old information and keeping up the native atmosphere. The Park should receive copies of the material collected from old inhabitants and use it as a ground material for tourism and environmental education. One of the key investments is to rebuild one of the old Finnish settlements with economy buildings as a museum and tourism attraction to the northern shore of Paanajärvi.

9.3. Visitor Management

Tacis Karelian Parks Project had a major emphasis on developing tourism along the Russian side of Scandinavian Green Belt, especially in the Paanajärvi National Park. The detailed results are given in the separate report on the tourism development (Friman and Hogmander 2001). In this development plan, only major issues are summarised.

9.3.1. The Park develops her infrastructure and equipment keeping pace with the increasing number of visitors

Before the war, there was a Finnish community in Paanajärvi and regular traffic routes towards Kuusamo. When the Park was established in 1992, it was accessible only with difficulty due to the lack of open roads. In 1994 a road was constructed through the eastern part of the Park so that the river Olanga, lake Paanajärvi and the former village Vartiolampi are accessible by car. Also the rapid Kivakka and the fell Kivakka are now within a reasonable hiking range from the road.

The number of visitors have risen annually being at the moment some 3000 per year. The main part of the services, as camp sites, cabins, saunas and nature trails are constructed along the river Olanga between lakes Paanajärvi and Pyaozero. Suitable conditions for fishing have favoured fishermen who are the largest group of visitors in the Park. The growth of the amount of visitors is seen in Table 2.2.

According to the tourism strategy, the amount of visitor days in the Park is estimated to increase from 12 000 at the moment to 35 000 in year 2010. Attached figure 9.1. shows also visitor categories and their share of total visitors. The key assumption in this increase is that Suoperä-Kortessalmi border-crossing will be opened in 2005 for international traffic. The Park has four years time for investments and product development - this fact is the main challenge for the Park management.

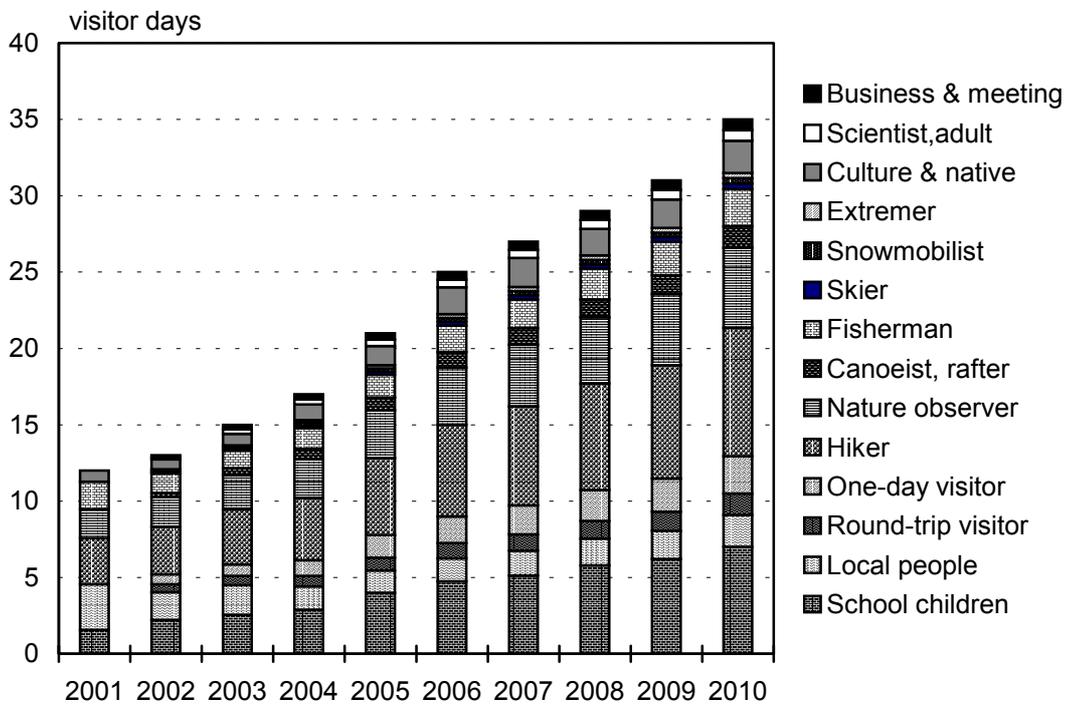


Figure 9.1 The development of visitor days and visitor categories in 2001-2010. Source: TOURISM STRATEGY OF THE KARELIAN PART OF THE GREEN BELT.

The increasing amount of visitors need more services and facilities of good quality. The main strategy is to improve services along the Olanga river and simultaneously enlarge the tourism facilities gradually to new areas. By opening hiking trails to other parts of the Park, it can offer a greater variety of possibilities to enjoy the nature and services in the Park. Before the new investments, the Park has to define a more precise zoning inside the areas directed for tourism, plan the integrated design for facilities and implement the plans according to the visitor demand and financial possibilities. The main tourism area will be along the Olanga river. The southern part of the Park will be the area for services for ordinary hikers and the northern part of the Park will be meant for the advanced and extreme hikers.

The plan for key investments is given in Appendix XX, and the most important investments are briefly as follows:

- Main tourism centre at the eastern end of Paanajärvi including 3 chalets and a service house for catering

- Reconstruction of an old Finnish settlement with economy buildings in the northern shore of Paanajärvi
- Ecological education centre in Vartiolampi (see more at page 8.3.3.)
- Facilities at the bridge of Olanga River – services without accommodation
- Service Centre by the Gate – welcome information and concentrated waste collection
- Road repairing
- Accommodation at the visitor centre at Pääjärvi
- Services on hotspot sights:
 - Mäntykoski
 - Selkäkoski
 - Kivakkakoski
- Hiking routes including rental cabins and a network of fireplaces
 - Fell Nuorunen
 - Northern route – Wild Reindeer Route
 - Paanajärvi Northern shore route
 - Southern route
 - Old Frontier guard route
 - Paanajärvi Southern shore route
 - Päänuurunen route
- Routes and services for canoeists and fishermen
- Winter routes

A waste management plan will be drawn up and implemented simultaneously with new facilities. Environmental principles, which the Park will adopt, direct all the service development. Also field interpretation plan should be drawn and implemented. Fishing has had a dominant role in tourism at the beginning which has caused some environmental damages along the river side. Fishing sites need to be organised and constructed in a manner which minimises the impact on shores and enables efficient control. Piers and boat slips will be constructed on areas where they are needed for the Park management or where boating is allowed and recommended.

The Park has acquired with the support of Tacis Karelian project good equipment for the Park management and tourism services. The excellent maintenance is essential for durability of these materials. However, a continuous renovation is needed in order to keep the services up-to-date.

The bad condition of the main road is one of the main troubles for tourists, especially for those, who would like to use their own car in transport. The Park has to co-operate with a local forest enterprise in order to improve the main road and get resources for road improvements inside the Park area. Many environmentally oriented tourists are willing to minimise the use of their own vehicles in the Park. They are ready to leave the vehicles to Pääjärvi or to the gate of the Park. For those tourists the Park should offer daily scheduled transport services.

In the development plan it is not possible to give exact timing of investments, because the funding of the construction is still unclear at the moment. However, it is obvious that the Park will not get enough money for investments from federal budget and the tourism income does not enable investments as fast as needed. National and international projects and long term co-operation with tour operators might be possible solutions for financing of investments.

9.3.2. Production of information and Park marketing as well as product development will be improved

The Visitor Centre Unit together with the Tourism Department will be in charge of the information material production. At the moment, the Park has basic brochures, web-sites and CDs thanks to Tacis Karelian Project, but the enlargement of clientele and the improvement of the information base of the Park requires an efficient and prompt production of new material. Collaboration with tourism operators aim at new products, which raise the need for advertising and the use of media for spreading out the product information. The co-operation with tour operators should be enlarged to cover the production of information and marketing material. The Park should make nature interpretation plan and implement it gradually with investments on nature trails and other facilities.

When prioritising the needs for new material, the following issues and products rise up:

- Brochure and web-sites concerning the temptations and regulation of the Park
- Basic handbook for foreigners on travelling in Russia and especially in Louhi district
- A list of available products and a prize list including the products of business partners
- Information point at the Gate providing basic information for visitors

- Short nature trails in the park including info boards and leaflets
- Visitor handbooks for plant and bird enthusiasts

At the moment, the share of foreign visitors, mainly from Finland, is about 40 %. The standards for tourism development has to be based on so called "Middle European level", although the main visitor flow is still coming from Russia. This principle enables the sustainable financing of investments with the help of foreign investors and at the same time strengthen the ownership of the area among the Russians.

The new visitor centre will be directed into a centre of intelligence and marketing on the Park and the whole Louhi district as well as The Green Belt. This is will be realised only with a continuous and deep collaboration with local administration and private tour companies.

In Tourism strategy for the Karelian part of The Green Belt (Friman and Högmänder 2001) there are defined the key products of Paanajärvi National Park. They are also presented in Annex 7. The products have been identified for each visitor category and private tour operators can use these key products as a part of their own packages. A continuous collection of feedback from the visitors and the product development together with the tour operators are crucial when improving the marketing of the park.

9.3.3. Ecological education will be developed in the park so that program and premises can be offered for school pupils, students and all kind of organisations willing to learn more on the park, its nature and history, environmental protection and good behaviour in nature.

The ecological education is one of the main activities in all national parks. In Paanajärvi the co-operation with stakeholders, especially with the local schools, already started a long time ago. Better premises, more material and training for the teachers are needed. The Park should widen the scope of the education to cover also cultural heritage of the Park, sustainable use of the natural resources and the respective behaviour in nature. The co-operation with other Russian protected areas, NGO´s and international organisations can open new gates for the Paanajärvi National Park on this branch.

Vartiolampi, place from an old Karelian settlement, is selected as a site for a future centre of ecological education. The Centre will be constructed gradually, but the first step is to start a detailed and careful planning, which is crucial for guaranteeing the high quality. In the investments plan the following construction actions are defined:

- Main Ecological Education House (150 m²), meeting facilities for max. 30 persons with 3 classrooms
- 5 cabins (60 m²) for 10 persons in each
- One smoke sauna
- A small chapel near the cemetery

Vartiolampi also serves hikers (rapids Kivakkakoski and Fell Kivakka), canoeists, rafters and fishermen. Day visitors can make an excursion in the former village as the history of the village and its cemetery are presented. The permanent exhibition of the village history is located in the Education House. Day visitors can also take a hiking tour to rapids Kivakkakoski. Canoeists, rafters and fishermen can have their picnic lunch outside in the tepee or use a smoke sauna. They can also be accommodated when rooms available due to other courses.

The ecological education is not only aimed for school children. Premises for meetings and seminars are offered at the Visitor Centre together with Vartiolampi Ecological Education Centre which offers also for organisations and companies, close to the nature. Both places will also be developed for training the staff from protected areas from the whole Karelia and the Fennoscandian Green Belt or actors along the White Road. Chalets for accommodation next to the Visitor Centre will be constructed for the use of researches, customers of environmental education, participants of training courses and tourists.

9.3.4. Tourism will be developed in the Park in a useful co-operation with both foreign and domestic enterprises

The basic tourism infrastructure is still under construction in the Park. Through the well organised co-operation with tour operators and other stakeholders, the Park can get support for the investments, rely on the good quality of the services produced by external sources and find its own role as developer and organiser of services and activities of the national park. This would also provide the

Park administration an opportunity to concentrate on the other main activities in the national park while tourism is developed on a wide basis.

In order to safeguard the Park against the harmful influences of growing tourism, the Park should adopt guiding or rather eco-tourism principles on the protection of nature and cultural values. The environmental and quality principles of the Karelian National Park is presented in the Tourism strategy and the guidelines are also presented in Annex 4. The Park should pay attention to the international development in tourism eco-labels. Oulanka National Park has chosen PAN Parks concept for the basement of tourism improvement and Paanajärvi should apply the same principles at appropriate level and schedule.

The role of the Park as an authority and the role of tourism companies are presented in Chapter 7 (Principles etc..). The Park needs more precise models for co-operation with private entrepreneurs defining responsibilities and obligations of both parties following the principles of eco-tourism. The Tourism Department has key roles in the product development and the marketing. Tourism is important for the Park not only for arising environmental awareness but also for financing the conservation operations. The activities of the Tourism Department of the National Park should be organised so that all the expenses, including investments and income, can be followed separately. That will facilitate finding the right pace for investments and the overall advisability of tourism services.

The Park will support creating a network of tourist services in the Louhi district and have a central role in the development of tourism in the whole district, Karelia and the Green Belt. The Park will actively promote the local business development and involvement. At the moment, there is a lack of reliable subcontractors both in the tourism and construction businesses. Also the souvenirs production offers possibilities for locals to develop their own enterprises.

9.3.5. The Paanajärvi National Park and its Visitor Centre in Pyaozerski will be developed as one of the main attractions and the key centre on intelligence along the White Road and in the Green Belt

One of the most important milestones in the history of Paanajärvi National Park will be the opening of the new visitor centre and the office building in the spring 2002 at the tenth anniversary of the Park. A fluent start of the centre is essential for the image of the Park. The training of the staff and success in recruiting are crucial for the high level services in the centre. Concept for the Visitor Centre activities has to be developed not for the Park only, but with a wider approach delivering the information and selling material e.g. maps and souvenirs to the visitors. The Tourism Department of the Park, later possibly Tourism Company, will operate in the Visitor Centre taking care of the product development of tourism, bookings and marketing.

The next challenge for the centre will take place at the time of the opening of Cross Border Point in Suoperä-Kuusamo. The Park services and the skills of the staff will be developed so that they are ready to meet the remarkable change in tourism at that time. The White Road info point will be established – in a co-operation with the local tourism administration – at the new Visitor Centre in Pyazero a great number of tourists passing by for information on the Park and on the whole Louhi district as well as Scandinavian Green Belt.

10. Investment plan

The purpose of the Paanajärvi National Park is to manage the Park in the best possible way in order to conserve and protect the unique nature values within its territory. This main task and the related responsibilities have been stipulated in the law. Therefore the Park is a public entity. The logical consequence from this is that in order to be able to fulfil its mission, the Park should also enjoy public financing from the state budget to cover all its investing and recurrent costs.

However, under the present economic conditions in Russia and Karelian Republic, state spending is very limited. In most cases it is barely sufficient to cover the salaries of the minimum staff to keep the basic services running, such as guarding the territory from unauthorised entries, illegal fishing and hunting or other damaging activity.

New sources of finance must be found to be able to develop the Park and make it more accessible and more attractive. In fact, since its establishment in 1992, the Park continuously collects some own income in form of entrance fees and fishing licences. These earnings have grown all the time to the extent that in the year 2000 they reached 2.5 million roubles and already formed the main funding source for investments.

The present Strategic Development Plan wants to strengthen this approach. It endeavours to develop tourism into the major activity of the Park and the principal source of finance for future investments for improvement of the various services and creation of new ones. The idea is that a financially healthy Park will also be better equipped to take care of its main mission: the nature conservation.

To receive more tourists, a considerable amount of new investments is needed. As a result of the Strategic Development Plan, a list of new investments is prepared (see Annex 5, Table 8). The fulfilment of the list is to be seen as a prerequisite for attracting the planned numbers of domestic and foreign tourists. A Business Plan is written for calculating the feasibility of the investment scheme.

According to the investment plan, during the period 2002-2008 the total amount of total investment would rise to some 27 million roubles. This appears to be rather a large sum when compared to the present own funds for investments of the Park, which for instance in the year 2000 were 1.4 million roubles. However, the calculations showed that the investment would be profitable towards the end of the planning period and e.g. in 2008 the share of the return on investment will amount to about 20%. The Business Plan is presented in Annex of this report.

The main challenge signifies the appropriate financing for the investment plan. The Park is a public entity directly under the Ministry of Natural Resources of the Russian Federation. It is not a business enterprise in the normal meaning. This special character of a national park means also a certain dilemma when drawing up a business plan: how to develop commercial business, while certain public obligations must be taken care of? This is perhaps the main limitation as a national park improves its economy through commercial tourism activities.

The fact is, however, that because of the budget limitations the Park already has been compelled to look for own income sources. The development plan seeks to support this realistic approach. In the end, this is a policy question: whether or not the federal and republican authorities want to follow this tendency, which may lead to national parks operating as self-financing structures.

An alternative discussed in this Strategic Development Plan would be to form a separate tourism company, which would operate on a purely commercial basis. However, this approach may be possible at a longer run, because the current legislation in force neither permits the Park to establish an own company nor to be a partner in an eventual joint venture. This situation greatly limits the external financing options, which are discussed in the following chapter.

11. Financing

In the past, the Park's financing for investments from the federal and republican budgets was only marginal, and during the last three or four years practically nil. In this situation, the Park was compelled to look for other financing sources. It managed to increase the income from tourism to be able to maintain at least a minimum level of investment and reinvestment (renewal of old installations).

The new Investment Plan, however, will be of such a magnitude that the Park's own funds will be completely insufficient and other financing sources should be secured. Below, the following alternatives are discussed:

1. Public funding
2. Financing from own income
3. International financing institutions
4. Private sector funding

The existence of the documentation prepared under the Tacis Karelia Parks Development project, Strategic Development Plan, Tourism Strategy and Business Plan, will be helpful when negotiating for financing for various financing options. It should be noted, however, that the international and private banks all have their conditions and rules for loans and usually request additional information according to their own procedures.

Public funding. These financing sources include the budget of the Russian Federation and the Republic of Karelia. This would be the logical solution, because the Park is a state organisation and represents the public interests in nature conservation. So far the record of public funds for the Park's investments has been discouraging. Lately the economic situation in Russia has been more stable and even slightly improving. This may be reflected in the future in the form of better financing possibilities for the national park network. However, even in the best case, this will probably take years to materialise. It is also possible that such new policies will be adopted and will lead towards a more self-financing status of state entities in forestry and nature conservation sectors.

Financing from own income. This alternative has already been implemented during the last five years. The possibility of using own funds for investments has more or less kept the Park going at a reasonable level under the present circumstances. However, considering the planned new investments, the own means will not be sufficient, although they can and should form a considerable part of the needed financing. There are also some legal limitations as to the use of own income: they are supposed to be invested during a specified time limit and for purposes as stipulated by the regulations on national parks.

International financing institutions. Under this heading, two types of international financing institutions are meant: international technical assistance bodies and international banking organisations. The first group includes such entities as the European Union (Tacis, Phare), The United Nations (FAO, UNEP) and non-governmental organisations like WWF.

The Paanajärvi National Park already receives sponsoring from Tacis, which has made a significant contribution to the improvement of the Park's physical structures. The best side of the financing by the technical assistance bodies is that the sponsoring is made available in the form of grants, i.e. there is no need to pay it back. Therefore it is one of the best ways to finance projects of common interest, such as national parks, which also are of international importance.

International banking organisations (e.g. The World Bank) grant soft loans for the public sector including nature conservation. However, a park is too small an object for lending, it should be a part in a larger development project of federal or republican significance. Lately, the World Bank has been financing a large biodiversity development programme in the Russian Federation through its Global Environment Facility (GEF).

Private sector funding. For the private sector two alternative financing possibilities could be considered: equity funding from a private business partner or a bank loan.

The Park is already collaborating with both domestic and foreign tourism operators, even on a regular basis. In the future, the legislation permitting, it will be perhaps possible to develop the collaboration into business partnerships. This would concern those parts of the investment plan dealing with direct service of tourists like accommodation and catering, i.e. where profitable business is to be expected in short to medium term. The private partner may participate in financing by allocating equity funds into the joint venture formed with the Park.

The Park as such is probably not eligible for bank loans to cover its investment costs. In case a separate company is formed with private sector involvement, bank loans would become a viable option when investing in tourism services or in the production of souvenirs or other saleable goods.

Annexes

1. The list of endangered species
2. Report on the environmental auditing of Paanajärvi National Park 2.-6.10.2000
3. Environmental and Quality Principles for National Parks
4. Goals and Actions for Paanajärvi national Park development in 2001-2010
5. Business plan of the Paanajärvi National Park
6. Proposed chart for organisation and responsibilities development
7. The key Programs of Paanajärvi National Park based on Karelian part of the Green Belt Tourism Strategy

Annex 1

Endangered species of the Paanajärvi National Park

Latin name	Russian name	Finnish name	English name	Red Data Book (conservation category)		
				Karelia	Russia	East Fennoscandia
PLANTS						
<i>Woodsia alpina</i>	вудсия альпийская	Tunturikiviyrtti	Alpine woodsia	3		3
<i>Woodsia glabella</i>	вудсия гладкая	Kaljukiviyrtti	Smooth woodsia	3		3
<i>Cystopteris dickieana</i>	пузырник Дайка	Haurasloikko (muoto)	Common fragile fern	3		3
<i>Gymnocarpium Jessoëense</i>	голокучник иезский	Idänimarre	Northern oak fern	2		2
<i>Gymnocarpium robertianum</i>	голокучник Роберта	Kalkki-imarre	Limestone oak fern	2		3
<i>Polystichum lonchitis</i>	многорядник копьевидный	Suippohärkylä	Holly fern	0		0
<i>Asplenium rutamuraria</i>	костенец постенный	Seinäraunioinen	Wall-rue spleenwort	3		3
<i>Asplenium viride</i>	костенец зеленый	Viherraunioinen	Green spleenwort	4		3
<i>Botrychium boreale</i>	гроздовник северный	Pohjannoidanlukko		3		3
<i>Botrychium lanceolatum</i>	гроздовник ланцетный	Suikanoidanlukko	Lance-shaped grape fern	4		4
<i>Botrychium multifidum</i>	гроздовник многораздельный	Ahonoidanlukko	Leathery grape fern			3
<i>Diphasiastrum alpinum</i>	плаун альпийский	Tunturilieko	Alpine clubmoss	4		
<i>Isoëtes setacea</i>	полушник щетинолистный	Vaalealahnaruoho	Spring quillwort	4	2	
<i>Isoëtes lacustris</i>	полушник озерный	Tummalahnaruoho	Lake quillwort	4	2	
<i>Elymus fibrosus</i>	пырей волокнистый	Siperianvehnä		2		2
<i>Elymus kronokensis</i>	пырей альпийский			2		2
<i>Elymus mutabilis</i>	пырей изменчивый	Lapinvehnä				1
<i>Carex adelostoma</i>	осока неясноустая	Lapinnuijasara		3		3
<i>Carex atherodes</i>	осока прямоколосая	Vienansara	Slough sedge	3		
<i>Carex glacialis</i>	осока ледниковая	Varvassara	Glacier sedge	4		2
<i>Carex heleonastes</i>	осока болотолубивая	Lettosara				4
<i>Carex jemtlandica</i>	осока йемтландская	Kuusamonnokkasara	Yellow sedge	4		1
<i>Carex laxa</i>	осока повислая	Velttosara		2	3	2
<i>Carex livida</i>	осока свинцово-зеленая	Vaaleasara	Livid sedge	4	3	
<i>Carex media</i>	осока средняя	Siperiankirjosara		3		3
<i>Carex norvegica</i>	осока норвежская	Kirjosara	Close-headed Alpine-sedge	1		
<i>Carex parallela</i>	осока параллельная	Soukkasara		0		0
<i>Carex rupestris</i>	осока скальная	Kalliosara		3		3
<i>Carex tenuiflora</i>	осока тонкоцветковая	Viitasara	Slender-flower sedge			3
<i>Eleocharis mamillata</i>	ситняг сосочковый	Mutaluikka	Mammilate spike-rush			3

Latin name	Russian name	Finnish name	English name	Red Data Book (conservation category)		
				Karelia	Russia	East Fennoscandia
Eriophorum brachyantherum	пушица короткотычинковая	Himmeävilla	Close-sheath cotton-grass	4		3
Schoenus ferrugineus	схенус ржавый	Ruosteheinä	Brown bog-rush	3		3
Juncus triglumis	ситник трехчешуйный	Kolmikkovihvilä	Three-flowered rush	3		3
Luzula spicata	ожика колосистая	Tähkäpiippo	Spiked wood-rush	0		0
Cypripedium calceolus	венерин башмачок настоящий	Tikankontti	Lady's-slipper	4	3	4
Calypso bulbosa	калипсо луковичная	Neidonkenkä	Fairy slipper	3	3	3
Dactylorhiza lapponica	пальчатокоренник лапландский	Kaitakämmekkä (muoto)	Lapland marsh-orchid			1
Dactylorhiza traunsteineri	пальчатокоренник Траунштейнера	Kaitakämmekkä	Narrow-leaved marsh-orchid	4	3	
Epipogium aphyllum	надбородник безлистный	Metsänemä	Ghost orchid	3	4	3
Salix pyrolifolia	ива грушанколистная	Talvikkipaju		2		1
Salix reticulata	ива сетчатая	Verkkolehtipaju	Snow willow			3
Salix triandra	ива трехтычинковая	Jokipaju	Almond-leaved willow	3		3
Arenaria pseudofrigida	песчанка ложно-холодная	Tunturiarho		3		3
Cerastium alpinum	ясколка альпийская	Tunturihärkki	Alpine mouse-ear	3		
Gastrolychnis angustiflora	дрема узкоцветковая			1		0
Gypsophila fastigiata	качим пучковатый	Kangasraunikki	Baby's breath	2		2
Silene tatarica	смолевка татарская	Tataarikohokki	Tartarian catchfly			3
Steris alpina	смолка альпийская			3		3
Stellaria calycantha	звездчатка чашечкоцветковая	Pohjantähtimö	Northern starwort	3		3
Stellaria fennica	звездчатка финская	Idänluhtatähtimö				3
Batrachium eradicatum	шелковник неукореняющийся	Hentosätkin		4		
Batrachium trichophyllum	шелковник волосистolistный	Purosätkin	Frogwort	4		3
Ranunculus hyperboreus	лютик гиперборейный	Pohjanleinikki	Arctic buttercup	3		3
Arabis alpina	резуха альпийская	Tunturipitkäpalko	Alpine rock cress	2		
Draba cinerea	крупка серая	Idänkynsimö	Gray whitlowgrass	3		3
Draba hirta	крупка седая	Isokynsimö		3		3
Saxifraga aizoides	камнеломка жестколитсная	Kultarikko	Yellow mountain saxifrage	3		3
Saxifraga hirculus	камнеломка болотная (козлиная)	Lettorikko	Marsh saxifrage			3
Saxifraga nivalis	камнеломка снежная	Pahtarikko	Alpine saxifrage			3
Dryas octopetala	куропаточья трава восьмилепестная	Lapinvuokko	Mountain Avens	1		0
Dryas punctata	куропаточья трава точечная			1		
Padus borealis	черемуха северная					4
Potentilla crantzii	лапчатка Кранца	Keväthanhikki	Alpine cinquefoil	2		2

Latin name	Russian name	Finnish name	English name	Red Data Book (conservation category)		
				Karelia	Russia	East Fennoscandia
Potentilla nivea	лапчатка снежная	Pahtahanhikki	Snow cinquefoil			2
Potentilla shamissonis	лапчатка Шамиссо	Ruijanpahtahanhikki		2		2
Sibbaldia procumbens	сиббальдия распростертая	Närvänä	Creeping sibbaldia	0		1
Sorbus gorodkovii	рябина гладковатая		Gorodkov's mountain-ash			4
Astragalus frigidus	астрагал холодный	Peuranvirna	Yellow Alpine milk-vetch	3		3
Astragalus subpolaris	астрагал почти-полярный			3		3
Oxytropis sordida	остролодочник грязноватый	Idänkeulankärki		3		3
Callitriche hermaphrodita	болотник обоеполый	Uposvesitähti	Autumnal water-starwort			3
Viola rupestris	фиалка скальная	Hietavokki	Teesdale violet			4
Epilobium alsinifolium	кипрей мокричниколистный	Hetehorsma	Chickweed willow-herb	3		3
Epilobium davuricum	кипрей даурский	Vuorolehtihorsma	Arctic willow-weed	3		3
Epilobium hornemannii	кипрей Горнемана	Pohjanhorsma	Hornemann's willow-herb	3		
Epilobium laestadii	кипрей Лестада	Turjanhorsma				2
Myriophyllum sibiricum	уруть сибирская	Kalvasärviä	Water milfoil	3		
Angelica archangelica	дягиль лекарственный	Väinönputki	Angelica	3		3
Pyrola norvegica	грушанка норвежская	Pohjantavikki	Norwegian pyrola			4
Loiseleuria procumbens	луазелеурия распростертая	Sielikkö	Alpine azalea	3		
Phyllodoce caerulea	филлодоце голубая	Kurjenkanerva	Mountain-heath	3		3
Androsace septentrionalis	проломник северный	Ketonukki	Northern androsace	2		2
Primula stricta	первоцвет прямой	Lapinesikko	Erect primrose	3		3
Gentianella amarella	горчавочка горьковатая	Horkkakatkerö	Bitter gentian			4
Gentianella lingulata	горчавочка язычковая	Kesähorkkakatkerö	Autumn gentian			4
Polemonium acutiflorum	синюха колокольчатая	Kellosinilatva	Jacob's ladder	1		1
Hackelia deflexa	гакелия поникшая	Kalliosirkunjyvä	Beggar's-lice	4		3
Myosotis decumbens	незабудка холодная	Lapinlemmikki		3		2
Thymus subarcticus	тимьян субарктический			2		2
Veronica fruticans	вероника кустарничковая	Varputädyke	Rock speedwell	2		2
Pinguicula alpina	жирянка альпийская	Valkoyökönlehti	Alpine butterwort	3		3
Pinguicula villosa	жирянка волосистая	Karvayökönlehti	Hairy butterwort			4
Galium trifidum	подмаренник трехраздельный	Pikkumatarä	Small bedstraw			4
Valeriana sambucifolia	валериана бузинолистная	Lehtovirmajuuri	Elder-leaved valerian			4
Lobelia dortmanna	лобелия Дортмана	Nuottaruoho	Water lobelia	4	3	

Latin name	Russian name	Finnish name	English name	Red Data Book(conservation category)		
				Karelia	Russia	East Fennoscandia
<i>Aster sibiricus</i>	астра сибирская		Arctic aster	0		0
<i>Cicerbita alpina</i>	цицербита альпийская	Pohjansinivalvatti	Alpine blue sow thistle	3		4
<i>Crepis nigrescens</i>	скерда черноватая	Pahtakeltto				3
<i>Erigeron decoloratus</i>	мелколепестник неокрашенный	Kalvaskallioinen				3
<i>Inula salicina</i>	девясил иволистный	Rantahirvenjuuri	Irish fleabane			3
BIRDS						
<i>Gavia stellata</i>	Краснозобая гагара	Kaakkuri	Red-throated diver	x		x
<i>Gavia arctica</i>	Чернозобая гагара	Kuikka	Black-throated diver			x
<i>Cygnus cygnus</i>	Лебедь-кликун	Joutsen	Whooper swan	x		x
<i>Anser fabalis</i>	Гуменник	Metsähanhi	Bean goose	x		
<i>Melanitta fusca</i>	Турпан	Pilkksiipi	Velvet scoter	x		
<i>Melanitta nigra</i>	Синьга	Mustalintu				
<i>Mergus albellus</i>	Луток	Uivelo	Smew	x		x
<i>Milvus migrans</i>	Черный коршун	Haarahaukka	Black kite	x		x
<i>Haliaeetus albicilla</i>	Орлан-белохвост	Merikotka	White-tailed eagle	x	x	x
<i>Circus cyaneus</i>	Полевой лунь	Sinisuohaukka	Hen harrier			x
<i>Aquila chrysaetos</i>	Беркут	Maakotka	Golden eagle	x	x	x
<i>Pandion haliaetus</i>	Скопа	Kalasääski	Osprey	x	x	x
<i>Falco columbarius</i>	Дербник	Ampuhaukka	Merlin	x	x	x
<i>Falco tinnunculus</i>	Пустельга	Tuulihaukka	Kestrel	x		x
<i>Grus grus</i>	Серый журавль	Kurki	Crane	x		x
<i>Charadrius hiaticula</i>	Галстучник	Tylli	Ringed plover			x
<i>Philomachus pugnax</i>	Турухтан	Suokukko	Reeve			x
<i>Lymnocyptes minima</i>	Гаршнеп	Jänkäkurppa	Jack snipe			x
<i>Larus fuscus</i>	Клуша	Selkälökki	Lesser black-backed gull	x		x
<i>Bubo bubo</i>	Филин	Huuhkaja	Eagle owl	x		x
<i>Glaucidium passerinum</i>	Воробьиный сычик	Varpuspöllö	Pygmy owl	x		x
<i>Strix nebulosa</i>	Бородатая неясыть	Lapinpöllö	Great grey owl	x		x
<i>Cinclus cinclus</i>	Оляпка	Koskikara	Dipper	x		x
<i>Ficedula parva</i>	Малая мухоловка	Pikkusieppo	Red-throated flycatcher			x
<i>Luscinia svecica</i>	Варакушка	Sinirinta	Blue throat			x
<i>Phoenicurus phoenicurus</i>	Горихвостка-лысушка	Leppälintu	Red start	x		
<i>Turdus torquatus</i>	Белозобый дрозд	Sepelrastas	Ringed quazel	x		
<i>Lanius excubitor</i>	Серый сорокопут	Lapinharakka	Great shrike	x		x
FUNGI						
<i>Herizium coralloides</i>	Ежевик коралловый			x	x	
<i>Polyporus pseudobetulinus</i>	Трутовик ложноберезовый					x
MOLLUSCS						
<i>Margaritifera margaritifera</i>	Жемчужница европейская	Jokihelmisimpukka	Pearl oyster	x	x	x

Latin name	Russian name	Finnish name	English name	Red Data Book (conservation category)		
				Karelia	Russia	East Fennoscandia
FISHES						
Salmo trutta	Кумжа	Taimen	Brown trout	x		x
Salvelinus alpinus	Палия, арктический голец	Nieriä	Char	x		x
Thymallus thymallus	Хариус	Harjus	Greyling	x		
Coregonus pidschian	Сиг-пыжьян	Siika (alalaji)	Whitefish (subspecies)	x		
Coregonus lavaretus	Обыкновенный сиг	Siika	Whitefish	x		
MAMMALS						
Pteromys volans	Белка-летяга	Liito-orava	Flying squirrel			
Canis lupus	Волк	Susi	Wolf			
Mustela	Ласка	Lumikko	Weasel			
Gulo gulo	Росомаха	Ahma	Wolverine			
Lutra lutra	Выдра	Saukko	Otter			
Ursus arctos	Бурый медведь	Karhu	Brown bear			
Lynx lynx	Рысь	Ilves	Lynx			
Rangifer tarandus	Лесной олень	Metsäpeura	Forest reindeer			
Myopus schisticolor		Metsäsopuli	Forest lemming			

Annex 2

Report on the environmental auditing of Paanajärvi National Park 2-6.10.2000

Auditors: Environmental manager Mr. Tage Lampén and Park Manager Mr. Jorma Takalo both from the Natural Heritage Services of Metsähallitus.

1. To audit Paanajärvi National Park using the same principles as in internal Natural Services audits.
2. To propose environmental objectives and targets for Paanajärvi National Park.

Conclusions of the auditing:

Right at the outset it became obvious that since the same kind of decisions-in-principle governing activities in Paanajärvi National Park as those within the Natural Heritage Services have not been approved, it is not possible to make use of the same principles in the auditing as those used for internal Natural Heritage Services' auditing. In these audits, an evaluation is made of whether the entity in question actually operates in accordance with the approved principles and guidelines, and decrees. Based on this fact, we abandoned traditional auditing and focused our attention on documenting development perspectives and the putting forward of proposals for improvement, since there exists a desire to develop the Oulanka-Paanajärvi park complexity into a model park for other Karelian national parks. Owing to our poor command of the Russian language, we did not have sufficient information about the park's plans and ecosystem inventories, which would have been extremely useful to the auditing.

To ensure that the development of the park is systematic and that sufficient attention is paid to all the essential matters from the park's standpoint, we propose that the park adopt as a tool for development the ISO 14001 international environmental standard. This standard, or parts thereof, can be used for developing activities irrespective of whether the intention is later to apply for a certificate for the park or not.

Applying for an environmental certificate would call for extremely large investments in relation to the park's resources, we propose that at this stage it would be more sensible to make use of the most important parts of the standard for developing the park. This does not preclude possible later application for a certificate. If the park is developed on these principles, before long it might be possible, for the park to act as a model for other Karelian parks. We propose that development would occur in stages, making use of the environmental standard, in the following way:

The most important parts of the environmental standard from the standpoint of the Park's development:

1. Auditing of the environmental aspects (4.3.1)

From the development standpoint, the auditing of the environmental aspects in all activities and processes taking place in the Park is the most important phase. In the auditing, one should bear in mind that attention should only be paid to those matters which can be supervised or influenced. Special attention should be paid to those activities which have, or can have significant impacts on the environment.

The best end result is achieved, if the Park management carries out this survey. As a tool, the Excel spreadsheet, as used by Metsähallitus, and the guidelines associated with this, could be used. Benefit could also be derived from the environmental aspects of the Natural Heritage Services unit. Based on their own judgement and knowledge, the auditors can choose those operations which have, or may have, a significant impact on the environment. The Park management should ensure that the perspectives connected with this significant impact are taken into account when setting the environmental objectives.

2. Environmental policy (4.2)

The Park management executives may draft a public environmental policy for the Park which includes e.g. an explanation of how the environmental protection level is being maintained and through which its improvement is made possible. The part of the standard in question covers those matters which at the very least ought to be included in the environmental policy. Among these, the fact that the policy should include a commitment to continual improvement and prevention of pollution. In addition, the environmental policy forms a foundation on which the organisation can establish its objectives and targets.

3. Objectives and targets (4.3.3)

The organisation should set up objectives and targets for the Park. When the objectives are being set, the legislative and other requirements, and above all the Park's significant environmental

aspects, should be taken into consideration. The objectives should be itemised and the targets measured in practice when possible and in suitable circumstances preventive measures taken into account.

As objectives, primarily those activities which have significant impacts on the environment should be chosen. Some of the objectives set should not be aimed at improving the state of the environment for the time being. Instead, they should be aimed at monitoring the state of the environment to see whether this remains under control and does not worsen.

4. Environmental management programmes (4.3.4)

The organisation shall establish and maintain programmes for achieving its objectives and targets. This means, among other things, that selected activities would be governed in different ways, for instance by principles and guidelines. In addition, plans are generally required for the activities in question which specify at least the responsibilities and schedules. Monitoring and measurements are again needed to determine whether the set objectives and targets have been achieved. Later, files can be consulted to determine whether the objectives have been attained. To facilitate this, an extract has been appended to this audit from the management programme for environmental matters within the Natural Heritage Services unit.

Once these, the most important issues from the standpoint of development and the environment, have been attended to, the other requirements of the standard can be dealt with.

5. Observations and proposals for development :

Based on the foregoing, we do not have the requirements for presenting environmental objectives and targets before the environmental aspects have been audited. In case one of the following activities, according to the environmental perspective audit, should have a significant environmental impact, we offer a few viewpoints on development for which objectives and targets can be set at a later date.

1. Waste management

Observations:

When the purpose of a park is to act as a model park, attention should be paid to improving waste management. We observed for instance when mixed waste and biowaste are collected in the same waste sacks (bin liners), marked odour problems arise due to the decay of the biowaste and these detract from visitors' enjoyment of the Park. Additionally, we observed that odour attracts animals to the waste disposal site and these scatter the waste, as a result of which the area becomes littered with rubbish. We have no information about where the remains are taken to and how they are treated there. If they are covered with soil at a municipal landfill, in the anaerobic conditions organic waste evolves methane gas, which increases climate warming to a greater extent than carbon dioxide. Pit latrines cause odour problems and they can also pollute groundwater.

Another source of disturbance from the environmental standpoint are, in our opinion, the piles of metal scrap left in the environment. If engines and machinery have been used in the area once used as a depot, there is a high risk that oil and fuels pass into the soil and pollute it.

Objectives, targets and development proposals

If environmental objectives and targets are set for waste management, the principles of waste management could first be drafted for the Park. These would define how waste management is currently taken care of and how it is intended to be handled in the future. In principle, a stand could be taken on all the sub-areas of waste management, such as composting, waste sorting, waste transportation and guidance. In addition, a waste management development programme ought to be prepared for the Park which would include all the practical measures, with their schedules and responsibilities.

In all probability, the available resources will form barriers to the kind of measures that would be possible during the initial stages. In our opinion, one of the most urgent measures is to separate organic waste from mixed waste and compost it. Composting could take place either in a distributed fashion at the waste sources, or in a concentrated way at a few points to which biowaste is transported. Concentrated composting is an economically better alternative which can be achieved all year round, always assuming that most of the biowaste is brought to the central composting point. Mixed waste could be brought to a single point. At a later stage, latrine pits could be replaced with composting toilets.

Concrete proposal:

A waste sorting point will be set up on the Park border. During the early stages, it would be possible to sort biowaste, reusable bottles and cans (if this kind of arrangement exists), and other mixed waste. National Park visitors would be obliged to bring all their waste to this sorting point. On the Park border, and later possibly also at the visitor centre as well, small waste bags could be on

sale, or given free to all visitors, one for mixed waste and the other a self compostable bag for biowaste.

Waste could only be brought to the sorting point in these bags. If a visitor considers that his waste will not fit into the bags, he could obtain more. If a visitor were to fail to ask for the bags, he would be obliged to explain how he will avoid making any waste. To work efficiently, this system would require supervision and guidelines for visitors. Visitors could also be informed how, through their own choice of materials, they could ensure that as little waste as possible is left in the Park. Examples of guidelines of this type could be a request to pack picnic food in reusable containers and to burn all combustible waste.

If the arrangement described does not work, i.e. if visitors were not to take their biowaste to a single collection point, it would be necessary to use more composters. In this case, composters should be installed at least at Mäntykoski, at the eastern end of Lake Paanajärvi, at Sillankorva, and at Vartiolampi.

At the next stage, attention should be paid to the order in which the piles of old litter would be cleared from the site. The old Mäntykoski well, which acts as a rubbish tip, should be attended to without any delay. As an open shaft, it constitutes a danger to both people and animals.

Attention should be paid to prevention of oil and fuel from passing into the soil or groundwater in the waste management development plan. This in all probability calls for the drawing up of an instruction. Other hazardous waste treatment also requires some rules. It would be a good process if all existing toilets were eventually changed into composting toilets.

2. Constructions in the environment

Observations:

We observed that, compared to the size of the Park, there were not many facilities inside the Park for visitors. We were impressed by the fact that duckboards were laid in the wet places before too much wear had taken place. Another good point is that the Karelian culture has been taken into account when constructing the information boards. However, the small size of the information boards is a slightly negative aspect as it causes uncertainty whether all the necessary information in various languages is available.

There are still some deficiencies in the constructions to be observed. This was obvious, for instance, in the interior of the cabins and in the steps at Mäntykoski. More attention should also be paid to the efficiency and robustness of the constructions. For example, if a visitor sits in the rain on a bench in the Mäntykoski shelter, his back will probably get wet. In addition, there is no certainty that the roof of this shelter will withstand the heavy weight of winter snow.

There were slight deficiencies in regard to the location and maintenance of the constructions. If the camp fire place at Kivakkakoski was located further down, closer to the rapids, it would be in a more enjoyable place from the visitor's standpoint. If camp fire places or other services are provided, attention must be paid to ensure they are properly supplied. Now there are camp fire places on the northern shore of Lake Paanajärvi lacking firewood.

If all constructions had a common style based on the traditional Karelian culture, this would give a stylish appearance to the whole Park. This has only been taken into account in a few of the constructions, for example in the new information board frames and in the cooking shelter at the eastern end of Lake Paanajärvi. For the sake of the Park's character, it would be best for all the Park's constructions to have a common style. Less successful points in this respect included the Astervajoki camping area, where the style of the lean-to shelter did not suit that of the other constructions. In the surroundings of the Paanajärvi helipad there were many constructional styles which failed to harmonise with each other.

Trails should be adequately marked and signposted, to prevent hikers from straying off the trail, especially where visitors are not allowed to wander off the trail into the terrain. Camp fire sites ought to be provided with some kind of wood shed to protect firewood from the rain. If the use of open fires is prohibited in the Park during exceptionally dry weather owing to the risk of forest fires, there should be signs to this effect in different languages. For extinguishing small fires, the requisite equipment, a bucket for fire extinguishing, for example, could be provided at camp fire places. We were impressed by the provision of old car wheels for containing camp fires. These appeared to work well and in all probability they also conserve firewood. Another comfortable piece of equipment is, we felt, hand washing facilities. These could well be used at locations of Natural Heritage Services as well.

Objectives, targets and development proposals

If objectives and targets are drafted for constructions in the terrain, the Park could prepare a set of guiding principles for such constructions. In the principles, emphasis should be laid on, for in-

stance, how to derive the greatest possible benefit from the Karelian culture and traditions. In addition, there should be principles applying to the quality, efficiency and ease of maintenance of buildings and other constructions. For preparing these principles, the Natural Heritage Services' principles of construction in protected areas may be a useful guide. To achieve a good result in construction, drawings of corresponding buildings that have been tested in practice are necessary. The drawings would be assembled together with details of the consumption and cost of the building materials. The principles should govern all construction projects taking place in the Park irrespective of who does the actual construction. To provide an assurance of quality, training in building construction will probably be necessary.

3. Guidance, communications

Observations:

A good point is that literature about the Park is available in the form of publications and a brochure, and that a website is set up. On the other hand, it has not appeared to be time yet to concentrate on guidance for visitors inside the Park. The cabins could well be supplied with portfolios telling visitors about the Park, wildlife and opportunities for recreation. Additionally, there could be clearly worded cabin rules, preferably accompanied by drawings.

Objectives, targets and proposals for development

We feel it is necessary to draft a plan for visitor guidance and communications. This would lay down the rules regarding e.g. what kind of material and languages are required at the main visitor information points, the smaller information points, cabins, and so forth. In addition, principles should be established respecting the architectural style and technology which are to be used. The siting of information points along the nature trails and elsewhere together with other subjects would also need to be specified.

4. Maintenance of the area

Observations:

According to our information, a management and use plan are drawn up for the Park. We have no further information on the contents of this plan. However, active maintenance was not obvious in the Park. We did, however, take note of the fact that some trees were felled for firewood in the vicinity of the camp fire sites. This, in our opinion, may not be the best solution from the standpoint of the landscape or biodiversity, if the finest trees, generally snags (old, standing dead trees), are used for firewood. Does the management and use plan lay down rules for the preserving of a natural state, restoration of habitats, visitor guidance, research, benefiting from nature, and the development of tourism in the Park?

Maintenance is also influenced by whether or not there exist Park regulations. Their existence is not apparent from the brochure, since certain activities are not completely prohibited but the public is simply requested to follow existing regulations.

Objectives, targets and proposals for development

Developing the Park, it is necessary to establish the principles of the Park management, unless these already exist. The Natural Heritage Services' The Principles of Protected Area Management in Finland could be of use when establishing such principles. These principles are finalised as concrete practical measures in the management and use plan. The plan could also include the more important special plans. We consider the firewood provision important to be arranged in a sustainable way from the ecosystem and environmental perspective.

5. Road and trail network

Observations:

The Park's road network is in rather a poor condition. There were comparatively few signposted trails and, since some sections of the trails extend along roads, this reduces their attraction. Due to the small number of trails, these cannot be connected to form circuits of varying length. There should also be a long and integral hiking trail in the Park, making it possible for visitors to take a 5-7 day hike into the wilderness.

Proposals for development

Not knowing the zonal division of the Park and the results of ecosystem inventorying or the navigability of the terrain, we propose the following new layout for the hiking trails. As far as possible, the trails should be supported by the present service and accommodation points. A good trail network provides an opportunity for making both short day excursions and wilderness hikes lasting for several

days. The trail network should be planned so that it supports nature tourism business activities to the greatest possible extent.

We propose the following trail routes:

1. Nature trail to Mäntykoski

The theme of this nature trail could be the human habitation in the area in times past. This would make the Mäntykoski area more attractive. While the visitors utilise the nature trail, the tourism operators would have time to prepare food.

2. Hiking route

This route would go from Mäntykoski to Astervajärvi, through a possible national heritage farm, to the eastern end of Lake Paanajärvi. From there, it would continue along the Astervajoki route and then, before the road, along a new route to Sillankorva. From there, a second route would extend to Paanajärvi, for example along the northern side of the road. The Sillankorva route would continue towards Vartiolampi but not, however, along the road. From Vartiolampi, the route would continue to Kivakkakoski, hugging the river channel. At Kivakkakoski there could be a suspension footbridge giving access to the west bank of the river. On the west bank there would be two hiking routes, one of which would go via Kivakkatunturi fell to the Park border and north to Sillankorva.

The cabins located along the trail would serve as accommodation. This kind of route network would also support enterprise. For example, a hiker would leave his vehicle at the Park border, as the tourism entrepreneur would transport the hiker along the hiker's route to the starting point at either Sillankorva or the eastern end of Lake Paanajärvi, and then by boat to Mäntykoski. Along the trail, it would be possible to develop not only accommodation or meal services, but also information services. It is important the route passes through the attractive landscape and the cultural sights. It would be a good idea for the route described to have a circuit connection with Nuorunen. Depending on the popularity of the route, there may be a need to enlarge the route network at some later date.

It would be best, if the sights in the terrain, the routes and the signposting are all in order before the road in the Park is repaired. This would give the Park better opportunities for welcoming larger numbers of visitors without damaging the Park's ecosystems. In conjunction with the road improvements, it would also be a good idea the road melts into landscape as well.

Literature:

- ❑ Finnish Standards Association SFS standard SFS-EN ISO 14001. Environmental management systems. Specification with guidance for use.
- ❑ The Principles of Environmental Construction Work introduced by the Natural Heritage Services of Metsähallitus.
- ❑ The Principles of Protected Area Management in Finland. Guidelines on the Aims, Function and Management of State-owned Protected Areas.
- ❑ Environmental aspects auditing table and instructions for filling this in
- ❑ Extract from the environmental aspects perspective audit the Natural Heritage Services of Metsähallitus.
- ❑ Extract from the waste management environmental perspective audit
- ❑ Extract from the environmental management programmes for the Natural Heritage Services of Metsähallitus.

The auditing of the environmental aspects will be carried out using Lotus Notes' environmental perspective auditing application. If it proves difficult to describe the significance of the impact, the following factors may be used as an aid to assessment. The significance is evaluated on the basis of these general effects.

The duration, extent and probability factors of an impact are given the same mathematical sign as the seriousness factor.

seriousness

normal activity /exceptional activity

the impact is harmful or enhancing to only a slight extent, blank (no sign)

the impact is fairly harmful or enhancing, sign -/+

the impact is harmful or enhancing to a significant extent, sign --/++

duration

duration of impact is months, blank

duration of impact is years, sign -/+

duration of impact is decades, sign --/++

extent

impact is limited to the work site, or part of it, blank
impact is limited to the work site or its immediate vicinity, sign -/+
impact extends over a larger area, sign --/++

probability

probability of event is low, blank
probability of event is fair, sign -/+
probability of event is high, --/++

risk assessment

fair environmental risk, sign !
impact can be counteracted at reasonable expense
serious environmental risk, sign !!
impact cannot be counteracted, or its elimination is possible only at great expense

Annex 3

Environmental and Quality Principles for National Parks; based on Tourism Strategy of the Karelian Part of the Green Belt (Friman and Högmander 2001)

1. Sustainability must govern

All the actions of the Park shall be based on sustainable use of resources. Some examples:

- ❑ Tourism should be adjusted to natural limits, i.e. what nature and culture can tolerate
- ❑ Wearing of nature should be followed all the time
- ❑ Facilities should be allocated so, that the harm for nature can be minimised
- ❑ Waste disposal should work effectively

2. Conservation of natural and cultural heritage is the main task

When planning activities, knowledge of natural and cultural values of the Park should get priority. Tourism is subordinated to the main task. This principle should be followed for example in following cases:

- ❑ "Don't sell their lives!" Rare and timid animals can suffer from tourists who want to approach
- ❑ Park should prepare information of nature and nature conservation
- ❑ Co-operation with scientists is important in increasing knowledge of nature

3. Tourism should benefit local people and local economy of the region

The national Park should be open for co-operation with the neighbouring communities. This would maximise the benefits for both parts. For example:

- ❑ Park relies on accommodation, transport and other services of the villages nearby
- ❑ Park recruits workers from the region
- ❑ Tourism is developed in co-operation with local administration
- ❑ Park has well functioning liaison with local entrepreneurs

4. Quality in planning and construction of the Park

When the national Park is developed, it is important to use professional planners, preferably such who know the area and culture there.

- ❑ All facilities should be carefully planned in advance and the plans followed
- ❑ Local style in constructions gives a catchy memory in visitors' minds
- ❑ Roads and trails, cabins and campsites should be well adapted in the landscape
- ❑ Broken constructions should be repaired immediately

5. Highly qualified guides are needed in every Park

Guides meet visitors and guests of the Park. Their work has an essential role in building up the image of the Park. Some principles to be followed:

- ❑ Local guides have many advantages, train their skills in client oriented service
- ❑ Use also expertise of scientists working in the Park to train the guides
- ❑ Adopt a positive attitude towards visitors

6. Tour programs should respect local traditions and environment

Both programs of the Park and the tour operators should have connection to the local history and traditions. These are of great interest to the visitors.

- ❑ Well planned tour programs promote nature conservation, at least in increasing the knowledge of the visitors
- ❑ Find out old stories, interview old people, use local guides
- ❑ The Park should make written contracts – with instructions about following these principles - with tour operators

7. Punctuality and reliability is appreciated

In the long run, only punctual and reliable actors can survive in tourism business. In national parks this refers for example to the following issues:

- ❑ Quick and prompt answers to questions
- ❑ Reservations and prices always maintained
- ❑ Punctual guides and transports

8. Always guarantee safety of visitors

Visitors are expecting that they can trust the arrangements and be sure about their personal safety. It is important that:

- ❑ No risks are taken in wilderness, on water or road
- ❑ There is always a reserve plan for bad weather or unexpected incidents
- ❑ Visitors and their property is always in safe and they know it

9. Supervision is attending on everybody

Effective supervision is needed in every national Park, but it must be carried out on a discreet way. Some hints:

- ❑ Information about the Park regulation should be available in advance and on the spot
- ❑ Functional zoning should be available for visitors
- ❑ Guiding and discussions of the rangers lead to the best result

10. Ask for response and comments from visitors

Comments from visitors are essential in developing the Park and its services. It can be done in various ways:

- ❑ Regular inquiries at the Park gate should be carried out every year
- ❑ Guest books in cottages and www page can discover many important things
- ❑ Be susceptible to the response, that is the best way to develop the Park

Annex 4

Goals and actions for Paanajärvi National Park development in 2001-2010

I ADMINISTRATION AND PARK MANAGEMENT

1. The Park is developed into an internationally acknowledged, efficient organisation

1.1 The Park defines together with relevant stakeholders her working principles and policy, update those continuously and disseminate them efficiently

- ❑ Public duties vs. commercial activities
- ❑ Environmental principles
- ❑ Partnerships (public and commercial)
- ❑ Peoples participation
- ❑ Tourism principles
- ❑ Investment policy
- ❑ Pricing principles
- ❑ Utilisation of Natural resources
- ❑ Research principles

1.2. The Park develops her organisation and a chart of responsibilities to meet the needs of modern National Park management and changes in the Park clientele

The Park reforms its organisational structure gradually according to available resources for recruitment and training. The main functions and units are the following:

- ❑ Administration and accounting
- ❑ Planning and overall management
- ❑ Information and research
- ❑ Visitor centre services including environmental education
- ❑ Tourism development and marketing
- ❑ Field services covering "rangering", legal issues, construction, maintaining the infrastructure , equipment and transporting

1.3. The Park adopts the method of teamwork as a basic principle in leading

2. Professional skills of the Park staff is developed so that the Park can meet the challenges in the Park management and modern tourism

2.1. Skills of the Park staff will be improved both through training and recruitment

The need for strengthen the skills covers all main information needs and activities of the Park:

- ❑ knowledge of the Park nature and history
- ❑ nature conservation
- ❑ Park management
- ❑ technical skills
- ❑ legislation
- ❑ finance
- ❑ foreign languages
- ❑ computer skills
- ❑ client oriented service, guiding
- ❑ marketing
- ❑ production of information materials
- ❑ personnel management and leadership
- ❑ team work

2.2. The key posts are to be filled by external professionals gradually according to financial possibilities

2.3. The Park actively seeks for optimal solution in the use of own workforce and external services

2.4. Co-operation in improvement of professional skills will be developed together with other protected areas in Karelia and whole Russia

2.5. Exchange programs with Finnish and other Green Belt protected areas and specialised training institutes for both on-the-job and in-service training

2.6. The researches carrying studies in the Park will be involved in training the staff

2.7. The Park actively searches possibilities to keep terms of job contracts competitive and tempting

3. The Park strengthens the co-operation and relations with local, regional and international authorities and partners

3.1. The Park continues to actively seek for grant funds mainly for investments and training

3.2. The Park and its staff participate and arrange actively national and international meetings and seminars

3.3. The Park staff actively participates in the development of other protected areas in Russia e.g. through the collaboration with Fennoscandian Green Belt partners and Association of NW Russia Parks, sharing experiences and paving way for new projects

3.4. The Park widens international co-operation for increased exposure to the current development trends and financing opportunities with e.g. the following partners:

- National Parks world wide
- Europarc
- European Commission and its funds
- IUCN and WWF
- American contacts
- Research institutes

3.5. Oulanka-Paanajärvi co-operation will continue to be developed based on Twin Parks concept

3.6. The Park has exceptional possibilities to international co-operation in Russia adopting an active information and experience intermediary to other Russian protected areas

3.7. The Park runs actively with other players in White Sea tourism development

4. The Park will be expanded to its natural boundaries, which are also ecologically well planned

4.1. The Park will prepare a plan for natural boundaries of the Park including the fells north to the Park, Kauttio and Sieppitunturi areas in the northwest and Tavajärvi with surroundings in the southwest

4.2. The Park will support research of nature in the planned extension territories and monitor use and changes in the natural state. The Park will organise guided tours to the planned extension territories

4.3. At an appropriate time the Park will submit a proposal for the extension of the Park

4.4. The Park as an conservation and recreational use expert will actively participate in the inventories and discussions on the use of the forestry area between the Park and Murmansk oblast

II. MANAGEMENT OF THE NATURAL AND CULTURAL HERITAGE

1. Scientific research supports the Park in achieving its objectives

1.1. The Park draw up a Scientific Research Program which is based on the information needs for the Park management

1.2. The Park establish a Scientific Council for implementing the SRP and invites both Russian and Finnish research organisations to participate on the work of it

1.3. The Park make up the rules and models for agreements for the co-operation with research organisations and groups where ground rules and responsibilities are described detailed

1.4. Researchers are involved in the training of the staff and updating the GIS database

1.5. The information gathered in inventories forms a background for planning nature trails and other facilities and production of information and education material

2. The Park together with other actors carries out inventories and updates the geographical information and other information systems

2.1. Improving the Park knowledge base on its nature habitats and species by collecting existing material, making new inventories and developing the Geographical Information System as a tool for the Park management, visitor services and environmental education

2.2. The Park enlarges and diversifies its library

2.3. The Park continuously updates the GIS with information on nature trails and other facilities for visitors

3. The Park actively monitors her diverse values

3.1. The Park will draw up a monitoring plan and start systematic monitoring of nature state and the human impact, especially through tourism and fishing with feedback to management

3.2. Guarding will be intensified particularly in the remote parts of the Park to get rid of poaching and illegal fishing

3.3. The Park intensifies fire control by instructions and testing the usefulness of fire towers during dry periods

4. The Park actively manages habitats and endangered species

4.1. The Park starts active management of species and habitats by compiling a program for inventories and management principles, developing the methods and prioritising the activities and organising the monitoring

4.2. Conservation plans will be drawn up for the most important habitats and species

The Park defines the sustainable fisheries management, preferably for the entire catchment area in collaboration with actors down and up stream

5. The Park actively manages culture heritage and characters

5.1. Cultural heritage of the Park will be studied in an inventory in order to get more information for the development of the Park management and visitor services

5.2. The Park will construct a centre for restoring Karelian culture in Vartiolampi area in connection with Environmental Education Centre and a centre for restoring old Finnish culture in northern shore of Paanajärvi in connection with a Home Museum

III. VISITOR MANAGEMENT

1. The Park will develop her infrastructure and equipment keeping pace with the increasing number of visitors

1.1. The service facilities according to the investment plan will be implemented based on demand and availability of financing in a manner that they adapt well to the environment and are of high quality:

- ❑ Main tourism centre at the eastern end of Paanajärvi
- ❑ Reconstruction of an old Finnish settlement with economy buildings in the northern shore of lake Paanajärvi
- ❑ Vartiolampi Ecological Education Centre with chalets, chapel, smoke sauna etc. facilities
- ❑ Gate welcome information and service point and centralised waste management
- ❑ Service point at the bridge

1.2. Hiking routes with campsites and rental cabins will be constructed gradually according to the existing plan and based on demand so that more of the non-restricted parts of the Park can be taken in use for visitors.

- ❑ Paanajärvi Northern shore (21 km)
- ❑ Nuorunen (25 km)
- ❑ Kivakkatunturi (6 km)
- ❑ Kivakkatunturi-Kivakkakoski (13 km)
- ❑ Southern hiking route (64 km)
- ❑ Northern wild reindeer route (45 km)
- ❑ Old frontier guard hiking route (5 km)
- ❑ Paanajärvi southern shore route (20 km)
- ❑ Päänuorunen (5 km)

1.3. The Park will define the precise zoning inside the areas directed for tourism and compile a plan of integrated design for facilities as well as formulate instructions for construction work

1.4. Waste management plan made, trained and implemented with key investments

1.5. Piers and boat slips will be constructed where needed in terms of the Park management or where boating is allowed and recommended

1.6. Field interpretation plan will be drawn and implemented

1.7. Fishing sites will be organised and constructed in a manner which minimises the impact on shores and enables control

1.8. Roads to the Park and inside the Park to Vartiolampi and Paanajärvi Eastern Shore with parking areas will be improved

1.9. Bus connection, as a service of the Park, from Pyäzero to the Park and between sites within the Park boundaries will be developed so that the use of private cars in the Park can be limited

1.10. Pyäzero Visitor Centre completed with sauna and chalets

1.11. Equipment for management and tourism services will continuously be purchased and maintained

2. Marketing of the Park, production of information as well as product development will be improved

2.1. Information and marketing material will be developed and spread out constantly through media and target groups

- Brochures
- WWW-site
- Advertisements
- Production and development in close co-operation between the Park and private enterprises
- Information made available in NW-Russian and Finnish visitor centres, key tourism info points in Russia and Finland
- Intensive use of Russian tourism marketing channels
- Marketing via satisfied customers

2.2. Information on the temptations and regulations of the Park will be improved through leaflet delivery, info boards and through availability of nature interpretation materials and guiding

2.3. Questionnaire for visitors will be compiled and customer research will be carried out repeatedly with the feedback to product development and Park management

2.4. Visitor centre developed into a centre of intelligence and marketing of the Park

2.5. Russian clientele selected as one of key target groups and the services will be developed to fulfil "Middle European level"

2.6. The Park together with tourist companies take care of the product development of tourism and the marketing of production

- Guided tours, treks, both nature and culture aspects
- Lake and river boating , canoeing and rafting
- Fishing tours
- rent of equipment
- accommodation
- meal services
- specific program packages
- retreat / leisure time travelling

3. Ecological education will be developed in the Park so that program and premises can be offered for school pupils, students and all kind of organisations which want to learn more about the Park, its nature and history, environmental protection and good behaviour in nature

3.1. Co-operation in ecological education will be developed together with other protected areas and national Park, schools and NGO´s.

3.2. Material will be produced for pupils and students of the natural and cultural heritage of the Park.

3.3. Material from stakeholders will be received for pupils and students in issues concerning e.g. environmental protection and good behaviour in nature

3.4. Ecological Education Centre in Vartiolampi will be designed and implemented

3.5. Premises for meetings and seminars are offered at the Ecological Education Centre for organisations and companies, which appreciate to assemble near nature

3.6. Visitor Centre and Ecological Education Centre in Vartiolampi will be developed for use in training of staff from protected areas of whole Karelia and actors along the White Road

4. Tourism will be developed in the Park in a useful co-operation with both foreign and domestic enterprises

4.1. Rules for the co-operation in tourism will be developed. They will include a contract model, the responsibilities and sharing of benefits of all the parties and the obligations for the partners following the principles of eco-tourism the Park has adopted

4.2. A separate tourist company owned by the Park will be established in order to take the responsibility for organising tourism in the Park so that the Park staff can concentrate on the ordinary Park management

4.3. The tourism improvement will be based on the principles of international PAN Parks concept and if the Park fulfilled the criteria it can use it as an eco-label together with Oulanka National Park and other qualified partners

4.4. Local business development and involvement is actively promoted

5. The Paanajärvi National Park and its Visitor Centre in Pyazero will be developed as one of the main attractions and the key centre on intelligence along the White Road and in the Green Belt

5.1. The Park services and the skills of the staff will be developed so, that they are ready to meet the remarkable change in tourism, which will take place when the Cross Border Point in Suoperä-Kuusamo will be opened for international traffic

5.2. Concept for the Visitor Centre activities will be developed not for the Park only, but with a wider approach delivering the information and selling material e.g. maps, souvenirs etc. to the visitors

5.3. The Park will support creating a network of tourist services in the Louhi district and have a central role in development of tourism in the whole district, Karelia and Green Belt

5.4. A White Road info point will be established – in co-operation with the tourism administration – at the new Visitor Centre in Pyazero so that a great number of tourists passing by will stop there

5.5. Tourism company of the Park will operate in the Visitor Centre taking care of product development of tourism, bookings and marketing.

Annex 5 Business Plan of the Paanajärvi National Park

1. INTRODUCTION

As a part of the Karelia Parks Development Project, a comprehensive Strategic Development Plan for the Paanajarvi National Park is elaborated. Because tourism is identified as the most important source of income, a separate Tourism Strategy has been worked out for the Park. The current Business Plan is elaborated in conjunction with the above two plans and they are used as a basis for the various financial calculations. The experience of both Karelian and international specialists are brought together. The main work load, however, has been on the Institute of Economics of the Karelian Research Centre in Petrozavodsk. The international team acted as a facilitator.

The main reason for this Business Plan is to secure more own income for the Park. In the emerging market economy there is always a possibility for more competition, even between the national parks. Ecotourism has a growing potential. To turn that potential into concrete cash flows requires that the business operates well. That is a reason for writing this plan, which could be a tool for increasing the effectiveness of the Paanajärvi Park.

The given Business Plan (BP) is a document, which has the following goals:

- To outline short-term and long-term development programmes in investments;
- To provide economic information which may be of interest for local people, specialists, authorities, and potential partners;
- To process financial information and to give recommendations for the development of tourism activity in the Paanajärvi National Plan;
- To give recommendations for the price and economic policy of the Park in order to ensure successful and effective activities in the future.

Current situation of the Park

Since its establishment in 1992, the Paanajärvi National Park has been constantly suffering from insufficient funding from state budgets. The allocations have been just enough to cover the running costs, i.e. salaries of the personnel and practically nothing has been left for investments. The reason for this was the economic crisis that Russia faced through most of the 1990`s. Due to its ability to generate some own income from tourism, the Park has overcome these difficulties surprisingly well. However, now the Park is facing a period of large-scale investments, if it wishes to develop its activities to an international standard and get its share of the growing ecotourism business in Europe.

The composition of visitors over the last five years has been fairly constant and consists mainly of individual visitors interested in mushroom and berry picking, fishermen, hikers and nature observers. The share of foreign tourists has varied between 28 and 48%.

As it is seen from Figure 1., a constant growth of arrivals since the opening of the Park has occurred. The average annual growth has been approximately 400 persons. Most likely, this trend will be maintained also in the future.

Table 1

Development of visits to the Park 1994-2000
(man/days)

Type of visit/service	1994	1995	1996	1997	1998	1999	2000 (prelim.)
Total,	202	791	897	1536	1533	2140	2193
Of which:							
Foreign visitors		220	300	645	733	882	872
Karelian schoolchildren						336	269
Russian schoolchildren						15	10
Fishing license services	33	92	226	432	594	899	1191

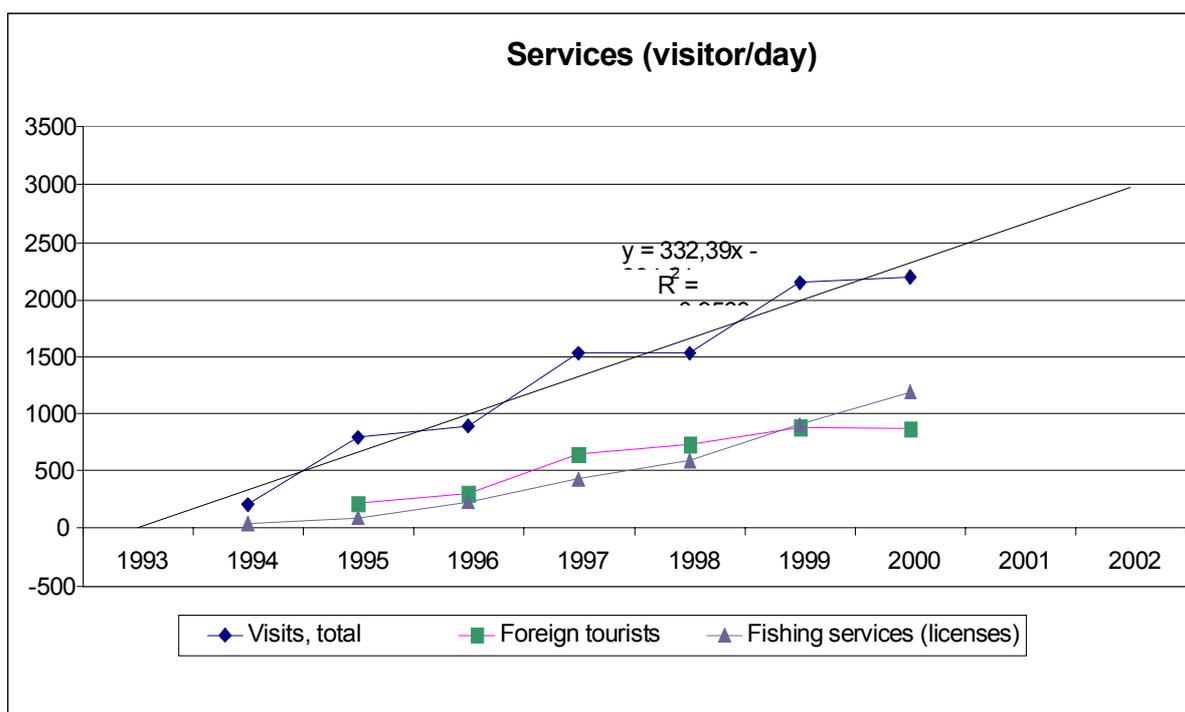


Figure 1. Distribution and total number of delivered services (visitor day) and their distribution by service type and visitor type.

The human resources of the Paanajarvi are shown in the following Table 2. As can be noticed, the number of employees has raised steadily. This is related to the growing number of visitors. The number of technicians and part-timers depends on the volume of works to be done. Since 1995 the Park has employed a scientist among the staff.

Table 2.
Organisational structure and staffing
(persons)

Category	1993	1994	1995	1996	1997	1998	1999	2000
Average total staff, Including:	24	33	37	37	40	44	43	46
Technicians	14	18	14	14	14	19	15	15
Employees	9	14	21	21	24	23	26	28
Scientists			1	1	1	1	1	1
Part-time workers	1	1	1	1	1	1	1	2

An essential factor for the development of any enterprise, the National Park included, is its personnel. Qualified workers are needed to ensure a successful operation.

In the future it is planned to expand the scientific activities of the Park and, respectively, to attract more scientists. Once the visitor centre is constructed, the upsurge of all kinds of arrivals is expected. The visitor centre may host scientific conferences and provide working space for researchers.

According to the Tourism Strategy, the number of arrivals will reach 10 000 by the year 2010. This requires more capacity to accommodate and serve visitors. In the year 1999, ecological education programmes non-existent before were launched. In the future, it is planned to increase the number of ecological education-oriented arrivals. The eventual opening of the new border station at Suoperä around the year 2005 will almost certainly lead to a considerable growth in the volume of tourism in the Park and the above target in visitor number may be reached even earlier.

Financing and income structure

The National Park is a state-owned entity, having a public role in nature conservation. Therefore, the main financing source for individual projects must be the federal budget. However, during

the past seven years, these sources have not been sufficient for covering the investment and recurrent costs for running the Park. It has become increasingly difficult, if not impossible, under the continuous budget deficits to meet the requirements of proper Park management. The leading financing role has been taken by the Park's own funds earned mainly from tourism and other related activities.

Table 3
Funding sources for investments (1000 roubles)

Source	1993	1994	1995	1996	1997	1998	1999	2000
Federal budget		130		50	60		0	0
Karelian budget			20				10	0
Park's funds			52	130	55	57	615	1436
Tacis							47	1019
Total		130	72	180	115	57	672	2455

Funding structure

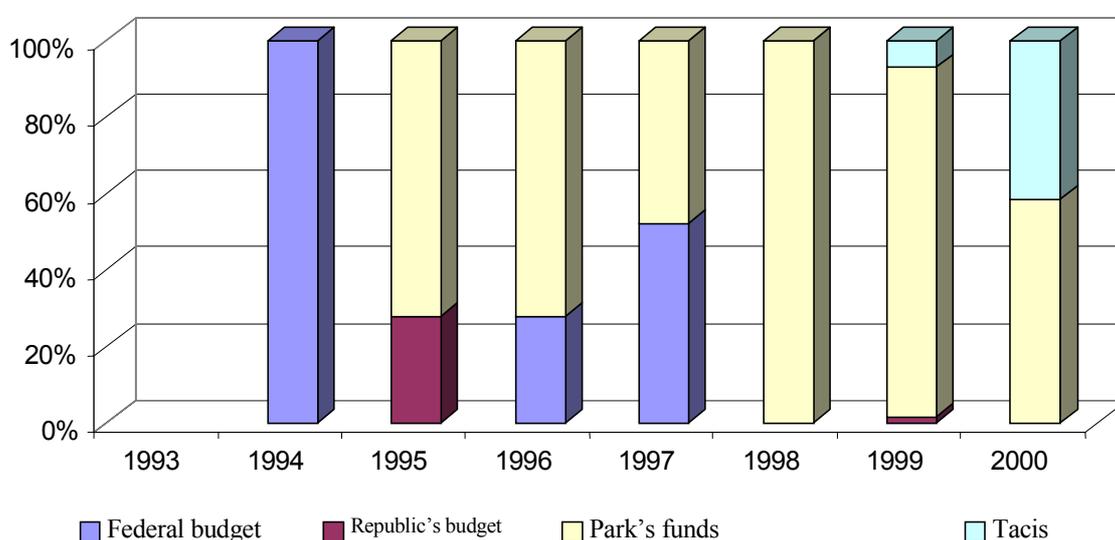


Figure 2. Funding structure (relative shares of various funding sources)

Table 4.
Income structure of the Paanajärvi National Park
(1000 roubles)

Source	1993	1994	1995	1996	1997	1998	1999	2000 (prelim.)
Federal budget	73	471	351	758	960	610	850	1081
Local budget			55	155	30			
Total of own funds, including:		1	120	77	200	388	1660	2507
From <i>Goskomles</i>			93	8	24	82	727	1421
Fees collected in the Park, including:		1	35	69	185	306	879	1086
<i>Licensed fishing</i>		0,1	6	19	64	80	268	287
<i>Transport</i>				4	6	34	153	107
Other services		0,9	29	46	115	192	458	692
TOTAL	73	472	471	835	1160	998	2510	3588

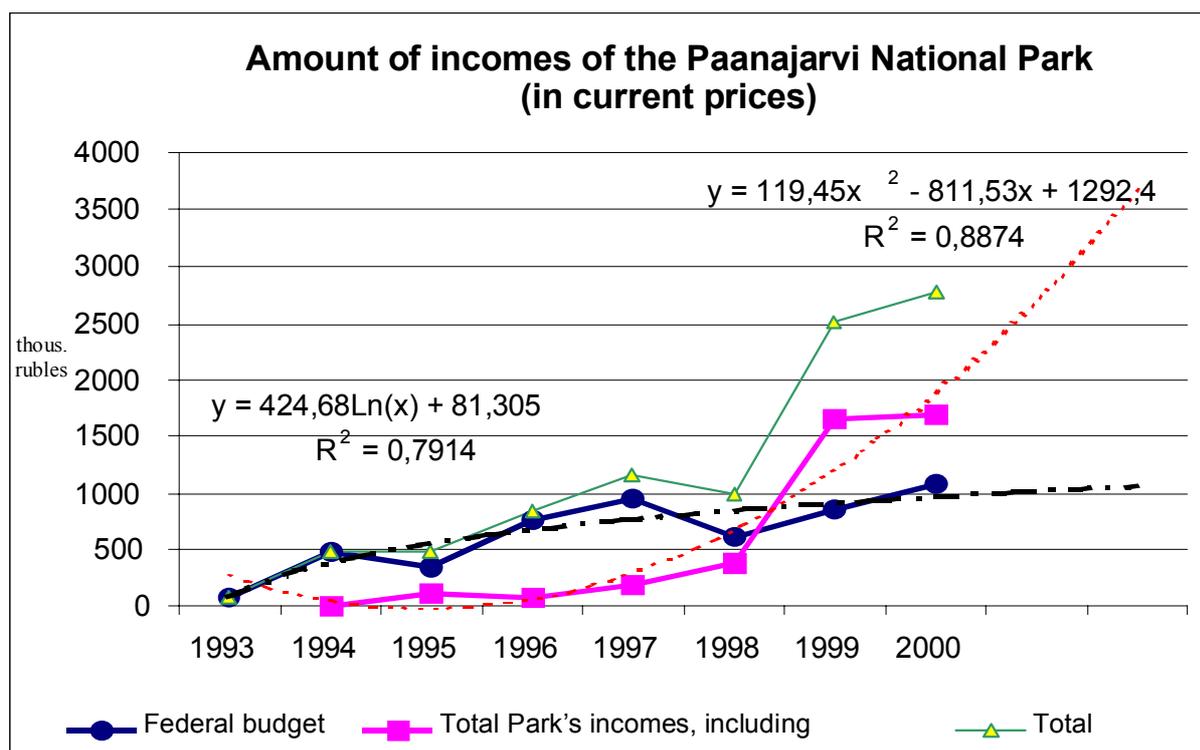


Figure 3. Income development of the Paanajärvi NP in 1993-2000

Income here refers to all proceeds from different sources.

Over the whole period the amount of income has been growing in all positions. Only in the year 1998, a drastic drop in income took place because of the sudden economic crisis in Russia. The crash in rouble value had the same impact in all industrial sectors. It is evident from the above graph as well as from the Figure 2. that the Paanajärvi National Park is increasingly using its own funds for various investments. Most probably this tendency will be continuing for a while.

To have a better understanding of the development described above, it would be better to show the same data in comparable prices, i.e. to eliminate the effect of inflation as much as possible. To this end, the so-called "conditional units" have been used, which is based on a US dollar rate as accurately as possible. In fact, the presented figures correspond to the Park's income in US dollar values. Thus, we can reasonably assess fluctuations of the figures and compare them between each other.

We can also say with certainty that the proceeds of the Park have been growing each year except 1995, when the income in roubles remained at the same level while the US dollar rate rose. The same happened in the crisis of 1998, when the upsurge of the US dollar amounted to 600% and the budget failed to follow this dramatic growth.

The main conclusion from the diagram in Figure 3 is that funds generated from the Park's own activities have taken the first place. In the best of cases, this could safeguard the Park's stable financial situation in the future: it is easier and even better to make financial calculations relying on your own resources and thus reduce dependence on central budgetary funds, which are unreliable at least for the time being.

Cost analysis

The data concerning costs, as well as that on the income formation presented in the previous pages, have been derived from the Park's own accounting records. The numeric information obtained presents a fairly reliable general situation of the financial situation of the Park, its income formation and cost structure.

Table 5.
Cost structure (1000 roubles in current prices)

Category	1993	1994	1995	1996	1997	1998	1999	2000 (prelim.)
Total	59	248	488	874	969	1037	1631	1859
Production costs	32	53	163	288	285	543	898	999
Costs on forestry administration	27	195	325	586	684	494	733	860
Taxes	2,82	22	38	68,4	58	39	85	

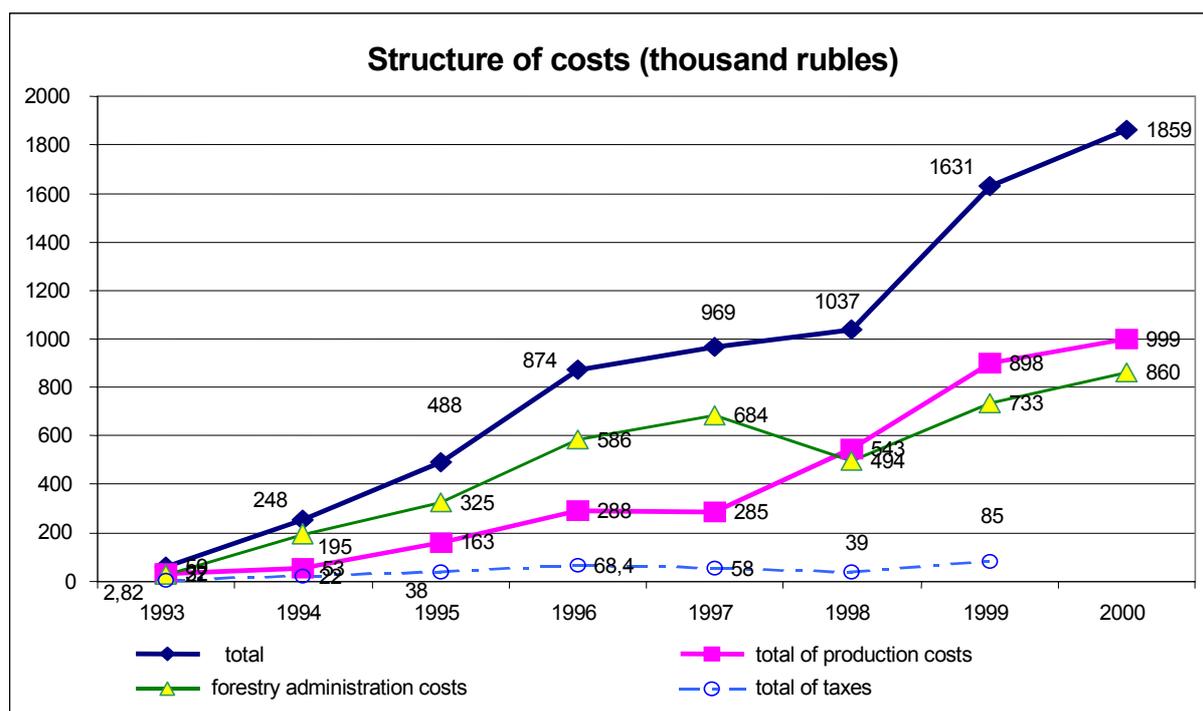


Figure 4. Structure of costs from 1993 to 2000 (1000 roubles)

As can be seen, during the last three years spending has been largest on production. These cost items include forest management, protection, and improvement work in the terrain. Recently a lot of effort has been put in upgrading the Park facilities in order to make it more comfortable and thus increase its attractiveness among tourists. Over time, the share of costs assigned for the improvement of the Park will gradually diminish. It is expected that the investments will lead to positive results and bear fruit in the form of increased arrivals.

To have a better idea of the situation it is useful to look at the expenses per one arrival. This will help to identify trends in income formation and to figure out ways to increase profits.

In the next table the expenditures are divided into tourism-related costs and non-tourism costs. Then these costs are calculated for one arrival in order to find out an average unit cost per arrival.

Table 6.
Cost structure per arrival (1000 rbls)

Item	1993	1994	1995	1996	1997	1998	1999	2000 (prelim.)
Arrivals, total		202	791	897	1536	1533	2140	2193
Tourism costs	0,7	11,5	33	58	43	123	229	290
Costs (tourism)/ arrival		0,057	0,042	0,065	0,028	0,08	0,11	0,13
Other production costs	61,12	258,5	493	884,4	984	953	1487	2021
Costs (others)/ arrival		1,23	0,62	0,99	0,64	0,62	0,70	0,92
Income from arrivals		1	35	69	185	306	879	934
Income/ per arrival		0,005	0,044	0,077	0,12	0,20	0,41	0,43

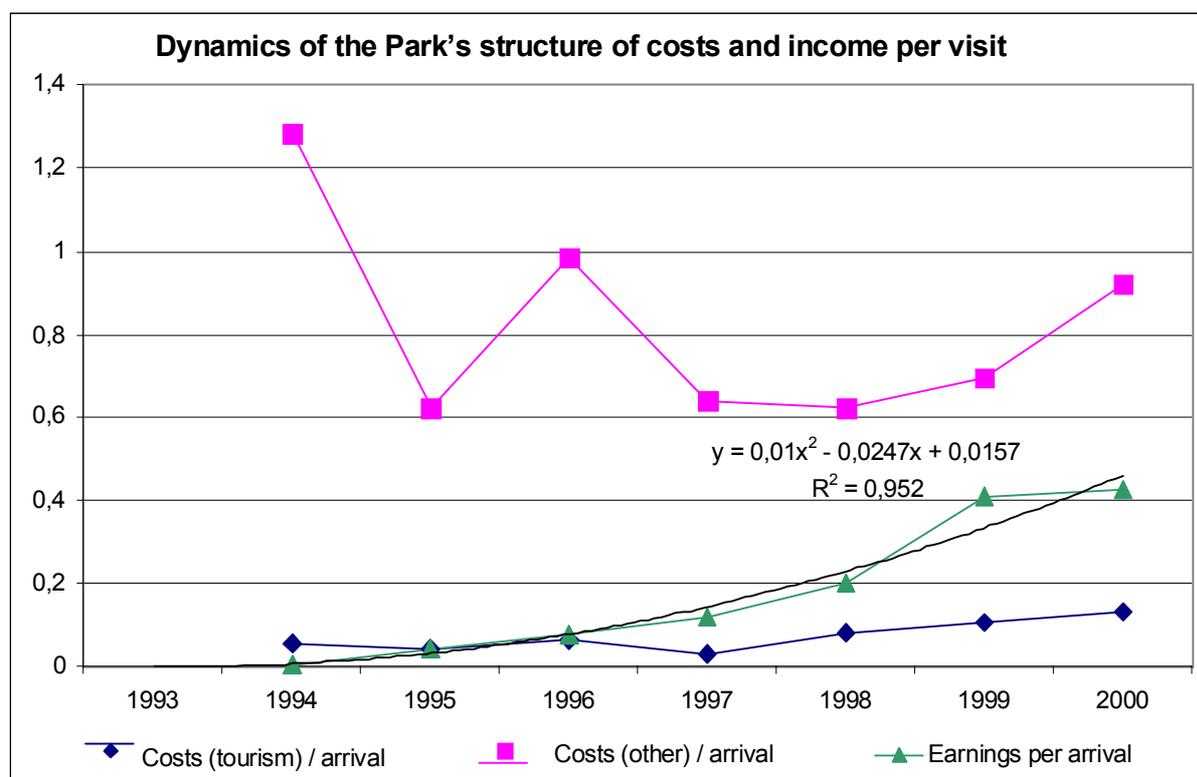


Figure 5. Cost structure of the Park per arrival (thousand roubles)

As seen from the graph, the income per arrival has been going up all the time. In fact, the index is an average cost of an arrival. Tourism costs (it includes all costs of the Park improvement and tourism development) have also been rising but their growth has been much slower than that of the income rate. The increased spending on tourism is connected with the growing interest of the Park to allocate funds for tourism development.

Other (production) costs are expenditures not specifically related to tourism but to the general management of the Park territory. These costs result from action (e.g. maintenance) which is conducted regardless of tourism and recreation. As a total, the other expenses grow, but diminish as a unit cost per one arrival. Over the last few years, the other expenses per visitor have been slightly growing due to fluctuations in the number of visitors. This means that more and more funds are spent on the overall maintenance as a National Park without worrying too much the financial result. However, this situation can go on only if the flow of visitors keeps growing.

The income received from one arrival is lower than the expenses per arrival. The deficit is covered from the local, republican and federal budgets. As stated earlier in this report, it will be necessary to seek for ways to increase the income earned by own efforts. As seen from Fig. 5, the past ex-

perience proves that this is realistic. If the assumed trends are maintained, in approximately three more years the income per arrival will be higher than the accumulated expenses.

The easiest way to achieve this result would be by increasing the number of foreign tourists. They have higher service pricing, if compared with the price list for Russian citizens. This would significantly boost the aggregate income, still by only slightly increasing the number of visitors. As a consequence, the average income per one arrival will be improved.

Unfortunately, it is impossible to constantly gear up the price for services. The price can be lifted on the base of inflation and improved services. The latter is only possible through new investments. We have the following circle: To get more income, investments are needed; to get investments more income is needed. The only conclusion drawn from this situation: the determinative factor of the Park's income development is the number of arrivals. The growth of arrivals results in more tourism expenses, but we can safely assume that their growth will be more than compensated by the growth of arrivals.

Thus, by enlarging the number of arrivals it is possible to increase the income rate of the Park. Along with this, the opportunity of the Park to self-invest will improve. As it was demonstrated previously in Table 3, the Park itself provides the most funds for investments. This will allow the Park to improve its quality of services and, respectively, make the Park more popular and boost the inflow of visitors. We have a possibility to reach a positive cycle: increased visits lead to additional income, which, in its turn, leads to more visits. Such a policy will underline the need to improve the carrying capacity of the Park and to coordinate its activities. The construction of a Visitor Centre is this kind of action.

The Visitor Centre will take over the function of the main coordinating and information unit of the Park, and it will appear as a starting point for excursions. The Visitor Centre should also become a gateway to the Park. In addition to new comfortable offices, the Visitor Centre will provide new opportunities for the Park.

Market analysis

In the following, some aspects of the tourism markets are shortly discussed as essential from the point of view of the Business Plan. More comprehensive analysis of the present situation and the future prospects of tourism in the Paanajärvi National Park will be found in the Tourism Strategy.

2. TOURISM MARKET AND MARKETING

The modern tourist business is the most intensively developing entrepreneur business worldwide. Tourism takes one of the primary places among industries, which yield foreign currency in large amounts. In particular, the worldwide share of tourism in currency returns makes up to 10%, in the EU – over 5,5%. Tourism offers jobs to over 6% of EU's labour resources. In Finland, the proportion of tourism amounts to 4,3% of the gross national product.

Over the recent years the marked growth of international tourism has also been noticeable in Russia. In 1995 about 4,7 million foreigners visited Russia as tourists and in 1996 this figure reached 17,5 million people. This positive tendency is still present.

Due to natural beauty of Lake Paanajärvi the National Park around it has good perspectives to attract tourists from all over the world. The Park has developed foreign relations and is cooperating with the Oulanka National Park in Finland for a long time. These two Parks make a big cross-border area around conservation water areas of Lake Paanajärvi and the Oulanka River which flows into it. In general, these two bodies of water supplement each other and, correspondingly, add a lot into the tourist values of the both Parks.

The Oulanka National Park is famous in Finland. It has a permanent flow of tourists of up to 150 000 arrivals per year. The fact is that Paanajärvi is located very close and, logically, people could be interested in visiting the both Parks. In 1998, the University of Oulu held an interview of visitors of the Oulanka National Park. All in all, 200 people were interviewed and it showed that 90 % of visitors were interested in visiting also the Paanajärvi National Park. It means that there is a potential in the tourist market, which could be used and turned over to concrete flows of foreign visitors bringing the common good to the Park. However, it is obvious that there are some preconditions:

- The price and cost levels remain stable;
- The Visitor Centre will be opened according to schedule in the year 2002;
- Suoperä border crossing point will be opened for international traffic around 2005;
- Suitable tourism products are developed and investing in infrastructure will continue;
- The Park staff will have sufficient knowledge and skills to run tourism business;
- Tourism will be developed into a separate business unit in the Park.

In general, an easy access to the Park by car should be provided in order to attract more visitors, where the enlargement of the Suoperä border checkpoint is also necessary. If the checkpoint is enlarged the flow of tourists will grow several times. A part of these visitors could be easily attracted to see Lake Paanajärvi.

During the last decade an interest to ecological tourism has risen in Scandinavia and other western countries. People are becoming aware of the need to protect nature and have interest to see the sites of primeval forests, for example in Karelia. Quite a number of tour operators working in nature travel are prepared to cooperate to find out exciting targets for clients.

A conclusion can be made from the above that the Park has an opportunity to occupy a niche in the tourism business thanks to its outstanding features and potential.

3. MARKETING STRATEGY

At present, the most important task for the Paanajärvi National Plan is to guarantee protection of ecosystems. Any other activity including tourism are secondary and depend on the primary task. However, according to the law, the Park is authorized and even obliged to provide ecological education and information. This is certainly important for the local population and especially schoolchildren. Tourists could also be one of the target groups for the dissemination of information about the Park, flora, fauna and Karelian nature in general. Tourism could yield income to the Park and, at the same time, help to maintain and improve infrastructure and services.

Apparently the total number of visitors of about 10,000 visitors per year (30,000 visitor days) by the year 2010 is realistic and possible. Yet the Park should have the marketing strategy, which serves as a key tool for planning and implementation of tourist business. The strategy will positively help tourism development in Paanajärvi. The most important is to choose a segment of the tourist market that is from the Park's point of view considered the most desirable and useful at present and in future. At the moment the services provided by the Park are quite modest and the most potential clients admit hiking, canoeing and sport fishing, whose prime interest is nature itself, while the services offered are only of secondary importance. Unfortunately this type of tourism is not very profitable for the Park, because this target group is quite independent with their own tents, food, etc.

Often marketing is understood as "selling", although it is a broader concept comprising all those steps, which help a product to reach the client and make the demand sustainable. It is a question of long-term work and dialogue where services and products are being continually improved on the basis of the feedback from clients. One of the first steps is segmentation of potential market and choice of a desired share of potential clients. Besides that, a well-developed marketing strategy should guarantee the following:

1. Availability of products and services, which are interesting to clients. An expected income is directly proportional to a delivery of products for selling more and higher quality – more income available.
2. Organization of the marketing. Eventually, services can be delivered through external operators on the contract basis with the Park.
3. Permanent collection of information concerning tourism market, potential clients and competitors. This information is used for marketing improvement.
4. Delivery of information on the Park to a potential target group in proper time.
5. Network of partners (tour operators) for the international market development.

Nowadays the Internet could be used as an instrument to get and disseminate information needed for successful marketing. Although the most effective method is participation at international exhibitions, continued dialogue is needed also with tour operators, authorities, non-governmental organisations, other stakeholders and interested parties.

4. FINANCIAL ANALYSIS

4.1. Data input

The Project Expert Programme was used for the financial analysis of the business plan and the investment ideas. The Programme is presented by a set of modules, the results of which are presented by income and other indices. Information obtained from the Park administration, from the Strategic Development Plan, Tourism Strategy and general economic information was used for the data input.

The work has been done in the following stages:

1. General data input (inflation, rate of currency exchange, discount rate);
2. Park data input (marketing plan, expenses, price and cost price of products);

3. Elaboration and optimization of the Investment Plan;
4. Selection of essential results.

The following rate of inflation has been considered: the first 4 years – 10 %, the next 3 years – 8 % and further – 6 %. Taxes have been calculated at 38.7 % (collected from salary).

As far as the Park is not a new entity, the first stage was an economic description of its current state: assets and liabilities, property, etc, which are presented in Table 7 at the end of report. This kind of information was received from the Park administration.

The estimates on the number of visitors and visitor days as well as the tourism products are based on the Tourism Strategy for the period 2002 through 2010. There the target group and year have been most essential. They formed the basis for calculating the expected income during the coming years. (The expected development of tourism in Paanajärvi is presented in Table 12.)

There were some difficulties connected to computing the cost price. In this calculation the expenses for services production means costs for actual carrying out of services (40% of turnover), marketing expenses (5% of turnover), utility expenses and staff wages.

The Visitor Centre construction is not considered because it will be financed and implemented completely by the EU/Tacis Project. Only construction effect (its impact on the tourist flow), additional utility services, extra working places (guides, engineers-programmers, technical staff, etc) have been taken into account.

4.2. Elaboration of the Investment Plan

Any project needs a plan of financing compiled together with the investment plan. In this case the main attention was paid to the Investment Plan, which was designed for the Strategic Development Plan of the Park.

The main problem when preparing the Investment Plan (timing of its various stages) was one of the regulations on National Parks, which says that Parks should not carry out activities aiming at profit-making. That is why all resources earned by carrying out of services should be used completely (or maximally) for construction of utilities and road laying. Such an approach is shown in the table and graph describing the necessary investments by each year (see Table 8). It is a work schedule produced by optimising the Investment Plan.

4.3. Financial calculations

The aim of the computer-based calculation was to determine the dynamics of essential investments needed for the implementation of necessary works. The results are presented in form of tables at the end of the Business Plan. In the following, some salient features of the calculations are discussed:

The expected cash flow is shown in Table 10. Here we can follow the financial activities of the Park. The last line (cash balance in the end of the period) reflects the balance of payments, which is the indicator of the Park welfare. When calculating the balance in the end of the period, the balance of the previous period is considered, and, correspondingly, the investment expenses are compensated by these payments from previous periods. So, the situation with cash flow is not always similar to that of profits and losses, where profit is taken into account only during the current year.

The following information is presented:

1. Income from sale of services
2. Fixed costs: general costs and personnel costs
3. Taxes
4. "Other costs of the preparatory period" are, in fact, costs on the investment activity discussed above
5. As the result of the cash flow calculation the bottom line "Cash balance statement as end of the period" is presented.

In our case, this table is not very interesting because, according to the regulations, the Park has no right to use money left from a previous year. If the Park could use it, then evidently its financial position would be more than profitable. Unfortunately, this is not the case and the Park has to sustain it.

Therefore, Table 9 "Profits and losses" is more interesting to us. It demonstrates financial activity of the Park without transferring profits and losses from a previous period. According to regulations on National Parks, they have no right to get profit neither to move profits over to the next periods. Therefore this table indicates the financial state of the Park more clearly.

This table describes costs in detail: production costs, marketing costs, salary, depreciation costs, etc.

The table on profits and losses as well as the previous table do not consider proceeds from the budgets and from other external funding sources: it only covers the own funds intended for self-investment in the Park's development.

The result of the calculations in Table 9 is presented in the bottom line – “Net profit”. The line reflects the result of the financial activity as of the end of the year. This line can be either positive or negative. Positive figures mean that the Park has worked effectively. This is an income to be used for investments; otherwise it will be withdrawn according to regulations.

If the result is negative, meaning a deficit of funds as of the end of the year, it indicates a need for financing from other, external sources.

The calculation shows that there will be a negative result in the years 2002 through 2004, when the investment activity is at its peak. In these years support from the state budgets and other sources will be needed. All the other years are profitable. However, this will only happen, if the number of visitors reaches the expected target figure. Unexpected factors may have their impact, yet their influence is limited and will probably not have a global effect on the Park or its financial situation.

Finally some financial indices have been produced and are presented in Table 11. They show a negative trend during the first half of the ten-year investment period but improve towards the end.

5. CONCLUSION AND RECOMMENDATIONS

5.1 General conclusions and recommendations

A national park is a state-owned entity and therefore the main financing source must be the republican and federal budgets. However, this has become virtually impossible in the recent time due to the deficit in budgetary funds. Currently, the leading place has been taken by such funding sources like the Park’s own funds and the Tacis Project. It is good on the one hand because the Tacis Project as a project of the European Union possesses vast financial resources. On the other hand, this project is time-limited, and it terminates its operations in spring 2001. Therefore the best and most sustainable alternative in the long run would be a stable funding from the state budgets.

Under the current circumstances, however, the most effective approach for the Park would be to use own funds for the Park’s development. This would expedite planning and estimation of the use of financial resources needed for the Park.

This Business Plan is intended to find a way of living less dependant on the state budgets. The Park’s experience during recent years affirms that this is a feasible alternative. Earnings allow increased investment in the Park’s improvement, new construction and reconstruction and an incentive system for the personnel. It can be assumed that if the Park manages to get surplus income, it can be ploughed back for the development of the Park itself. The only meaningful source of such funds for the Park is seen in income from the sale of tourist services. Thus, attention and forces should be concentrated on this business.

From the viewpoint of the Business Plan, tourism should become the key action area of sufficient volume as described in this paper and in the Tourism Strategy. This should become the goal towards which all efforts should be directed: work for territorial development in and outside Park (including promotional and scientific actions), staffing policy, inter-regional and international ties.

The Business Plan is closely connected with other developmental plans worked out within the Tacis project. For instance, the dynamics of the visitor flow, which is the basis for calculating profitability of the Park’s operations, was developed together with the Tourism Strategy for the Paanajärvi National Park. The Strategic Plan enlists necessary investments, which are also made use of in the Business Plan, and the investment schedule is worked out based on them. These investments are not only aimed at improving the state of the Park but also at attracting more visitors to the Park. Therefore, their execution is one of the primary objectives for the successful development of the Park as a territory of considerable tourism interest. Timely, accurate and high-quality investment activity will have a positive influence on the Park’s long-term development.

Another important task of the Park to attract more visitors is the promotional activity both in Russia and abroad. This activity also needs attention, time and efforts. The effect of the advertising is sometimes undervalued and the results from conducted actions may take time to materialize. Anyway, the Park has to take part in promotional campaigns in exhibitions, fairs (including tourism fairs), conferences, etc.

A factor essential to any enterprise, and not least to a national park, is the composition and the number of staff. Qualified workers are needed to ensure effective work of the Park. The number of workers will depend on the number of sold services, necessary scientific research and maintenance of machines and facilities. To create a motivated human resource, the Park has to provide staff training. This can be a workshop for guides and wilderness guides, administrators, economists and marketing experts. If the Park counts on a larger number of foreign visitors, then professionalism of the Park

staff will play an even more important role. Client-oriented service training should be emphasised in upgrading the qualifications of the Park's personnel.

5.2 Recommendations on economic and price policy

Appropriate economic and price policies are required to improve the effectiveness of the Park operations as an enterprise. However, they ought not to be in any conflict with accepted norms and standards.

Firstly, there should be a clear objective towards making profit. We define profit as the money that will eventually remain at the end of a year at the disposal of the Park. It is necessary to identify ways how to use it for instance by rewarding the staff or acquiring equipment, machinery, office appliances, etc.

It would perhaps be a good idea to establish a special investment fund, which could be used by the Park. This would make it possible to plan and implement long term investment schedules in a sensible way. There should also be a reliable accounting system, which would enable monitoring the development of profitability of the activities of the Park as a whole and also product by product. Consequently the Park management could always keep track on the productivity and profitability of all of the operations.

A fixed price on tourist services is used in the calculation. This approach leaves open the possibility to increase incomes by raising prices on services offered. Any decision thereof should be made in compliance with the legislation and rules concerning the financial activity of the Park. One should also take into account eventual market studies and other estimations of possible consequences of such actions.

To have results of the Park's operations as expected, it is necessary to follow the recommendations described above in the text of the Business Plan and those included in other parts of the Development Strategy of the Park.

One of the most important conditions is a timely and consistent investment activity. A plan of needed investments is presented in Table 8 "Calendar Plan of Investments". This table gives the planned years of different construction projects and other actions. The table is also related to a specific nature of some works. They may have special timing, norms and conditions of execution. If it turns out during the planning of works that some stages cannot be conducted in a specified year, these stages should be replaced by stages of similar price, or corresponding adjustment in the calculations should be made.

Table 7

Paanajärvi NP: Starting financial statement

Line	Amount (roubles)
Monetary resources	635 000,00
Bills receivable	0,00
Raw material, materials and accessories	0,00
Incomplete production	0,00
Stock of ready production	0,00
Bank deposits and securities	0,00
Short-term prepaid costs	367 000,00
Total current assets	1 002 000,00
Fixed assets	4 634 000,00
Accrued depreciation	873 297,00
Residual value:	3 760 703,00
Land	0,00
Buildings and facilities	1 615 971,00
Equipment	1 919 732,00
Prepaid costs	0,00
Other assets	225 000,00
Investments in fixed assets	0,00
Investments in securities	0,00
Leased assets	
TOTAL ASSET	4 762 703,00
Deferred taxation	0,00
Short-term loans	0,00
Due bills	5,00
Obtained advance	0,00
Total short-term liabilities	5,00

Line	Amount (roubles)
Long-term loans	0,00
Ordinary shares	0,00
Preference shares	0,00
Capital contributed above nominal value	0,00
Reserve funds	0,00
Surplus capital	4 762 698,00
Retained earnings	0,00
Total property assets	4 762 698,00
TOTAL LIABILITY	4 762 703,00

Table 8

List of investment stages (Calendar plan)

Name of investment	Period	Year	Cost, rubls
Road bridge-Paanajarvi	30	2002	818 000
Road bridge-Vartiolampi	30	2002	1 636 000
Gate of the Park	30	2002	484 000
Ecological education center in Vartiolampi	30	2003	2 136 000
Tourist base on the eastern shore of Lake Paanajarvi	60	2003	1 323 000
House museum near the eastern part of the Paanajarvi	60	2004	2 990 000
Service point at bridge	30	2005	418 000
Visitor centre and office	90	2006	5 714 000
Nuorunen hiking route	30	2005	974 000
Manttykoski services	30	2005	63 000
Selkakoski services	30	2005	49 000
Kivakkakoski services	30	2005	49 000
Waste management system	30	2007	1 577 000
Paanajarvi N shore hiking route	30	2007	1 070 000
Kivakkatunturo hiking route	30	2007	445 000
Kivakkatunturi-Kivakkakoski	30	2007	663 000
Southern hiking route	30	2005	2 471 000
Wild reindeer route (northern route)	45	2008	2 319 000
Old frontier-guard hiking route	30	2008	371 000
Paanajarvi south shore route	30	2008	949 000
Päänuorunen hiking route	30	2008	487 000
Total			27 006 000

Table 9.
Profits and losses (roubles)

	Line	2001	2002	2003	2004	2005
1	Gross sales	4 452 290,25	4 452 113,65	4 790 786,78	5 119 674,38	6 439 869,16
2	Losses					
3	Sale tax					
4	Net sales	4 452 290,25	4 452 113,65	4 790 786,78	5 119 674,38	6 439 869,16
5	Materials and accessories					
6	Piece work payments					
7	Aggregate direct costs					
8	Gross profit	4 452 290,25	4 452 113,65	4 790 786,78	5 119 674,38	6 439 869,16
9	Property tax					
10	Administration overheads					
11	Production costs		1 337 292,00	1 443 120,00	1 533 576,00	1 729 717,00
12	Marketing costs		222 876,00	240 516,00	255 600,00	321 185,00
13	Salary of administration personnel	220 800,58	221 021,38	221 242,40	221 463,64	221 664,80
14	Salary of production personnel	334 664,40	334 999,07	347 853, 51	485 984,09	486 425,51
15	Salary of marketing personnel	17 051,27	17 068,32	17 085,39	17 102,47	17 118,01
16	Aggregate fixed costs	572 516, 24	2 133 256,76	2 269 817,29	2 513 726,20	2 776 110, 32
17	Depreciation costs	1 390 524,36	258 696,46	248 689,38	212 682,62	190 647,23
18	Credit interest					
19	Aggregate non-production costs	1 390 524,36	258 696,46	248 689,38	212 682,62	190 647,23
20	Other incomes					
21	Other costs		2 164 509,65	2 137 784,86	2 175 505,40	2 646 836,19
22	Losses of previous periods			788 967,14	645 471,90	774 734,37
23	Pre-tax income	2 489 249,64	-104 349,22	-645 471,90	-436 711,74	51 541,06
24	Aggregate costs charged to income					
25	Exchange gains					
26	Taxable income	2 489 249,64	-104 349,22	-645 471,90	-436 711,74	51 541,06
27	Income tax					
28	Net profit	2 489 249,64	-104 349,22	-645 471,90	-436 711,74	51 541,06

	Line	2006	2007	2008	2009	2010
1	Gross sales	7 840 682,54	8 987 758,57	10 317514,07	10 410859,17	9 967 466,93
2	Losses					
3	Sale tax					
4	Net sales	7 840 682,54	8 987 758,57	10 317514,07	10 410859,17	9 967 466,93
5	Materials and accessories					
6	Piece work payments					
7	Aggregate direct costs					
8	Gross profit	7 840 682,54	8 987 758,57	10 317514,07	10 410859,17	9 967 466,93
9	Property tax					
10	Administration overheads					
11	Production costs	2 368 596,00	2 696 964,00	3 088 104,00	3 121 404,00	3 121 404,00
12	Marketing costs	394 764,00	449 496,00	514 680,00	520 236,00	520 236,00
13	Salary of administration personnel	221 842,13	222 019,60	222 176,86	222 310, 17	222 443, 56
14	Salary of production personnel	486 814,65	487 204, 11	487 549,20	487 841, 73	337 154, 65

	Line	2006	2007	2008	2009	2010
15	Salary of marketing personnel	17 131, 70	17 145,41	17 157,55	17 167,84	17 178,14
16	Aggregate fixed costs	3 489 148,48	3 872 829,11	4 329 667, 61	4 368 959,74	4 218 416,35
17	Depreciation costs	182 140,39	167 249,89	120 260,44	109 956,10	109 956,10
18	Credit interest					
19	Aggregate non-production costs	182 140,39	167 249,89	120 260,44	109 956,10	109 956,10
20	Other incomes					
21	Other costs	3 517 999,09	3 209 895,34	2 196 813,28		
22	Losses of previous periods		737 736,89			
23	Pre-tax income	651 394,58	1 000 047,33	3 670 772,73	5 931 943,33	5 639 094,49
24	Aggregate costs charged to income					
25	Exchange gains					
26	Taxable income	651 394,58	1 000 047,33	3 670 772,73	5 931 943,33	5 639 094,49
27	Income tax					
28	Net profit	651 394,58	1 000 047,33	3 670 772,73	5 931 943,33	5 639 094,49

Table 10.
Cash flow (roubles)

	Line	2001	2002	2003	2004	2005
1	Earnings from sales	4 452 290,25	4 452 113,65	4 790 786,78	5 119 674,38	6 439 869,16
2	Costs of materials and component parts					
3	Piece work costs					
4	Aggregate direct costs					
5	Total costs		1 560 168,00	1 683 636,00	1 789 176,00	2 050 902,00
6	Personnel costs	412 773, 07	413 185,84	422 625,30	522 386, 59	522 861,08
7	Aggregate fixed costs	412 773, 07	1 973 353,84	2 106 261,30	2 311 562,59	2 573 763,08
8	Investments in shorts					
9	Incomes from shorts					
10	Other earnings					
11	Other payments	5,00				
12	Taxes	159 743,18	159 902,92	163 555,99	202 163,61	202 347,24
13	Cash flow from operational activity	3 879 769,00	2 318 856,89	2 520 969,49	2 605 948,18	3 663 758,84
14	Assets purchase expenses					
15	Other costs of the preparatory period		2 164 509,65	2 137 784,86	2 175 505,40	2 646 839,19
16	Incomes from assets sale					
17	Purchase of ownership rights (shares)					
18	Sale of ownership rights					
19	Incomes from investment activity					
20	Cash flow of investment activity		-2 164 509,65	-2 137 784,86	-2 175 505,40	-2 646 839,19
21	Park's (share) capital					
22	Loans					
23	Loan service payments					
24	Loan interest payments					
25	Leasing payments					

	Line	2001	2002	2003	2004	2005
26	Dividend payments					
27	Cash flow of financial activity					
28	Cash balance statement as of out-set of the period	635 000,00	4 514 769,00	4 669 116,24	5 052 300,87	5 482 743,65
29	Cash balance statement as of end of the period	4 514 769,00	4 669 116,24	5 052 300,87	5 482 743,65	6 499 666,30

	Line	2006	2007	2008	2009	2010
1	Earnings from sales	7 840 682,54	8 987 758,57	10 317 514,07	10 410 859,17	9 967 466,93
2	Costs of materials and component parts					
3	Piece work costs					
4	Aggregate direct costs					
5	Total costs	2 763 360,00	3 146 460,00	3 602 784,00	3 641 640,00	3 641 640,00
6	Personnel costs	523 279,37	523 697,99	524 068,94	524 383,38	415 844,52
7	Aggregate fixed costs	3 286 639,37	3 670 157,99	4 126 852,94	4 166 023,38	4 057 484,52
8	Investments in shorts					
9	Incomes from shorts					
10	Other earnings					
11	Other payments					
12	Taxes	202 509,12	202 671,12	202 814,68	202 936,37	160 931,83
13	Cash flow from operational activity	4 351 534,06	5 141 929,45	5 987 846,46	6 041 899,42	5 749 050,59
14	Assets purchase expenses					
15	Other costs of the preparatory period	3 517 999,09	3 209 895,34	2 196 813,28		
16	Incomes from assets sale					
17	Purchase of ownership rights (shares)					
18	Sale of ownership rights					
19	Incomes from investment activity					
20	Cash flow of investment activity	-3 517 999,09	-3 209 895,34	-2 196 813,28		
21	Park's (share) capital					
22	Loans					
23	Loan service payments					
24	Loan interest payments					
25	Leasing payments					
26	Dividend payments					
27	Cash flow of financial activity					
28	Cash balance statement as of out-set of the period	6 499 666,30	7 333 201,27	9 238 235,39	13 029 268,57	19 071 167,99
29	Cash balance statement as of end of the period	7 333 201,27	9 238 235,39	13 029 268,57	19 071 167,99	24 820 218,58

Table 11
Financial indices

	Line	2001	2002	2003	2004	2005
1	Current ratio (CR), %					
2	Quick ratio (QR), %					
3	Net working capital (NWC), rubles	2 736 516,97	4 327 814,09	4 615 191,95	5 283 987,99	5 162 599,85
4	Net working capital (NWC), FIM	684 129,24	1 081 953,52	1 153 797,99	1 320 997,00	1 290 649,96
5	Stock turnover ratio (ST)					
6	Receivable accounts ratio (CP)					
7	Payable accounts ratio (CPR)					
8	Ratio of capital turnover (NCT)	1,63	1,03	1,04	0,97	1,25
9	Fixed assets turnover (FAT) ratio	1,55	1,72	2,05	2,42	3,37
10	Total assets turnover (TAT) ratio	0,79	0,64	0,69	0,69	0,91
11	Total debts / total assets (TD/TA), %					
12	Long-term debts/total assets (LTD/TA), %					
13	Long-term debts/fixed assets (LTD/FA), %					
14	Total debts/equity (TD/EQ), %					
15	Interest coverage ratio (TIE), times					
16	Gross profit ratio (GPM), %	100,00	100,00	100,00	100,00	100,00
17	Operational profit ratio (OPM), %	21,53	-234,60	-245,21	-175,71	-223,35
18	Net profit ratio (NPM), %	21,53	-234,60	-245,21	-175,71	-223,35
19	Ratio of current assets (RCA), %	35,02	-241,34	-254,54	-170,24	-278,60
20	Ratio of fixe assets (RFA), %	33,45	-402,41	-501,51	-425,98	-751,71
21	Profitability of investments (ROI), %	17,11	-150,86	-168,84	-121,63	-203,27
22	Profitability of own equity (ROE), %	17,11	-150,86	-168,84	-121,63	-203,27
23	Earnings per one share (EPOS), rubles					
24	Earnings per one share (EPOS), FIM					
25	Dividend per one share (DPOS), ruble					
26	Dividend per one share (DPOS), FIM					
27	Ratio of dividend cover (ODC), times					
28	Total assets per one share (TAOS), rubles					
29	Total assets per one share (TAOS), FIM					
30	Share price / earnings (P/E), times					

	Line	2006	2007	2008	2009	2010
1	Current ratio (CR), %					
2	Quick ratio (QR), %					
3	Net working capital (NWC), rubles	6798 44,80	7495793,63	10796673,57	16 301 949,91	22 185 215,38
4	Net working capital (NWC), FIM	1 699 536,20	1 873 948,41	2 699 168,39	4 075 487,48	5 546 303,84
5	Stock turnover ratio (ST)					
6	Receivable accounts ratio (CP)					
7	Payable accounts ratio (CPR)					
8	Ratio of capital turnover (NCT)	1,15	1,20	0,96	0,64	0,45
9	Fixed assets turnover (FAT) ratio	4,54	5,80	7,32	8,03	8,40
10	Total assets turnover (TAT) ratio	0,92	0,99	0,85	0,59	0,43
11	Total debts / total assets (TD/TA), %					
12	Long-term debts/total assets (LTD/TA), %					
13	Long-term debts/fixed assets (LTD/FA), %					
14	Total debts/equity (TD/EQ), %					
15	Interest coverage ratio (TIE), times					
16	Gross profit ratio (GPM), %	100,00	100,00	100,00	100,00	100,00
17	Operational profit ratio (OPM), %	-137,81	-97,84	23,12	56,98	56,98
18	Net profit ratio (NPM), %	-137,81	-97,84	23,12	56,98	56,98
19	Ratio of current assets (RCA), %	-158,94	-117,32	22,09	36,39	25,42
20	Ratio of fixe assets (RFA), %	-625,54	-567,57	169,15	457,27	474,95
21	Profitability of investments (ROI), %	-126, 74	-97,22	19,54	33,71	24,13
22	Profitability of own equity (ROE), %	-126, 74	-97,22	19,54	33,71	24,13
23	Earnings per one share (EPOS), rubles					
24	Earnings per one share (EPOS), FIM					
25	Dividend per one share (DPOS), ruble					
26	Dividend per one share (DPOS), FIM					
27	Ratio of dividend cover (ODC), times					
28	Total assets per one share (TAOS), rubles					
29	Total assets per one share (TAOS), FIM					
30	Share price / earnings (P/E), times					

Table. 12
Visitor Categories and the Development of Visitor Days of Paanajärvi National Park in 2001-2010

Visitor category	Delay	%	2001	%	2002	%	2003	%	2004	%	2005	%	2006	%	2007	%	2008	%	2009	%	2010			
School children	3	13	1560	17	2210	17	2550	17	2890	19	3990	19	4750	19	5130	20	5800	20	6200	20	7000			
Local people	1	25	3000	14	1820	13	1950	9	1530	7	1470	6	1500	6	1620	6	1740	6	1860	6	2100			
Round-trip tourist	1		4	520	4	600	4	680	4	840	4	1000	4	1080	4	1160	4	1240	4	1400	4	1400		
One-Day visitor	1		5	650	5	750	6	1020	7	1470	7	1750	7	1890	7	2030	7	2170	7	2450	7	2450		
Hiker	3	25	3000	24	3120	24	3600	24	4080	24	5040	24	6000	24	6480	24	6960	24	7440	24	8400	24	8400	
Nature observer	3	16	1920	15	1950	15	2250	15	2550	15	3150	15	3750	15	4050	15	4350	15	4650	15	5250	15	5250	
Canoeist, rafter	3		0	2	260	3	450	4	680	4	840	4	1000	4	1080	4	1160	4	1240	4	1400	4	1400	
Fisherman	3	15	1800	10	1300	8	1200	8	1360	7	1470	7	1750	7	1890	7	2030	7	2170	7	2450	7	2450	
Skier	3		0		0	1	170	1	170	1	210	1	250	1	270	1	290	1	310	1	350	1	350	
Snowmobillist	3		1	130	1	150	1	170	1	210	1	250	1	270	1	290	1	310	1	350	1	350	1	350
Extreme visitor	3		1	130	1	150	1	170	1	210	1	250	1	270	1	290	1	310	1	350	1	350	1	350
Culture & native	3	6	720	5	650	5	750	6	1020	6	1260	7	1750	7	1890	6	1740	6	1860	6	2100	6	2100	
Scientist & adult	3		1	130	2	300	2	340	2	420	2	500	2	540	2	580	2	620	2	620	2	700	2	700
Business & Meeting	3		1	130	2	300	2	340	2	420	2	500	2	540	2	580	2	620	2	620	2	700	2	700
TOTAL		100	12000	100	13000	100	15000	100	17000	100	21000	100	25000	100	27000	100	29000	100	31000	100	35000	100	35000	
Growth (% ,No)			7,5		8970		10500		12580		15540		18750		20250		21460		22940		25900		25900	
Commercial tourism			4560		4030		4500		4420		5460		6250		6750		7540		8060		9100		9100	
Non-commercial																								

Annex 6

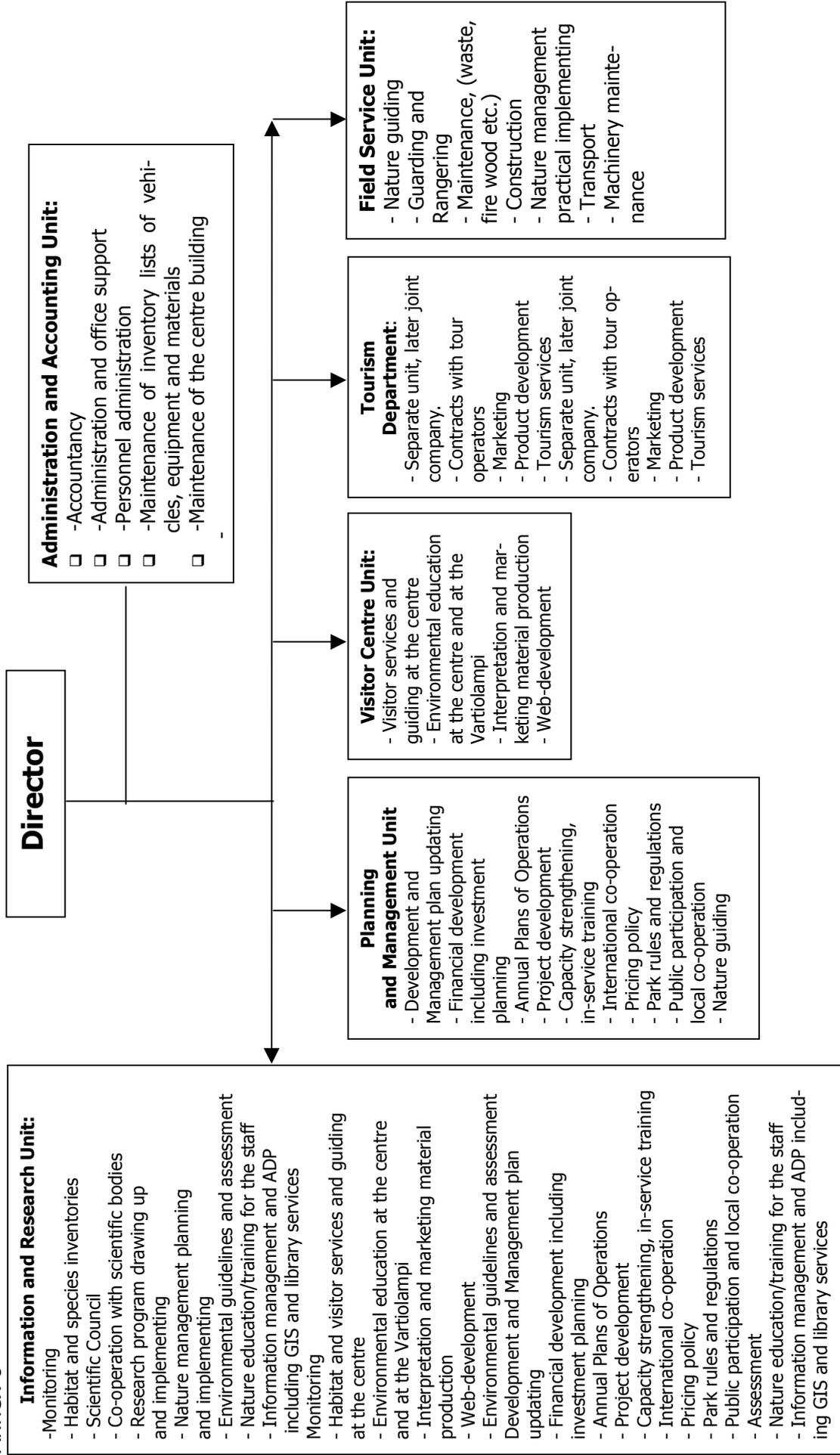


Figure X The organisational and responsibility chart of Paanajärvi National Park

Annex 7

The Key Programs of Paanajärvi National Park based on Green Belt Tourism Strategy

Visitor category	Programs
One-day visitors	"Sights of Paanajärvi"; Guaranteed departures on Saturdays and Sundays. June, July and August.
Hikers	"Hiking weekend in Paanajärvi": 4-days guided hiking on any planned routes; "One Day Hiking Fell Kivakka – Kivakkakoski"; "Hiking on the Reindeer route"; one week.
Nature Observers	"Dreams of Paanajärvi National Park"; 4-days nature observation in the Park.
Canoests, rafters	"Canoeing in Olanga River"; 4-days canoeing on the river including river rafting.
Fishermen	"Fishing in Paanajärvi National Park"; 4-days fishing program.
Skiers	"Cross-country skiing in the wilderness"; 4-days cross-country program in Paanajärvi National Park.
Snowmobilitists	"Snowmobiling in Paanajärvi National Park"; 3-days snowmobiling in Paanajärvi National Park, 1 night in Pääjärvi.
Extreme nature tourists	"Adventure in Paanajärvi National Park"; 4-days program.
Culture & native visitors	"Tour to old Paanajärvi village"; 4-days tour.
Scientists, adult trainees And experts	"Meeting or seminar in Paanajärvi and Pääjärvi"; 4-days seminar or meeting program. "The nature of Paanajärvi National Park" ecological education program.
Business & meeting	"Summer/winter adventure in Paanajärvi National Park"; "Meeting and adventure in Paanajärvi National Park".