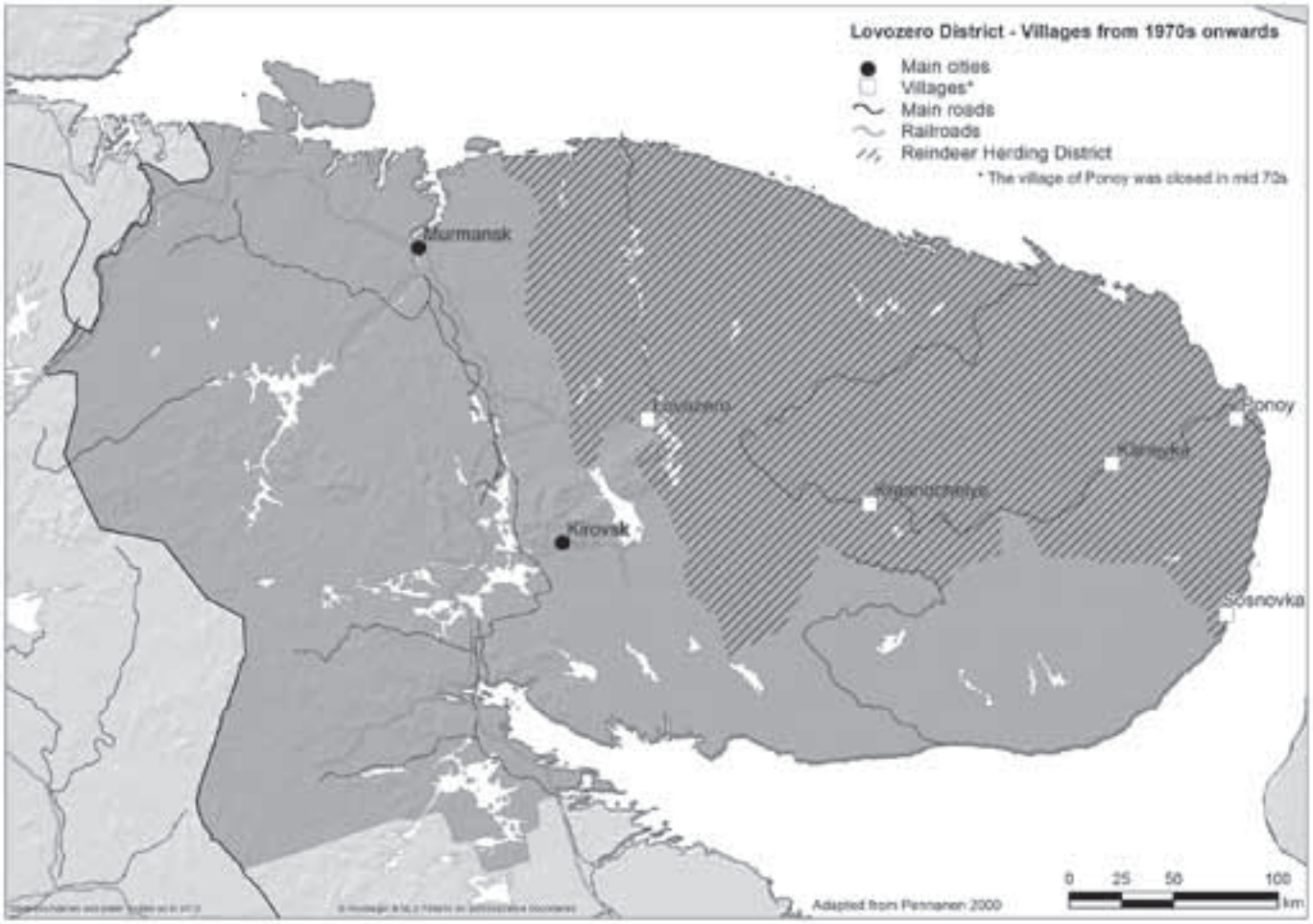
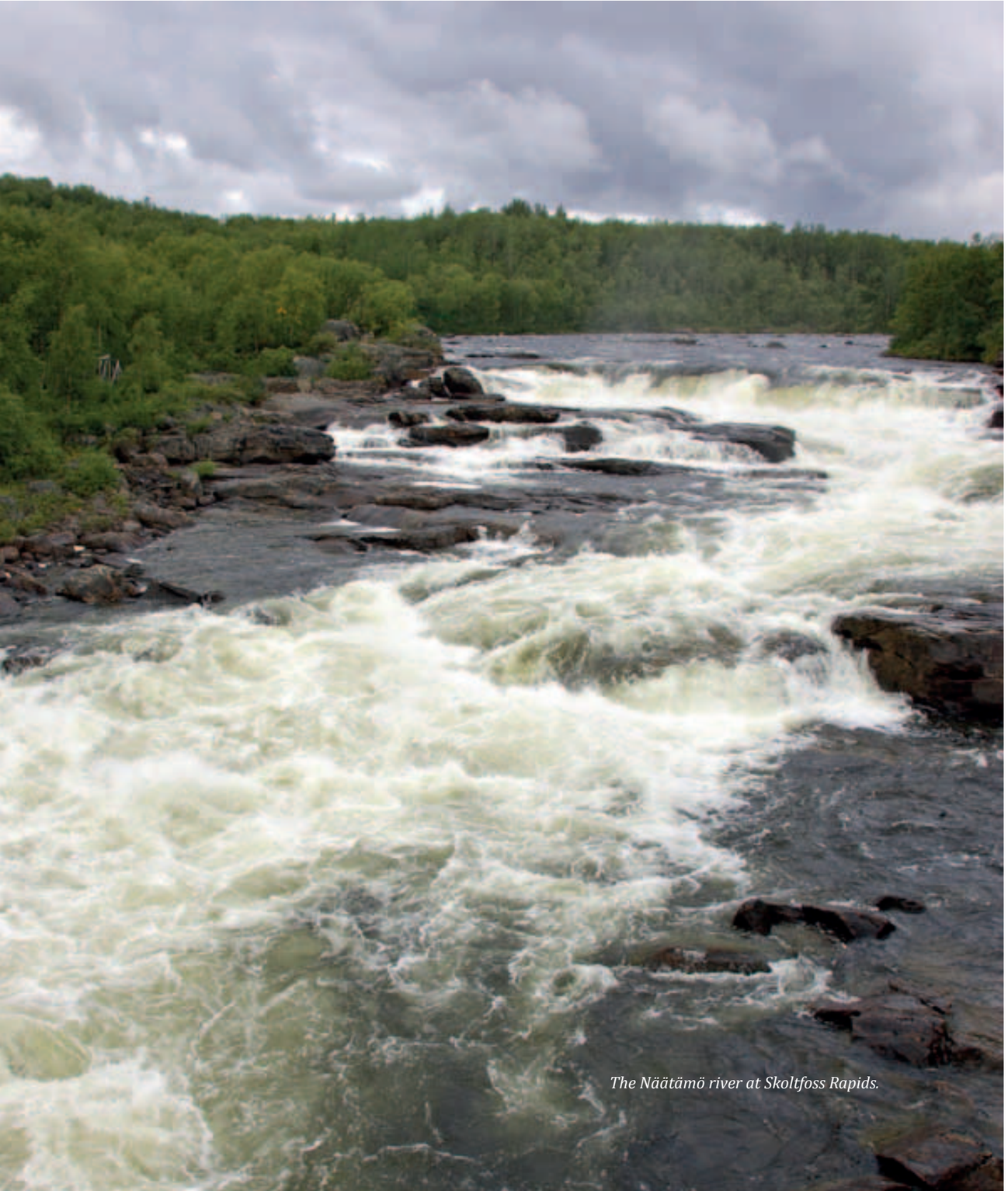



*Luujäu'rr (Lovozero) District – Villages from the 1970s Onwards.*



*The Näätämö river at Skoltfoss Rapids.*

# Ponoi and Näätämö River Collaborative Management Plan

**Tero Mustonen, Snowchange Cooperative**

**and**

**Pauliina Feodoroff, Saa'mi Nue'tt**

# Contents for Ponoi and Näätämö River Collaborative Management Plan



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Maps: *Johanna Roto including previously published materials from the Eastern Sámi Atlas.*

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# Preface

This report contains results of a project “Skolt Sámi Survival in the Middle of Rapid Change” that operated from 2009 to 2013, with various manifestations, in the Neiden watershed. The project manifested as a cooperation between the Skolt Sámi and other Eastern Sámi communities, the Saa’mi Nue’tt cultural organization and the Snowchange Cooperative. Partners also included the Indigenous Peoples Climate Change Assessment – IPCCA, United Nations University – Traditional Knowledge Initiative and the Sámi Council.

The project is part of the international Indigenous Peoples Climate Change Assessment (IPCCA) initiative that is being developed and coordinated by a Peru-based indigenous non-profit organization, ANDES, and supported by UNU– Traditional Knowledge Initiative. By applying the IPCCA methodology of community-led self-reflection, evaluation, and future-visioning based on local worldviews and traditional knowledge, the Sevettijärvi Skolts developed a community-based climate change adaptation plan. Out of this process a collective consensus has emerged that the climate change challenges faced by the reindeer, while significant, are manageable given the present-day nature of reindeer herding. Instead, the Skolt Sámi identified their customary salmon fishery, the other half of their traditional subsistence and cultural identity, as a much greater concern.

As a result, the Snowchange-Skolt partnership has chosen to focus their climate change adaptation efforts on enhancing the resilience of the Skolts’ traditional salmon fishery along the Näätämö River. Scientists have also identified that the stocks of the Atlantic salmon have diminished in the past thirty years, mostly due to fishing and human alterations in the habitats of the fish (Niemelä et al. 2001: 1). Therefore the focus on the salmon is relevant as the concern is shared both in Indigenous societies and science.

Additionally the work was expanded with the co-funding from the Nordic Council of Ministers[1] to cover additional workshops in the Neiden watershed and the Ponoi watershed in the Murmansk region, Russia. Ponoi is a significant salmon river in the region too. This Plan is the project report also for the NCM activities. Partners in the NCM work included in addition to Snowchange and Saa’mi Nue’tt: Neidenelvens Fiskefellesskap, Murmansk State Technical University, North Atlantic Salmon Fund, Nordregio and the Trilateral cooperation on our common resource; the Atlantic salmon in the Barents region (KO197) Project. The Australian Indigenous-designed Traditional Knowledge Revitalisation Project – TKRP coordinated by Victor Steffensen provided culturally-appropriate methods to build a knowledge database during the project. Authors are especially thankful for this guidance to mr. Steffensen.

The authors are very thankful our co-authors, supporters and reviewers, in no particular order: Nordic Council of Ministers, Indigenous Peoples Climate Change Assessment (IPCCA) and Alejandro Argumedo, United Nations University – Traditional Knowledge Initiative, Saa’mi Nue’tt, Sámi Council, Snowchange Cooperative, Gleb Raygorodetsky, Vladimir Feodoroff, Paula Feodoroff, Jouko Moshnikoff, Satu Moshnikoff, Illep Jefremoff, Teijo Feodoroff, Kolttien kyläkokous, Tiina Sanila-Aikio, Minna Moshnikoff, Kaisu Mustonen, Eero Murtomäki, Rita Lukkarinen, Dennis Martinez, Ari Lehtinen, Alexey Kanichev, Yevgenii Kirillov, Sergey Phillipchenko, Houses of Culture in Kanevka, Sosnovka, Krasnochelye, Lovozero, the National Geographic Online Edition, Orri Vigfússon and the North Atlantic Salmon Fund, Johanna Roto, Eero Niemelä, Samuli Aikio, Jorma Mattsson, Leif Rantala, YLE Sámi Radio, Vigdis Siri, Toini Sanila, Tellervo Laine, Marina Apgar, Yevgenia Prokhorova.



[1] with the project “Ponoi and Neiden – Lifestreams of Eastern Sápmi”



Toobdi kue'l.

Tiõ'đi puõccu.

Tõi ǩiõlid silttii.

Mi'jjid suu teâđaid kuõ'đi,

puõ'tti ääi'j ǩiõtkkmen.

Läärvan-O'lssee-Piâtt-Ǩiurrâl-Vää'sǩ-Eeunka

ci'sttjee'l

*We dedicate this report to the memory of Jouni Moshnikoff, a Skolt Sámi knowledge holder, who passed away in 2012.*




# A. Introduction

The Barents Region is undergoing a system shift. It means both the natural and social realities are changing in profound, multiple twists and turns. Old ways of thinking, governing and management are in need of a reconsideration. We wish to draw the main developments into a cohesive plan for discussion for the Neiden and Ponoi rivers, the two major salmon streams of the region. We wish to propose bold, new solutions that tackle both the more equitable governance structure regarding these rivers and fisheries and at the same time address local and practical steps to improve the situation on the ground.

This plan identifies key traditional indigenous and local knowledge observations from 2009 to 2013 along the Näätämö (Finnish)/Neiden (Norwegian) /Njauddâm (Skolt Sámi)[2] river flowing from Finland to Norway and the Ponoi river watershed in Murmansk, Russia. We provide an ecological overview of both water-bodies. The plan proceeds, based on the socio-ecological analysis carried out in the and with the local communities, to propose a wide-reaching reform towards collaborative management (co-management) architecture. It is hoped to be culturally relevant for all stakeholders. Main focus of the proposed steps will be the Atlantic salmon (salmo salar l.) and related fisheries. This Plan is to be seen as a start of discussions, not as a blanket statement or a final product.

[2] These terms and toponyms are used interchangeably through the report.

## 1. Collaborative Management in Theory and Practice

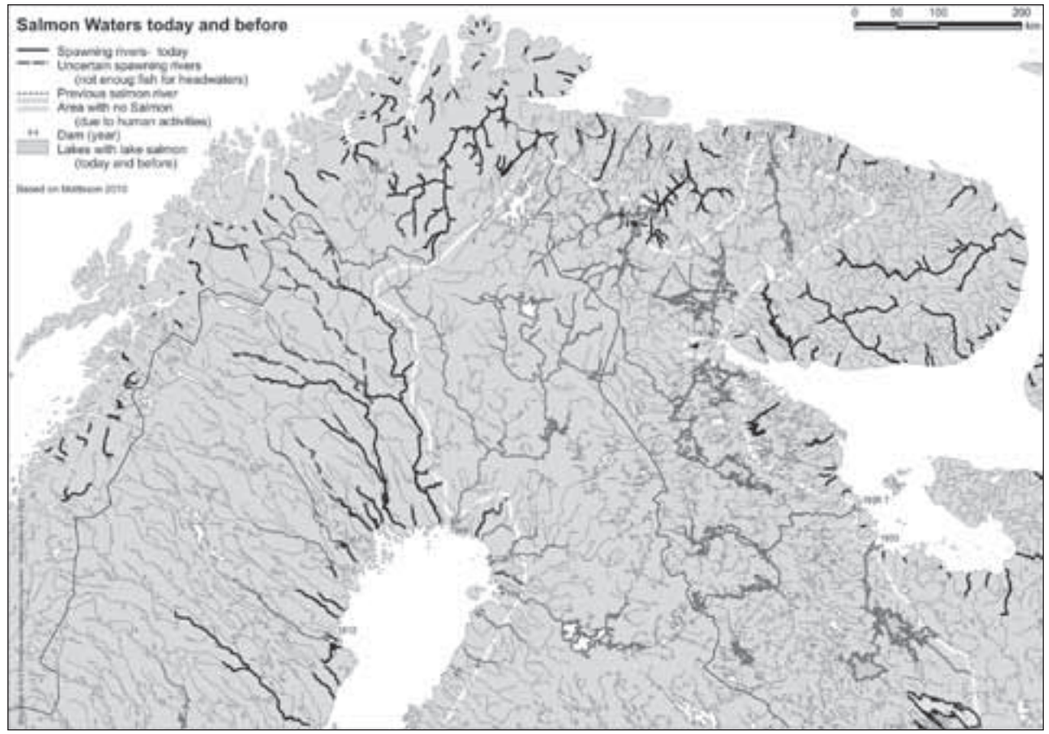
Discussion on improvements to fisheries is a crucial theme in our times in the Barents Region. Role and use of local and Indigenous knowledge, especially in Finland, is emerging (Mustonen 2009, Mustonen 2012a) as a field of practice. It is connected on the other hand to the debates regarding Arctic (Stammler 2005, Watson and Huntington 2008) and Indigenous Sámi knowledge (Helander 1999, Lehtinen 2011, Mustonen 2012b). It has also to do with the Finnish local communities and their subsistence activities (Luotonen 2006, Mustonen 2009).

If we investigate the international context of different knowledge traditions and co-management theories, Berkes (2012) calls for a widespread reform of natural resources management in the context of rapid ecosystem change and marine fisheries. He (2012: 466) argues that ecosystem-based (EBM) approach involves and includes a holistic view of managing resources in the context of their environment (see also Howitt 2001, Pretty 2011). They contain a consideration of habitat issues and system resilience. By identifying gaps in case studies around the world (mostly in oceanic ecosystems), Berkes (2012: 466-468) emphasizes that ecosystem-based fisheries management (EBFM) deriving solely on fisheries biological science captures only one slice of the EBM pie. This has important implications for the Neiden and Ponoi watersheds.

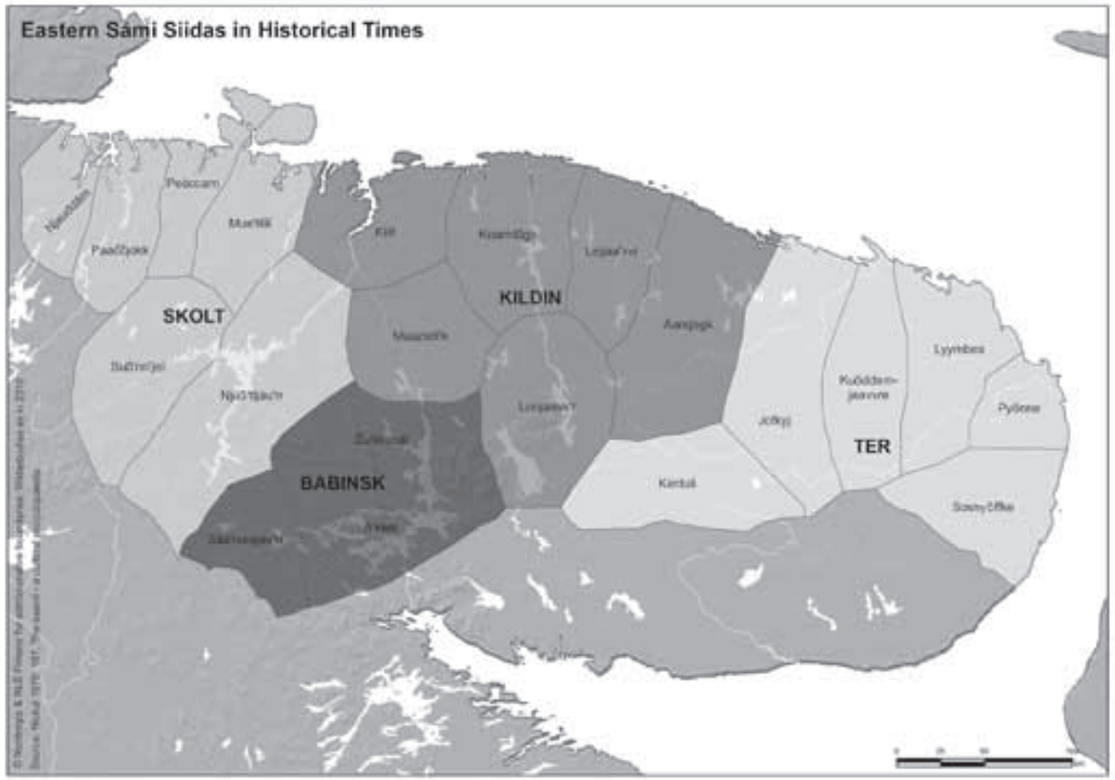
A broad ecosystem-based approach that includes social and ecological considerations has been identified as a "social-ecological system" (Berkes 2012: 466-468). It manifests as a complex adaptative system that includes social (human) and ecological (biophysical) subsystems in a two-way feedback relationship (see also Mustonen 2012a). Simply stated, a social-ecological system perspective is a major departure from the conventional view. In the context of Finnish resource governance, new approaches are urgently needed as the previous models of using natural and raw materials have often proved to be socially and ecologically unsustainable (for example on hydroelectric power, see Mustonen et al. 2010, Mustonen 2012b). Equity and power problems associated with natural resources production have a global reach (Howitt 2001, Pretty 2011). In the case of Neiden and Ponoi there are cross-border and regional dimensions involved.

Berkes (2012: 470) argues that the system change, whether in terms of climate or ecosystems, requires us to address management in a whole new context of principles. The transformation from management into *governance* has to include a set of tools to be successful. He identifies amongst some co-management or sharing of resource use power, in some cases also adaptative co-management which would mean an on-going, self-organised, dynamic process (ibid. 470). Social learning, inclusive management and integrative science have been established decades ago as valid approaches to the emerging new natural conditions, but interestingly enough Berkes (2012: 470) suggests *clumsy solutions*, more specifically defined as "exploratory solutions that include inputs from a broad range of stakeholders along the fishing chain and require information-sharing, knowledge synthesis and trust-building".

These unexpected, clumsy and "fuzzy" solutions may provide new avenues for ecosystem stewardship which Berkes (2012: 470) identifies as being a "strategy to respond to and shape social-ecological systems under conditions of uncertainty and change to sustain the supply and opportunities for use of ecosystem services to support human well-being." Role of traditional knowledge may yield new approaches and views on ecosystem change, because it involves its own scales and time-space apparatus.




*Major Atlantic salmon rivers are included. The years next to the rivers indicate hydroelectric or other development, which has ruined the salmon-spawning capacity of that particular stream due to human activities. Most of the rivers still that run free can be found in the Eastern Sámi territories. These rivers are under heavy pressure for example from the tourist fish camps and the illegal harvest of fish. Climate change, biodiversity depletion and invasive farmed salmon pose additional threats.*




*These maps indicate the Eastern Sámi siidas or Indigenous-controlled communities in historical times. The southern coast of the Kola Peninsula had been used by the Sámi in prehistoric times, but since the 1200s Russian Pomory and Karelians travelled on the coast and controlled areas along the White Sea. The four larger 'Eastern Sámi' cultural spheres: Skolt, Babinsk, Kildin and Ter have been indicated.*

*Views of Lake Rautujärvi in the Näätämö river watershed.*




# Question of Scales: Indigenous Knowledge of the Arctic

**Tero and Kaisu Mustonen**

When resilience, ecosystems and human societies are discussed in the Arctic, we often view them through the lenses of measurement-based worldviews. World is linear, spatial dimensions that can be measured are fixed and solutions follow this trajectory. However the Indigenous societies of the Arctic have, each in their distinct ways, non-linearities of time-spaces of their worlds. These expressions and knowledges are best transmitted in the local languages. This is relevant because the decisions regarding the Arctic need to assess multiple understandings and cosmologies of the world in order to find appropriate solutions to the issues at hand.

Every distinct Indigenous nation has their own specific ways and expressions. Central to this realization that Arctic Indigenous societies are *circular* in their cultural notions of being, time, space and place as a part of their *movements*. The actual reality is far more complex than this, but this is a conceptual model. Hunting, fishing and other subsistence activities act as means of communication, exchanges and relationships with the tundra and taiga, with the universe. Language in its spoken form is an open system, which is linked with the landscape and land through a set of intimate, sensual connections. Each specific language belongs into its own part of the land.

Another key concept is the notion of an *Event.* These Events, which often are documented as "Indigenous observations" should be read in the context of this many-layered spherical reality. An Event, when it occurs, is often interpreted in the Indigenous culture against immediate surroundings, but also against the mythical-spiritual deeper layers of Indigenous mind and memory. An Event can be reflected on in many ways – it may contain links and repetitions to mythical times, which are passed down as oral narratives and histories. It may even exist simultaneously in Myth-time and present. If it involves animals in nature which are a key part of the Indigenous mind in a specific location, such as the Raven, a bird of knowledge, Creator and Trickster in several Arctic societies, it may be interpreted with high priority and significance. Some *places* are Events themselves. Places can have dual or multiple beings too, especially this is the case in regards to *sacred places* (Haruchi et al. 2002), i.e. stones, trees, spiritual places, grave sites of the spirit people. Link between Events and a place can be sometimes blurred. Some *Events* will be consulted with the Elders and Spiritual people in the communities – they will guide the community to form relationships with the context and meaning regarding an Event. Or as *Haudenosaunee* scholars Sheridan and Longboat (2006: 366) from boreal zone express this; *"Onkwehonwe [Indigenous] mind everything because everything minds Onkwehonwe. Haudenosaunee minds are composed not just of visible ecological domains but also by the numinous qualities of those domains that, allowed to mature, express the fullness of traditional territory. Old-growth minds and cultures mature, emerge, and encompass the old growth of their traditional territory. Haudenosaunee minds are congruent with their traditional territories but more important, Haudenosaunee minds are required to accomplish that symmetry in accomplishing their authenticity. The Haudenosaunee Creation Story explains and situates mind and territory in simultaneous origin and speaks to their timeless symmetry in speaking of a time when humanity's ancestors lived in the Sky World."*

Driver of life and society for the Indigenous peoples is constant change. Most change is welcome and natural cycle of life. All change is observed. In the past 100-200 years, in some regions even earlier than that, *imposed, often violent change* has taken place, for example as a colonisation process or in the context of war. This is a one-way process where power is employed *towards* the Indigenous society in question. Other *change* is a two-way process with the universe, where the community, through their ceremonies, rituals and other activities maintains relationships and reciprocities as a part of these *natural and cyclic changes*. All Indigenous societies understand the concept of *transformation*. As Macdonald (2000) reports from Nunavut, sometimes beings change forms, spheres.

Indigenous peoples often recognize too that universe is vast and unknown; there exist other beings and unknown time-places outside most of the human realms. In fact a crucial notion of the current times in the Indigenous societies of the Arctic is the notion of unknown realities – we have entered, given the multiple imposed, violent changes ranging in their impacts from climate to oceans to animals, into times which have not been seen before. According to several Indigenous Elders, we have abused our relationship with Nature, thus suffering from the consequences (Mustonen 2009, Mustonen 2012c).

Or in the words of the poet Nils-Aslak Valkeapää from the North Sámi society:

*tomorrow is a new day*
*other animals*
*I converse with the fire*
*tomorrow*
*it too will have another language*
*new migration routes for tomorrows reindeer*
*the stones will have different traditions*
*an alien time within time,*
*alien*

(Gaski 2003: 246)

It is widely recognized in the ecological (Berkes 2012), climate (Arctic Council 2005) and Indigenous (Mustonen 2012a) literature that old ways of land and water management and use cannot provide sufficient answers to challenges of today. Ecosystem-based fisheries management is therefore needed and may provide new ground for restorative work in watersheds.

Berkes (2012: 473) argues that ecosystem-based fisheries management-EBFM is revolutionary because it would involve dealing with multiple disciplines, scales and objectives simultaneously. Addressing EBFM would offer the possibilities to expand management into governance that includes cooperative, multilevel approaches involving partnerships, social learning and knowledge co-production.

*So if Sámi Indigenous and other local knowledge is an important source of management in the case of Neiden and Ponoi watersheds and it receives a full expression through the various oral histories from the communities where does this lead us in terms of governing the river?*

Answer lies in the role of collaborative, in short *co-management* (Carlsson and Berkes 2005: 65-66) of resources which has been defined in a number of ways including:

**a.** Co-management is a situation in which two or more social actors negotiate, define and guarantee amongst themselves a fair sharing of the management functions, entitlements and responsibilities of a given territory, area or set of natural resources.

**b.** Co-management of common-pool resources, such as fisheries and forests, are depicted as some kind of power-sharing arrangements between the State and a community of resource users.

**c.** Collaborative management, co-management, is defined as the sharing of power and responsibility between the government and local resource users.

**d.** According to World Bank the sharing of responsibilities, rights and duties between the primary stakeholders, in particular, local communities and making that involves the local users in the decision-making process as equals with the nation-state.

**e.** Co-management is a situation in which two or more social actors negotiate, define and guarantee amongst themselves a fair sharing of the management functions, entitlements and responsibilities of a given territory, area or a set of natural resources.

**f.** It is an association between co-management with natural resources management. Co-management as a partnership between public and private actors. Co-management is not a fixed state but a process that takes place along a continuum.

*Filip, Vladimir and Tero investigate toponymic place-names of the Näätämö watershed in September 2012.*

*Co-management* therefore is an approach to governance. It is governance that, if properly designed, addresses the concerns identified by Ettlinger (2011) and Foucault (2005) with the notions of governance, governmentality and (ab)uses of power.

Optimistically Carlsson and Berkes (2005: 66) see management as a right to regulate use patterns and transform the resource by making improvement. In the Finnish resource management (Mustonen et al. 2010) a co-management regime is a new concept. Only recently some initiatives have begun to emerge, for example with the Sámi and Hammastunturi "wilderness area" in Lapland. However while "consultation" and "participation" have been "guaranteed" in the environmental impact assessments and hearings regarding various scales of resource exploitation in Finland, no meaningful power sharing or local contextualisation has taken place (Mustonen 2012a, Mustonen 2012b). There is a fear that the collaborative management principles are transferred to domestic uses and solved technically without engaging with and embracing the transformative principles of Indigenous and local knowledge, and power relations.

Carlsson and Berkes (2005: 66-67) identify the organisation with which arrangements are made to be usually an agency with jurisdiction over an area (usually referring to a state agency) and local communities. Communities are rarely "coherent and homogenous units" (ibid.). They are constantly changing and multidimensional, cross-scale social-political units. In terms of investigations of time-space, they may contain and produce non-Euclidean narratives of a place (Luotonen 2006, Mustonen 2009, Ettlinger 2011).

Carlsson and Berkes (2005: 66-67) interpret co-management as a continuum from the simple exchange of information to formal partnership. It supposes that parties have agreed on an arrangement, but the actual arrangement often evolves. They (2005: 67-68) emphasize that it is a dynamic and iterative system, a process which is constantly re-adjusted because ecosystems response to resource exploitation may be highly unpredictable. According to them (2005: 68) "nature is seldom linear. Command-and-control kind of resource management is a poor fit for ecological uncertainty. Evolution of co-management networks is the substantial result of ongoing processes of problem-solving." Lastly (Carlsson and Berkes 2005: 71) there are identifiable number of tasks for a well-functioning co-management, which include:

1. Data gathering
2. Logistical decisions: who harvests and where
3. Allocation decisions
4. Protection of resource from environmental damage
5. Enforcement of regulations
6. Enhancement of long-term planning
7. More inclusive decision-making

For the Neiden and Ponoi watersheds some discussion on terminologies of knowledge is defined in the following way:

**1.** Indigenous knowledge means in this Plan specifically Sámi knowledge. It differs from *local ecological knowledge* in qualities and reciprocal relationships that the Eastern Sámi peoples have with their landscapes and ecosystems. According to international scholarship it is expressed in a number of myriad ways (Sheridan and Longboat 2006), including oral histories, toponymic place knowledge and non-Euclidean time-spaces and scales (Mustonen, 2009, Ettlinger 2012). Some North Sámi scholars have ventured out to make the case that Sámi have their own time-space terminologies and concepts which do not translate outside the culture (Helander 1999). In accordance with the international and various national laws, here the Indigenous knowledge refers to knowledge of those individuals, families and other communities and collectives that have been inhabiting their current localities prior to establishment of European governance and state in the region. Often the acronym TEK, meaning traditional ecological knowledge is used to refer in general to such Indigenous knowledges of ecosystems.

**2.** All local people inhabiting the watershed have local (ecological) knowledge. It is by nature practical, experience-based and provides crucial ecosystem observations on the fisheries practice. It may contain elements that are similar to Indigenous knowledge, but needs to be surveyed as its own set of principles, as the international legal framework contains categories and dimensions which separate local knowledge from the Indigenous peoples and their knowledges. However, it is of no less importance as a source of information for the health of ecosystems and watersheds in this Plan.

In this section we have surveyed theoretical frames to do with collaborative management, traditional and Indigenous knowledge and the need for a new approach to governance of fisheries and watershed in the context of global and Arctic change. In the next part a view on international examples of functioning co-management regimes is provided.

*(Top) Filip Jefremoff, a Skolt Sámi fisherman.*
*(Middle and lower photo) Vladimir Feodoroff has been fishing on the Näätämö river since his childhood.*



*Teijo Feodoroff and Jouko Moshnikoff cut reindeer meat in the fish camp.*

## 2. Selected Arctic Cases of Collaborative Management for Fisheries

One of the longest-running collaborative management arrangements for fisheries is located in the Inuvialuit Settlement Region – ISR in the Northwest Territories, Canada. It follows the Inuvialuit Final Agreement - IFA that established the legal context for collaborative management for the region. For the issues here, it is relevant due to the practices related to the delta and watershed portions of Mackenzie River that flows in the area.

Under the IFA, there is a Fisheries Joint Management Committee. This body is responsible for:

- collecting harvest information
- making recommendations on subsistence quotas
- operating a system of sports fishery on Inuvialuit and Crown lands
- community tours within the management area
- research, assessment and monitoring projects for all affected communities

(EIRB 2013).

Together with the Environmental Impact Screening Committee and Environmental Impact Review Board of the ISA, the Inuvialuit can review and determine if proposed development will have impacts on their subsistence, wildlife harvests, or whether new initiatives will have environmental impacts in the region (ibid. 2013). The Inuvialuit Final Agreement principles include preservation of Inuvialuit cultural identity and values in changing times, to allow them to be equal and meaningful partners in northern society in Canada and to protect and preserve Arctic wildlife (Wildlife Management Advisory Council North Slope 2003: 40).

While the exportability and specific items of the Inuvialuit Co-Management Regime need to be properly assessed for the Eastern Sámi case of relevance here is the involvement of the Indigenous stakeholders in an institutional and power-devolving arrangement. Secondly, crucial issue is the role of traditional knowledge in management and quota recommendations and individual capacities for the Fisheries Joint Management Committee to provide relevant decisions to the sport fishery in addition to subsistence systems and its own independent monitoring role for the Mackenzie and affected watersheds in the ISA.

In the Russian Arctic the UNEP/GEF-sponsored ECORA Project worked in the Lower Kolyma Region of Republic of Sakha-Yakutia, Russia from 2003 to 2009. In the mandate for this conservation project was the development of collaborative arrangements for Indigenous harvest of fish (Mustonen 2009). The role and scope of the project were limited from the beginning and no permanent structures for co-management were installed.

The importance of the ECORA experience lies in the Russian context. It provided the mechanisms of information flow from the traditional users (Mustonen 2009) into the regional and Republican natural resources managers in a culturally-appropriate ways, most of which consist of harvest diaries, mapping, participant observations and documentation of communal oral histories regarding fisheries (Mustonen 2007, Mustonen 2009).

Lower Kolyma has professional fishery resulting from the Soviet times, mainly in the community of Podhovsk and in the practices of some Indigenous obschinas or tribal communities, such as Turvaurgin and Nutendli (Mustonen 2009). While Kolyma is a far bigger ecosystem than Näätämö or Ponoi, again the watershed view and recognition of traditional knowledge and oral histories as a baseline of ecosystem change may contain elements of exportability for the future development of Ponoi and Näätämö watersheds.

## 3. Ponoi and Näätämö River Project 2009-2013

In this part we present the historical case for Indigenous governance of watersheds that has existed in the region prior to 1944, transfers to modern times, international concerns that have been raised during the project and then the data, methods and analytical framework for the work regarding Neiden and Ponoi.

### 3.1. Overview of Eastern Sámi Cultural Fishery and Indigenous Management Practices

In 2011 the Eastern Sámi Atlas (Mustonen and Mustonen 2011) was released, capturing the baseline information of Indigenous governance of water bodies that the Sámi practiced during the period prior to large-scale colonial presence. In the following we



*Historical photos of Eastern Sámi fisheries from the 1800s. (Top) An Eastern Sámi family camp. (Middle) A coastal seine on Ponoi in 1800s. (Bottom) Seining in Suonikylä.*

summarize the main aspects of this system and its context from the Atlas.

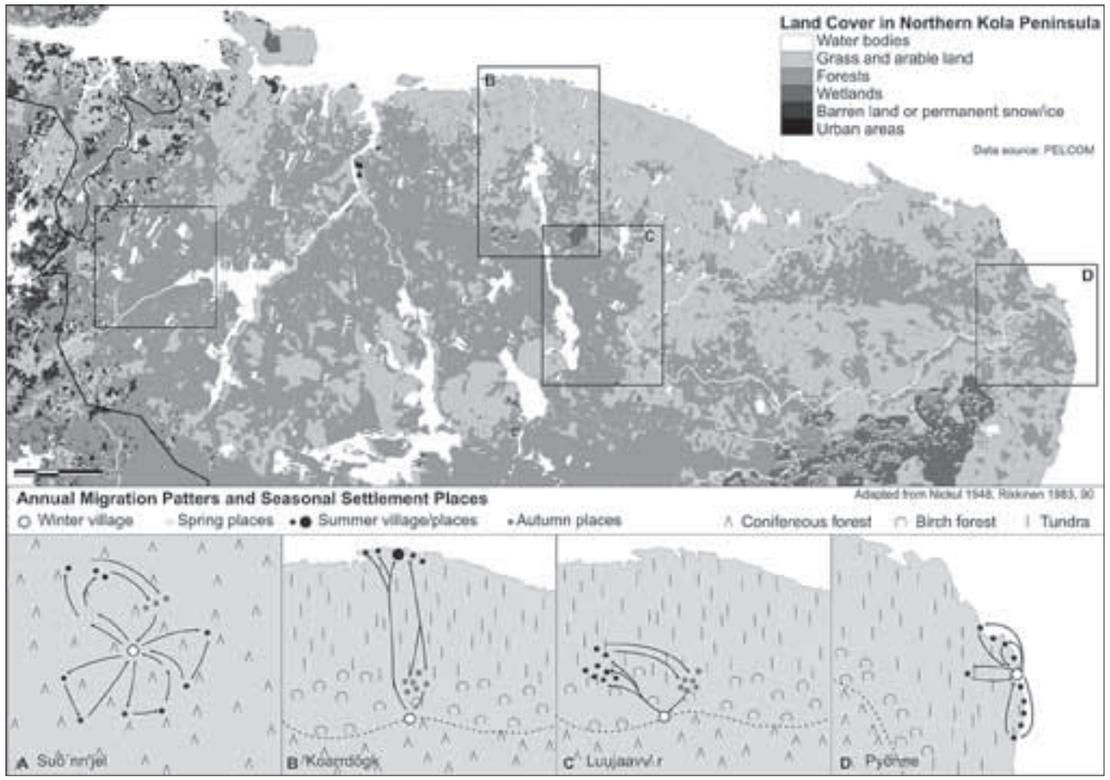
Fishing in the fresh waters of Northern Eurasia has been the defining activity that has allowed the Indigenous Nations of the region to survive through harsh winters and short summers. The oldest archaeological net finding, a 10,000-year-old seine net from the Karelian Isthmus, discovered by Finnish scholar Sakari Pälsi in 1913 in the Antrea community, confirms the age-old role of communal fishing in the area (ibid. 2011). Especially net ice fishing has been a crucial food-gathering practice.

The Indigenous Nations of Northern Eurasia consider their territories as homelands. Through the millennia, these cultures have developed systems of interaction with their landscapes, icescapes and dreamscapes. Hunting and fishing are at the heart of these systems of reciprocity. It is important to identify the key elements of such systems so that they can be understood when questions of biodiversity change, land use and fishing are discussed.

We can explore this through the family territories and Indigenous governance structures in Suonikylä/Suõ'nn'jel Skolt and other Skolt Sámi Nations. The Skolts call themselves *"Sä'mmlaž"*, the Sámi. Their community can be called *"siida", "sit", "sijt"* or *"sijdd"* in Sámi.Suonikylä was the last of the Eastern Sámi communities that practiced their own ways of being until 1944 when the war ended this way of life. As described elsewhere, these Skolts were relocated to Finland and resettled in various communities, such as Sevettijärvi.

The Skolt Sámi situation prior to 1944 offers the clearest documentation of the Sámi society in these parts of the world, and while each of the Eastern Sámi Nations has their own social and culturally specific systems, the Suõ'nn'jel stories and knowledges shed a light on land-use, land-use and occupancy and lifeways which are similar with other communities of the area.

In the community of Suõ'nn'jel prior to 1944, the family-controlled territories formed the basis of social organisation. Skolt leader Matti Sverloff writes that decision making by the Skolts happened in family and village meetings during life in Suõ'nn'jel. This community administration guaranteed an Indigenous sovereign decision-making body for the Skolts. Waters, lands and hunting territories were family-controlled areas. If one family received less and another more, the community administration or council




*This map explains the different models of reindeer nomadism or seasonal rounds in Kola. There were three to four different models, possibly more, of seasonal rounds.*

transfered some territories to the family in need.

The family ceding some of its territories to the family in need did so through oral agreements. This was a mechanism by which the community controlled the resources they possessed and tried to even out the disparities that might occur. No individuals owned territories in Suõ'nn'jel; they were owned communally. The highest body of decision-making was the community council called *"sobbar"*.

Sverloff remembers that the administration of the council rested on the council of the headmen of each family, called *"norrös"/"norraz"* who was also called *"sijddsovenj"*. The council demarcated fishing territories for each family. In previous times the deer hunting territories had also been decided upon in a similar fashion. Adult males and the headmen of the community could speak up. Widows with children could also speak during the meetings. Women could be present at the meetings.

These councils decided on all issues, and these family territories produced all that was needed for the families. The role of *norraz* collapsed after the settlement to Če'vetjäu'rr (Sevettijärvi), and the current, modern Skolt Sámi Act of Finland concentrates on enabling individual Skolt Sámi to build houses or fishing huts. However the way the Skolts have arranged the huts along the Näätämö river reflects the surviving elements of the family governance of a waterbody.

The borders of family territories were firm but could be changed through oral agreements. Their borders mostly followed water bodies but also along the crest of fell areas. They could be considered to be 'temporal borders'.

The fishing culture and seasonal rounds of the Skolt Sámi Nation within their traditional territories of Suõ'nn'jel and Peäccam at the Finnish-Norwegian-Russian borderlands indicate one of these systems in a clear manner. The Skolts, like other Indigenous Nations of Eurasia, practice their systems of reciprocity with their landscapes. These systems renew their knowledge regarding the land through the seasons. Relationships with specific lakes and rivers are encoded in the oral traditions of a given culture.

These spiritual and cultural relationships contain taboos and rules of behaviour and conduct regarding both the seen and the unseen. One example of this in connection to the Skolts is the rules of behaviour regarding Lake Reksjavr in the Suõ'nn'jel territory. The spirit of the lake is very observant and should be kept in mind at all times. One cannot make noise on this lake. There are rules on how the nets and seining should be put into the water. On this lake, special words outside of everyday Skolt language must be used, and in this way the lake imposes its own place-specific vocabulary.

This exemplifies just how closely the Indigenous Sámi languages are tied to their landscapes.Conservational fishing practices take, for example, the form of the autumnal harvest for spawning whitefish and other species. Many families had fishing traps on spawning rivers in the autumn, but great care was taken regarding the resources. A fishing trap would be set on a creek for two to three nights in a given autumn.

After that, the creek would be left alone for three years. On the fourth autumn, the fish trap would be set for two nights. This was an Indigenous conservational fishing mechanism to insure the dispersal of fishing over many different water bodies, and at the same time it ensured that individual creeks and the fish inhabiting them could spawn and not be over harvested. The same practice was applied by the Skolts to all water bodies in the Suõ'nn'jel area.

Individual lakes were under Indigenous governance and conservation mechanisms as well. Scholars (ibid. 2011) describe how family fishing areas were strictly observed. As a matter of principle, each Skolt family would have at least one productive lake under their control. For example, on lower Lake Äkkjäu'rr (Akka), the Skolts had a quota of three fish per day per family.

The Indigenous systems of governance and harvest have been changing throughout the past four hundred years in the Eurasian North. Colonisation and the imposition of nation-state rule over Indigenous territories and resources have caused great changes and inflicted much damage. Adaptation mechanisms have been successful in some regions, and in others, e.g. the Skolt inhabited territory of Suõ'nn'jel, forced relocations and territory loss have caused almost irreparable damages to both the lands and water bodies and to the people as well. But even today subsistence fishing is still one of the key place-based knowledge repositories. Especially subsistence ice fishing across the Fennoscandian North and into Siberia is for many families a crucial source of food, culture and tradition. In terms of ecosystem biodiversity, Indigenous subsistence fishing is also a key monitoring system for scientists interested in the health of these water bodies.

In Suõ'nn'jelsijdd (Suonikylä) women played a very active role in seining on the lakes. Each lake would have seining harvest site place names, for example Lake Källjäu'rr (Kallajavr) would have "hundreds" of sites and Lake Kuotsjavr only ten sites. The Skolts have as well used seining during winter up until Christmas.

The Kildin Sámi fished for salmon with *"vahtuu/ootto"* seine on the Kola Fjord. The other end of the seine was attached to the shoreline and required continuous observation when the salmon would come to the seine. Great skill was required to be able to spot, even in the midst of heavy wind, the ripples on the water that marked the arrival of the salmon into the seine. Usually salmon weighing 10–25 kg were harvested.

The Paaccjokk Skolts had a dozen apaja seining catch sites along the ocean coast. These sites were called *"laapp"* in Skolt. They rotated the sites between families, and this cycle was called *"pirräs"*. The cycle lasted twelve years, during which each family would fish in one spot in a given summer. At the end of the cycle, all the catch sites would be redistributed by of casting lots, allowing each family the same chance in the distribution of sites and cycles. Seining was the main method of catching.

In Suõ'nn'jelsijdd territory on the Kolgmasjoki River, trout was harvested from August to October with a fish weir. Whitefish was also harvested through this method. Njuõttjäu'rr and Suõ'nn'jel *siidas* had a common fishing weir since the 1500s

at Patunankoski rapids on the Tuållâm (Tuuloma) River. Salmon was distributed to the families of the community. Salmon was used as well in the payment of taxes to the monasteries. Storå estimates that up to 65–80,000 kg of fish would be caught on this weir. All of this was destroyed when in 1935–38 the Soviet Union constructed a power dam on Kallipoga Rapids. Skolts have fished for salmon using a weir on the Tuållâm (Tuuloma) River as indicated in documents from 1574 and 1657. According to the official Russian land register from 1574, the Tuållâm (Tuuloma) River rapids have been owned by both the Nuortijärvi and Suonikylä Skolts. In 1920, they lost their ownership of this stretch in the Tartu Peace Treaty of 1920.

There was a system of self-regulation, for example at Ponoi, to avoid over fishing autumn salmon, similar to the Skolt system. In October the Kola Sámi would begin ice seining at their autumn sites. This ended in November when the trip to the winter village was made. At the winter village, people would fish for whitefish, pike and burbot with nets under the ice.

Sergejeff (in ibid. 2011) discusses the Peäccam (Petsamo) Skolts' small-scale salmon fishery during the 1920s and 1930s in Ki'ǩǩernjargg (Kalastajasaarento) on the Barents coast. In the spring members of this Skolt Nation would start to fish for Atlantic salmon with harv or large-meshed sea nets. The main base for fishing operations was in Jierni on the Peäccam Fjord. According to Sergejeff the Peäccam Skolts had over ten productive fisheries along the fjord in the times when Russians controlled the territory. Each family would occupy one spot. People would live in turf huts along the coast. The fishing spots would be determined through a "lottery" system every three to five years so that different families would have different spots. This fishery ended in 1942 when Darmidon Jefremov was the last Skolt to fish there using the *harv* nets (Ibid.).

The establishment of kolkhozy in the 1930s destroyed the ownership of lakes and discouraged traditional Sámi fishing. The immense impacts of the Soviet system naturally transformed Eastern Sámi fishing as well. The command economy provides some records of fishing since 1917. The 1927 statistics report that in Kola half of the freshwater catch was whitefish, 12% perch and 9% pike. The lakes were owned by families and divided between people. During the early Soviet period between 1917 and the purges of the 1930s, Indigenous fishing systems and the newly established Soviet structures co-existed.

In Jokanga the *siida* owned the lakes and sold the rights to fish on a lake for one year at a time. The money generated was used to support the *siida* and take care of community elders. Seine nets were still used by the *siidas* in the 1930s. They were used in winter seining between two to three families in commercial fishing.

Volkov (ibid.) provides a rare view into the fishing in the 1800s and early Soviet period. He mentions that the Kildin Sámi had a similar lake fishing system to the Skolts. They fished on lakes Chudzjavr, Akkjavr, Kontsesjavr, Sivnjavr, Luvnjavr, Fadeev's javr, Unjavr, Korgjavr, Ovdlumbal, Paldos Lumbal, Chorrjavr, Leipjavr, Elchjavr and Chevchesjavr in 1877. Volkov writes that "inside the settlements the fishing areas like the hunting territories were shared between families. The unit of measurement was called *"kuddas"* in Notozero Sámi". A half-unit was *pial-kuddas.* A salmon-share was called "esse" among the Jokanga Sámi.

The practice of *kuddas* is worth investigating. Volkov writes that this area consisted of two equal parts. The head of each family could determine the use of his half of the territory. Another part was held in reserve. When the son of the family grew up, the reserve was lost and given to the son. Father and son could still fish together in the same lake system though.

Volkov spoke to the Sámi elders in Kildin, Notozero and Semiostrov areas about this system. He mentions that the community provided the *kuddas* places to the families. If somebody passed away, the territory would become vacant for re-allocation. *Kuddas* included fishing in lakes and streams. In salmon fishing powerful families were given territory in exchange for catch.

Traditional fishing techniques according to Volkov included a communal seine, *nukht.* The size of the seine could be from 213,40 metres to 426,80 metres long and 2-3 metres tall. In one household there usually would be two seines. *Zakol ("zabor") fishtraps were used from earlier times as dams in the streams for spawning fish*. Saim 'nets' were popular with the yarn purchased in Kola town or Ponoi. Nets were boiled in alder bark to make them durable and less visible. Fish spear and lures were also among the tools used.



*An old wolverine trap on lake Harrijärvi.*

### 3.2. Indigenous Management, Problems and Solutions in Modern Times

As the Russian history of Indigenous peoples in the region, such as the Eastern Sámi, is explained in detail elsewhere (Mustonen and Mustonen 2011), the aspects of Indigenous governance in modern times focus mostly to Norway and Finland. Main reason for this choice of focus is that the Soviet times did not allow much local participation in resource governance inside the command-and-control society. Nevertheless, simultaneously the aspects of a closed society *preserved* many knowledges of local peoples and practices better than in the "West". However, such an assessment and analysis of comparisons is beyond this document.

Traditionally the areas of the Neiden watershed have been governed by the Njauddâm Skolt Sámi siida. However, these people to a great extent assimilated by 1900s to the surrounding Finns and Norwegians due to a number of assimilative practices in those countries. Prior to 1940s the amount of net fishery on the Neiden river was low. The watershed was used at this time by some North and Inari Sámi – inter-tribal conflicts remained low when the Skolts resettled here, even though some reindeer disputes emerged (Aikio 2013).

It was in 1940s after the re-settlement of the Suonikylä Skolts to Sevettijärvi that the subsistence economy regarding Atlantic salmon really began. Meanwhile the Kvens, or descendants of the Finnish-Karelian settlers on the Norwegian coast, continued the *käpälänuotta*[3] small seining on the Skoltfoss Rapids. From 1944 the nation-states and their conflicts in the area wrecked the capacities of Eastern Sámi

[3] Käpälänuotta is a special seine and a practice on the rapids, based on the way the Skolts perceived the bears to harvest salmon from the stream. Literally translated, it means "[bear] paw seine".

peoples to exercise their own kind of Indigenous governance regarding natural resources. But it did not mean the end of Sámi knowledge or actions regarding their lands. From 1944 to 2000s the Skolts have maintained some elements of their village governance body as well as projected their opinions regarding the Neiden fishery to state bodies in Norway and Finland.

These decisions reflect the Skolt Sámi governance that *continued inside the modernity of natural resources management*. Most visible of these is the system of fishing cabins along the Neiden River following family, clan and collective system, similar to the governance employed in Suonikylä (Hankesuunnitelma 2003). All in all in 2003 fifteen cabins existed. These processes constitute important building blocks for revitalisation of governance built on traditional knowledge and practices.

Natural resources management in the Neiden watershed is built on science-based expert knowledge and participatory measures of local and national stakeholders. The defining frame is the Finnish-Norwegian treaty that addresses the river. The treaty has been agreed on in the past in 1964, 1978 and in 1984 (Niemelä et al. 2001: 1, Länsman 2010: 13). In mid-2000s the financial framework for the Finnish side of all Skolt fisheries, not just Neiden, was around 60,000 € (MMM 2004). There is some economic value of salmon mainly for the Skolts in Finland.

Scientists studying the river had identified already in 1800s that there is a concern for the amount of fish going upstream in Neiden (Niemelä and Erkinaro 1999). Of note is that as these plans to construct a fish ladder to improve the situation started to emerge, the Skolts opposed this strongly (ibid. 1999: 1). The idea was to "improve" parts of the Skoltfossen with explosives. In 1940s the Norwegian government initiated a plan for hydroelectric development Gandvik, and diversion of river direction on river Kallojoki belonging in to the Neiden watershed (Niemelä et al 2001: 2, Länsman 2010). This would have impacts on the water flow of the main stream.

Eventually the lakes Garsjöen and Kjerringvatn were diverted to flow to the Varangerfjord (ibid.). This caused the watershed of Neiden to dimish by two percent. Due to these plans Norway expressed its willingness to improve the salmon capacity to bypass the Skoltfossen Rapids and improve possibilities of Finns and Skolts to harvest salmon upstream.

Scientists (Niemelä et al. 2001: 3) have raised concerns of the capacity of salmon to pass the Skoltfossen and argue that majority of the salmon stop at this place to wait, opening opportunities for increased harvest as the fish rest. This event is subject to the water flow in the river too.

First explosions on the Skoltfossen, in direct opposition of the local fisheries body, were carried out in 1956 (Länsman 2010: 13). In 1999 the government of Norway stated that these measures "failed completely" (Norway 1999). The Käpälä seining on the Norwegian side discontinued for five years due to the impacts from the explosion, but continued after conditions improved in 1961 (ibid. 1999: 2-3). Local people also in Neiden resisted the construction of the fish ladders to the southern side of the river. The ladder, originally conceived to be a three-step piece, was finished as a one-piece system in late 1967 (Länsman 2010: 13). Compensations from the 1956 were paid to the local fisheries body in Neiden.

Scientific monitoring seems to indicate the 1967 ladder is functioning. However majority of the salmon accessing the ladder are below three kilos. Larger fish tend to steer to the käpälä seine spot. The maintenance and time of opening of the gateway may also influence amounts of fish passing the ladder. In times of low water the fish may have trouble finding it (Niemelä 2013).

Niemelä and Erkinaro (1999) assessed the impacts of the Kallojoki developments. Mean flow amounts decreased around 1,6 cubic metres per second. They argue that impact to fisheries upstream is hard to assess due to low number of nets before 1940s. Then by mid-1970s the net fishery had become more effective, but there is no scientific indication of the Kallojoki river development having impacts to the amounts caught. Niemelä and Erkinaro (1999) note the concern local people have had regarding this issue and impact.

1967 the fish ladder had been thus constructed. Its impacts were surveyed for the following forty years. Tuunainen (1999) identified that mostly small, one to six kilogram salmon used this ladder even though Niemelä (2013) has argued recently for the presence of larger fish, depending on the flow. Scientists argued that there is "not enough" information about the behaviour of salmon as it comes up the river (ibid. 1999). On the other hand it has been determined that bigger salmon can use rapids as before (Norway 1999, see also Niemelä 2013). Closure and limitations for net fishery was raised as a management option at the time.

In 1999 Finland proposed that "local peoples knowledge" should be a key source of information regarding the functioning of the ladder (UM 1999: 6). Orell (2012: 16) says that the ladder is an important aid for the salmon in their migrations. Scientists are monitoring the salmon migration at the ladder using video cameras and new technologies (ibid.)

In 1973 the Finnish state called together a Committee on the Skolt Affairs (kolttatoimikunta). It released its report in 1973 (Kolttatoimikunta 1973: 1). In this document, far ranging reforms and policies were proposed to the lives of the Skolts – including fisheries. The report states that the relationship between the Skolts and Finnish state is based on exclusive rights of a use of forests, reindeer herding, fishing and hunting. "These rights were recognized and agreed on by the Finnish state when the Petsamo region was joined with Finland in 1920" (Kolttatoimikunta 1973: 1). So juridically, in 1973, the state of Finland re-confirmed the Indigenous rights to land use the Skolts have. This recognition included the understanding and acceptance of family- and clan-based uses of the lands and waters. Here the focus is only on fisheries. The land allocations, hunting, herding and other land uses require their own analysis in the future.

More comprehensive views and policies were discussed in the post-WW2 times. The 1973 report documented that during the re-location of 1940s the state purchased twenty seines and 1500 nets for the Skolts to support their fishery (ibid. 1973: 6). Within the Skolt legislation there are specific rights to:

- establish network of fishing cabins and storage areas of fish.
- establish boat harbours and drying racks for fishing nets.

(Kolttatoimikunta 1973: 12).

The report identifies that due to the remoteness of the Sevettijärvi and Neiden areas, the subsistence and "wilderness"-based economies of the Skolts have been preserved there the longest. Fishing is mentioned to consist of both main and supplementary economic activity for the Skolts in 1973 (Kolttatoimikunta 1973: 34). At the end of 1972 there were 1300 nets for ninety families in the region. 180 boats were used.

According to the state committee views, overall the losses of fishing capacities are derived from low amounts of fish, non-existent knowledge of fish stocking, poor condition of fishing equipment and the hydroelectric regulatory impacts in the Inari lake watershed (Kolttatoimikunta 1973: 34).

Most importantly, in early 1970s the different zonings for water areas had not been completed in Lapland. This allowed some discussion on *how* and to *what extent* the Skolt rights to land and water uses could be implemented. It is very relevant, from the viewpoint of investigating how the Skolts exercised their rights in modern times after 1944, to look more closely to their demands in the context of the 1973 report:

- The committee identifies, that as the zoning has not been completed in Inari, Enontekiö and Utsjoki municipalities, land owners have been able to conduct "all kinds of fishery" without control. The same situation has been with those people engaged in reindeer husbandry. In effect, the time from 1944-1973 has been therefore a *temporal space* where the Skolts to some extent have been able to influence their own fishery and uses of the land in the new context of Neiden area.
- However the report identifies (Kolttatoimikunta 1973: 35) that while Skolts have had in theory the capacity to fish in all water bodies of their settlement area, the fishing pressures from the other residents of Inari municipality have caused a situation where there is not enough fish for the Skolts.
- Therefore, in 1973, the Skolts made the proposal to the state that a zone of exclusive Skolt fishery would be established, inside which only they could fish (Kolttatoimikunta 1973: 35).
- The state responded to this proposal by saying that: "such an arrangement is not yet possible, as the zoning of water areas has not been completed and there is resistance from the other local fishermen, at this time." (Kolttatoimikunta 1973: 35, 43, italics by the author). Committee identified that it does not possess the sole rights for this kind of a decision, but *when the zoning proceeds*, the Skolt demands should be taken *into a consideration*. More precisely: "If the Skolts will not receive enough waters for their fishery in the zoning, then the state could provide, from

the territories it will receive as a result of the zoning process, areas for the exclusive use of the Skolts" (ibid.). Effective management, training and restocking programmes should be targeted to such areas if this actualizes.

- *In the mean time while the zoning is on-going*, the Committee report suggests, an exclusive use of waters for the Skolts should be investigated to some water bodies in the settlement area, by using compensatory mechanisms to pay funds to other fishermen to allow the Skolts their rights of harvest (ibid. 35,43).
- Lastly the possibility of renting a harbour and a fishing rights to the Skolts from the Norwegian side of the border should be explored (Kolttatoimikunta 1973: 36.)

The Committee report is an important document of different ways of organising Skolt rights within the nation-state of Finland in the post-war period. More importantly so, the Skolts, represented by Matti Sverloff in the committee, made consistent proposals reflective of their own Indigenous governance and harvesting within the system. It seems the Skolts preferred their fisheries-based system even in the new conditions of post-1944 settlement areas over reindeer herding.

How did the state respond to the problem identified in 1973 as a "lack of stockings"? With a strong stocking campaign.

Niemelä et al. (2001: 5) identify that during the 1970s a large governmental fish stocking programme was initiated in the Sevettijärvi and Neiden areas. This caused fish diseases and impacts to the quality and sizes of fish, and eventually in the end of 1980s all stocking was forbidden to the Neiden watershed. In 1980s the stockings included river Ivalojoki whitefish that was introduced to several lakes in the region as well as different stocks of char (ibid.). In the 2010s seining was done on lake Sevettijärvi to remove large whitefish populations diminished in size (Snowchange Sevettijärvi Oral History Tape 1-2012).

Still in 1990s the state company Metsähallitus conducted stockings of grayling and whitefish to the lakes Sevettijärvi and Kirakkajärvi using roe from the Neiden watershed (Niemelä et al. 2001). Small additional stockings of char have been conducted within the watershed.

Salmon stocking has taken place:

- in 1984 on the river Silisjoki with 50000 juveniles.
- In 1985 on the river Silisjoki with 3000 juveniles.
- In 1984 in the lake Sevettijärvi and attached lake which have a connection to the Näätämöjoki river.
- On the Norwegian side records indicate salmon stockings on 1960s and 1970s, for example in 1965 40000 fish, mostly derived rom the roe of the fish from the käpälä-seine and fjord fisheries (ibid.)

In 1990s during the negotiations for the management improvements between Finland and Norway regarding Neiden Finland identified the salmon fish farms as a source of concern for the wild salmon stocks (UM 1998). Negotiations for the renewal of this "salmon treaty" were launched in May 1998 when Finland issued a statement of concern to Norway for the Neiden watershed fisheries (ibid. 1998a).

In October 1998 the Ministry of Foreign Affairs (UM 1998b: 2-4) documented various grievances of local people, including the Skolts, in preparation for the negotiations with Norway in 1999. Several prominent Skolts from Sevettijärvi expressed their opinions in this hearing. These key issues included, that:

- income should be guaranteed based on the fish caught on Neiden.
- Target should be that the salmon will expand it spawning territories on the upper part of the river.
- Prevention of salmon parasites is very important.
- Question should be explored whether disinfected roe could be taken from lake Inari to river Neiden.
- Boats arriving from other watersheds need to be disinfected.
- Float planes may also provide a problem.
- Negotiations regarding the river and its management should involve the local people, especially on issues to do with restrictions (on net fishery, season or number of nets).
- On the Finnish side representatives of both villages, Sevettijärvi and Näätämö should be included as well as the local business community (UM 1998b).



In the negotiations in Oslo in late October 1998 between Norway and Finland, again the Skolts made the following observations and recommendations (UM 1998c):

- On the Finnish side of Neiden the catches are very low and fish are small despite the fact that spawning territories reside here.
- Given the special legislation of Skolts regarding Neiden it is more important tool than fishery laws of the river. Spawning sites and their production should be maximized.
- Net fishery on the Finnish side should be regulated and reduced too, there is a need to discuss this option. Also the stocking closure on the watershed puts more fishing pressure towards the river.

As the negotiations proceeded in 1999 Finland raised further concerns for the increased fish farming in the fjord close to Neiden and asked for its closure (UM 1999: 3, 6). Norway on the other hand identified the impacts from seals and mergansers to the salmon stocks on the river (UM 1999). Finland proposed that a "problem-based approach" should be adopted regarding the watershed as opposed to regulatory framework that was important to Norway. Finland also stressed the rights of the local people as being important in the region, guaranteed in international treaties and the constitution of Finland. To certain degree the state of Norway agreed, saying in 1999 that "close cooperation of local and border region populations is very important" (Norway 1999).

As the negotiations wound towards their end in 1999, the Sámi Parliament stressed the need to pay special attention to Neiden (UM 1999b). Protective zones for Neiden were created and no fish farms would be in these regions.

In early 2000s different community reports (Jefremoff 2005: 27) identified subsistence fisheries to be very relevant (over 70% of the respondents to the 2005 inquiry) to all Skolts living in the Neiden area. In 2003 a proposal was made for a new project emphasizing the importance of Neiden watershed to the Skolts and development of the watershed (Hankesuunnitelma 2003). It emphasized the importance of cultural fishery to Skolts as opposed to other Sámi groups historically. This plan, reflective of local concerns, identified four problems:

**a.** Some tourist fishing spots become overcrowded during the peak of the season and conflicts exist between the net fishery and lure / fly-fishing.

**b.** Grayling stocks have been impacted especially on Lower Neiden.

**c.** Many tourist groups occupying same spots for weeks cause environmental degradation along the river.

**d.** There is a potential of spreading the salmon parasite *gyrodactylus salaris* as the fishing equipment comes outside the watershed (ibid. 2003).

In mid-2000s different state authorities have provided general development recommendations to the watershed and tourism (Länsman et al. 2005). Specifically for the Skolts, in 2005 Jefremoff (2005: 70-71) published recommendations of development of fisheries in the Sevettijärvi – Neiden areas. They included:

- The role of subsistence fishery is significant for the Skolts and the need for new fishing cabins is relevant and should be guaranteed. Cabins allow the expansion of the fishery to include additional revenue and incomes.
- Rights to build a cabin should be guaranteed even though no financial compensations would be received for the actual construction work.[4]

This section has reviewed different cases where the Skolts have exerted their views and ideas of a fishery management during times of modernity and strong state control over natural resources. In summary while each development has been assessed separately, consistency built on the strong relationship the Skolts have with their water bodies through these decades emerges.

[4] Reviews of past grievances and suggestions has been summarized into the new recommendations of collaborative management in this report. However, not all specific issues have been named, so future negotiations need to review the 1944-2012 concerns in detail.

*Filip Jefremoff fishing on Näätämö river.*

### 3.3. Context For New Solutions for the 2010s

For a number of years representatives of the Eastern Sámi peoples (Mustonen and Mustonen 2011, Sevettijärvi Declaration 2011) in many communities have felt that their reality and voices are not adequately heard in management of natural resources. At the same time, the international participants of the Indig enous Peoples Climate Change Assessment (see Appendix 1) recognized that "from our diverse but united perspectives we conclude that the global climate system is in a state of deepening crisis." Scientific and traditional Indigenous knowledge observations confirm this to be true for the region (Arctic Council 2005, Mustonen and Mustonen 2011).

The Atlantic salmon management structure flows from the bilateral agreements between Finland and Norway that date back to 1873. In the 2000s, the states of Finland and Norway have also begun a dialogue, with varying degrees of success, with the different Sámi nations on questions of cultural, linguistic and land rights. This discussion is most advanced in Norway, but emerging also in Finland (Mustonen 2012a). In 1973 Finland re-confirmed the responsibilities the state inherited from Russia towards the recognition of rights of the Skolts (Kolttatoimikunta 1973). Simultaneously the Sámi have embraced the new international legal tools and frameworks, such as the Convention on Biological Diversity Article 8j and various Arctic initiatives in recognizing their knowledge, rights and voices.

However the discussions on the ground and with state agencies on natural resources management in this evolving new context have left many locals, such as Finns, Komi, Kven, Russians and others feeling they have been excluded from the process. Old histories (Mustonen et al. 2010) are being forgotten and new conflicts and differences emerge.

Russia, as always, is in a state of flux. Decisions in Autumn 2012 to close the Russian Association of Indigenous Peoples – RAIPON, has severe implications for the national minorities and Indigenous peoples in the region even though this closure may prove to be temporary. Yet we have included voices and possibilities regarding the Ponoi in the context of regional and local laws on local peoples capacity to be included in the reformative management of natural resources as well as addressing the equity issues emerging from the watershed.

International scholarship on fisheries, while not a target of this inquiry, such as Berkes and Carlsson (2005) and Berkes (2012) is aware of global change, and regionally the various system changes that it instigates. Yet the Barents region with its Atlantic salmon stocks is under great pressure from development, transportation, aforementioned climatic change and emergence of new regimes of and for governance.

We wish to draw all of these various developments into a cohesive plan for discussion. We wish to propose bold, new and innovative solutions that tackle both the more equitable governance structure regarding these rivers and fisheries and at the same time address very local and practical steps to improve the situation on the ground. In this report we wish not to lay blame on past grievances or problems. The space to do that is elsewhere. The purpose of this plan is to seek new solutions in this time of change.

#### 3.3.1. International Concerns in the Neiden and Ponoi Cases

During the last part of the project, from 2011 to 2013 we followed international discussions regarding the North Atlantic salmon stocks. The Icelandic-based non-governmental organization *North Atlantic Salmon Fund* –NASF[5] provided materials and statements on the salmon politics during this period.

Mr. Vigfússon made the position of the organization known in a letter to the Norwegian Standing Committee on Energy and the Environment in late 2011:

"Norway is now the only remaining country around the North Atlantic with a significant mixed stock sea fishery for Atlantic salmon. The fishing is especially comprehensive in Finnmark, and many stocks are harvested to the extent that their spawning targets are not met. Several populations in the Tana river are on the brink of extinction. This net fishing is of no economic importance but is done out of old habits… Norway has failed to comply with international requirements. The Norwegian Government may be entitled to destroy its own wild salmon stocks if it so wishes and it certainly seems to be making a very efficient job of doing just that. But it must not destroy the stocks of Russia without the consent of the Russian Government. Far from consenting the Russians have sent letters of protest." (NASF 2011a).

Much of the criticism from NASF deals with the salmon harvest methods along the Finnmark coast. Especially the uses of bound nets [kilenot] and bend nets [krokgarn]. This is evident from a statement made 20th October 2011:

"The Norwegian nets used are to a large extent bend nets (Krogarn) despite the fact that this is a fishing method banned in most other places in the world" (NASF 2011b).

Secondly NASF has identified the amounts of spring salmon caught in Norwegian waters having impacts to the Kola stocks further east. In early 2012 in a letter NASF warned that:

"In 1994 we warned Norway that this was taking place and it might be inconsistent with international law. In the last few years, Mr. Andrej A Krainyi, Chairman of Russia´s Federal Agency for Fisheries, has complained about these netting operations. He has sent strongly-worded official letters to the Norwegian Government demanding an end to these illegal activities. The basis of these complaints is that these Norwegian nets are in violation of the UN Law of the Sea, art. 66. This article gives the country of origin (Russia in this case) the right to demand that operations like the Finnmark netting be stopped" (NASF 2012a).

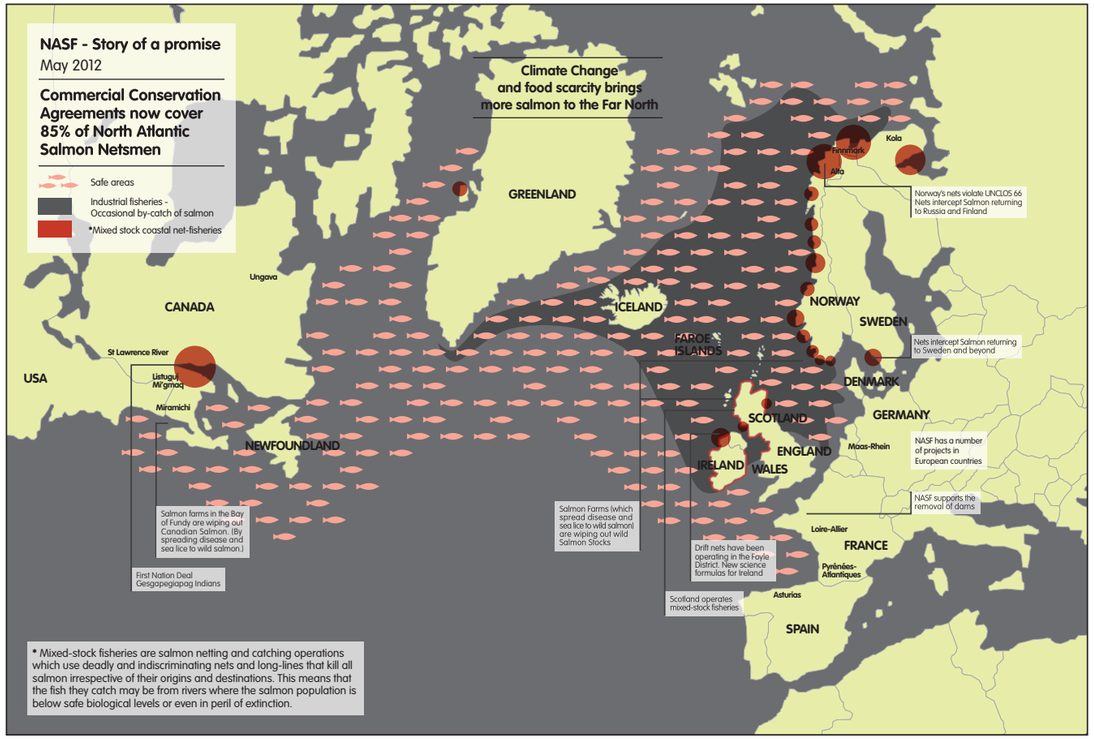
NASF based the impact on the fact that:

"These are salmon that would otherwise reach the Kola rivers to help feed the poverty-stricken rural communities that live there and try to sustain a vital tourist industry on which they rely." (NASF 2011).

The organization upped the ante in early 2012 with a direct accusation to Norway, asking Russia to help:

"Despite this it is not only clear that the Norwegian authorities intend to ignore these warnings but are proposing to increase these netting activities.

[5] led by the Icelandic businessman Orri Vigfússon.




Any increase is bound to raise the possibility that all or nearly all the Russian salmon that remain will be prevented from reaching the coast of the Kola region. I am also sorry to say that we understand that the PINRO organization in Murmansk has failed in their duty to offer protection for Russian salmon and report these illegal activities to the Russian Government" (NASF 2012b)

NASF engaged in a high-level dialogue to turn the salmon issue into a political inquiry between Norway and the Russian Federation in early 2013 (Barents Observer 2012). In a private letter, Vigfússon (2012) listed the possible framework for more strict management of salmon that "potentially the Russians will propose for the inclusion of the following restrictions in the 2013 Salmon Regulations in Norway". It could include:

1. Strict quotas for each net licence
2. Delay opening the netting season in all of Finnmark until 1 July, to allow MSW females of Russian origin to return their home water. In the Norwegian spring net fishery between 60 and 70% of the salmon are of Russian origin
3. Stop all netting east of the Tana fjord.
4. Stop all fishing with krokgarn (bendnets) in Finnmark.
5. Stop all salmon net fishing in Sør-Varanger municipality.
6. Kilenot (bagnets) to be the only form of netting that may be used.
7. Introduce new monitoring and policing measures.
8. Restrict fish farming in Finnmark area and set new and stronger environmental checks on fish farms.



Regarding the Neiden and Ponoi Atlantic salmon stocks, President of NASF Orri Vigfússon (2011) commented that:

*"When I visited the Tana/Neiden district 2-3 years ago, all the locals wanted to continue their kill but felt that all other rights holders and nations should stop. The salmon is an international resource and travels into the jurisdiction belonging to many stakeholders in many countries. Everyone says; I only take a little so I will continue but everyone else must stop. This does not work! We need to build up the basic biological stock quickly and start now. Everyone. At the same time we need to look into how we can help the local people earn more from the resource without killing the brood stock and this will quickly build up the resource. All my life I have been helping set up projects in rural areas, developing plans to help the locals earn more, build up and strengthen their lifestyles. What about the Skolts in the Neiden area; are they ready to adapt or do they simple want resources to do the same again? If so we may be wasting our time. On the Ponoi river, sport fishermen stopped killing salmon more than twenty years ago. They have sacrificed their right to kill the fish, take home and consume. This is their great contribution. They have also supported compensation schemes to preserve the salmon in the high seas and amongst natives in Greenland, Faroes etc. Thousands of seminars and meetings have already taken place about all these biological and socio-economic issues. Business leaders and civil servants, I am sure, will want to see solutions instead of yet another round of such massive deliberation."*

More specifically, NASF saw the steps regarding Neiden in the following way (Vigfússon 2012):

1. Reduced netting in the sea (buy-out schemes)
2. Reduced netting in the river
3. Reduced harvest by sport fishermen by introducing quotas and C&R.

In conclusion the actions of the NASF bring in a high-stake level to the salmon management and fisheries. The organization is aggressively challenging nation-states of the region, to certain degree with success (Barents Observer 2012), to re-negotiate and frame the plans for salmon. Secondly NASF uses international law to challenge Norwegian authorities (violations of article 66 of the Law of the Sea) on their decisions of methods of harvest.

More specifically for Neiden, NASF sees the answers in trying to address the whole chain of salmon ecosystems, from high seas and coasts to the river and sport fishery. Regarding Ponoi NASF uses the salmon tourism as a positive example of how local people can benefit from such activities. In this particular topic the empirical evidence in the project differs from the NASF statements, as the people along the Ponoi watershed, both Russians, Komi and Sámi, identify the salmon tourism to be an equity issue to be tackled. It will be discussed in full below. For the purposes of management of Neiden and Ponoi stocks, without analyzing the political positions of NASF, the role of all-parts of the salmon chain approach to management that the organization pushes for is identical to what Berkes (2012) identifies as a need for wider management range of stocks.

### 3.3.2. Data, Actors and Methods

In the following sections B and C, the results from the project are discussed. Primary data for the collaborative management plan for Neiden and Ponoi was collected from 2011 to 2013 in a culturally appropriate series of events, processes and meetings. More precisely, for the Ponoi, this involved a series of workshops in Lovozero, Murmansk region in (February 2012, May 2012, September 2012), oral history documentation along the Ponoi watershed and adjacent marine communities (Krasnochelye, Kanevka and Sosnovka) and crosscutting scholarly analysis of meteorological, ecological and limnological data from the various scientific archives and organizations in the Murmansk region. Then the limnological data was analyzed further in Finland in 2012-2013 (Tossavainen 2013).

All in all over fiftyfive people were interviewed and oral histories collected. This was achieved with a coordinative work by Yevgenii Kirillov, a Sámi journalist located in Lovozero, who worked with the Murmansk Snowchange Coordinator Alexey Kanichev to accomplish the oral history documentation. The local "Houses of Culture" played an important role in collecting the local views from the communities. Additionally Sergey Philipchenko, locally-known journalist and co-researcher, travelled to the community of Krasnochelye in June-July 2012 to document more in-depth views on how the Ponoi and the salmon is changing. Once the fieldwork was over, interviews were conducted with the representatives of the regional administration in Murmansk and the salmon tourist companies. Archival materials regarding Sámi

knowledge and Ponoi were employed too.

For Neiden, series of workshops were conducted between 2011 and 2013. These involved primarily Skolt Sámi in Sevettijärvi village and local Kven and Norwegians in the village of Neiden. Additionally five Skolt fishermen spent the summer 2012 documenting Sámi knowledge of Neiden, toponymic place names, cosmologies, catch and weather statistics, spawning sites and other relevant Indigenous knowledge materials. They also took photos of the important sites and events of the season to provide *optic histories of the river*. Participant observation was used by the Snowchange Co-op and United Nations researchers involved in the work. The results have been summarized below. Full materials are at the Snowchange Co-op oral history archives. Similarly to Ponoi, main limnological data was reviewed from public sources and analyzed into Tossavainen (2013).

*Satu Moshnikoff, an Elder in Sevettijärvi and Tero Mustonen (right) discuss the weather changes in the community in September 2012.*



# B. Ponoi River and Watershed

**Tero Mustonen and Alexey Kanichev**

This chapter provides an overview of the Ponoi river watershed. Ecological and climatic data has been obtained from public sources at the Murmansk Science Library, as well as through interviews and thematic analysis from public sources in the region. The community socio-ecological analysis is based on a set of 55 interviews conducted in the summer 2012 and oral history archival materials.

## 1. Location and Bio-cultural Information of Watershed

Ponoi is the largest river of the Kola Peninsula and its total length is about 425 kilometers. It is one of the four rivers in Murmansk Region that are over two hundred kilometers long[6]. (Committee for Industrial Development, Ecology and Nature Management of Murmansk Region 2012: 32).

The average annual flow makes up 175 $m^3/s$. Watershed territory is around 15467 $km^2$ (Prusov 2004).[7] The Ponoi river begins on the western branches of Keiv and flows into the White Sea. The river basin occupies the central part of the eastern half of the Kola Peninsula. More than one fifth of the Ponoi basin is covered by mixed forest, where coniferous trees dominate.

The Ponoi basin may be divided into three parts:

1. Upstream region (211 kilometers from river mouth) consisting mostly of wetland, covered by sparse wood.
2. Middle course of the river (from 211 to hundred kilometers from the mouth) where river flows into stone plateau and forms a valley.
3. Downstream, where river cuts into the crystalline rocks it forms canyons. For about seventy-five kilometers the Ponoi flows in the tundra zone.

The total difference in height of the Ponoi from river springs to mouth makes up 292 metres; 40% of this drop is located in the downstream region, where eight rapids are situated. “Bolshoi Brevennyi”, large rapids are located twenty-four kilometers away from the mouth. In a distance of two kilometers water falls down here for eleven metres.

Width of the Ponoi in the lower reaches at certain places is more than two hundred metres. Ponoi is considered to be the most potential river for hydroelectric development on the Kola Peninsula. The lower Ponoi which is full of rapids is especially valuable in this context.

There are more than 2400 small rivers and tributaries all over the Ponoi watershed which vary in size. Their total length makes up more than 8000 kilometers. The largest tributary of the Ponoi is the Purnach river. It flows into the Ponoi from the southern bank at the distance of 75,7 kilometers from river mouth. The length of the Purnach is 136 kilometers. Other large tributaries are Melnichnyi, Loperyanka, Tomba, Kolmak, Acheryok, Yokonga, Lebyajyi, Sukhaya, Kinemur, Krivaya, Eljok, Kuksha, Elnjok, Kojnjok and Pessarjok. These toponyms reflect a rich history of Eastern Sámi language and presence along the watershed as a part of their seasonal rounds.

Water quality of Ponoi is controlled and tested regularly by the Murmansk Department of the Federal Hydrometeorological Service[8]. Measurements are carried out six to twelve times a year on the fifty-five rivers, lakes and tributaries of the Murmansk region.

Administrationally Ponoi is considered to be a “water object”[9] situated on the territory of the Russian Federation and the Murmansk region. Key legislative acts regarding it are approved by the Government of the Russian Federation (Moscow) and the Government of the Murmansk region.

Government of the Russian Federation passes laws at the federal level. They affect and determine

[6] Ponoi is 425,7 km, Varguza is 262, Strel’na is 213 and Iokan’ga is 202,7 km.

[7] Ponoi is therefore the third largest watershed on the Kola Peninsula after Kovda river [26000 $km^2$] and Tuuloma river [18000 $km^2$].

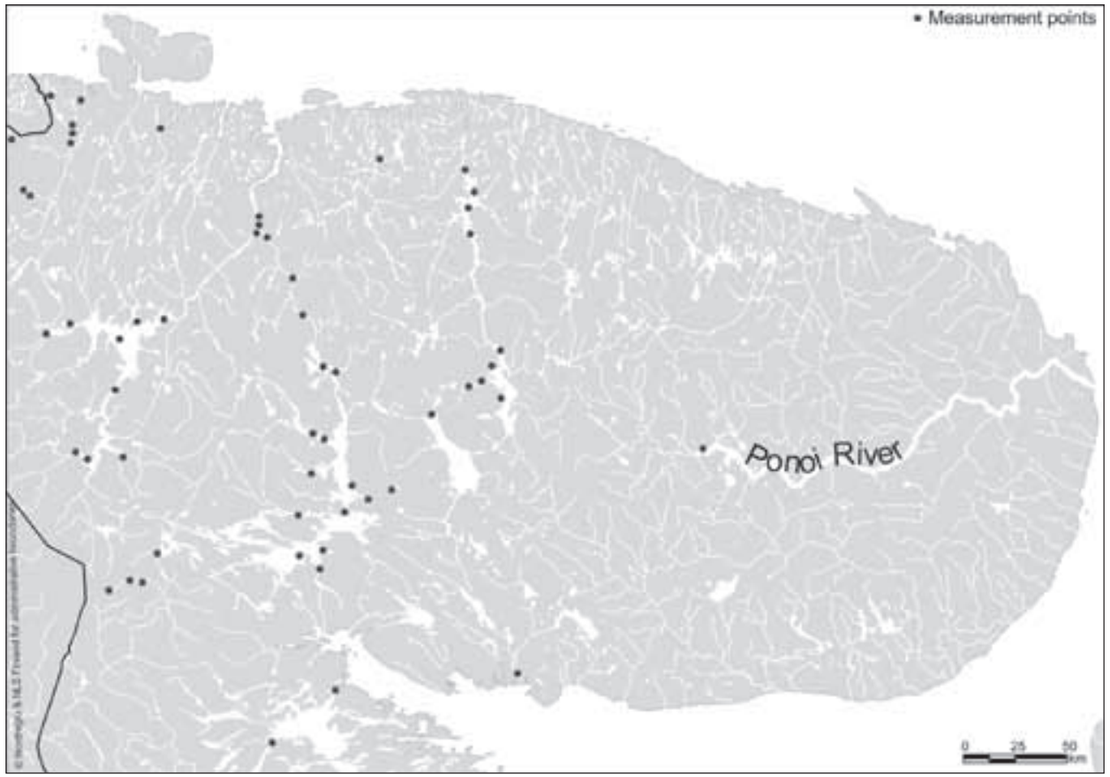
[8] ROSGIDROMET.

[9] A Russian legal term.

the legal context for all the subjects of the Russian Federation (of which the Murmansk region is a subject). Simultaneously, subjects can pass their own laws at regional level in order to interpret an implementation of federal laws.

Population-wise the residents of the Ponoi watershed are predominantly ethnically Komi, descendants of various Sámi peoples, Ponor and Russian. There are a few individuals with Nenets heritage. Fryer and Lehtinen (2013: 11) identify the legal implications of the regional-federal level rights and identity politics. According to them, the Sámi were awarded the federal and international status of "indigenous peoples" and rights associated with them. The Provincial Charter of 1997 in Murmansk region re-affirmed this (ibid. 10). However Fryer and Lehtinen (2013) argue that the ethnic composition of many villages on the peninsula is mixed and the municipality of Lovozero lobbied to have rights recognized also for the Komi who feel the Kola Peninsula to be their "little homeland" (ibid. 2013: 11).

The lobbying produced regional results, also recognizing lifestyle of reindeer herding as a status for subsistence rights. However, in the 2000s some laws on the federal level have allowed the Sámi to establish the "kin-based enterprises" or obschinas, as opposed to Komi, a fact that continues to be an issue also along the Ponoi (Fryer and Lehtinen 2013). In recent years the "Pomor" people, or descendants of the Russian sea-faring traders who occupied the coastal areas of Murmansk, have reasserted their identities (see more on Komi and Pomor identities at Shabayev and Sharapov 2011).




*Points of overall observation for a water quality around the Murmansk region.*



## 1.1. Ecological and Climate Data

The ecological situation of Ponoi, given it is not often reviewed in English, is presented first through summaries from Russian data (Kanichev 2012a, 2012c). Then a cross-reference analysis is given from international experts (Tossavainen 2013).

According to the reports from ROSGIDROMET it is typical of Ponoi to have high concentrations of Iron-Fe, Copper-Cu and organic substances. Exceedingly high concentrations of Fe are observed during the periods of winter and summer low water, when catchment comes primarily from groundwater. During the period of spring melt higher than normal accumulation of organic substances can be observed. Committee for Industrial Development, Ecology and Nature Management of Murmansk Region (2012: 32) confirms this and states also that Ponoi is characterized by high levels of iron, copper and organic substances. All samples collected in 2011 showed the levels of iron and manganese above legally required maximum.

Kanichev (2012a, 2012c) reviewed a large body of materials from state and regional archives and published scientific sources regarding main trends and aspects of water quality on the Ponoi watershed. Further limnological analysis was done by Tossavainen (2013).

The first information concerning the chemical compound of the river-waters of the Kola Peninsula refers to period of 1938-1940. During Second World War the hydro-chemical observations were discontinued. They resumed only in 1945 on the Kola River (Kanichev 2012a). The Kola Peninsula has three seas surrounding it and about half of coast adjoins with non-freezing Barents Sea. The forming of coastal area flow is influenced by the proximity of these seas. Considering the geographical position and climate of the Kola Peninsula it may be supposed that atmospheric conditions play a dominant role in the forming of hydro-chemical regimes of river waters (Kanichev 2012a: 1-2).

Southern seaside of the Kola Peninsula is affected to some degree by the White Sea which freezes during wintertime. As a result, relational amounts of $SO_4$/Cl in surface-slope waters are a little higher (0.40 – 1.00) than on the north side of the Peninsula (ibid.).

Hardness of water on the Kola Peninsula ranges from 0.03 to 1.20 mg-eq, surface waters refer to category of very soft waters. The least hardness (from 0.09 to 0.38 mg-eq/l) is observed in the river-water during spring flooding peak. During low water level period water hardness increases from 0.14-1.20 mg-eq/l during wintertime to 0.12-0.86 mg-eq/l in summertime. Water hardness is small during the whole year in the central parts of the Peninsula (0.03-0.23 mg-eq/l) (ibid.).

### 1.1.1. Ecological situation on the Ponoi River During the Period 1976-2011

Specific feature of the Ponoi is the presence of metal ions such as copper, ferrum-iron, manganese and phenols in its unpolluted river-water. Higher concentrations of these metals are observed during low water period, when river is fed by underground waters.

*A view of the Ponoi at Krasnochelye community.*

**Maximum regional allowable concentrations of elements in the water objects of fishery-water uses in Murmansk region, Russia for 2010, based on Kanichev 2012a,c**

| № | Name of substance | Limiting indicator of harmfulness | MAC, mg/l |
|---|---|---|---|
| 1 | Vanadium, V | toxicological | 0,001 |
| 2 | Hexachloran | toxicological | * |
| 3 | $NH_3$ | toxicological | 0,05 |
| 4 | $NH_4^+$ | toxicological | 0,5 |
| 5 | $NO_3^-$ | toxicological | 40,0 |
| 6 | $NO_2^-$ | toxicological | 0,08 |
| 7 | Fe | toxicological | 0,1 |
| 8 | Mg | sanitary-toxicological | 40,0 |
| 9 | $Na^+$ | sanitary-toxicological | 120,0 |
| 10 | Ni | toxicological | 0,01 |
| 11 | Cu | toxicological | 0,001 |
| 12 | Co | toxicological | 0,01 |
| 13 | Oil products | toxicological | 0,05 |
| 14 | Zn | toxicological | 0,01 |
| 15 | $F^-$ | toxicological | 0,05 |
| 16 | $SO_4^{2-}$ | sanitary-toxicological | 100,0 |
| 17 | $Cl^-$ | sanitary-toxicological | 300,0 |
| 18 | Hg | toxicological | * |

| | |
|---|---|
| * | It means that any amount of harmful substance is prohibited to dur |
| | It means "No data" |

According to Kanichev (2012a) the following annual observations have been made along the river between 1976-2011:

- 1976: According to observations near Ponoi village, the Ponoi river was polluted by suspended substances (213 mg/l) and ferrum (3.7 times the maximum permissible concentration, MPC).
- 1977: According to observations near Ponoi village, concentrations of ferrum makes up 2.3 MPC, higher concentrations of suspended substances are also observed (18 mg/l). According to observations near Krasnochelye village, the Ponoi was polluted by oil products (6.4 MPC) and ferrum (1.2 MPC).
- 1978: According to observations near Krasnochelye village there were higher concentrations of copper (8 MPC), zinc (1.6 MPC), phenol (up to 2 MPC).
- 1979: According to observations near Krasnochelye village, the Ponoi was polluted by oil products (13 MPC), phenols (11 MPC), zinc (2 MPC) and chloro-organic pesticides.



- 1980: According to observations near Krasnochelye village, the Ponoi was polluted by oil products (7 MPC), nickel (>7 MPC), phenols (2 MPC). Higher concentrations of zinc have been also observed.
- 1981: According to observations near Krasnochelye village, the Ponoi was polluted by oil products (2 MPC). Moreover, chloro-organic pesticides were observed.
- 1982: Water quality on the Ponoi river changed to worse concerning concentrations of oil products, phenols and heavy metals. Concentration of oil products increased from 0.10 mg/l to 0.18 mg/l (3.6 MPC), phenols – from 0.009 mg/l to 0.019 mg/l. Concentrations of ferrum, copper, nickel, cobalt exceeded 2-4 times MPC. In addition to this, chloro-organic pesticides have been found.
- 1983: According to observations near Krasnochelye village, the Ponoi river was polluted by oil products as before (0.27 mg/l).
- Data between 1983-1996 could not been obtained for this study.
- 1997: River-water was considered to be with low levels of mineralisation with stable oxygen content. Higher concentrations of phenols, ferrum and copper were observed; their concentrations exceeded 5, 4 and 2 times MPC respectively. According to one sample, concentration of manganese exceeded 3 times MPC. Concentration of suspended matters varied from 1 to 8 mg/l.
- 1998: The Ponoi was considered to be low mineralized with stable oxygenous content. Concentrations of ferrum, copper and phenols were higher than MPC; values were 14.6 MPC, 16 MPC, 9 MPC respectively. Some samples showed that there had been higher concentrations of nickel and oil products.
- 2000: Concentrations of ferrum, copper and manganese exceeded MPC in all samples. Some samples showed higher concentrations of zinc, nickel and mercury. Concentrations of ferrum varied from 2 to 8 MPC, and reached maximum value in March and August during low water period. The highest concentration of copper (8 MPC) has been observed in June, during flooding period. Higher concentrations of manganese have been observed during flooding period (May; June), during autumn-winter low water period (October). A factor of complexity pollution have increased this year and equaled 22%.
- 2002: Usually the Ponoi river is known for higher background concentration of metals. Concentrations of ferrum, copper and manganese exceeded MPC in all samples. Concentrations of ferrum are supposed to be stably higher with its peaks during winter and summer low water period when river is fed by underground waters, with high concentrations of ferrum. Concentrations of ferrum varied from 0.43 to 1.04 mg/l, that exceeded 4-10 times MPC. Concentration of manganese reached 4 MPC. Waters with high concentrations of copper entered the river during intensive snow melting; its concentrations varied from 1 to 6 mg/l. Concentrations of organic matter were not high. According to biochemical oxygen demand ($BOD_5$), concentration of organic matter didn't exceed MPC, but chemical oxygen demand (COD) exceeded MPC in three samples of 6. In May concentration of organic matters (according to COD) made up 26.7 mg/l. A factor of complexity pollution reached 16.6%
- 2004: Higher concentrations of metals have been observed on the Ponoi river.
- 2005: Higher background concentration of metals have been observed on the Ponoi river. Concentrations of ferrum, copper and manganese increase during winter and summer low water period, when river is fed by underground waters.
- 2006: Higher concentrations of ferrum, copper and organic substances are typical for the Ponoi river. The highest concentration of ferrum has been observed during winter and summer low water period, when river is fed by underground waters. Higher concentrations of organic substances have been observed during during spring freshet.
- 2007: Higher concentrations of ferrum and copper are typical for the Ponoi river; its concentrations varied from 1 to 2 MPC.
- 2008: Higher concentrations of ferrum, copper and organic substances are typical for the Ponoi river. Concentrations of ferrum and copper exceeded MPC in all samples.
- 2010: Higher concentrations of ferrum, copper and organic substances are typical for the Ponoi river. Concentrations of ferrum and copper exceeded MPC in all samples.
- 2011: Higher concentrations of ferrum, copper and organic substances are typical for the Ponoi river. Concentrations of ferrum and manganese exceeded MPC in all samples. (Kanichev 2012a: 5-7)








*These photos by Kihlman from the 1800s show different landscapes of the Ponoi watershed.*



In order to improve cross-referencing of water data both from domestic sources and from international experts a further statistical analysis was carried out in Finland in the winter 2012-2013 (Tossavainen 2013). Results have been summarized below:

**A.** 2002-2007 observations of levels of iron (300-1040 µg/l) are typical of a water-body in the forested taiga ecosystem. 1997-2000 levels are slightly higher (600-4380 µg/l). As the pH levels are above 5,5 there are no immediate impacts to fish from the higher levels of iron.

**B.** 2002-2007 observations of levels of copper (1-6 µg/l) are low. Usually median level of copper is around 10 µg/l. There is some inconsistency with the level of measurements for 1997-2000, which point to levels of 2-16 µg/l of copper. If the measurements are mg/l, then the water quality would be poor. Most likely the indicative unit is µg.

**C.** 1978-1998 phenol levels on Ponoi have been small (2-19 µg/l). Analytical methods need an international harmonization to make lasting conclusions.

**D.** Regarding mercury and nickel, there is a peak in 1980 and 1983 in these substances. Nickel was reported to be at 73 µg/l, exceeding international safe levels momentarily. As well the high peak of mercury in 1980 and 1983, 300 µg/l and 80 µg/l respectively, again exceed international safety levels.

**E.** Organic matter, causing eutrophication, was recorded to be 1-213 µg/l between 1976-2000. Further analysis is needed to harmonize sampling methods between Russia and Finland. Mainly the river health points to an oligotrophic situation. Some levels of phosphate phosphor were occasionally quite high at 97 µg/l.

**F.** Potassium permagnate levels between 1965-1970 were between 2-15,2 mg/l, but again further analysis is needed on and an international harmonization to make lasting conclusions.

**G.** Levels of Chloride (0-21,1 mg/l), Calcium (0,2-14,4 mg/l), Magnesium (0,1-5,8 mg/l) and Sulphate (0,8-10,3 mg/l) between 1965-1970 are within normal international perimeters. (Tossavainen 2013).

In conclusion from the international review of measurements, Tossavainen (2013) argues that:

**A.** The available statistics from Ponoi 1965-2012 are excellent in terms of a range of analysis, but the sampling phases start to be irregular at the beginning of 1980s. Sampling positions have been located at the villages of Krasnochelye, Kanevka and Ponoi (now a discontinued, abandoned settlement).

**B.** Based on the intensive sampling until 1983, the Ponoi river water quality was quite good with occasional peaks of iron levels. This is explained by natural conditions in the watershed and soils. As the pH levels have been above 5,5, there are no or little impacts to fish.

**C.** Between 1979-1983 the occasional records of high levels of oil, and extremely high levels of nickel and mercury stand out.

**D.** Some of the statistics derive from the Soviet times. Certain caution with the statistical materials need to be employed, but overall these are the main trends in the river. There are several scientific and limnological recommendations that can be derived from the materials. For example the residual amounts of oil, phenols and metals in the wider lake-like parts of Ponoi need to be explored. (Tossavainen 2013).

#### 1.1.1.1. Salmon and Other Fish of Ponoi

Prusov (2004) gives a throughout biological overview of the situation of Atlantic salmon stocks on Ponoi in addition to overview of the fishery. According to him (Prusov 2004:1): "The Ponoi river is one of the few salmon rivers of Europe, where there is still stable and genetically clean population of the Atlantic salmon (salmo salar) with groups of summer and autumn spawning which include tens thousand of specimens." Scientific and commercial fishery for the salmon was stopped around 1994 with the rise of the salmon tourism.

Commercial harvests had begun in the 1500s when the Russian Orthodox Church became involved in the region. Prusov (2004) provides an overview of the

commercial harvest:

- In the middle of 17th century 10000 – 37000 salmon have been caught in the river.
- In the end of 19th – beginning 20th Century 40000 – 60000 salmons have been caught in the river.
- During 1920 – 1960 catches varied very much, at average of sixty tons (18800 salmons).
- In 1960 there was the largest catch of salmon – 41830 individuals (108.6 tons).
- According to salmon's weight, maximal catch was in 1955 – 121.5 tons (28060 individuals).
- At the sea fishing grounds situated in the Ponoi fishing area, twenty tons of salmon have been caught annually. After applying fixed limit of catch (sixty tons) in 1987 for coastal salmon fishing on the White Sea, about 20% from the total catch have been caught in the river.
- In 1990s the salmon tourism took around 5000-10000 salmon on the river with increases in early 2000s up to 20000.

Prusov (2004: 3) identifies the ichtyofauna of the river to consist of:

- Atlantic salmon (salmo salar L.)
- Bulltrout (salmo trutta L.)
- Whitefish (coregonus albula L.)
- Cisco (coregonus lavaretus L.)
- Grayling (thymallus thymallus L.)
- Smelt (Osmerus eperlanus L.)
- Pike (esox lucius L.)
- Perch (perca fluviatilis L.)
- Roach (rutilus rutilus L.)
- Ide (leuciscus idus L.)
- Minnow (phoxinus phoxinus L.)
- Burbot (lota lota L.)
- Banstickle (gasterosteus aculeatus L.).

Additionally according to Prusov (2004: 3) "There is some amount of humpback salmon (l. oncorhynchus gorbuscha) which goes in the river for spawning. According to literature data, on the Ponoi may be also nelma (l. stenodus leucichthys) and char (l. salvelinus alpinus)."

Prusov (2004) identifies two distinct groups of Atlantic salmon that come to Ponoi. Summer group (16%) arrives in June-July and spawn the same Autumn. Second group (84%) of arriving fish spends the winter in the estuary or downstream, spends the summer on the river and spawns the following Autumn. Salmon moved both up- and downstream. The fish spends usually one to three years at sea before returning.

*Prusov (2004) provides the following table on the size and weight characteristics (± SD) of salmon producers on the Ponoi during 1981-2003.*

| Race | 1SW | | 2SW | |
|---|---|---|---|---|
| | Length, cm | Weigh, kg | Length, cm | Weight, kg |
| Autumn | 57.4 ± 4.43 | 2.3 ± 0.58 | 74.4 ± 6.23 | 5.2 ± 1.36 |
| Summer | 50.6 ± 3.70 | 1.5 ± 0.36 | 68.3 ± 5.11 | 3.7 ± 0.94 |

According to research results from Prusov (2004: 8-9) survival rate of fish in the catch-and-release method is up to 80-90%, with death rate depending on "water temperature, period of being in the water before the first catching, period of catching and its trapped position, place of hooking and type of damages. It was shown that salmon's survival rate after being caught and released reduces rapidly if water temperature exceeds 20 0C. Moreover, fish, spent a long time in the river, is known to have better survival rate rather than fish which has just come from a sea to river… Such factors as period of catching, water temperature and period of salmon being in the fresh water before catching, don't cause considerable influence on salmon's survival on the Ponoi river according to existing types of fishing. So that, it may be concluded that salmon's death rate on the Ponoi doesn't exceed 10% during catching by "catch and release" method."



If we investigate historical records of how local people have perceived the post-Soviet space and salmon in the past, main issues can be identified in the statement by a Sámi man from Krasnochelye in 2003:

In the Soviet period the Sámi were deprived of the right to fish salmon for their own consumption if they didn't work at the fish (collectives) farms. Moreover, the whole coastal area was controlled and ruled by the military and the salmon was considered state property. In 1990 started a rapid and pervasive development of tourist sport fishing of salmon on the Kola Peninsula. Sport fishing camps were built for this purpose. In 1995, there were more than 100 of these camps. At the moment there are about 60, all enjoying support of local potentially corruptible officials. All of these camps have been built without taking into account the interests of the local population and violating hugely the Indigenous People's right to the land. For example, the cooperative 'Reindeer herder' (Olenivod in Krasnoshchel'e) had a special site where they could fish at the river Ponoi and 12 sections/zones in the sea for salmon fishing. In 1995 we were deprived of the special river site and of 8 sections of offshore sea salmon fishing due to the active fishing sport tourism. As a result we have lost about 10 million roubles per year. All this was carried out without taking into account our interests and with gross violation of our rights. At the moment there exist the following types of salmon-fishing:

1. Licensed salmon-fishing for fishing cooperative societies (the Murmansk Fishing and Water Department, 'Murmanrybvod' distribute the fishing quota to the cooperative societies dealing with fishing).
2. Sports/tourism fishing for foreign tourists (principle: catch and - let go).
3. For local population living in the districts of the Kola Peninsula (principle: one can take the catch home, the allowed fishing period is 6 hours).

Let us look closer at the third type:

- a licence for a Sámi costs 40 roubles;
- licence for those living in the area/district costs 150 roubles;
- licence for those living in the Kola Region costs 250 roubles.

It should be noted that the institution that provides the licence does in many ways violate our rights. Nowadays, it's strictly forbidden to fish with a net. This despite the fact that the Sámi people have fished with nets and other traditional equipment for centuries and always followed generally known rules and special periods for fishing in order to save salmon baby fish. Murmanrybvod (the Murmansk Fishing and Water Department) alters rules and periods for salmon fishing nearly every year for the sake and benefit of foreign tourist fishing. For example, in 1995 the inhabitants of the Kanevka village could fish salmon on the Ponoi River at a length of 60 kilometres without any time limit. In 2000 they were allowed to fish on the same river but only at a length of 10 kilometres and only on its left side, for a period of max. 6 hours with a maximum catch of 1 salmon and 1 other type of fish. In 2001 another fishing sport camp was built in that area and the part of the river allowed for our fishing shrank to 5 km. Russian officials have illegally, for the benefit of tourist companies, built camps on reindeer pastures and thus destroyed the tracks of their natural seasonal migration. In summer they use helicopters and disperse reindeer herds without consulting the reindeer herders on their routes for reindeer drift. They also use powerful motorboats in the areas of salmon spawning-grounds without any special permission although many parts of the Ponoi River are considered restricted areas and are equal to a natural sanctuary. The sports fishing camps have been built, with gross violation of the laws of the Russian Federation concerning Indigenous Peoples and without the agreement of local settlers. When we addressed ourselves to the state and local authorities with this subject, we got as reply only that the tourist companies had been given an interim permission for building fishing sports camps. However the Constitution of the Russian Federation doesn't have an article which could make that legal. As conclusion I would like to say that the rights of the Sámi people exist only on paper. The priority of foreign tourism defines all the decisions made and the interests of the local population and the Sámi people are not taken into account. (Mustonen and Mustonen 2011: 115)

A full review of local fishery along Ponoi from historical times to present cannot be given here. Some pre-Soviet practices are reported in Mustonen and Mustonen (2011: 40). If the collaborative management plan proceeds in the coming years, these and other archival materials will form an important baseline of past events. The long quote above from 2003 also positions the voices from 2012 into an interesting dialogue – a decade has passed, and many of the issues remain the same in the villages.

### 1.1.2. Industrial Activities on the Watershed and the Kyanite Deposits

According to reports from the Committee of Industrial Development, Ecology and Nature Management of the Murmansk region (2012) there are no industrial activities on the watershed of the Ponoi river. Mostly this is because the Ponoi region is considered to be hard to reach and scarcely populated. In the Russian Federation there are no kyanite deposits which are in use. Those kyanite deposits that are known to have been explored are located on the Kola Peninsula (*Keivskaya svita*, more than twenty deposits) and a deposit Hizovaara in Republic of Karelia.

The Keiv Kyanite slates of the Murmansk region are the largest concentrations of kyanite in the world (sparsely andalusite). Productive slates are considered to be slates with thickness of 80–150 metres, with a length of 140 kilometers. Mineral compound of these slates is the following: Kyanite (30–40%, sometimes variations may be from 10-15% to 75-80%), Muscovite, Quartz, Staurolite. Sometimes also Amazon stone and Zircon occur here.

On the whole twenty-nine Kyanite deposits have been explored, five of them were explored about forty years ago. This collection of resources is called "the Keivskaya group". The total ore reserves are estimated to consist of about four billion tons of ore. The most explored places are *Novaya Shuururta, Chervurta, Tyapysh-Manuk and Tavurta*. Concentrates of Kyanite have been obtained with the following content of $Al_2O_3$: 55,3%, at output 32,7%, at extraction 67,7%. Generally speaking, there is information that content of $Al_2O_3$ may make up to 57-58%, and simultaneously the content of harmful impurities is small (no more than 1% of ferrum oxides and alkali).

### 1.1.3. Protected Areas Along Ponoi and Adjacent Regions

In the context of Areas of Nature Protection regarding Ponoi, the following have been established (Committee for Industrial Development, Ecology and Nature Management of Murmansk Region 2012: 95, 106, 107):

#### 1. State Natural Biological (Fish) Reserve and Zoological Reserve of Regional Significance Ponoisksii

It has been established by the Decree of the Government of Murmansk Region No284-PP in 05.08.2002 with earlier decisions in place from 22.04.1981. Area is 98 600 hectares, and it is situated at the territory of Lovozero district. The territory includes 234 kilometers of Ponoi River, from the mouth to the former village Chalmny-Varre/Ivanovka. Borders and regime of the reserve were set by the Decree of the Government of Murmansk Region No 413-PP/13 from 27.10.2005. This reserve was established to study, use, and preserve habitat and migration routes of the flora and fauna of the region. At the territory of Ponoiskii Fish and Zoological Reserves there is a monitoring of nesting diurnal birds of prey by the inspectors of the reserves. The following protected species exist at the Ponoi River Basin:

Fish: Atlantic salmon, Brown trout (kumzha), Ide (iaz).
Birds: White-tailed eagle, Peregrine falcon, Osprey, Merlin, Gyrfalcon, Whooper swan, Barnacle goose, Common crane.
Mammals: Wolverine, Arctic fox and wild reindeer.

#### 2. Forest Nature Monument - Junipers at Magazinmusiur height

This natural monument is situated 50 kilometers to the north from the village Krasnochelye between rivers Yokanga and Sukhaia. Juniper cluster is situated at the top of Magazinmusius height. Its height reaches 1.2 meters. This cluster is unique for the Murmansk Region. Area of this monument is 3 000 ha.

#### 3. Nature-historical monument - Petroglyphs near the village Chalmny-Varre

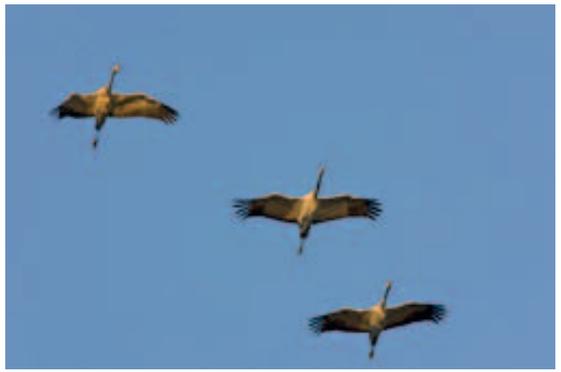
At the southern bank of Ponoi, close to the waterline, near the former village Chalmny-Varre (Ivanovka), 45 kilometers downstream from the village of Krasnochelye is situated a spread group of six rocks with ancient Sámi petroglyphs. Area is 1 ha.



*Rock art from Chalme-Varre/Ivanovka.*

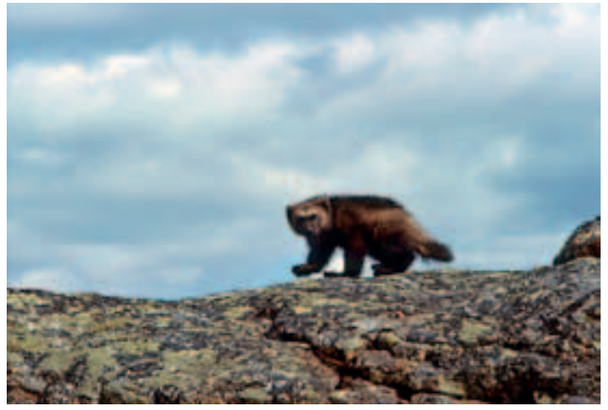
*White-tailed eagle.*





*Common crane*

*Whooper swan*



*Wolverine*

*Gyrfalcon*

*Osprey*

### 1.1.4. Weather and Climate in the Region and Along the Ponoi

Regarding climate, the Committee for Industrial Development, Ecology and Nature Management of Murmansk Region (2012: 41-43) states that in 2011 the average temperature at the Kola Peninsula was two degrees higher than the norm. The year was one of five warmest years since the beginning of measurements in 1936 (with the warmest year being 1938 – 2.8 degrees above the norm).

In 2011 the largest negative deviation was in February (5 degrees below the norm), the largest positive deviation was in December (7.3 degrees above the norm). Average precipitation was normal. However, Southwest of the region had precipitation above the norm, while Northeast precipitation was below the norm. July was the wettest month with 140 % precipitation of the average and September was the driest with only 52 % of the average (Kanichev 2012c).

Winter 2010-2011 was the coldest in the last twelve years. Average winter temperature was 0.9 degrees below the norm. Spring 2011 (as well as spring 2010) was 2.9 degrees above the norm. Springs 2011 and 2010 were the warmest in the last twenty years and are among three warmest springs since 1936. Summer 2011 was warm, 1.4 degree above the norm. Autumn was the warmest since the beginning of measurements in 1936, 2.6 degrees above the norm (ibid. 2012).

More precisely regarding Ponoi, to characterize thermal regime of the Ponoi river, water temperature data of many years in the area of hydrometric stations near Krasnochelye (290.5 km from the mouth) and Ponoi village (12.7 km) have been used (Kanichev 2012c: 1).

The Ponoi is the most powerful river of the Kola Peninsula according to its water content. But in spite of its large length and catchment basin, it is not very deep; during summertime depth doesn't exceed 5-6 meters. In addition to this, because of high stream turbulence, heat penetration into the water masses of the river it goes fast, causing similar water temperatures on vertical of watercourse (ibid.).

In the following table there is data of average weekly air and water temperatures from May to October on the Ponoi river (1950), according to hydrometric station near Krasnochelye.

*Table. Average decade water and air temperatures on the Ponoi river according to observations near Krasnochelye village, 1950.*

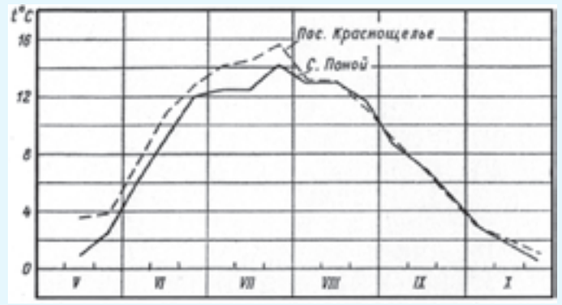
| V | | VI | | VII | | VIII | | IX | | X | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Water | Air | Water | Air | Water | Air | Water | Air | Water | Air | Water | Air |
| 1.7 | 2.9 | 7.0 | 4.9 | 11.6 | 7.6 | 11.7 | 9.3 | 8.3 | 6.1 | 5.8 | 6.8 |
| 4.4 | 4.5 | 10.0 | 8.7 | 12.1 | 9.6 | 15.0 | 16.6 | 7.1 | 7.1 | 3.6 | 3.7 |
| 5.9 | 4.2 | 17.0 | 14.7 | 12.5 | 10.0 | 10.5 | 9.0 | 6.7 | 5.7 | 0.7 | -0.5 |

The changing of average weekly water temperature of the river near Krasnochelye and Ponoi villages during ice-free period is shown on the figure above. During springtime (May and June) the water temperature increases due to development of spring atmospheric processes with a high of about 12-14$^0$C in June. (ibid.).

In July temperature keeps rising gradually to its maximum in the middle of the month. During period of many years the maximum water temperature was observed 17.06.1943 (23.20) near Krasnochelye and 1.08.1938 (25.00) near Ponoi. The next changes in water temperature may be considered as stable condition in the first half of the month and its gradual abatement in the second half. Monthly average long-term water temperature in August was 12.6$^0$C near Krasnochelye and 12.5$^0$C near Ponoi village (ibid.).

In September rapid air cooling may be observed, simultaneously significant decreasing of water temperature occurs. Abatement gradient of water temperature is considered to be 4-5$^0$C. Average water temperature near Ponoi and Krasnochelye makes up respectively 6.9 and 7.3$^0$C. (ibid.).

In October air temperature keeps decreasing passing below zero. Simultaneously, water temperature decreases rapidly: in the end of the month it may be close to zero. Monthly average water temperature is considered to be 1.8-1.4$^0$C. During the following water temperature decreasing below zero water overcooling may be observed and forming of the river ice (Kanichev 2012c).




*Average weekly water temperature of the Ponoi river according to data from hydrometric stations near Krasnochelye and Ponoi villages during 1936-1951 collected by Kanichev 2012a, c.*

Thermal regime of the Ponoi in its downstream is influenced by the sea, which is like an accumulator of the heat. Until middle of August water temperature near Ponoi village is lower than near Krasnochelye, which is situated more continentally – about three hundred kilometers upstream. Until the middle of Autumn water temperature near Ponoi village is a little higher rather than near Krasnochelye, about, 0.4-0.6$^0$C. (ibid.)

### 1.1.5. The Ponoi Freeze-Up and Ice Break

Ice cover on the rivers of Kola Peninsula lasts about six to seven months a year. Thermal condition of air masses, mainly in atmospheric surface layer, determines the freeze- and ice-breakups (Kanichev 2012c).

Because of length of the river (425.7 km) winter regime of the Ponoi during periods of debacle, freezing-over and ice-forming has different features, depending on the river part, climatic conditions of the basin, geomorphology of the area and features of the river mouth (ibid.).

The freeze-up is observed almost at the whole length of the river: first phenomenon is expected to be around 19th October but ice cover is expected to arrive on 24th October. Differences in these periods may be explained by usual changes in temperature. Process of continuous stable ice-formation starts as soon as temperature falls below zero. But final periods of river freezing are different for some parts of the river. It depends on flow velocity in different parts of the river and tributaries (ibid.).

Thermal and ice regimes of tributaries differ from the Ponoi ones, so that natural process of the Ponoi freezing may change. For example, near Krasnochelye freezing-up occurs 30$^{th}$ October, but near Kanevka village freezing-over occurs a little later, because of nearest tributary – Yokanga river –it occurs 20$^{th}$ November. Average freeze-up near Ponoi village is 14th November, considering that it has varied between 25th October and 27th December (Kanichev 2012c).

From the beginning of freeze-up period ice cover of the Ponoi river gradually increases and it achieves its maximum in the middle of April. According to survey data maximal measurements of ice cover for long-term period have been observed near Krasnochelye and Kanevka villages 73 centimeters and near Ponoi village 104 centimeters (ibid.)

Winter season of 1940/41 is of significance. Frosts during that season exceeds standards by 47%. According to data of long-term observations, an average duration of freeze-up period of the Ponoi river near Krasnochelye village made up 195 days and near Ponoi village 182 days.

Beginning of spring ice-drifting and ice break-up is expected to be all the length of the river and it occurs 14-17th May. River becomes ice-free usually in the second half of May, around 20th-23rd May. Process of spring ice-drifting at upstream and middle course of the river doesn't have a high intensity and it usually occurs without ice blockage phenomena. At the downstream of the river, near Ponoi village, spring ice-drifting occurs intensively enough and it is accompanied by strong ice blockage, causing high water level (ibid.).

According to long-term data, average duration of ice-drifting period along the river is different; it increases towards mouth and makes up from three days (Krasnochelye) to eight days (Ponoi village). Minimal duration of ice-drifting period doesn't exceed 1-2 days. The longest duration of ice-drifting period for long-term period (19 days) has been observed near Ponoi village in 1941 (ibid.).

## 1.2. Cultural Zones and Communities of Ponoi

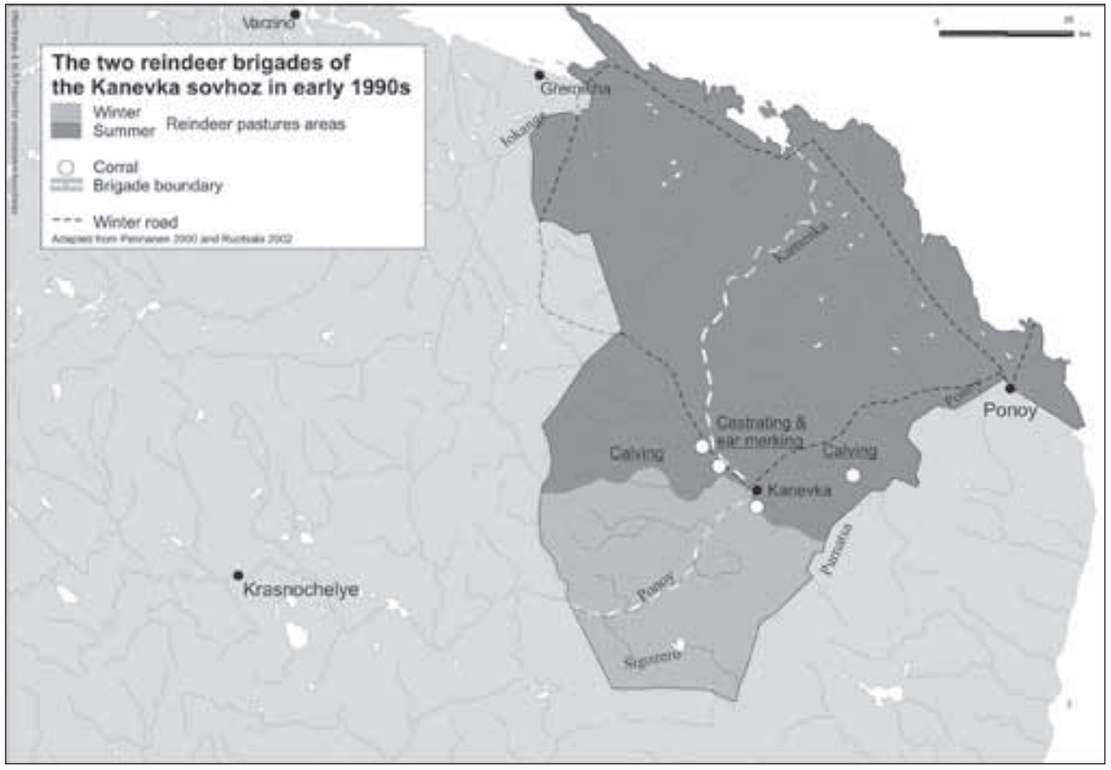
In this part the different communities of Komi, Sámi, Russian, Pomor and other peoples along the Ponoi watershed are introduced. Their socio-economic overviews are briefly discussed. Additional observations have been included from the community of Sosnovka on the White Sea coast as the local people have been and still are to some extent engaged in a coastal and maritime fisheries.

### 1.2.1. Kanevka

Kanevka is a settlement in Lovozero municipal district of Murmansk region, it is the fourth largest settlement of the Lovozero district. Population consists of 67 inhabitants (according to 2010 census). Connection with other settlements is only possible by using air traffic (plane or helicopter). Settlement is situated on the both banks of the river Yokonga before it flows into Ponoi.

*Grandmothers of the local Komi cultural group in Krasnochelye and Lovozero district.*






*This map indicates the land use and seasonal pasture use of the Kanevka brigades. The events of the reindeer year are marked on the map along with winter roads.*

*Komi handicrafts in Krasnochelye.*

*Komi reindeer herding family in Krasnochelye. They wished to remain anonymous.*

Main enterprise of settlement is an agricultural reindeer cooperative "Olenevod". Nowadays this cooperative faces several material and financial issues because of its long distance from satellite departments of the cooperative and high costs for transporting goods. Fishing, hunting, mushroom and berry gathering are of great importance for the local inhabitants. Ecological tourism has been developed in the community to a certain degree. Land allocations near the settlement are in the hands of foreign salmon tourist companies.

### 1.2.2. Krasnochelye

Krasnochelye is the main village along the river. It has become a popular place for fishing and is located in the upper reaches of the Ponoi. Close to the town there are fishing bases, which are visited by foreign and domestic fishermen tourists. Population makes up 432 inhabitants according to 2010 census. Distance between Krasnochelye and Lovozero is 150 kilometers. Settlement is not connected by roads with other settlements; there is only air traffic between them. It is situated on the northern bank of the Ponoi river.

The main enterprise of settlement is an agricultural reindeer Cooperative "Olenevod". Fishing, hunting, mushroom and berry gathering are of great importance for the local inhabitants. There is a nursery school/kindergarten, school, shop, post-office, weather station and fur farm in the settlement.

In 2012 some local people called their situation *"euphoric"* – thus residents describe the state of agricultural cooperative "Olenevod" because of appointment of the new director Andrey Kokarovich Reyzvih - one of the richest businessmen of the Murmansk region. Mr. Reyzvih invested 29 million rubles in 2011, saving "Olenevod" from bankruptcy, and now he wants to return this investment with a profit (Phillipchenko 2012: 3). However not all residents celebrate this turn of events, as is evident in the words of one of the prominent pensioners of the village: *"Now it is the time of oligarchs who comes with bags of money. The herds of private reindeers were destroyed. There is only 600 reindeer left from 2 500 reindeer. Almost nothing is left. Salaries are not paid."* (Snowchange Krasnochelye Oral History Tape 2012-1).

The new director has decided to charge a fee of owners of private reindeer for pasturing reindeer in collective-farm herds. This service fee is from 1,000 rubles to 2,000 rubles per one reindeer per month. Such high price made owners of private reindeer to start slaughtering their reindeer on a mass scale. If several years ago the number of private reindeer was about 2500 heads, today the number is not exceeding 600 heads, this is despite the fact that acting herders (who work at the collective farm) are permitted to have up to twelve private reindeer without payment. Total number of reindeer is estimated to be around 9500 in 2012. Nowadays there are corrals at Semiostrovie and Panteleyka. In 2011 a slaughter-house was built in Krasnoshelye. In 2012 a slaughter-house is being built at the mouth of Lumbovka river (Phillipchenko 2012: 3).

These days agricultural cooperative "Olenevod" has excluded from its structure the mechanization park (formerly called "tractors park"). A long time ago the dairy farm was closed too. Nowadays there are only four cows in Krasnoshelye. They cannot provide even one percent of the needs of Krasnoshelye inhabitants for milk products. The main problem is lack of fodder; to import mixed fodder from Lovozero is very expensive (Phillipchenko 2012: 3).

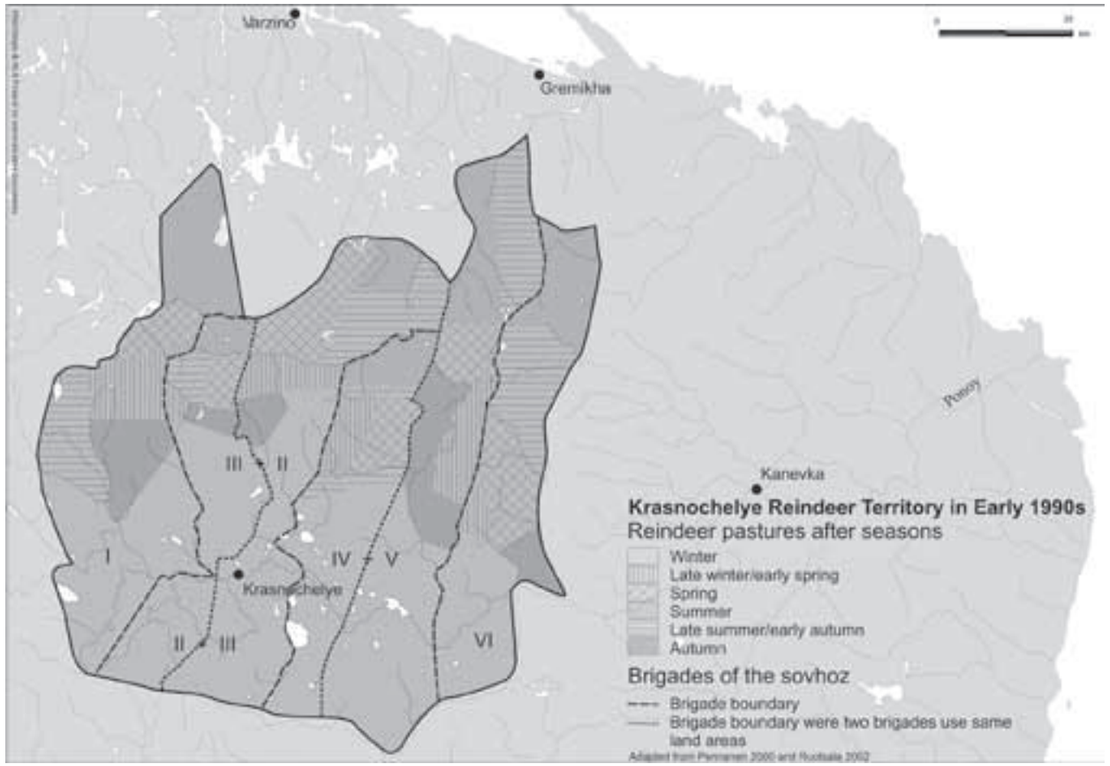
Some villagers expressed their views on the food security in the community: *"In winter it is not a problem. Everybody has vehicles and can go to buy food themselves. But in summer it is a problem. Helicopter comes and everything is sold out immediately. You just get what you manage. There are two private shops that help. For example the shop run by Kanevs' is cheaper than the municipal shop. Take a small bottle of vodka. In Kanevs' shop it is 75 roubles and in the municipal shop it is 95 roubles. And take sausages, in Kanevs' shop they are 250-280 roubles and in the municipal shop there is nothing cheaper than 300 roubles. The municipal shop is very expensive. I do not understand why, they do not pay transportation costs. Same brands. When people go themselves in winter for food they bring only those things that do not perish from frost – flour, sugar, etc. Eggs are almost always available. But sometimes they are of poor quality."*(Snowchange Krasnochelye Oral History Tape 2012-8)

There are around 45-50 students in the village school and 20 children in the kindergarten. Plans have been made to construct new school. Villagers have observed that many of the buildings in the community are in disrepair. Lack of medical services remains also a constant talk in the village.

### 1.2.3. Ivanovka (Chalmny-Varre)

Chalmny-Varre/Ivanovka is mostly an abandoned






*This map illustrates the Krasnoshchel'e reindeer territories and seasonal use in the early 1990s. The creation of obschiny or Indigenous-controlled communities since 2002 has changed the land use in the village. Yet the "Memory of Lenin" Co-Op is the main reindeer herding organisation in the village and eastern part of Kola.*

settlement even though some people return to it during the open water season. It is located from Krasnoshelye downstream on the Ponoi, at distance of 60 kilometers.

On the northern stony slope of the mountain with Sámi toponym *"Chalmny-Varre"* (Eyes of the forest) several houses of the settlement still exist. Nobody has been living here for twenty years, but in the summer some pensioners and old people visit this place with the intention of fishing and gathering of berries and mushrooms and sheep grazing. When winter comes they return to Krasnochelye.

This settlement became famous in the 1970s when archeologists from Leningrad described unique stones with Sámi rock art for the first time. The approximate age of rock carvings has been estimated at 2000 years BC. One of these stones is kept at the Local History Museum in Lovozero.

Nowadays about ten houses still exist in the community. Ivanovka was founded by the arriving Komi people in the early 1900s. Indigenous Sámi inhabitants, keeping their nomadic lifestyle, had some settlements near Ivanovka. The common name of those villages was Kamenskie. *Zimnyaya kamenka, Letnyaya kamenka, Verkhnyaya kamenka* are the known place names in Russian, but besides these places, wherever Sámi people fished, there were some seasonal villages and campsites. Unfortunately nowadays no buildings of those villages remain.

*Views of the Chalme-Varre / Chalmny-Varre (used interchangeably) cemetery, summer residents and buildings. The top left image has been taken by Kihlman in late 1800s and top right in 2006, offering possibilities of optic land use change comparisons.*



### 1.2.4. Ponoi

Ponoi is an abandoned settlement. It is situated on the southern bank of the Ponoi river near the rivermouth where it flows into the White Sea (Beloye More). Nowadays there are no inhabitants in the settlement even though it is visited seasonally by some locals.

### 1.2.5. Sosnovka

Konstantinov (1997) says that the reforms of 1991-1992 hit Sosnovka hard. Isolation resulted from the crash of the Soviet Union. He (1997) identified that local people resisted the idea of a private reindeer herding already then. Poaching emerged quickly to be a real problem for food security, especially due to military taking their toll on the herds. In 1990s the head of Sosnovka had positioned the future of the community to depend on "a reversal to hunting/gathering with a core support" from the collective enterprises (Konstantinov 1997). Then the number of Sosnovka reindeer were estimated to be around 8,000 animals. Wild deer mixed with the herd. Ethnic composition of the herding brigade was primarily Komi-Pomor individuals (ibid.)

Konstantinov (1997) reported that in mid-1990s this herding brigade was assembled on a kin-ship principle, much like the Sámi obschinas from the 2000s (Mustonen and Mustonen 2011). Salmon catches from this time were sold to Archangelsk traders who arrived with sail boats from the opposite shores of the White Sea. Salmon was purchased at the time at 40,000 RUB (8 USD) a kilo (Konstantinov 1997).

In 2012-2013 the community of Sosnovka the social situation continues to be dire. Population is decreasing, even though airplanes still fly to the village occasionally. A branch of agricultural cooperative, SPKH Olenevod operates in the village. There is a post office, diesel electric station, library, shop and buildings for administration. Population is around twenty-thirty people, occasionally dipping down to eighteen individuals in the wintertime. It used to be around a hundred in the 1990s. Ethnically the villagers consider themselves primarily to be Pomors, descendants of Russian maritime traders of the region. Locals grow potatoes and vegetables for their own use.

### 1.2.6. Indigenous Peoples Along Ponoi

The Sámi have the status of "indigenous peoples" in Murmansk Region, according to the Federal Decree of the Government of the Russian Federation No536-p *On the Adoption of the List of Indigenous Small-numbered Peoples of the North, Siberia and the Far East of the Russian Federation* issued 17.04.2006 and the chapter 21 of the *Murmansk Region Charter* (Committee for Industrial Development, Ecology and Nature Management of Murmansk Region 2012: 64-67). The Komi have successfully lobbied for some regional rights, but the unclear legal context continues (Fryer and Lehtinen 2013).

The Decree of the Government of the Russian Federation No631-p *On the Adoption of the List of the Areas of Traditional Residence and of the Traditional Economic Activities of the Indigenous Small-numbered Peoples of the of the Russian Federation and the List of Traditional Economic Activities of the Indigenous Small-numbered Peoples of the of the Russian Federation*, issued 08.05.2009, establishes following municipalities as areas of traditional residence and traditional economic activities of indigenous people in the Murmansk Region:

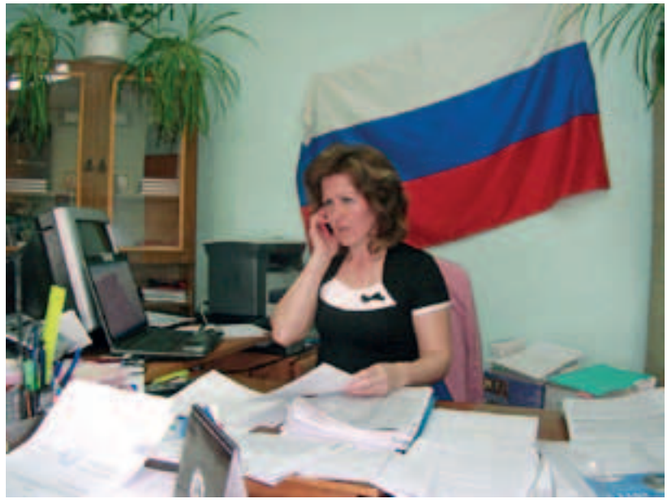
1. Kovdorskii District (raion)
2. Kol'skii District
3. Lovozerskii District
4. Terskii District

(Committee for Industrial Development, Ecology and Nature Management of Murmansk Region 2012: 64-67)

According to the census there were 1599 Sami in Murmansk Region in 2010 (ibid. 2012: 64-67). Committee for Industrial Development, Ecology and Nature Management of Murmansk Region Report 2012 identifies that "The Sámi live on the land of their ancestors; they identify themselves as a special ethnic group and preserve their traditional way of living. Most of Sami live in rural areas and work in agricultural industry and in ethnic communities (obschinas)."

Traditional economic activities of Sami in the Murmansk Region include: reindeer herding, fishing in inland lakes and rivers of the Kola Peninsula and in the Barents and White Seas, hunting, the construction of traditional houses, making of traditional clothes and instruments, as well as other crafts that involve processing of skins, furs, bones and other materials, picking wild plants (ibid. 2012). The Government of the region provides political programmes to support the local Sámi and other minorities such as the Komi (ibid. 2012: 64-67):

"A special attention was paid to the work of the Council of the Representatives of Indigenous Small Peoples of the North by the Government of Murmansk Region. This collective consultative body by the Government of Murmansk Region was established as required by the federal law No 82 FZ – passed 30.04.1999 *On the Guarantees of the Rights of Indigenous Small-numbered Peoples of the Russian Federation* and by the law of the Murmansk Region No984-01-ZMO, passed 30.06.2008 *On the State Support of the Indigenous Small-numbered Peoples of the North of Murmansk Region that Practice Traditional Forms of Economic Activities*. The Council was established to defend rights and lawful interest of the indigenous small people of the North of Murmansk Region, the Sámi. According to the decree of the Government of Murmansk Region No 57-PP from 11.02.2009 the Council of the Representatives of Indigenous Small Peoples of the North by the Government of Murmansk Region was formed. The decree of the Government of Murmansk Region No 138-PP from 06.04.2010 outlines the procedure for the Council formation. 11th February 2011 a new Council was formed following the end of term of office of the first Council. 24th March 2011 the first meeting of the second Council that was formed according to the Decree of the Government of Murmansk Region No 100-PP from 14.03.2011 took place. Four meetings of the Council took place in 2011. Following issues were discussed: interaction of the Council with commercial land and natural resources users at the traditional Sámi territories; northern reindeer herding of indigenous peoples of Murmansk Region and realization of fishing and hunting rights of indigenous peoples. The Council has also passed a decision on how to divide main responsibilities among its members: publishing of Sámi-related books; provision of reindeer herders with trips to health resorts; participation of indigenous communities in nature protection activities, celebration of the International Day of indigenous Peoples of the World, amongst others."



*Yulia Artieva, a worker for the community of Krasnochelye.*

*Residents of the communities of Ponoi watershed.*

*Nikolay Artiev*

*Reindeer herders with Sergey Phillipchenko*

*Agafia Rocheva*

*Valentina Terentieva*

*Tamara Matrekhina, Maria Kaneva and Valentina Sarnavina*

*Vasili Terentiev*

*Rochev family*

*Meeting in library*

*Sergey Phillipchenko with Aleksandr Terentiev*

*The House of Culture in Krasnochelye*

## 2. Results and Observations From the Project Work

In this chapter main findings from the community workshops and interviews are described. Findings focus on the results of the visits to Krasnochelye, Kanevka and Sosnovka communities. Additionally the opinions of the salmon tourist fishing companies and authorities are explored.

### 2.1. Krasnochelye

First community workshops regarding Krasnochelye took place between 26th June and 3rd July 2012. Co-researcher Sergey Phillipchenko coordinated and conducted majority of the fieldwork. The first survey of Krasnochelye inhabitants was done selectively, by preliminary arrangement with respondents. Respondents could choose any convenient time and place for interview. Interviews were held in such places as a library, a cultural center, administration, and at private homes of respondents. All in all 28 people took part in this first round of documentation (Phillipchenko 2012: 2). As one of them commented: *"It is great that such study is done here but the problem is that we realized that we do not know answers to most of the questions. We are not curious [enough]!"*

The oldest of respondents was eighty-seven years old, the youngest twenty-eight years. People of different occupations expressed their viewpoints to the interview questions. Each respondent before interview was acquainted with greeting text of scientists from Finland (Snowchange).

During the Soviet times besides reindeer-husbandry, there were construction brigades at the collective-farm (sovkhoz) "Pamyat Lenina" ("Remembrance of Lenin"), as well as every season there were organized seasonal fishing brigades (Phillipchenko 2012: 2). The reindeer herding crisis is triggering responses from the villagers, such as from a man in his 50s: *"They should introduce prohibition for slaughter of reindeer for some time."* (Snowchange Krasnochelye Oral History Tape 2012-4) In this way the herds of reindeer could be rebuilt.

The idea of a prohibition has been presented already in 1990s. A respected pensioner and a wife of a reindeer herder, a Komi woman in her 50s, made the following statement: *"Well, I do not want anybody to be offended... The population of reindeer is being destroyed by poachers. The number of reindeer has grown less. I remember that when we used to go to tundra in the late 1980s- early 1990s the herds were really large, I speak about the first herd, the herd of Krasnochelye. There were around eight thousand reindeer. I remember they brought them and we went to see the herd. You close your eyes and the reindeer just go and go and go. But now there are fewer reindeer and I will tell you why. In the 1990s the situation in the sovkhoz was critical and they doubled the annual plan. They killed twice as many reindeer as planned. There was such an outcry among the reindeer herders that herds are destroyed. My husband who was the head of the brigade was against it. He promoted a temporary ban for slaughter of reindeer. It was still when Dmitrii Afanasievich Matrekhin was a director of the sovkhoz. But the ban was never introduced. They asked to ban slaughtering for five or at least three years so that the herd would recover its population."* (Snowchange Krasnochelye Oral History Tape 2012-5)

According to her the situation in the reindeer herding is still functional, it has not totally collapsed: *"Lichen is in tundra but reindeer also eat grass and their like mushrooms a lot. Reindeer travel towards Gremikha. Herders always worked together with the 9th brigade from Lovozero in this area. The 1st, 3rd and the 9th brigades used to work together. This year the 9th brigade has been separated. I speak about 1st and 3rd brigades because I know they work better: my husband and my son used to work there. There are some private reindeer as well but they have cut now the number of private reindeer because new rules were introduced. Now the limit of private reindeer is six. For example, my husband is allowed to have six reindeer free of charge as a pensioner. If you have more than that you have to pay 1200 roubles per reindeer per month. It is very expensive. Those, who did not work in reindeer herding, pay 2 400 roubles per month".* (Snowchange Krasnochelye Oral History Tape 2012-5)

The "euphoria" created by the new management has not convinced all residents. They feel traditional occupancies, such as reindeer herding will be under threat as is evident in the words of a 60-year-old man from the village: *"For me the most important issue is reindeer herding. Laws are wrong, the attitude of the new owner is wrong. His dream is to destroy private ownership of reindeer. Probably it is coming to that [hunting grounds for tourists] – a safari. Young people do not want to become reindeer herders. There are many reasons for that."* (Snowchange Krasnochelye Oral History Tape 2012-13)



*The bell of Krasnochelye.*

#### 2.1.1. Social Issues and Infrastructure

One of the more prominent topics for decades has been the debate regarding construction of a road to the village. 55-year-old man made the following observation connecting the road to environmental conditions: *"At some point the road idea was discussed and the local population was against it because strangers would come here. Now there is no strong feeling about it among locals. If it will appear, it is fine, if not, also fine. People are afraid that if road will be constructed it will bring pollution to the local water systems. For example, platinum was recently found in the area [Fedorova-Panskie tundra] and who knows where the pollution would go."* (Snowchange Krasnochelye Oral History Tape 2012-1).

70-year-old woman, a pensioner, also agrees: *"Nowadays, the road does not matter. Everybody has vehicles that do not need the road. There are plenty of those vehicles and all those poachers come here even without the road. Of course, in summer the road is more needed but tourists are coming by helicopters. There are plenty of tourists in summer as well. So, if the road will be built it is good, but if it is not, it is also good. Well, they will probably build this road sooner or later for Shtockman project or to develop Keivy but the opinion of the local residents should be taken into account through referendum or through other means."* (Snowchange Krasnochelye Oral History Tape 2012-8).

56-year old reindeer herder who has now retired, would like to see no road to Krasnochelye: *"The road was discussed around three years ago but since then we heard nothing. Probably most of people think that the road is not needed here."* (Snowchange Krasnochelye Oral History Tape 2012-11)

On the other hand Komi woman in her 50s feels positively about the road: *"They always ask us about the road and everybody answers that we do not need the road. I think it would be more comfortable if we get the road. You can just sit and drive. We would not depend on helicopters."* (Snowchange Krasnochelye Oral History Tape 2012-5)

Also a 60-year-old woman from the village would like to see a road: *"I think that earlier people were against the road because they were afraid of poachers coming here. Nowadays, it does not really matter whether there is a road or not. Nowadays there are so many hi-tech vehicles available [snowmobiles and others] that poachers are already here. They also use helicopters for hunting. People are buying all-terrain vehicles. So the absence of the road will not be a barrier for poachers. As for the local residents, the road might become useful; it might decrease the transportation costs. You have seen how expensive food is here, in comparison to Lovozero. It will be also easier to travel from the village. Of course, I do not know how the transportation will be organized. There are not so many residents in Krasnochelye… Who will organize the bus and who will pay for maintenance of the road? But at present, the road is a necessity. If there will be a road there will be an electricity transmission line along it. So it is all tied together. Maybe the road will also help to cut costs for fuel transportation. We need to calculate costs and benefits. What will be cheaper: the current situation when fuel for diesel is delivered here or an electricity transmission line?"* (Snowchange Krasnochelye Oral History Tape 2012-9)

Another issue surfaced during the community interviews. A 58-year-old man said that there was a railroad construction from Apatity to Gremikha: *"There is a monument at Kulijoki. It is a high wooden statue and a fence around it. Nobody takes care of it but it has survived on its own. I think it is a monument to the guards. The road was built by prisoners. I do not think that they would erect a monument to prisoners. Probably it commemorates those soldiers that guarded the prisoners. It was a railway from Apatity to Gremikha. It went from Octiabr'skii and passed approximately 60 kilometers north-east from Krasnochelye."* (Snowchange Krasnochelye Oral History Tape 2012-10)

The question of local jobs and opportunities for the young people rests partly with the positive development of the fisheries in the village. A woman in her 50s explained the situation of her son: *"I can just say that when my elder son tried to get a job in the sovkhoz as a fish-technician [he was a specialist on fish processing for food industry] – it was around five years ago - he was told that they have somebody else for that position. But now we see that there is neither a fish-technician no a fish unit in the sovkhoz. My son during his studies at the Higher Maritime School was very interested in the potential of the local fish – what kind of canned fish you can make, etc. However, during the time he had this initiative there were some power struggles and quarrels within the sovkhoz. I do not know what it was about, I do not want to mislead you but there were some problems. He was not able to convince the sovkhoz managers. Now he is in the Army. You know, this territory needs some people with ideas, not only with higher education, but people with a little engine in their heads [said laughing], so that they will find ways to develop our economy and not only to ask for support and subsidies. And there were such active young people who tried to do something but it did not work. And now he is in the Army and would not return to his former projects. Well, I do not want to criticize or show fingers at somebody but I think that they could have started some vegetable growing business here or some cattle farming."* (Snowchange Krasnochelye Oral History Tape 2012-4)

### 2.1.2. Subsistence Fishery in Krasnochelye

A woman in her 70s remembers the collective economy of the Soviet times at the mouth of the river on the coast: *"When I was a child I used to go with my mother to check our seine in the river. It was during the sovkhoz time. Mom was taking us to check the seine after ebb. It is called to "to go to sorting out" [poekhat' na pereborku]. Sea water goes away and fish is left in a box. The seine consists of a box and so-called wings [krylia]. Mom used to joke – If we get no fish I will leave you in a box as bait'. I was so afraid."* (Snowchange Krasnochelye Oral History Tape 2012-8)

*Views of the village of Krasnochelye in August 2006.*

In early 1990s the professional fishery in the village was closed: *"Around the 1990s. They said that fishing does not bring profit. There were also many restrictions from the top. They just did not allow the sovkhoz to fish. It was very difficult. I remember that Matreikhin tried to get permission for the sovkhoz to fish in lakes and rivers but in vain. So, I think that is the main reason."* (Snowchange Krasnochelye Oral History Tape 2012-5) This ended the sale of fish to the community residents. After that the various subsistence fisheries, legal and illegal, started to emerge.

Regarding subsistence fish, it is being obtained by Krasnochelye residents by themselves. There are no longer fishing brigades which a while ago caught dozens of tons of sea, lake and river fish. Residents provide themselves, their relatives and friends with fish; sometimes they take a small fee. A license for a salmon costs 150 rubles. A man who caught a salmon on the license, must fill out special paper form and bring it to the local administration indicating the weight of a fish (Phillipchenko 2012: 3).

Official permits to fish at the lakes and rivers (including nets) are not often issued, but locals face no problems with that because regulatory authorities these violations by local inhabitants. Regulatory authorities themselves comprehend that the fishing laws for inhabitants of such small and remote places must be adjusted in special way (Phillipchenko 2012: 3-4).

In conversation with a 55-year-old employee of agricultural cooperative "Olenevod" evidence of barbaric attitude to nature by tourists emerged. One of his friends, former director of collective-farm (sovkhoz) which is situated near Varzuga, is very concerned with the attitude to nature these days, that's what he writes in his letter:

*"... I'm very worried about my sovkhoz. S.M. Kalyuzhny has done a lot of positive things for the village, but I think we have lost even more. If we compare the catches of salmon in the 1980s (150 tons per year), then in 2011 were caught only eleven tons. The scale of poaching took unimaginable proportions. In the natural environment of the Tersky coast animals such as elk, reindeer have almost completely been destroyed. Via Varzuga to Lovozero district travel tens, if not hundreds of snowmobiles with tourists and hunters, and most of them are poachers. The government is not able even to comprehend the size of the problem, not to mention its ability to stop the destruction of unique nature of the region."* Most of people who live in villages like Krasnochelye agree with such description (Phillipchenko 2012: 4).

### 2.1.3. Observations About the Ponoi and the Salmon

During the June observations, the following discovery was made: *"Ponoi river loses its salmon shoal because of the numerous poachers and tourist camps."* (Phillipchenko 2012: 4). Overall a Komi female pensioner in the village commented on the salmon: *"But there is less fish on Ponoi. This year 2012 there was a very difficult situation with salmon in Ponoi. My husband tells that the tourist camps use boats with jet-motors. Salmon lays eggs under stones but jets just wash it out, suck it in. There is so little salmon and it is so small in size. Everybody who took licence for salmon this year complained that there was no fish. Salmon was never fished in such amount. There was always ban for salmon fishing, as long as I remember myself from my childhood."* (Snowchange Krasnochelye Oral History Tape 2012-4)

Many local inhabitants refuse to buy licenses, but go fishing just as they did before. Buying a license, a resident of the village is obliged to fill out special paper form and bring it to the local administration. Not every fisherman wants to do it. In the special paper form a fisherman has to write the weight of every fish he caught, as well as he must write the time and place where he caught the fish. Fishing without a license can lead to a big fine, but the locals ironically call themselves "poachers" and continue to take that risk (Phillipchenko 2012: 4). During winter locals fish at rivers and lakes which are situated nearby, such as Medvezhye lake and Churozero lake. Or as an older man from the village said: *"Everybody just fishes how they want. Nobody would check what you fish in winter."* (Snowchange Krasnochelye Oral History Tape 2012-1)

So the poaching has many social dimensions along Ponoi. On the other hand the official regulations for local fisheries do not meet the subsistence needs of the people. Simultaneously poaching includes wild, uncontrolled hunting and fishing practices by people arriving outside the community and

the region. Use of satellite navigation and motorized vehicles has opened up the terrain to these poachers. Lastly many locals observe the presence and behavior of salmon tourists to be a form of poaching with a lot of equity issues as voices, practices and knowledge is not heard. Or as one of the locals said: *"I go fishing and under current rules I am a poacher. There is also winter fishing with rod. As for net fishing it is illegal. The fishing inspection does not persecute us for net fishing but it is still illegal and you never know when the attitude will change. So, we are all at the position of thieves and poachers. They just train us to be thieves and poachers."* (Snowchange Krasnochelye Oral History Tape 2012-13)

Locals identify the salmon fisheries to be located at Acha, Ryaboga, Pournach, Pacha and Lebyazhja rivers. No one can tell the precise number of tourist camps, but people believe there are at least ten camps at Ponoi River and its tributaries (Phillipchenko 2012: 4). The impact from the tourist industry has become visible along Ponoi. A 50-year-old man has made the following observation: *"Those tourists are seen everywhere. Even in some places where almost nobody ever visits you can see traces: young trees with ripped bark because a heavy vehicle drove over them. It could be tourists; it could also be poachers. Everybody has GPS nowadays you cannot get lost and they just go everywhere on their own. It is difficult to catch them."* (Snowchange Krasnochelye Oral History Tape 2012-4)

Local people have memories of the campsites from the 1980s: *"I was myself at Lebiazhka. I liked the place there. The river is wider there than here. It is closer to Kanevka. The river is even wider in Kanevka. When we were komsomol-members we used to go to Kanevka. We performed there with concerts. It was in the 1980s. We were there at subbotnik, chopped wood there and helped people in Kanevka."* (Snowchange Krasnochelye Oral History Tape 2012-4)

A respected 56-year-old reindeer herder remembers sites along the Ponoi and human uses of them: *"There is such a river, Kulijok. It is around 60 kilometers from here. It is around 80 kilometers of the telephone line. There is a camp of communication technicians there. Kulijok goes to Sakharnaia river and Sakharnaia river joins Ponoi."* (Snowchange Krasnochelye Oral History Tape 2012-11) A communication specialist Diomkin used to live there.

The health of the fish remains a popular topic amongst the villagers. Woman in her mid-thirties made the following observation: *"Salmon, by the way, has become smaller. People say that it is because fish is caught and then released back into the water. There are wounds that fish cannot fully recover from."* (Snowchange Krasnochelye Oral History Tape 2012-2)

In her observation the sustainability of the catch-and-release practice is challenged. Arguments and observations are made that the impact causes the fish to perish later, once it has been released back to the river.

Others are not sure of the change in salmon, as one 50-year-old woman says: *"Local residents say that there is a big difference in taste. I do not feel it, I find it as tasty as before. I have noticed that pike from Verkhne-Kamenskoe is much better than from other places."* (Snowchange Krasnochelye Oral History Tape 2012-2)

An Elder, a woman in her 70s feels the salmon camps with their practices have influenced the fish: *"Particularly taking into account, that they let fish back to the river. The fish probably will die in any case and the fish after that does not go here to lay eggs. Fish has become smaller."* (Snowchange Krasnochelye Oral History Tape 2012-8)

Observations regarding water quality and the river were made by a Komi woman in her 50s: *"It has become more beautiful. It has become shallower. This year we even did not get high water in spring. We do not have any industrial waste."* (Snowchange Krasnochelye Oral History Tape 2012-5)

### 2.1.4. Indigenous and Minority Rights to Fish in Krasnochelye

In the context of minorities and Indigenous peoples and the fishery according to the specialist of municipality Julia Artieva, acting legislation of Murmansk region doesn't assign any special rights or permits to Sámi or Komi people to do the net fishing at rivers and lakes. But it is expected that in months to come, some changes will be done in the legislation, so that indigenous peoples as well as inhabitants of remote villages will get such a right to fish with nets. There were a lot of petitions from inhabitants of Krasnochelye to the local municipality and Murmansk Regional Duma (parliament) with request to let local do the nets fishing. People hope that their petitions will be heard by authorities (Phillipchenko 2012: 4).

35-year-old municipal female worker positions the case clearly: *"People just manage their fishing on their own. They fish for themselves. Up to now there were no big problems linked to such practices. If there would have been some problems with the controlling agencies people would come to complain. But of course, locals want such practices to be officially recognized. It is part of the tradition here and they need it. And I think that even if they sometimes fish above the limits and sell some fish to their neighbours. It is good for fisherman and good for those who buy it. We should just praise them for such practices because they find the ways to support themselves independently."* (Snowchange Krasnochelye Oral History Tape 2012-2)

*Views of the village of Krasnochelye in August 2006.*

Ethnic divisions regarding rights are also divisive between the Sámi and the Komi, who has some local status as a national minority but do not possess the Indigenous legal rights. A Komi woman identified this case: *"I have heard that Sámi are allowed [to have nets]. There is nothing for Komi. If it would have been allowed we would have used the opportunity."* (Snowchange Krasnochelye Oral History Tape 2012-5)

56-year-old Komi herder observed that some reforms have taken place regarding the net fishery: *"Now it is allowed at Churozero and Purnach lake. The permission is given until New Year, until herring starts coming to lay eggs. There are certain limitations on the size of the net and of the net sections."* (Snowchange Krasnochelye Oral History Tape 2012-11)

The rights of the local Sámi to establish obschinas or the kin-based tribal communities also create doubt and uncertainty in the local non-Sámi residents: *"Some time ago we heard that they were digging something near Ivanovka and that there would be a kin-based community. Then we heard that they put a fence up to protect reindeer at the land that was assigned to them. But after that we heard nothing. I can just tell that those who work in this community are not the most hard-working people around here and I do not think that they will be a success story. I think that they might have something just on paper. I remember recently there was a story somewhere closer to Murmansk about a community that had many reindeer but only on paper."* (Snowchange Krasnochelye Oral History Tape 2012-2)

### 2.1.5. Environmental and Weather Change in Krasnochelye

According to local residents weather changes are very visible. Winters have become warmer. If in the past blood-sucking insects activated after 20th June,

starting with the mosquitoes, and then later in July-August appeared midges (gnats). Now blood-sucking insects appear considerably earlier. This year (2012) for example, mosquitoes appeared in the beginning of June; the strange fact is that midges (gnats) started to act even before mosquitoes. Mushrooms grow up much faster. Salmon has become much smaller in size (Phillipchenko 2012: 4).

*Views of the village of Krasnochelye in August 2006.*

A Komi woman in her 50s has observed weather change. She is able to trace her observations through the subsistence and reindeer economy events: *"Earlier the reindeer herders had slaughtering before the Revolution day (7th November). October – November there were already frosts and they brought reindeer for slaughtering. The slaughter was later and later. At present they cannot slaughter even in December because it is too warm. I remember that when I married in 1982 they used to finish slaughtering by the New Year. Then it was later: January, February. At present they finish only in March. It is very bad. Pregnant reindeer also get slaughtered. Earlier, reindeer used to come in November and then go back to tundra. Now they bring them later and reindeer return to tundra in March. Well, in March they are still close to Krasnochelye, around 30 kilometers and then in May they go further to tundra. In June they are released for free grazing. Winter comes earlier. In May there used to be frosts still. I remember when we married I was seeing my husband off in May and I was still wearing a fur-coat. Nowadays at the beginning of May I can already plant vegetables in a green-house. As for potato it is the same – the beginning of June but some already plant potatoes at the end of May. I remember we used to swim more in the river than children do now. Berries depend on the year. It used to be the same. We did not pick so many berries as it is done now. We used to pick berries only for ourselves. Nowadays many people pick for whole-sale purchasers. Some of them do not wait until the berries are ripe enough."* (Snowchange Krasnochelye Oral History Tape 2012-5)

Another Elder in her 70s reflected on the experiences since 1940s. She has seen some cycles in the way the weather warms and cools: *I have lived here for 70 years. There are changes. But who knows. I remember there were some extremes in my youth as well. When I worked in a geological expedition our technical worker froze to death in July. Then when I already worked at the post office we had a summer when the river could not open for such long time. And there were very hot summers as well. So it is difficult to say. It is better to ask some other old people. Midge normally appears in August and this year it appeared before mosquitos. I was so surprised when I was bitten at the beginning of June. Berries are ripe earlier. I remember when I was a child we used to check cloudberry only on 2nd August on Saint Ilia Day. Only to check, you could not yet pick it. And lingonberry was picked only after 1st September. And now you can pick lingonberry already in August. And cloudberry is almost overripe already in the mid-July. So, there are visible changes."* (Snowchange Krasnochelye Oral History Tape 2012-8)



### 2.1.6. Cultural Heritage in the Village and Connections with Chalme-Varre

The survival of Ter and Yokanga Sámi languages remains a vocal topic, following the death of the last speaker of the Akkala Sámi language in 2003. The situation in the Eastern Kola villages seems to be hopeless in this context, as is described by a 55-year-old man: *"Even the late elders here did not speak these dialects."* (Snowchange Krasnochelye Oral History Tape 2012-1) A 50-year-old Komi woman agrees: *"In Krasnochelye I am positive there are none. We have mainly Komi here. And those Sámi who live here they all speak Komi."* (Snowchange Krasnochelye Oral History Tape 2012-5)

During our community documentation we spoke with one Sámi who could speak his native Eastern dialect. He is a pensioner in the village of Krasnochelye. Toponyms of Ponoi and different reindeer terminologies of Sámi language were taped. These materials await future analysis. He spoke of his family roots in Chalme-Varre: *"My grandparents lived at Yokan'ga and used to visit us here from time to time, in Chalme-Varre. They were all reindeer herders. I was born in tundra near Yokan'ga. They should not press people so much. They should not take money from herders so that the herders would stay at the sovkhoz. Otherwise the result will be bad."* (Snowchange Krasnochelye Oral History Tape 2012-7)

Many of the former residents of Ivanovka/Chalme-Varre live now in Krasnochelye. Connections are maintained with the former dwelling site, especially in the summer. A Komi woman in her 50s originally from Ivanovka discussed her memories of that place: *"We just know that we are from there. Of course we keep contact with each other. I moved from there when I was three years old. But I was always visiting the place with my grandmother. I was already in school and we used to go by boat to Ivanovka. They [the old people] tell how they lived there. They told that in Ivanovka they used to grow many vegetables: carrot, turnips, cabbage. They used to grow all that in kolkhoz and themselves. My grandfather worked all his life as a fisherman. They fished at the lake Peschannoe. We did not have Sámi. It is a new village, only 90 years old. I think there was no mentioning of this place until 1920s."* (Snowchange Krasnochelye Oral History Tape 2012-5)

## 2.2. Kanevka

The small settlement of Kanevka is a fly-in community along the Ponoi. It is located 200 kilometers from Krasnochelye by boat. This means a 6-8 hour ride along the river. During winter around 50-60 people stay in the village and in the summer around 100 people. In 1994 113 people used to reside in Kanevka.

The oldest resident of Kanevka is a woman who was born in 1929. Her uncles founded the village in 1923 according to her: *"There was only Vasilii Kanev, Aleksei Kanev. They were brothers of my mother. Sergei Kanev, Afanasii Kanev and Egor Kanev. Five brothers. One brother lived in Lumbovka and here in Kanevka there were three brothers. And Egor Kanev lived in Ponoi and in Kanevka. I was born when my parents were away but they brought me here when I was a baby. So it is almost that I was born here."* (Snowchange Kanevka Oral History Tape 2012-1).

Another elderly man remembered the Kanevs too: *"They were relatives, my uncles from my mother's side. My mother's father was their brother and he moved here after them. They were from Dumovka."* (Snowchange Kanevka Oral History Tape 2012-8). Following the arrival of the Kanevs, the Chuprovs arrived: *"Chuprov, our grandfather, came. He was second in the village. After that more people settled here and in 1930 a kolkhoz was founded."* (Snowchange Kanevka Oral History Tape 2012-4).

A man born in the Lovozero tundra in 1928 remembers the time during the war in the village:

*"It was fine. The administration of sovkhoz asked not to take me to the army because they needed people to work here. We carried hay, made veniki [birch bundles] There were cows here at that time and horses too. It was a large sovkhoz. In total the reindeer herd was around 2 000 animals and we had I think three different herds. After that I began working with reindeer as a reindeer herder. We rode in reindeer sleds there were no Buran [snow machines]. There were reindeer races in sleds at Ponoi river. I took part in them. The short race was 1.5 kilometers."* (Snowchange Kanevka Oral History Tape 2012-5).

In 1960s several festivities existed in the village: *"We had a Fisherman day, a Day of Youth when we,*

*young people, went for a picnic, upstream of Ponoi. The head of fishing inspection even allowed to fish one fish for soup. There was Festival of North with reindeer race. It was every year. I took part as well and won some of them. Races were along Ponoi. There was 2200 kilometers, than 500 kilometers and also buksirovka. There was also Maslenitsa when bliny were made (it is an all-Russian festival at the end of winter). Locals organized these festivals."* (Snowchange Kanevka Oral History Tape 2012-4).

A man born in 1959 also remembers these festivities: *"Maslenitsa, reindeer race. During Maslenitsa we all gathered at Kanevka square near the entry to the old shop. The organisers ordered ice-cream and beer in barrels. And everybody was buying as much as they want. When I was small I was coming with sledges. I used to give ride with my reindeer sledges and people paid me with ice-cream. So, at the end the sledge was full of ice-cream. Reindeer race was organized at Ponoi. I took part in them as a child and later as adult. It was better before. Now there is no money and you are all the time at work. It was even worse ten years ago during the transformation time we were not paid at all."* (Snowchange Kanevka Oral History Tape 2012-6).

In 1978 the fishing brigade in the Ponoi village was diminished, and towards 1990s it was totally closed down. Two elderly brothers from the community reflect those times of fishing: *"There was kolkhoz Sever, a 'millioner'. They used to catch up to 64 tons of salmon in good years. Not in the sea but in the Ponoi river. They were fishing for a day and the next day they were opening a net for the fish to get to the river. Now there is no such kolkhoz. I guess they just killed all fish. There are poachers; with jet-motors they destroy eggs. They wash it out of safe places."* (Snowchange Kanevka Oral History Tape 2012-7).

Now there are two brigades for reindeer herding in the community. The first brigade has two herders, the second has five herders. The head of these brigades is Nikolai Anatol'evich Terent'ev.

### 2.2.1. Fisheries, Salmon and Salmon Tourism in Kanevka

The oldest person in the village, born in 1920s, has paid attention to the salmon. Her observations portray concern for the fish: *"Fish has disappeared completely. It takes years for fish to grow. At first in Riaboga they used to catch around a hundred fish a day. Of course, fish does not have time to grow. There used to be a lot of fish here. And the sovkhoz fished a lot to fulfill the annual plan."* (Snowchange Kanevka Oral History Tape 2012-1).

*Aerial photo of Kanevka in mid-2000s.*



*Kanevka in mid-2000s.*

Starting from the mouth of Ponoi the salmon camps are operating at Ponoi, Purnach, Riaboga, upstream of Purnach, Acha and plans have been made to open a new one in Kolmak. There are five camps from the delta to Kanevka. Upstream from Kanevka there are Pacha, Porog, Lebiazhka and Sukhaia. Relationship with the salmon tourist companies has deteriorated according to the Elder: *"It is really bad. We get no freedom. They give us nothing. They first promised. When they were building Riaboga they promised to build eight-floor building. Since the promise ten years passed and nothing happened. Now they wanted to build some office building."* (Snowchange Kanevka Oral History Tape 2012-1)

An older man remembered the arrival of the first salmon camps in the region: *"...Salmon fishing brigade. It was closed down not in 1978 but in 1990s when the tourist camp at Riaboga was set. They were forced to take seine off. The first camp was at Pacha, I remember because I have worked there. It was organized in 1990 or 1991 by people from Petersburg Neob'iatnaia Priroda Company. When the camps were just beginning their business they provided some assistance. But now it is all over."* (Snowchange Kanevka Oral History Tape 2012-8).

An elderly lady remembered the Soviet fishery at the mouth of the river: *"Kolkhoz seine used to be at Ponoi, at the mouth, where the sea begins. It is a big net. It has gates and fish gets in it. We used to have sovkhoz and they had kolkhoz. Sosnovka also used to have kolkhoz but we had sovkhoz. Umba kolkhoz, Iokan'ga kolkhoz used to be. But we were already transformed into a sovkhoz."* (Snowchange Kanevka Oral History Tape 2012-1).

A man born in 1959 made the connection between the Ponoi seining and the contemporary salmon camps: *"The fishing brigade was fishing at tonia at the mouth of Ponoi [a section of river for seine fishing]. In a season they used to get around 65-70 tons of fish. At that time there was a lot of fish in Kanevka and everybody could fish as much as they want. Now those tourist camps closed such source of income for sovkhoz. Tonia is closed but there is not fish in the river either. And we are not allowed to fish"* (Snowchange Kanevka Oral History Tape 2012-6).

Similarly an elderly woman, born in 1934 commented on the salmon tourism: *"It has become worse. At first they took us there, they transport us by helicopter but after some time it was all abolished. Nothing is done for us."* (Snowchange Kanevka Oral History Tape 2012-2).

She has reflected on the current permits for local residents too. According to her the way licences are issued discourages local subsistence fisheries as they are not reflective of the needs of the residents: *"It costs 150 rubles. To pensioners! They were not giving licence while there was fish, as soon as fish disappeared they began selling licences. So, you take licence and get nothing. So I do not go fishing at all. Why did they make so that when fish was going they did not sell licences? So, we just sit and look at the river. There was never such thing here that nobody catches anything. If you take it from 6 pm it is valid until midnight. And what is the point now in autumn when it is so dark, fish will not bite in darkness. You will catch nothing. Nobody is going fishing nowadays. We have no rights. When these tourist bases were set they began selling licences. At the end of June when fish decreased they began selling licences only starting from 6 pm. What can you catch at that time? Nothing."* (Snowchange Kanevka Oral History Tape 2012-2).

Others agree on the problems of licensing: "They just sell us the licences only when it suits their needs" (Snowchange Kanevka Oral History Tape 2012-5).. The 79-old woman has made the following observation about the impact of salmon tourism on the river: *"Salmon lays eggs in shallow waters and jet motor streams destroy the caviar."* (Snowchange Kanevka Oral History Tape 2012-2).

A couple living in Kanevka has made a similar observation. Additionally the camps seem to be beyond inspections by the authorities, perhaps due to the position in society and the revenue they generate: *"They fish in small rivers where fish goes to lay eggs – Acha, Yugan'ga, Purnach. In those rivers the fishing is prohibited. Earlier Pomors even did not ring bells (church bells for services) when fish went to lay eggs. And now people wake up when they go with their jet-motors. The jet-motors influence eggs in the water. There is much less fish now here. They claimed that locals destroy fish population but the population of fish fell only after tourist camps were set in the area. I think that fish just do not have time to grow. It is because of jet-motors; because of a practice of catching fish and letting it back to the river. It will not survive. We do not know what they do in those camps. Maybe somebody does fish and let fish go. But other camps might make salted fish. The fishing inspection does not control them for some reason."* (Snowchange Kanevka Oral History Tape 2012-3)

A man born in 1959 agrees with this observation: *"It has become really bad. We are not allowed to fish. There is not fish and they blame locals for that. But in ancient times when salmon was going upstream to lay eggs they even did not ring church bells and now they use jet-boats. They use them in shallow waters, at only 15-20 centimeters deep. All eggs go through those jets. From where fish would appear? There is only small fish here; large fish disappeared. Before camps during laying eggs period the fishing agency did not allow us to use even simple motor boats."*(Snowchange Kanevka Oral History Tape 2012-6)

Elderly brothers from Kanevka identify similarly with the equity issue for the community fishery. Even in earlier times the official permits were not popular amongst the local people: *"We do not have anything. They squeezed us from all sides. Fishing was always prohibited to us. We were always poaching and fishing inspection used to catch us and fine us, for example, my mom used to be caught and other women around here. Of course, there is a big difference. We almost do not have any territory. They do not let us to go downstream after Acheriok, behind Kolmak even more so, there is OMON, security there. They come from tourist bases for fishing there and do not let us locals. As if we are stealing. They do not let us at their territory. They do not let there. You can get only to Penevoi, in Kolmak there is a security point every year."* (Snowchange Kanevka Oral History Tape 2012-7)

All-season subsistence fishery has been a crucial food source for the local people, as a 79-year old woman and her partner reflected: *"There was winter fishing earlier: pike and kharius (grayling) and red fish sometimes. Now there is less and less fish. This tourism is not needed here. Local residents get nothing from it. Just opposite, they just limit us. One guy told us that: 'you can always come to my base'. Where we will get 1000 roubles a day to pay for the stay? It is prohibited to fish up-stream. They also organized a check-point that does not let us go there where there is a good fishing area. The local residents just have a limited area allowed for fishing but it is not a good fishing area. They have to take these bases away. Bases are all located at places were reindeer used to cross the river. At first reindeer were coming out and were waiting when people will go away. Now they stopped coming at all, because there are houses there and people. Yes, they push us hard here. My brother cried when these bases came. He told that we were not defeated in war but they took with cunningness. They occupy this area. They sent OMON to deal with some local resident who was fishing. They do not respect us."* (Snowchange Kanevka Oral History Tape 2012-2).

An older man remembers the fishery at the village: *"Earlier there was a lot of grayling (kharius) and people fished it just in front of the village. But now the number of fish has dropped in last two years."* (Snowchange Kanevka Oral History Tape 2012-8).

According to these older people in Kanevka, the salmon tourism has excluded them from the river, up to a point where the companies are using checkpoints. Suggestions are made that these bases should be removed as they are "occupying" the homelands of the local people. A man born in 1959 identified the communal fishing grounds, but even there authorities have moved in: *"[Locals fish] from Potman'ga 1.5 to two kilometers. No. It is actually allowed from Kolmak, so it is five to six kilometers up to Kanevka and Islands. Up to large Zakharovskii Island. Here we can fish salmon with licences. But even then we are sometimes prevented from doing it. They even call OMON though we are the most peaceful in here. So the situation with fishing is very bad in here. We are repressed here. We have small salaries and almost all here are already pansioners. We buy licence and return home with no fish."* (Snowchange Kanevka Oral History Tape 2012-6).

A couple, a man and a wife who moved to Kanevka in 1978 from Ponoi, when that settlement was closed permanently, agrees with the overall feeling that the camps have caused trouble. They fish for subsistence seven kilometers upriver from Kanevka but now this zone too has become forbidden: *"I think that poachers are less active now. In sovkhoz they just let reindeer wonder away and do not pay salaries to people. Now it is more difficult to collect herds back. Earlier herds and herding grounds were more controlled. Those tourist camps have been hampering as well. I personally have never got any help. Maybe some time ago they got somebody to give them a lift by helicopter. There is nothing good for sovkhoz from them."* (Snowchange Kanevka Oral History Tape 2012-3).

They also feel that there are no rights for the local people regarding the fisheries. Licencing for the local people does not meet their needs and subsistence fishery is discontinued: *"There is almost no fishing. We do not have any rights. What kind of rights we can talk about? The fishing is almost over that only now they issue licences for us. Half summer is over and only now they began issuing the licences. And these licences are only from six to twelve o'clock. It means that during the day we do not have right to go to the river. Our rights are clearly violated. We are disturbing their clients. They fish approximately until six and only after that we are allowed to fish. But in reality they disturb us more. We are not to be blamed that we live here, by that river and we do not have other places to fish. Everything is so far from here. You can get there only by helicopter or all-terrain vehicles. But not everybody has all-terrain-vehicles. There are some lakes but far. 40-60 kilometers away. Enthusiasts fish kharius (grayling) here. Those who are not too lazy and are not afraid of frost. They sit here on Ponoi and also at mouths of smaller rivers like Pacha. They catch mainly kharius but also whitefish from time to time, burbot, perch. If there was a lot of different fish here we would not need this salmon so much. If I could get pike I would much better prefer pike. But I have grown by Ponoi and I cannot live without salmon. Well, I remember that earlier, and maybe now as well, it was allowed to reindeer herders in tundra to put nets in lakes. But not in here."* (Snowchange Kanevka Oral History Tape 2012-3).

The salmon companies have caused also changes to other local practices according to the couple: *"Because of the tourist camps they prohibit us to float wood for construction or for fire by the river. We need to ask for permission. I do not understand why. Earlier they were floating wood and the population of fish was not decreasing from that. Earlier they floated wood until Ponoi from Lebiazhka. When they built the village Ponoi they took construction wood from around Kanevka and Lebiazhka."* (Snowchange Kanevka Oral History Tape 2012-3).

*Views of the community of Krasnochelye.*

*Local house of culture*

*Local church is being build*

*Kindergarten*



*Krasnochelye hospital*

A man, born in 1957 has identified that some fish camps have helped the locals in transportation and other means too. However he mistrusts the scientists in close proximity to state power, and has concerns for the impacts to the river, especially from fuel discharges: *"Well, Acha and Pacha camps help sometimes. Riaboga camp does not help at all. Scientists say that they do not harm fish but locals think that they do. Their jet-motors wash fish eggs away. They also burn so much gasoline here and where does it go? It all goes to the river. They burn almost 200 tons of gasoline. When I was young there was no poaching. People were different but now there is poaching everywhere."* (Snowchange Kanevka Oral History Tape 2012-4).

The question of poaching according to official definition is a difficult issue in the remote wilderness villages of Kola. Two elderly brothers in the community explained the context through subsistence fishery: *"Earlier you could have been fined even for rods, let alone for nets. We were fined earlier and even more so now. And we needed to live somehow so we poached. My mother had nine children and father was in tundra, so I used to go with my mother fishing when I was twelve year old. Fourteen kilometers from here to Alden'ga. Earlier there was so much fish. We used to go to some river and it looked alive - so much fish. You just get a salmon every time you threw a fishing rod in. We did not need so much as we could get then. And now there is not much fish.We go up to Acheriok, up to Yogon'ka. But in Yogon'ka there is not much fish now as it used to be. There is Alden'ga upstream but there is no fish there. In Paman'ga there is kharius (grayling). There is fish in Riabaga but there is a base now that hosts rich people, the Americans. So, now they put security around there. They behave as kings, as if it is their land and their river."* (Snowchange Kanevka Oral History Tape 2012-7).

On the other hand, another Elder from the village agrees with the need for nature conservation: *"Here in Russia it is impossible to allow fishing without licences; otherwise all fish will totally disappear. There should be some limits in Russia, otherwise fish population will be destroyed. Ponoi is enough for me."* (Snowchange Kanevka Oral History Tape 2012-8).

A man in his fifties summed up the feelings of the local people regarding the salmon: *"Small rivers are all considered as egg-laying grounds. Nobody is allowed to fish there, not even foreigners. But they use Acha for rafting. We are not allowed to do that. We have fishing in our blood. We have been raised with fish. We love salmon. We do not know any other fish."* (Snowchange Kanevka Oral History Tape 2012-6).

### 2.2.2. Weather and Environmental Change in Kanevka

Local people had observed change in climate and weather too. A man born in 1934 has made the following observations: *"It became colder. Cloudberry does not grow well every year. This year some people went to check – it all dried out because there were no rains. Earlier you could see reindeer even near the village. Now when you go to the forest to pick berries and mushrooms you do not see any reindeer."* (Snowchange Kanevka Oral History Tape 2012-2).

Two elderly brothers from the community are certain that the weather has changed. They agree that the summers have become colder: *"Earlier after 7th November snow was on the ground and we had corral of reindeer. Nowadays even in December there is no snow and all rivers are open. We cannot gather reindeers for counting as there is no snow and the reindeer cannot be without water. Summers are colder."* (Snowchange Kanevka Oral History Tape 2012-7).

An elderly man also has noticed weather changes: *"It has become warmer and the pressure is jumping. I had some measurements. For Kanevka as I remember the normal atmospheric pressure was 735 – 760. I think it was three years ago the pressured dropped as low as 711. Last year [2011] there were rains in Lovozero but in Kanevka one month was so hot. All rain went away from us. In Kanevka is it often hotter in summer and colder in winter."* (Snowchange Kanevka Oral History Tape 2012-8).

A man born in 1959 made an interesting observation about fires: *"There are more fires along rivers. Otherwise it is difficult to say. Some summers are cold and some are very hot."* (Snowchange Kanevka Oral History Tape 2012-6).

A 54-year old man has made an observation about reindeer in Kanevka. According to him the wild reindeer in the area have caused reindeer to start migrating with them: "*Earlier reindeer were here but now they migrated with wild reindeers to a Lapland natural reserve. They are always disturbed here. There are always helicopters flying over them with tourists who are making photos. There is no help from [the salmon companies]. Reindeer are afraid of helicopters that are fighting all the time around here. That is why reindeer have left the place. Reindeer need silence."* (Snowchange Kanevka Oral History Tape 2012-5).

Tourist hunting around the community has resulted in declines for the wild animals, as the visitors rarely distinguish between the stocks: *"They buy hunting licences for wild animals in winter but they do not distinguish between wild and private animals. They call all of them wild. There used to be many moose. Sometimes I could see up to eleven animals in a day. They used to come to the village. Now they are rare. It is terrible that hunters just hunt all of them without any considerations, both locals and strangers. Everybody is just crazy about money: they do not eat them but hunt to sell. They hunt moose, reindeer. In winter there are people coming with snowmobiles. Plenty of those. They just use GPS and do not need local guides. Recently there were some people from St. Petersburg on foreign-made snowmobiles."* (Snowchange Kanevka Oral History Tape 2012-7)

## 2.3. Sosnovka and Adjacent Marine Areas

There are very few private reindeer in Sosnovka, but the cooperative herd is still there. The head-manager of the village is Pavel Vasilievich Vaganov who also works as the brigadeer for the reindeer herders. The herd is in summertime close to the sea and in winter inland. Corral site for the community is remembered by some herders in Krasnochelye: *"It used to take place close to the sea. The place is called Rvy. There used to be a tonia-seine there. Now there is no point to get reindeer to the sea for slaughter. You see, we used to order a ship and it would take reindeer meat straight from there. Nowadays, sometimes they bring reindeer to be slaughtered in here. One year they used Kanevka corral. Then meat was transported to Gremikha."* (Snowchange Krasnochelye Oral History Tape 2012-12)

One of the older women in the settlement explains the situation today: *"Our region has always been getting subsidies from the centre. Earlier it was much better with food supply, the health care was well-organised: doctors from Lovozero used to come regularly here. Nowadays we even do not have a feldsher [medical worker with qualifications between a doctor and a nurse] in the village. Planes are very seldom, only once a month. It is not enough. A passenger ship comes once a month, also not enough. We do not have any other transport here. Now reindeer herding is the main occupation in the village. When we receive some quota for fishing, people do fishing."* (Snowchange Sosnovka Oral History Tape 2012-3). A man born in 1939, pensioner, agrees that the overall context in the community is not to be celebrated: *"It is not so good."* (Snowchange Sosnovka Oral History Tape 2012-9) On the other hand not all people feel negatively; an older man feels the situation is acceptable: *"It is good. I am satisfied."* (Snowchange Sosnovka Oral History Tape 2012-8)

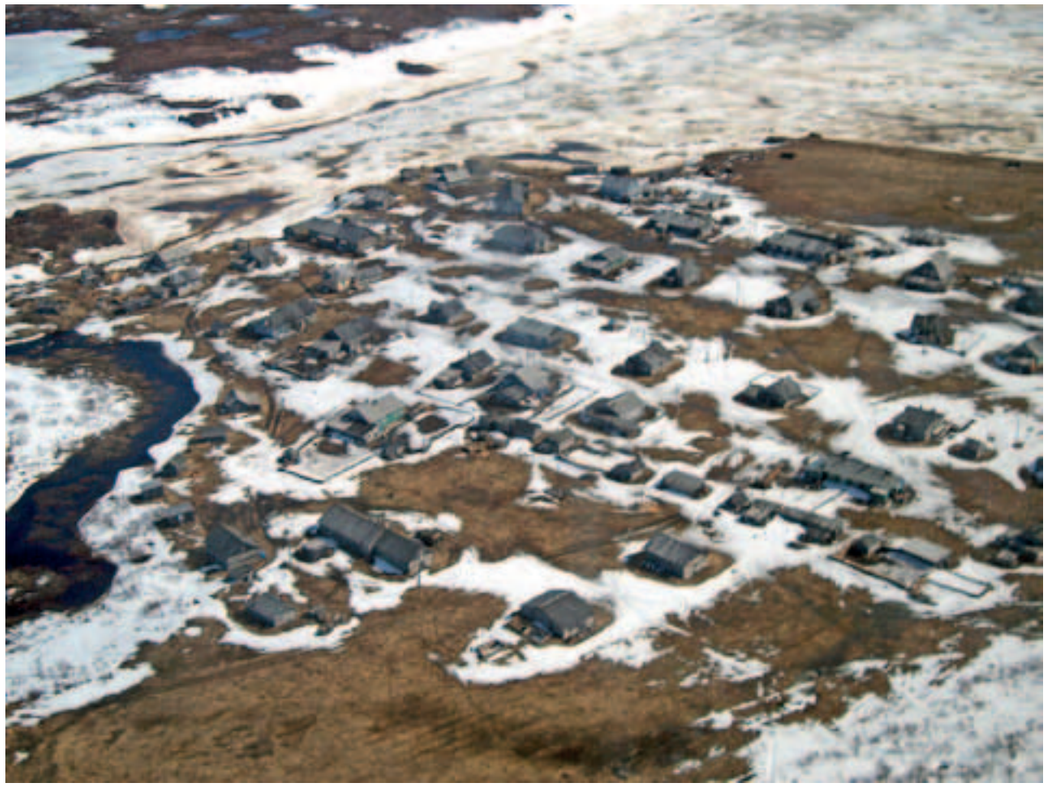
As to fisheries, a 32-year-old male in the village commented that: *"Well, last two years there were no permissions. Before there were permissions and you could buy them. This year there were no permissions."* (Snowchange Sosnovka Oral History Tape 2012-1). On the coast people fish for navaga, a cod-related marine species: *"Sometimes when navaga is coming and the sea is frozen they fish for navaga with a rod."* (Snowchange Sosnovka Oral History Tape 2012-3)

Poaching remains a problem, but again the definitions of it and local practices are sometimes at odds. Officially all is done to try to prevent the various illegal harvesting practices. But as elsewhere in the Lovozero raion, subsistence fishery is a crucial source of food for the locals in Sosnovka as is explained by a pensioner lady: *"We are given permission for fishing for own food supply. You cannot buy fish or meat in shops, they do not bring it here."* (Snowchange Sosnovka Oral History Tape 2012-3) Another older lady, born in 1952, confirms this with strong and clear message: *"We do fishing for own food."* (Snowchange Sosnovka Oral History Tape 2012-7)

An Elder in the village, born in 1939, points the finger towards Federal level and promises that have not been kept regarding the fisheries: *"Putin said long time ago that people who live near rivers, small-numbered peoples should be given fishing permissions. But they still do not allow us [enough quota or permits]."* (Snowchange Sosnovka Oral History Tape 2012-9)

The role of subsistence also in other natural products becomes evident in her observations regarding berries: *"I am a pensioner so I pick berries and mushrooms. It depends on the year. Some year can be very good for berries, some year can be with no berries at all but it is rare. I cannot say much about fishing. It is difficult to say about fish if you can fish only within given limits. But it looks that they are always able to meet quotas."* (Snowchange Sosnovka Oral History Tape 2012-3)

Salmon tourism has no role on the coastal settlement of Sosnovka. People on the other hand have heard of the experiences along Ponoi, and reflect on them: *"Luckily for us, there are yet none*



*Aerial views of Sosnovka.*



*[salmon tourist camps here].”* (Snowchange Sosnovka Oral History Tape 2012-3) A man born in 1971 agrees: *“Here in Sosnovka nobody is organizing tourism. Thank God for that.”* (Snowchange Sosnovka Oral History Tape 2012-6)

The special rights for the Komi and Sámi for net fishery receive some support from the older generation in the village, as is evident in the words of a person born in 1939: *“They should allow it* [the net fishery for Indigenous peoples] *but they do not.”* (Snowchange Sosnovka Oral History Tape 2012-7) Here it may be of relevance that across Murmansk, Archangelsk and Komi regions the discussions of role and scope of rights for the Pomors as Indigenous peoples, the Sámi is being debated and contested, so people in Sosnovka, due to their heritage as mainly Pomors, may feel attached to the larger context of these rights and support them also for others.

People on the coast have noticed some changes in the weather. 32-year-old man positioned the shift in winds as a priority observation, but feels the yearly cycles determine the change, as opposed to define human influence: *“Strong winds. November and December have become warmer. Winter is the same. Everything depends on the weather conditions and may vary significantly year to year.”* (Snowchange Sosnovka Oral History Tape 2012-1).

A man born in 1966 has seen overall loss of fish and animals: “*There is less fish and animals but berries and mushrooms are the same.”* (Snowchange Sosnovka Oral History Tape 2012-5).

Some locals do not agree with this assessment. A man born in 1971 has noticed a difference in berries: *“There are fewer berries for sure.”* (Snowchange Sosnovka Oral History Tape 2012-4). Feeling the same, a woman born in 1952 said that: *“Of course, there are changes. Winter is colder and summer is colder. There are not so many berries.”* (Snowchange Sosnovka Oral History Tape 2012-7).

The cultural landscape and heritage of Sosnovka remains within the memory of local residents. They position the older Sámi place names to be reflective of the land use and occupancy of this indigenous people of the region. The concept of *“Seid”* as a sacred Sámi location, place or an object is still known about. However today nobody speaks the language in the community anymore. Role and locations of sacred places are still being discussed in the village, as is evident from words of one of the pensioners in the community: *“I have heard that there is Seid mountain; it used to be a holy place for Sámi. It is around thirty kilometers in the tundra from here but there is nothing else. Nobody here speaks Sámi or Komi.”* (Snowchange Sosnovka Oral History Tape 2012-3) A woman in her 60s confirms the situation: *“They all died out. All old Sámi and Komi people have already died in the village.”* (Snowchange Sosnovka Oral History Tape 2012-7).

## 2.4. Salmon Companies

According to the Committee for Industrial Development, Ecology and Nature Management of Murmansk Region (2012: 32-33) the following species of the salmon family are fished in Murmansk region industrially or as a hobby:

1. Atlantic salmon (semga)
2. Pink salmon (gorbusha)
3. Coregonus (sig)
4. Brown trout (kumzha)
5. Char or salvelinus (golets).

In general in most of rivers of Kola Peninsula that flow to the Barents and White Seas the conditions are preserved to guarantee a stable population of Atlantic salmon. Such stability is achieved first of all by the active nature protection policy and artificial reproduction (artificially-grown fish is released into water) (ibid 2012).

Since 1988 the fish policy at Kola Peninsula has been following the *“small steps approach”*. The decisions are based on the evaluation of fish population in individual rivers. There was no industrial salmon fishing in the Barents basin in 2011. The same year 26256 tons of fish was caught at seines situated near the shoreline at the White Sea and at Varguza basin. 30407 tons of fish was caught for sport fishing at White Sea and Barents basins. Scientific fishing and monitoring fishing amounted to 0.319 tons. 1.196 tons was caught for reproduction purposes. 6.263 tons of salmon was caught as part of the measures to support of traditional economic activities and lifestyle of indigenous population in the White Sea area. Salmon spawning begins at the first week of May (ibid. 2012: 32-33).

There are approximately twenty sport fisheries companies on the territory of Murmansk region, which are responsible for organizing sporting fishing. Approximately 100 of 144 “water objects” are partly in ownership of these companies; about 78 of them are salmon rivers.

Catching salmon is the most developed type of

sporting fishery in the region. For more than eighteen years, fishing for salmon has been provided on the most attractive salmon rivers such as Ponoi, Varzino, Rynda, Harlovka, Yokanga, Varzuga, Umba and Kola. Highly-developed infrastructure of fishing tourism (with approximately 30 fishing bases that are functioning) provides financially good results. At the same time, nowadays a significant amount of small salmon rivers are being involved in the fishing tourism, which are far away from settlements but are productive too.

Majority of the amateur and sporting fishing is catch-and-release, the caught fish is returned back to the river. Some areas do not require this method. At salmon company fishing zones, people can fish with a *tourist voucher* (a document acknowledging conclusion of an agreement of compensating service in the field of amateur and sporting fishing).

These tourist services, including activity in the field of amateur and sporting fishing, are carried out in compliance with the requirements of federal laws "About Fishing" and "About tourist activity in the Russian Federation" (article 24 of the *Federal Law On Fishing and Preservation of Water Biological Resources* No 166-FZ, issued 20.12.2004).

Generally speaking, the system of tourist fishing works the following:

1. A specific fishing zone opens for development of sports fishery. The responsible Fisheries Department organizes a competitive tender for giving a contract regarding this area. Fishing tourist companies apply there. A company, who wins the tender obtains a right to fish water bio-resources at this fishing zone with intention of organizing sporting fishing.
2. After that, company constructs infrastructure necessary for organization of amateur and sporting fishing at the fishing zone.
3. Finally, citizens who want to fish go to the company and agree on the compensating services in the field of amateur and sporting fishing (paying money for that). Thus the citizen gets a tourist voucher with a license. After that the tourist is taken to the fishing zone by helicopter.

During the project fieldwork in 2012 representatives of various companies were met. One deep interview was conducted with the company "Silver of the Ponoi" (Kanichev 2012b). It was founded in 1998, thus it has been successfully working more than twelve years as on the international and Russian tourist markets. By paying close attention to the activities of this company we can see the mechanisms of the other salmon tourist enteprises too.

Main activity of the company is the organization of tourist fishing on the Ponoi river. All their services are certified. Since 2003 an annual inspections of their activity has been held. Here is the list of issues which are checked:

1. Tourist activity;
2. Food service;
3. Hotel service (Kanichev 2012b: 1).

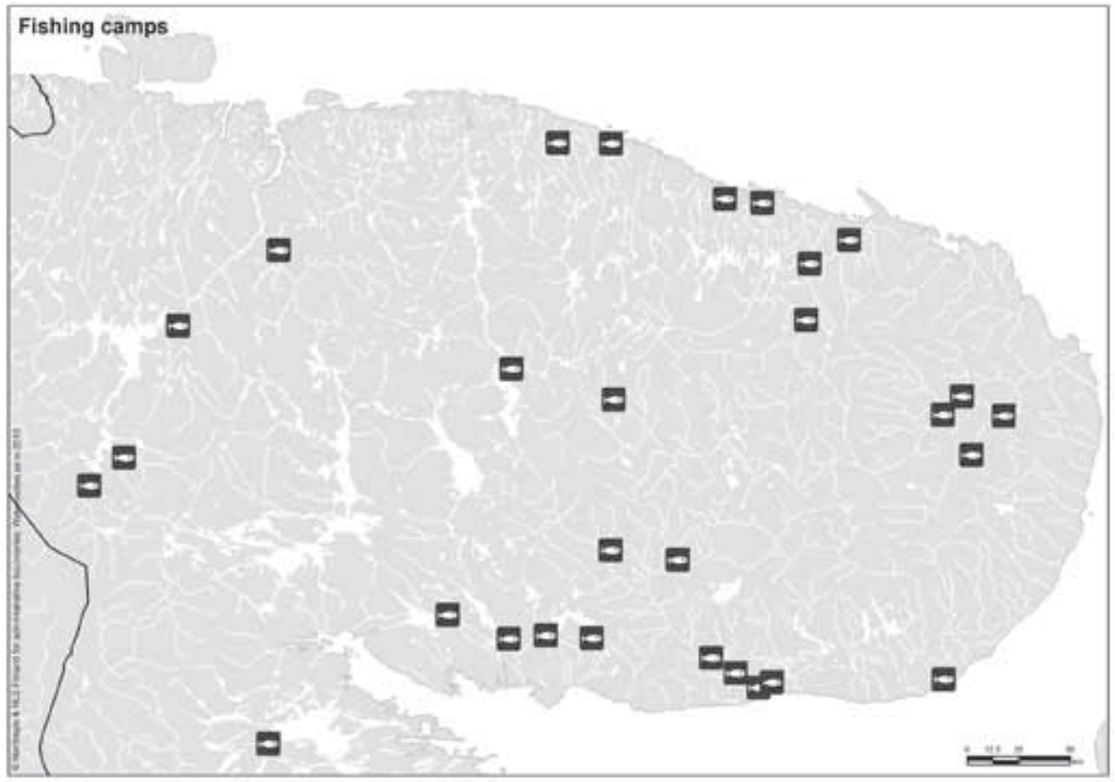
Tourist fishing season starts in the end of May and lasts till the beginning of October. A company has camps on the Ponoi river and its tributaries: Acherjok river and Pacha river. As a rule, a group of tourists are met at the Murmansk regional airport and taken to the Ponoi by helicopter. Usually tour lasts for seven days. A company has three tourist camps: camp "Pacha", camp "Acha" and camp "Porog". Camps have all the conditions for tourist accommodation: comfortable wooden houses with electric heater, sauna and shower (Kanichev 2012b).

Fishing is carried out by "catch and release" method. During first five weeks of the season, value of catch is high enough. During this time cisco also comes with salmon, but nevertheless, correlation of small/large fish) is 1:2. But as water and air are not still warm enough, water level often changes that causes some problems for successful fishing. In the middle of the season are the warmest weather and best catches. At these period water level decreases so that fishing by fording or from the river bank becomes much easier and interesting. In the end of June, arrival of new fish starts which is considered to be a marker for summer. During this period large fish dominate. In autumn the largest fish comes. At this period, salmon dominate (Kanichev 2012b).

To investigate the health of salmon stocks the company carries out assessment of catches (to avoid overfishing for salmon). Moreover, they prepare different reports for Russian state authorities.

As for relationship with indigenous peoples, here the situation is complex enough. According to the workers of the company, Sámi people often try to poach. At first a company tried to find a compromise






*Location of fishing camps in Kola in 2012.*

*A sport fishing guide on the Ponoi river.*

by negotiating with Sámi people and giving them special licenses which provide special benefit for them. Sámi people have taken these licenses and resold them to other people. However according to documents of the company, owners of these licenses are Sámi people.

According to the spokesperson sometimes Sámi people just poach on the fishing territories of company. To avoid it a company has had to hire a guard to protect their territories from poaching. If there was no company on the Ponoi, Sámi people would have fished any fish extensively which would caused overfishing. Nevertheless the company is trying to a find a compromise. For instance, recently the company offered Sámi people to sell tourists their products (souvenirs, goods etc). So far no attempts have been made by Sámi people. A struggle between fishing tourist company and Sámi people still exists (Kanichev 2012b).

As for management recommendations and health of salmon stocks workers of the companies say that the Ponoi needs to be guarded well. As too many strangers come on the Ponoi, much rubbish appears in the river after their "rest". It leads to bad water quality in the river and deterioration of salmon. In conclusion, as for plans for future "Silver of the Ponoi" says that they will focus not only on salmon but other fishes too; for example grayling, perch, pike. According to workers of the company, in future they will organize so-called "family tours"(Kanichev 2012b: 2).

## 2.5. Regional Authorities and Fish Monitoring

Amateur and sporting fishing is permitted to all citizens (including foreigners) in the water objects which are suitable for that purpose in the Murmansk region on the assumption that tourist has a passport and a license, given by the Department of Fishing Control Authority.

These Departments are the state bodies which are responsible for protection, control and management of water resources. In the Murmansk region such function is fulfilled by the Murmansk Department for Protection, Reproduction of Fish Supplies and Fishery Management (MURMANRYBVOD) and its fishing inspectorates. To regulate fishing activities catch limits and production measures (minimum size of fish which are permitted to be taken) are used.

According to "Rules of amateur and sporting fishing in the Murmansk region" indigenous peoples of the Murmansk region (Sámi, Komi, Nenets, Karelians) and other groups of population, whose lifestyle and culture include traditional nature management, have priority rights for fishing on the territories of their traditional inhabitation and activity.

Citizens who are recognized as "Indigenous peoples" are permitted to fish for their personal consumption. They can use fishing nets and seines in such places, where it is allowed to use special "personal permissions" (the cost of this permissions may be reduced due to privileges, given to indigenous people). The responsible body is the Department of Fishing Control Authority.

Regionally according to Committee for Industrial Development, Ecology and Nature Management of Murmansk Region (2012: 32-33) special fish-counting traps are set in Tuloma and Kola rivers (the Barents Sea basin) and Umba, Varguza and Kitsa (the White Sea basin) for monitoring purposes.

For 2012 in the rivers of the White Sea basin (Varguza, Kitsa and Umba) the fish population was dominated by the 2006 generation. There was also a mass return of generations 2005 and 2007. No fish that comes for a second spawning was registered at the Umba River for last year.

No artificial reproduction technique is used at Varguza and Kitsa. An artificial reproduction unit functions at the river Umba. Farmed salmon accounted for 1.6 per cent of the migrating population in Umba while around 10.72 per cent of the population of salmon is fished in Umba. It is worrisome that the salmon population of Umba has been dropping drastically in the last two decades. The same trend prevailed in 2011 as well: the levels of fish returns were much lower than limits. The Umba artificial reproduction unit is not able to restore the salmon population to its former size. According to authorities more measures to protect the population are needed (ibid. 2012). Special attention should be paid to a strict regulation of fishing and river protection.

In 2011 at the Barents basin of Kola Peninsula 70 per cent of all migrants consisted of the generations 2005-2006. At the basin of the Nizhnetulomskoe water-reservoir there is also high return of the generation 2004 (more than 20 per cent). There was more fish at Kola and Nizhnetulomskoe water-reservoir than usual (ibid. 2012).

It is illustrative that no second spawning was registered at the river Umba during the last two decades. There was no second spawning registered in the Kola River either, which is unusual for this river.

The water bodies of Murmansk Region have, as a rule low fish production and are dominated by coldwater fish such as coregonus, salmon and cod families. Fish reproduction in most of bodies of water that are situated far from industrial objects depends primarily on hydro-meteorological conditions, availability of food, and the number of spawning fish. In the water bodies that are situated in the vicinity of industrial centres the structure of fish population is affected by the easy access of the people.

Regional authorities suggest that in order to guarantee a stable reproduction of the fish populations, following measures are necessary: efficient fish protection; long-term regulation of fishing with fishing quotas based on biological indicators; monitoring and possibility to introduce changes to fishing quotas; rapid measures to compensate any damage to water ecosystems (ibid. 2012).

In 2011 48,2 tons of salmon was reserved for sport fishing, 30,41 tons of those reserved quota were used. In addition, 73,92 tons of coregonus (sig), vendace (riapushka), brown trout (kumzha), pike, perch, burbot (nalim), roach (plotva), ide (iaz) and grayling (kharius) were reserved for organized hobby and sport fishing. The sport fishing took place at 27 lakes and 14 salmon rivers. 28,22 tons of fish was caught or 38.2% of reserved quota (ibid. 2012).

*Well in the village of Krasnochelye.*

*Views of the village of Krasnochelye and airport.*



*Local airport*

## 3. Recommendations for Ponoi Watershed

The development of collaborative management structures for Ponoi watershed operate in the context of todays Russia. Some steps can be advanced, but the following discussions should be seen as a view, a road map, towards future. Realistic development of a functioning watershed management built both on Komi and Sámi as well as salmon tourist needs will take years.

Overall Prusov (2004) provides extensive management recommendations for Ponoi: "without a doubt, the most stable resources management is a situation when intervention in natural habitat and processes of natural reproduction of population is maximally reduced. In that case risks of negative changes are reduced to minimum level, so that recreational fishing, based on "catch and release" method, may exploit a stock, consisting of really "wild" fish, their quantity is maximal for certain habitat. This method of management, based on scientific recommendations, maximally provides saving of "wild" nature of population and increases economical benefits of stock exploitation."

Based on the work in the communities along Ponoi during our project, we wish to bring the following steps into the discussion as a basis for future management options:

### A. International Concerns
### Proposed actions:

- A comprehensive review of salmon stocks from the whole chain of habitats from high seas to upper Ponoi should be installed: In 2013 in addition to these traditional knowledge results expressed here, the KolArctic science project will issue major new scholarly information about the salmon stocks in the region. Following Prusov (2004), they together with the TEK observations and NASF concerns should be taken as a basis of development of the watershed.
- A Ponoi watershed-based international plan should be created as a basis of future work: This plan should include federal and regional commitments towards the watershed. Special attention should be placed on questions of local and Indigenous concerns as well as conservation needs. A permanent ban on mining and hydroelectricity would make sure the river has the capacity to remain a well-productive salmon stream.

Risks if not implemented:

- If the salmon stocks, habitats and fish health is only based on science, large portions of the watershed will be dismissed. Secondly equity issues and traditional knowledge, in some cases Indigenous knowledge will be ignored.
- If an international plan is not developed, pressures and drivers will mount to impact the river, most urgent of which will be impacts of climate change, mining and hydroelectricity.

### B. A Call of Parties to Develop Ponoi
### Proposed actions:

- If a Plan is installed to develop Ponoi watershed in a sustainable manner, a call of parties should be initiated from the regional and federal centers: This call should be directed towards local villages, including Sosnovka, as well as Sámi, Komi and Pomor organisations and salmon tourist companies. Regional and federal agencies will play a prominent role too.
- Past damages to the river and key habitats should be mapped to co-incide with this call of parties: These include the industrial legacies from the Soviet times which are visible in the water quality data and other impacts.

Risks if not implemented:

- Local people continue to be excluded from the development of the river.
- Past impacts to the river will remain to be known only to sectoral specialists and not considered in the management.

### C. Conflict Resolution Process for Ponoi
### Proposed actions:

- The report has identified an equity problem between local and Indigenous harvest and the "outside" salmon tourist companies: There is an immediate need of a conflict resolution process between the parties involved and the identification of problems.
- Number and role of salmon tourist "checkpoints": The instalment of "checkpoints" with guards in some parts of the river has caused perceptions of exclusive uses of river. These checkpoints should be dismantled and agreements reached as a part of a conflict resolution process on user zones and mutual respect.
- Workshops should be held in Krasnochelye, Kanevka and Sosnovka to explain science results and TEK results: Local people feel excluded from the information and development of the river. Therefore culturally appropriate workshops should be held along the river to make sure all local people are involved.
- Review of local rights to fish: There is confusion and mismanagement regarding Indigenous Sámi rights, Komi rights and local rights to harvest fish. These rights should be reviewed and harmonized. This will prevent "poaching" by local people and the real poaching too.
- Impact from motor boats on salmon spawning sites and roe should be investigated: Oral history interviews identify this to be a relevant topic in all communities and harvest areas along the river. Therefore a science and TEK-based survey into this topic should be identified.

Risks if not implemented:

- Equity issues continue to persist and local "poaching" continues.
- Impacts to salmon stocks continue without coordination efforts.
- Checkpoints along the river continue to cause hardships to local populations and create insecurity.
- Information on how the river is doing remains only in regional and federal centers, and local people do not hear results of science.
- Various different rights exist and legal implications are not harmonized.
- Different styles of river use by salmon companies lead to impacts to salmon spawning sites and roe.

### D. Cultural Recommendations
### Proposed actions:

- Mapping of Place Names in Pomor, Sámi and Komi: This mapping should be initiated as soon as possible. It will provide crucial information of habitats, past land uses and cultural heritage of the region.
- Promotion of Pomor, Sámi and Komi culture along the river: Using signs, posters, brochures and other means the visitors can immerse themselves in the rich cultural heritage of the region and invisible histories become more visible.
- Using models from other parts of Russian North, a new national park with cultural harvest should be discussed: Here a workshop on the Kolyma experiences could benefit the Ponoi development.

Risks if not implemented:

- Many knowledge holders in the villages will grow old and die, taking their knowledge with them. Then information on past issues is lost forever.
- Mapping of place names will expose the large and varied cultural history of the river. Otherwise it will be seen only as a "river" without histories.
- If no new conservation mechanisms are installed with appropriate cultural mechanisms, the present-day problems continue to persist.

# C. Näätämö Watershed in Finland and Norway

In this chapter the results of the work in Neiden are explained together with an overview of the watershed and policy recommendations.

## 1. Biocultural Information on the Watershed

The Näätämö/Neiden watershed is home today to Skolt Sámi, Kven, Finnish and Norwegian residents. The full multi-layered histories of the river cannot be expressed adequately here. However the Skolt Sámi are considered to be the *Indigenous peoples* of the river, even though the modern-day population of Sámi are the descendants of those Skolts who had to flee Suonikylä traditional territories in 1944. The original Näätämö Skolt tribe has, for the most part, assimilated with the surrounding populations in late 1800s onwards.

The Kven are a national minority on the Norwegian part of Neiden. They are ethnic Finns, many of which still speak the language. Kvens are the descendants of a Finnish population that moved to Varanger area in the 1800s from Karelia, Sodankylä, Kittilä and Kainuu areas. In addition to these peoples along the watershed there are local Finns, Norwegians, Inari Sámi and North Sámi peoples.

Norwegian part of Neiden belongs into the Syd-Varanger municipality, Finnmark Province. The Finnish part of Neiden belongs into the Inari municipality, located in the Province of Lapland. Some tributaries are located in the municipality of Utsjoki. The Neiden Fjord in the Barents Sea has a status of a "national fjord" in Norway, which carries certain land use preferences and guidelines. The Sevettijärvi, Näätämö and adjacent habitat zones belong into the "Skolt Sámi" territories in Finland, which are subject to the special Skolt legislation.

The management report for the Skolt territories (2012: 2) identifies the lake Sevettijärvi as having a lot of whitefish. This is due to large stockings of whitefish to these waterbodies in 1970s and 1980s (ibid.). State representatives from Metsähallitus company provided means for seining on the lake in summer 2011 and 2012. Seining spots and their locations were investigated with interviews and all in all in 2011 417 kilograms of fish were caught with seines, most of which was small whitefish (ibid. 2012: 2).

### 1.1. Ecological and Climate Data Regarding the River

The Neiden river begins on the lake Iijärvi on the Finnish side and flows into the Neiden Fjord on the Norwegian side. Watershed total area is 2962 square kilometers (Niemelä et al. 2001: 2). On the Finnish side the river flows for approximately 50 kilometers. On lake Iijärvi water level is 193 meters above the sea, and at the fjord 130 meters above the sea. During its course the river forms lakes such as Kaarttilompolo, Vuodasluobal and Opukasjärvi.

The fish on the river include (latin names in parentheses):

- Atlantic salmon (salmo salar)
- Lake trout (salmo trutta)
- Sea trout (salmo trutta trutta)
- Grayling (thymallus thymallus)
- Northern pike (esox lucius)
- Whitefish (coregonus lavaretus sp.), including stocks that migrate to the Barents Sea, 40 kilometers from the river.
- Arctic Char (salvelinus alpinus)
- Burbot (lota lota)
- Perch (perca fluviatis)
- Pike (esox lucius)
- Three-spined stickleback (gasterosteus aculeatus)
- Nine-spined stickelback (pungitius pungitius)
- Common minnow (phoxinus phoxinus)
- Flounder (platichthys flesus) (below Skoltfossen)
- Occasional visitors include escapee pink salmon from the Russian side, which are spawning on the river, are caught, as well as European eel, European river lamprey. (Tossavainen 2013, Niemelä et al. 2001: 4)



Scientific monitoring of Neiden river has taken place throughout the 1900s. Since 1980s results on the Finnish side have been digitalized and are publicly available. We have used the latest results from the water measurements to summarize current trends and issues between 2010-2012 (Tossavainen 2013):

- Alkanity of Neiden is between 0,12-0,231 mmol/l, which indicates a very good buffering capacity.
- pH of the water ranges from 6,74 to 7,25 with an average of pH 7,01, almost neutral.
- Levels of Calcium (1,9-3,5 mg/l), Magnesium (0,6-1,0 mg/l), Iron (72-220 µg/l), Aluminium (19-45 µg/l) are very low and harmless to various benthos and fish.
- Total amounts of Phospor (2-27 µg/l), Phospate phosphor (1-10 µg/l) and Nitrogen (160-240 µg/l) are very low and around 30-40 % of national averages. Levels of oxygen is very high and humus, organic matter are also far below national averages.

Overall the following conclusions can be drawn from the data:

- Quality of water measurement data is excellent. Results are reliable and certified.
- Water quality indicators of Neiden are an excellent level. The variation of water quality between 2010-2012 is quite modest, indicating no sudden changes.
- To summarize the water quality of Neiden watershed is premium with low human impacts. (Tossavainen 2013).

Niemelä et al. (2001: 1) conclude that the growth of salmon juveniles in the Neiden river is slow and life cycles long, so the impacts of fisheries take a long time to manifest themselves. Scientifically viewed all spawning of salmon in Neiden is natural and stocking has been forbidden by law. Total area of salmons in the Neiden watershed is 220 kilometers long, with 110 kilometers of a fishery (Niemelä et al. 2001: 3). Longest migratory distance of a salmon is from the river mouth to Tsiegnalisjärvi lake.

Scientists have identified the different spawning locations of the salmon along the watershed (Niemelä et al. 2001: 3). In the Finnish-Norwegian treaty on Neiden the area of fishery is defined to cover the "whole range of salmon migration" (Länsman 2010: 14-15). More precisely now on the Finnish side the salmon fishing zone ends at lake Iijärvi and on the central *lompolo* pond on river Silisjoki, marked with stones (Länsman 2010: 14).

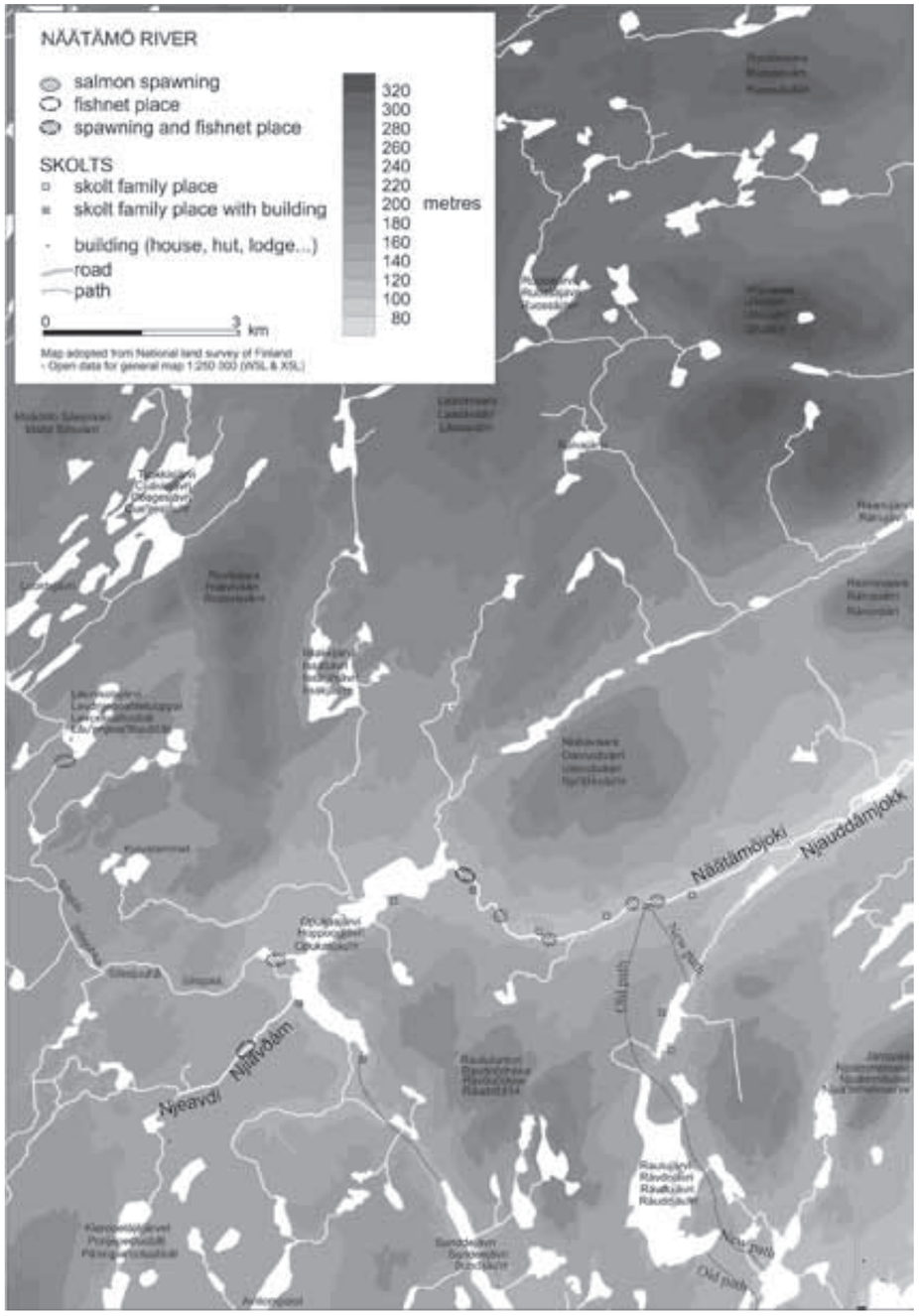
## 2. Results and Observations From the Project Work

The work results presented here derive from totally new method of Indigenous and community engagement of environmental monitoring in Sámi areas of Finland. Over the summer 2012 five, sometimes six Skolt Sámi fishermen, most of whom are also reindeer herders were hired, based on community review and choices, to:

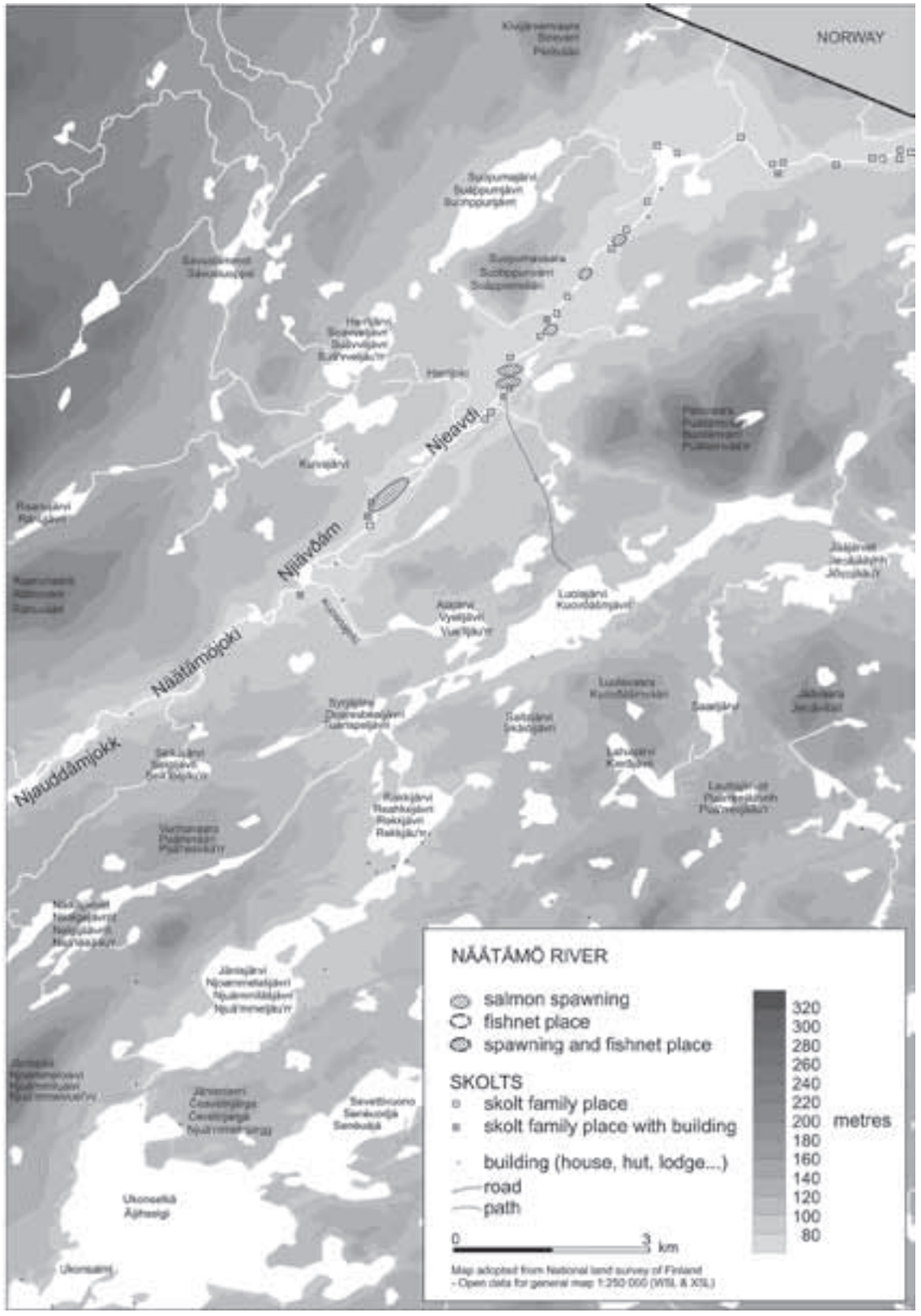
- conduct interviews with other Sámi in Skolt language about the salmon, place names and environmental change.
- Record their observations with digital cameras. This provides an exciting new field of "optic histories" some of which were caught "on film". Such a practice has future methodological implications.
- Record their catches and provide catch statistics from other users.
- To keep a weather diary, including monitoring of water levels and winds.
- To map crucial spawning sites, lost spawning sites, family- and clan-use territories, and other culturally relevant sites on maps to be digitalized.
- To participate and organize community workshops in the villages to expand the range of observations in cooperation with other Sámi.
- To cross-reference impacts of river change to reindeer herding.

Additional oral history materials were used to offer baselines from the Skolt Sámi traditional knowledge digital database that was developed during this project. New interviews were conducted also with the fishermen, leaders and administrators along the watershed, including the Kven fishermen in Neiden. With the main corpus of oral history materials spanning dozens of pages of text, the main observations have been summarized here. The database oral history materials and digital maps form a crucial source of future information of the river for the Skolts and other local peoples, and will be shared in the coming years as the collaborative management proceeds along the river.

*This map has been produced by the Skolt Sámi mapping their own river use and spawning locations. It features family cabin and fishing locations, traditionally owned trails and other features of the Skolt land use. The scale and details of the map have been changed to prevent specific cultural and personal information becoming public. While the map contains overlaps in spawning locations with scientific data (in Niemelä 2001), it provides a baseline for watershed restoration initiatives from the community viewpoint, of which most urgent are the restorations of salmon spawning locations. It also identifies the extensive land and water uses by the Skolts along the river.*





**BOX - Insect observations as indicators of changing climate**

Jaakko Pohjoismäki (University of Eastern Finland) and Tero Mustonen (Snowchange Cooperative)

Insect communities can response rapidly to changes in local climatic conditions, providing a sensitive indicator of climate change (Saarinen et al. 2003, Wilson and Maclean 2011). For example butterflies and moths, have witnessed an impressive expansion of southern species in the expense of montane and boreo alpine species all over Europe. In Finland, butterfly and moth species such *Aparatura ilia* and *Catocala fulminea* have expanded their range over 500 kilometers north in the last two decades (Hyönteistietokanta 2013).

In the project work the Skolt Sámi reindeer herders and fishermen were equipped with digital cameras to document their observations during the field season. First of all the strange or new observations are easily recorded in this way and the people can reflect on the observation themselves. For natural sciences, this has advantages too. Some conspicuous large insects, such as butterflies and some beetles can be reliably monitored also by non-specialists, enabling their use in local information collecting.

An example of such is the observation of Potosia cuprea scarabaeid beetle by Näätämö reindeer herders (see photo of the beetle) documented in the Summer 2012. This is the northernmost record of this large beetle species in the Nordic countries. Similarly, local people are key observers of fluctuations in insect populations such as outbreaks of aphids (see photo of aphids) or defoliating looper moth larvae (see photo of the birch trees).

*(Top left) aphids, (top right) beetle. (Middle and bottom) Damages to birch trees caused by the looper moth larvae.*



*Jouko Moshnikoff and Teijo Feodoroff, Skolt Sámi fishermen at fish camp.*

## 2.1. Skolt Sámi Fishery in Finland

According to most recent official statistics for 2012 4,3 tons of salmon were fished on the Finnish side of Neiden (YLE 2013). According to official statistics, forty local families harvested the river with nets. They caught 3000 kilos of fish. Tourists caught approximately 1200 kilos of fish in 2012 with a total of 680 tourists (YLE 2013). All in all 10, 6 tons of salmon were caught on Neiden watershed in 2012 (YLE 2013). This was a record high.

During 2012-2013 a local investigation into the amount of salmon harvested by local people and the Skolts was made. During the season 2012:

- Skolts took 443 salmon with nets and angling on Neiden. Biggest fish were around seventeen kilograms, with several fish in the ten kilogram range. Some individuals took over 130 fish, but majority of Skolt catches were five to fifteen individual salmon.
- Local people, Finns took around 255 salmon with nets. Biggest fish were around seventeen kilograms This net fishery license is based on the municipal residence in the territory of Inari.
- Overall observations included that the fish sizes have gone down in 2012, fish are not as round anymore and the small salmon, *titti*, has increased in numbers.

(Skolt Catch Statistics 2012).

### 2.1.1. Views from the Skolt Village Council

In 2011 the current chief of the Skolts Veikko Feodoroff (Saa'mi Nue'tt 2011) raised concerns that the Skolts had regarding the Atlantic salmon. Main observations included:

- The future of smolts needs to be secured. The mine Syd-Varanger Gruve AS operating and releasing discharges to the Bokfjord impacts the smolts on their way to the ocean. Especially the use of Magnafloc 1707 chemical and the four million tons of mining wastes that are released to the fjord need to be addressed and researched. The Skolts have called for a total end of discharges to the sea from the mine.
- Self-imposed regulations in the local fishery include in Norway over sixty centimeter female salmon which are released back to the river starting 1st August, an end of the tourist fishery starting 15th August, and a quota for them.
- The Finnish self-regulatory measures include end of the net fishery starting 10th August and lures from 20th August as well as catch-free days and release of female salmon over sixty centimeters. (Saa'mi Nue'tt 2011).

During the community workshops in 2012 Chief Veikko Feodoroff repeated his views. He is an active fisherman along the river himself and will be the head of the Skolt people until 2014. He said that the salmon summer 2012 was good and the stocks fluctuate. Management is currently achieved through negotiations with the Norwegian partners. It is important to keep the salmon for its survival. Skolt village council, kyläkokous has agreement with Finland and Norway to monitor the salmon stocks.

Feodoroff said that the Norwegian sea fishery is causing damages to salmon and therefore there is a need for a plan for salmon from the sea to upper parts of the river. Discussions on the local level are good - there is a good contact with the Kven in the Neiden village and the Käpälä seiners. However there is no contact with the sea fishery, only information from the scientists in Norway. Some changes are needed on the coastal fishery in Norway, possibly closures. Currently the net fishery is good and enough with three nets per person. Change to this system would be a great source of conflict. Tourist fishery has been stable, but some regions are overfished such as Kontinpaistama, Opukasjärven Köngäs and Saunakoski.

Climate change is real, and weather conditions have been very strange over the past five years. Autumn has been very warm. There are heavy rains with a lot of water, and it is raining all the time.

Collaborative management of the salmon stocks would be good. Skolt Sámi opinions should be heard more. Now the Skolts can participate in the monitoring, fishery regulations, and meetings with the government through participation. Skolts have imposed a self-regulatory and voluntary stops to salmon fishery themselves.

Recommendations could include that tourist fishery should be more regulated too, now it cannot be touched on. There could be a net fishery targets for the closures. Skolt fishery with its cultural relations and toponyms should be taken more seriously in Neiden river.

Mapping of Neiden river use could be done, but only for internal use. Again there are concerns that come from the Syd-Varanger Gruv. How it will impact the salmon? Smolts travel close to the industrial site on their way to the ocean. A concern that remains is that there are also international, such as Indian, Russian and Norwegian companies operating in the region, will they adhere to environmental standards.

### 2.1.2. Oral Histories and Observations of Salmon from the Skolt Fishermen 2012

During the project field season 2012 several small workshops were organised in the communities of Näätämö and Sevettijärvi to discuss Skolt observations of salmon and the river. Additional existing traditional knowledge and oral histories were incorporated into a database run by the Saa'mi Nue'tt cultural organisation. Secondly visits to the river and extensive field trips were taken by the five-six key knowledge holders. A large corpus of oral and optic histories as well as mapping of spawning sites, old spawning sites, cultural and occupancy sites was carried out. In this section the main findings of these oral histories are reported.

The fishermen have attached themselves with the river since birth as is evident from the words of a 41-year-old Skolt: *"I started to come to the river with my father, I do not remember how young I was. But they say I travelled on top of his backpack. I enjoyed myself. During the days I fished with a rod. I learned to fish with nets from my father, my uncle and some other Sámi"* (Snowchange Sevettijärvi Oral History Tape 2012-3). Additionally he started to fly-fish in his mid-20s.

A respected fisherman of 66-years-old said that *"I have fished on the river since before I can remember. My father, from whom I learned, was an enthusiastic fisherman already in Petsamo times [prior to 1944]".* (Snowchange Sevettijärvi Oral History Tape 2012-5)

Skolts as the Indigenous peoples have their opinions on the development of the whole river. They recognize equity issues and problems with their relationship of management and administration of the region. According to one Skolt fisherman, 62-years-old, the *"Skolts do not possess any special rights to the fishery along Neiden"* (Snowchange Sevettijärvi Oral History Tape 2012-1). Anybody despite their ethnicity living in the villages of Sevettijärvi and Näätämö has the rights to harvest with nets. Formerly the Skolts had these rights to themselves. Some Skolts prefer to fish only with rods. Mostly older people fish with nets.

Another older Skolt says that: *"We should have a larger say to the development of the whole area"* (Snowchange Sevettijärvi Oral History Tape 2012-2). The Skolts have a number of their own views for the development of the fish. They have been included in the specific recommendations of this report. There is a fear that if the net permits are surrendered, the Skolts will be overrun along the river, and their fisheries, relationships and occupancy of the river will be pushed aside (Snowchange Sevettijärvi Oral History Tape 2012-4). The rights to harvest are connected only with old land ownership titles.

The Skolts have a total, holistic view of their river and the fish. This becomes evident in the comments of a younger Skolt when he makes the connections of changes in high seas to the salmon: *"In the last part of summer the net fishery could be reduced. For example it could end a week earlier to stop the harvest of spawning salmon. But it is so long the chain [of events], when the salmon begins their journey on the Atlantic coast. There is a need to change the whole chain of harvest, not just here in the river. There are sea nets in the big waters through which the fish comes – including drift nets, fish traps, ordinary nets. They are trawling too much of the food of the salmon, including smaller fish and the shrimp. There is not enough food left for the salmon. That is why it is more lean now. The King Crab [introduced by the Russians on the Barents coast from the Pacific] eats all things on the sea floor. Shrimp has been harvested for decades. Now the salmon is more white, it is no longer fully red. It used to be more red. This is because there is little shrimp."* (Snowchange Sevettijärvi Oral History Tape 2012-3)

#### 2.1.2.1. Skolt Fishery After the Relocation 1947-1980

Above the responses of the Eastern Sámi to the administration of the Neiden in modern times were explored. In this section the river-specific observations and memories between 1947 and 1980s are shared. A strong fishery for the salmon existed from late 1940s, when Skolts arrived to the Sevettijärvi area, to 1980s. Skolts know the best fish were caught in the older times right after the Midsummer through to mid-July when the fish came up the river. According to the fishermen these salmon were "clean", meaning the flesh was red and healthy (Snowchange Sevettijärvi Oral History Tape 2012-1). Towards August the fish went "black" from spawning, in 1970s this took place around 10th September (Snowchange Sevettijärvi Oral History Tape 2012-1). Skolts would end their fishery 20th August.

Other seasonal subsistence activities happened in rhythms with the fishery until 1980s. Some of them go on today too. These included collection of hay, berry-picking, fisheries on the lakes in the Sevettijärvi region. Around thirty years ago the salmon fishery for the Skolts was a part of the everyday diets and that is why the salmon was fished. Now with some employment opportunities, freezers and shops the fishery has developed towards cultural and subsistence catch (Snowchange Sevettijärvi Oral History Tape 2012-1).

Seasonal use of the land and waters defined the human activities during 1947-1980. Skolts exported their clan- and family-based use of land and territory to the Näätämö river watershed, distributing cabin sites, netting areas and other uses accordingly. This included the use of lakes too. This lake fishery in the 1950s lasted for whole summer with seasonal migration to the various family- and clan-controlled cabins along the Sevettijärvi watershed, especially on Lake Opukasjärvi. A 62-yearl-old Skolt remembers how he spent his summers with his Grandmother and then, once Autumn arrived, he would continue the fishery with his father until the spawning times of the whitefish, especially around lake Solmusjärvi (Snowchange Sevettijärvi Oral History Tape 2012-1). A 66-year-old Skolt man firmly stated that *"everybody fishes their own spots along river. For example I will get lost if I go to lake Iijärvi, it is a strange place for me."*

(Snowchange Sevettijärvi Oral History Tape 2012-5)

A set of new toponymic place names since 1947 has emerged along the river as a result of the the arrival of the Skolts. They reflect traditional ownerships, trails, good catch sites, spawning locations and other events in the Skolt Sámi society and harvest along the river. One toponym is for example in Finnish "Riitakivi" – a stone of arguments (Snowchange Sevettijärvi Oral History Tape 2012-4). On this spot some people argued who can put their nets there. The place names have not been made public in this report as they are communally and family-owned.

One of the powerful optic histories, relayed here using oral history has to do with an account of a spawning moment of a salmon witnessed by an older Skolt: *"[Salmon chooses] a sandy or a gravel bottom for spawning. I have seen when they swim around during the spawning. If there is low water, you can see it. During floods you cannot. There needs to be some flow, it cannot be a still water. That is the spot which they choose. They move in, one fish at a time. It does not take too long for all of them to spawn in one place. First the big kojamo [male salmon] comes. Then the female fish starts to swim in. Big fish spawn first. Slowly they have travelled the river up. Others take their time, come later. It depends when they have entered the river."* (Snowchange Sevettijärvi Oral History Tape 2012-2)

According to the Skolts the floods bring much-needed new sands to the spawning spots, renewing and maintaining them. Ice carries bigger rocks which reshape the stream too. The river changes every year a little bit, but the main spots stay (Snowchange Sevettijärvi Oral History Tape 2012-5). A younger Skolt makes the comment that: *"Some of the salmon arrive already during the ice cover period, others come as late as in August. Towards the end of the season it is the smaller fish that arrive. Male fish comes first, travelling in midst of ice to prepare the spawning. He lies there for many months, preparing for the spawn. He kills the burbot, and when the small salmon comes, he drives them away too. He is patrolling his area, making sure all is alright."* (Snowchange Sevettijärvi Oral History Tape 2012-3)

The salmon was preserved salted prior to spawning in the Autumn. If spawned salmons would have been used, their roe was the only tasty part according to the Skolts (Snowchange Sevettijärvi Oral History Tape 2012-1). While salting allowed the salmon to be harvested through the winter, taste was affected by the amounts of salt used. If salmon is salted on a given day, the fish caught and salted first needs to be stored separately from the ones caught later in the day (Snowchange Sevettijärvi Oral History Tape 2012-2).

Many of the Skolts in the older generation preserved the notion of distributing their catches communally, whether it was a butchered reindeer or the salmon, to make sure that everybody got their part. (Snowchange Sevettijärvi Oral History Tape 2012-1) This practice came to its end around 1970s.

The concept of "luck" was discussed: a personal gift with the fish, catching birds or handling reindeer that has been given, and is then recognized by the others in the community. Behind this issue lie deep cultural and ancestral laws and traditions of connections to the land according to families, clans and individuals. Space here does to allow to explore this theme more (Snowchange Sevettijärvi Oral History Tape 2012-1). Other Sámi nations have also this notion, including the North Sámi.

Most importantly, according to tradition, the river provides, gives the salmon that is caught. Therefore the Skolts have a responsibility for the river and its health. Or as a 41-year-old man says: *"You cannot muck around on the river. River used to be sacred before. You needed to thank her, if you received something."* (Snowchange Sevettijärvi Oral History Tape 2012-3)

Other cultural sides of the fishery included that you should not show the individual catch, or brag with the amount of fish. Very strict observational laws were followed up until 1980s (Snowchange Sevettijärvi Oral History Tape 2012-1) Such laws included that one could not speak aloud anything negative along the river. You cannot shout or yell. Nature has its own dignity that needs to be respected. Skolt laws said you cannot fish at night, the river needs to rest (Snowchange Sevettijärvi Oral History Tape 2012-2). Many Skolts cannot understand the tourists who fish through the nights.

Older Skolts are still remembering and try to use the Indigenous governance systems of letting waters "rest", and not to overharvest. If there was more fish available, they were taken, but if the stocks were down, no harvests took place (Snowchange Sevettijärvi Oral History Tape 2012-2). They have witnessed that other users of the river do not follow these laws. Even if there is little salmon or other fish, all is taken as a principle. This is against the strict law of the river



(Snowchange Sevettijärvi Oral History Tape 2012-2).

Today the contemporary Skolts position their role as subsistence fishermen. The salmon is still a source of food and has importance in their lives (Snowchange Sevettijärvi Oral History Tape 2012-2). As one younger Skolt says: *"It is an important part of the summer, we need to go to our fishery"* (Snowchange Sevettijärvi Oral History Tape 2012-3). An older Skolt born in 1947 says: *"It there is no salmon we run out of food."* (Snowchange Sevettijärvi Oral History Tape 2012-5)

Most parts of the salmon are still used – only the intestines are left and sometimes the liver is not used anymore. Roe and milt are used. The older fishermen remember how in their childhood the intestines of whitefish and trout were boiled too along with the head and bones (Snowchange Sevettijärvi Oral History Tape 2012-2). When the salmon is caught, blood is let and the roe taken, as blood ruins it. Head is not removed and is eaten together with the fish as well as the bones. Even on smaller fish which are filéd the head and bones are boiled. The broth is used too, often with a piece of bread. (Snowchange Sevettijärvi Oral History Tape 2012-2).

*(Top) Whitefish caught by Filip Jefremoff. (Bottom) Male salmon has developed a characteristic hook on its lower jaw while travelling to spawning grounds.*

*Lake Kontinpaistama.*



*Paula Feodoroff holds two black titti, or small salmon caught in Summer 2012.*

### 2.1.2.2. Weather Change and Knowledge Along Näätämö in 2012

Many members of the Skolt Sámi community keep a record of weather events. As a communal weather observation, the statistics of Satu and Jouni Moshnikoff were reviewed during our community work. Several new and relevant events indicate a change since 2000 on the weather in the region. The Sámi also make associations between the weather, celestial objects and events in nature. While the space does not allow a full publication of these materials at this time we wish to present some selected examples from these observations:

- 20th January 2000: - 38 degrees cold with a lunar eclipse in the morning.
- January 2001: Plus degrees in January with real strong winds
- January 2002: Plus degrees in January with real strong winds
- January 2003: 25 degrees shifts in temperatures from -5 to – 30 C in short time
- 18th to 20th January 2005: Plus 1 C
- January 2006: Rains and plus degrees
- January 2007, 2008, 2010, 2013: Plus 1 C with January 2010 plus 5 C
- January 2012: Strongest high pressures in 40 years, - 27 C
- Same plus degrees C for February in 2000, 2003, 2004, 2005 with strong winds
- Plus degrees for March 2001-2003, in 2005: plus 7 C, in 2010-11 strong winds
- Summers 2000-2012: Powerful new winds have arrived.
- Many water bodies stay open for the winter, or can open up in January as it is so warm.
- Migratory birds: Now many songbirds stay in the village for the winter, as it is warmer, they do not migrate. (Moshnikoff 2013).

Then oral histories of weather were collected. Year 2012 was unusual because the Neiden river was freed from ice early (Snowchange Sevettijärvi Oral History Tape 2012-1). It took place in May, about two weeks before usual ice breakup. Ice cover was quite thin between 2011-2012 winter. As confirmed by the Moshnikoff weather diary too, in January 2012 some of the water bodies were still open, and it was stated by the reindeer herders of Sevetti that big open waters such as lake Surnujärvi were still open, which influenced reindeer herding and uses of routes (Snowchange Sevettijärvi Oral History Tape 2012-1).

This was the third bad winter in terms of ice cover on the river. Spring flood on the river was strong. Skolts are aware that the high levels of water also influenced the *käpälänuotta* seining on the Neiden side of the river (Snowchange Sevettijärvi Oral History Tape 2012-1).

*A rock and the stick in the Näätämö river that is used by the Skolts to monitor the water levels.*

Summer 2012 was also quite strange, there was no warmth at all. Dry summers have been the norm for several years along the river. Water levels were low and the Skolts feel during these summers the käpälä seining took more salmon than would have been necessary. When the water levels are good, the salmon can reach the proper up-stream spawning sites (Snowchange Sevettijärvi Oral History Tape 2012-1). Some Skolts also identified the selling of salmon directly at the seine as a factor causing overharvest, as opposed to only using the fish for food.

Cycles of flooding and water level change are part of the big cycles of the river according to the Skolts. But the weather has become too warm (Snowchange Sevettijärvi Oral History Tape 2012-1). Flowering of the berries has not succeeded due to the unexpected frosts many years in a row. Same observation is true also regarding mushrooms. They have been hard hit.

Biggest impacts have been observed with birds due to the weather change. When the eggs are laid to the nests, several years in a row, cold spells arrive, including snow and sleet showers, and no insects fly. This means there is no food for the birds and the eggs do not hatch properly. (Snowchange Sevettijärvi Oral History Tape 2012-1). This has been observed since 2006. Especially ptarmigan has been hit hard.

A 62-year-old Skolt man has heard a powerful experience from the Russian Sámi: *"I feel that the willow ptarmigans thought that it is no use to stay here any longer and try to nest. A Sámi man from the Russian side told us that he was in the Autumn by a fjord. Tens of thousands of willow ptarmigans collected on this fjord and they took off and flew towards the Arctic Ocean; to where, he did not know. But it is evident that a willow ptarmigan cannot fly for more than a dozen kilometres. Perhaps it was their collective suicide. All of them flew to escape hunger here. This man on the Russian side observed them with his binoculars all the way he could see. This was on the Kola Peninsula. And there they went, there was no willow ptarmigan there after that. This was around 2007. It was a strange event as willow ptarmigans never fly over the sea, always on land. It was the end of willow ptarmigans."* (Snowchange Sevettijärvi Oral History Tape 2012-1).

During summer 2012 all Skolt fishermen were asked to keep weather and wind diaries. The following significant observations were made by them through the season:

- 26th-28th June: Strong northern winds, very cold. No fish. No people on the river either.
- 9th – 11th July: A lot of mosquitoes. Fish swimming in the middle course of the river.
- 11th July: Real strong winds.
- 16th July: Strong sunshine with a big thunderstorm in the evening, water levels really low. Confirmed by two fishermen. All salmon hiding because of thunderstorm.
- 17th July: Strong winds from the North. Rains. A pike was caught on the rapids! Historical day! It has not been caught on the rapids before.
- 19th July: Strong north winds continue.
- 24th July: Water levels get lower and lower, with a 10 centimeter drop from the previous measurement.
- 26th July: *Ukkostäi*, a Thunder louse was seen today and there was thunder later in the day. Mink running along the river, seagulls, and frogs.
- 8th August: Strong westerly winds in gusts. Another fisherman reports NE winds for the morning, which are "extremely cold".
- 9th August: Very low water, then on 22nd September the water levels had increased to 41 centimeters above the measurement level with a strong change in a month.
- Snow cover has fluctuated between 28 and 90 centimeters in the village of Sevettijärvi in the 2000s.

(Skolt Sámi Weather Records 2012).

### 2.1.2.3. Observations of Environmental Change Along Näätämö in 2012

There is no forestry around village of Sevettijärvi but some exist in the community of Kaamanen, which belongs to the head waters of the river. This brings nutrients and affects the river according to the Skolts (Snowchange Sevettijärvi Oral History Tape 2012-1). Skolts have renewed some high land marshes (*jänkä*) which have been dammed by the local border patrols. This has helped in catchment of nutrients flowing into the river. (Snowchange Sevettijärvi Oral History Tape 2012-1)

One of the main observations of change that the locals have has been the arrival of tourism fishery since 1950s. It impacts the river and adjacent areas. People arrived with float planes and left large amounts of garbage along the river. (Snowchange Sevettijärvi Oral History Tape 2012-1) Especially plastic materials were totally alien to the Skolts in the 1950s and 1960s and were observed for the first time from the trash litter.

In 2000s it is also the Skolts who have trashed the vicinity of the river. The old moral codes of keeping nature clean and undisturbed are being lost (Snowchange Sevettijärvi Oral History Tape 2012-1). A 62-year-old Skolt man feels that the Skolts have become like the rest of the people in Finland, making the same mistakes along the river, and not paying attention anymore (Snowchange Sevettijärvi Oral History Tape 2012-1)

This is reflected in the net fishery. In the rules of the river it says 50 meter zones are to be left around nets. Now people are fishing with their flies and lures next to the nets out of envy (Snowchange Sevettijärvi Oral History Tape 2012-1).

62-year-old Skolt man defines his reasons for the fishery in the following: *"When I was a little boy I received the urge to fish. I also harvest because it is our food. There is always a purpose of coming to the river,*

*for our visit. In former times it was our survival, our food source. I was taught by my father and grandmother to do always something, never come in vain. Here on the river we catch fish, collect berries, hunt for ptarmigan and then we take them home."* (Snowchange Sevettijärvi Oral History Tape 2012-1).

Skolts feel that despite the many changes they still have their fish stocks here. All resources have been directed therefore to prevent further damages and on the other hand, prepare for the further warming.

*Cloudberry place of Filip Jefremoff.*

**2.1.2.4. Salmon in Näätämö River**

Skolts have observed that the river course and the water levels have stayed fairly intact in the recent years. The changes on the river that have been observed were due to human uses. The summer 2012 was especially cold. According to them, if salmon reaches the upper parts of the river, and spawns, then it returns successfully to the river (Snowchange Sevettijärvi Oral History Tape 2012-1).

Changes start on the fourth year when the fish return to their natal streams. Salmon dwarfs. An older Skolt in his 50s observed that 2012: *"had especially many small salmon"* (Snowchange Sevettijärvi Oral History Tape 2012-2). According to him, since his childhood in 1950s the fish have become smaller, they used to be *"longer, the* titti [small returning salmon] *used to be 1,5 kilos, now they are 1 kilo in weight. Also the female fish dominated in those days".* (Snowchange Sevettijärvi Oral History Tape 2012-2)

He has been fishing on the river since 10-years-old, at first with nets with his grandfather. Overall the fish in the 2012 season *"were not as good as before as the fish is smaller, it seems they do not have enough to eat"* (Snowchange Sevettijärvi Oral History Tape 2012-2).

This is confirmed by observations of a 41-year-old Skolt. He says that *"the small salmon are smaller now. They used to be bigger. There are less big fish around too. Milt fish used to be the biggest before."* (Snowchange Sevettijärvi Oral History Tape 2012-3) He continues to say that *"I have also noticed the salmon is more soft now. It is not so solid and strong as before. When you boil the fish the flesh goes soft in a new way. More white the salmon, more soft flesh."* (Snowchange Sevettijärvi Oral History Tape 2012-3). But in general the 2012 was a strong salmon year in amounts as a Skolt born in 1947 says: *"There has not been as many fish in my time."* (Snowchange Sevettijärvi Oral History Tape 2012-5)

Some of the tributaries of Näätämö River have smaller salmon, such as the river Silisjoki, where according to the Skolts the salmon is smaller (Snowchange Sevettijärvi Oral History Tape 2012-1). They affectionately call the Silisjoki salmon as "Eurofish".

Tributary Kuosnajoki used to be a spawning stream but is no longer. Silisjoki is a very crucial spawning tributary and year 2012 was a very good one (Snowchange Sevettijärvi Oral History Tape 2012-1).

River Vainosjoki has been *"spoiled"* according to a 62-year-old Skolt (Snowchange Sevettijärvi Oral History Tape 2012-1). The stream and the associated trout lakes have been lost, and no young salmon come from there anymore. Also trout has stopped spawning there. The lake was dredged and this impacted the fish, including a grayling spawning sites. Skolts feel the Vainos area could be restored with proper restocking activities. Lake Vainosjärvi was famous for its graylings. (Snowchange Sevettijärvi Oral History Tape 2012-1). The activities in Vainos have affected Kirakkajärvi lake and lake Sevettijärvi. Similar observations have been raised regarding Kuosnijoki river. Dregding there was done to improve boat access and this may have damaged salmon spawning areas.

Lake Opukasjärvi has increased growth of water plants compared to 1960s. Skolts think the human urine has caused eutrophication on the river. A 62-year-old Skolt man remembers that during his childhood in the 1950s there were no water plants at all on the lake (Snowchange Sevettijärvi Oral History



*(Top left) Cabin of the Skolts on river Silisjoki.*
*(Bottom left) The optic histories of the Skolts provided observations of malformation of pancreas of salmon in the summer 2012.*
*(Top right and bottom). ATVs and camps of the Skolts who took part in the Indigenous knowledge research.*

*(Top left) A big rock on the Näätämö river that the salmon bypass on their way upstream.*
*(Bottom, page 100 and 101) Salmon caught on nets and filéd.*



Tape 2012-1). Preventive measures such as seining and clearing of these waterplants should be initiated as a counteraction.

Lake Sevettijärvi is no longer a spawning area. The associated Kuosnajoki cannot be accessed and the former spawning sites have been covered with mud. Dregding took place there too. On river Kallojoki the Norwegians created a hydroelectric powerstation which according to the Skolts affected water flow there (Snowchange Sevettijärvi Oral History Tape 2012-1). Scientists have determined these impacts in 2001 to be "estimated to be very little" (Niemelä et al. 2001: 2). The hydroelectric company Varangerkraft has the obligation to annual investigations of impacts to the salmon from this tributary.

Catch-and-release methods, so prominent on Ponoi, trigger opinions from the Skolts. In the following oral history the core Skolt relationship and ways of being with the salmon emerges. A 41-year-old fisherman says: *"I do not like it at all. It is not good that already tired fish are further worn out. With dirty hands people are handling them, and in the worst case the salmon bites another fly, and gets even more worn out. Fish can die from it. It is alright for catching grayling or pike, but not for salmon. If the skin of the fish is damaged, it can get diseases more easily. It does not live that long. Pictures are also taken, and it means the fish cannot get enough oxygen. The salmon travels a long distance to perform its most important task – to spawn. We should not disturb them with such things on their journey. Another thing that really gets me is that people go with their long wading boots to the middle of the stream. This releases the 'slimes' and and algae from the bottom. It should be forbidden totally. If you have your nets out, and people are wading upstream, your nets get dirty. They do not follow the 50-meter zoning rule [distance between nets and angling spots]."* (Snowchange Sevettijärvi Oral History Tape 2012-3)

In terms of how the fishermen articulate their observations, of note in this material is that in the original Sámi language tape most of the fishermen speak of the salmon using the third person singular pronoun, as if they would speak of a person. The interconnected relationship manifests in this way.

Skolt fishermen have a concern for the Syd-Varanger Gruv mine located in Kirkenes. The mine can discharge its waters to the sea. As one experienced older Skolt said: *"I am sure it impacts the salmon. I have not heard what the researchers say. I do not know what poisons it is releasing, but for sure it is releasing poison. They do not clean the [discharge], they just dump their shit to the sea, and the amounts must be double what they have permits for."* (Snowchange Sevettijärvi Oral History Tape 2012-2)

## 2.2. Local Fishery in Neiden village, Finnmark, Norway

Statistics indicate that the local Käpälä seine produced 800 kilograms of salmon on the Norwegian side. Tourists and locals caught with rod around 5500 kilos of fish in 2012 (YLE 2013). All in all 6,3 tons were caught on the Norwegian side.

Karl-Magnus Arvola, born 1957, works in Customs at the Finnish-Norwegian Border and is the Head of the Local Fiskefelleskap, Association of Neiden Fishermen. Family Arvola arrived in the region in 1840s. Gradmother of Karl-Magnus's mother arrived from Kittilä, Finland, from the Sodankylä area. He belongs into national minority of Kvens in Norway whose language has the status of a "minority language".

There are approximately 270 residents of Neiden, the river flows 20 kilometers on the Norwegian side. Käpälä seining involves about 41-42 people in the organisation Neiden-Elvas Fiskefelleskap. It has an annual budget of 1,3 million Norwegian Kroner. Approximately 10,000 kroner is given annually per member. It pays for the fishery control, and 25 % of the funds derived from the permits go to the state.

Local observations regarding the river included flooding and high level water lasted a long time in 2012, with normal water levels for summer were reached at the end of July. Ice breakup was normal at the end of May, and then waters started to rise. Usual freeze up is in November, when the permanent night frosts arrive. It is hard to say whether climate has really changed. It may be that it is warmer, there is more algae. Waters have become more muddy in the fjord. You can still drink the water of Neiden, the village takes their water from the river. End of August was very good in terms of weather conditions. There was a lot of rain and wind in the early summer, stronger winds than before

Käpälä seining began 16th July 2012, which was later than usual, usually it begins in 1st July. 30 people were involved in the season 2012. Some stakeholders as they are getting older they hire a helping hand to the seining. Annual catch is around 1000 kilograms, there are five groups practicing this seining, and around 200 kilos are given to each group. Cooperation is good with the Finnish Game and Fish Research Institute and Metsähallitus, state forestry and land management agency, as well as the Skolt Sámi. 40 kilos of salmon is enough for one year per person.

The permits for Käpälä seining are given by the Fiskefelleskap, and they have decided there is no net fishery on the Norwegian side. Øivin Arvola made the current Käpälä seine, he passed away in 2011. There is one Käpälä seine in use and one in reserve. Width of the seine is five-six metres and length is 1,80 metres, both lower and upper ends of the net are pulled while seining. It exists only in Neiden. Rights to use Käpälä require permanent residence and land ownership with a minimum of five hectares in Neiden.

There are not many young people involved in the fishery. 90% of the tourists who come to Neiden are Finns. There are not too many fishing tourists, but the area reserved for them and their fishery is too small, too concentrated. It looks like many people are fishing there due to this. Around 3000 permits for tourists are sold every year.

According to the local fishermen, 2012 was a good salmon year, whole catch was around 6300 kilos, with a thousand kilos from käpälä-seining. There were many small salmon, around two kilos. Big salmon were released back to the river for spawning, the biggest salmon caught ever has been around twenty kilos, also this year a twenty kilo fish was released from the seine. The release of these fish helps the spawning. Other fisheries can take two big salmon or four small salmon per day. It may be that a transfer to ten to fifteen fish per season system is to be expected.

Neiden opinions on the Finnish net fishery included that researchers have said the smolt production is better on the Norwegian side of Neiden, there is a wish to have more spawning fish on the Finnish side. In 2012 one escapee salmon from the farms was caught. Others were "Neiden" stock, characteristically long and slender. Otherwise there were very little escapees. Some have been caught just outside the Neiden Fjord. There is some sea lice on salmon, but there was more in 1960s. Scale samples are delivered to RKTL and authorities in Norway.

As to the coastal fishery there are about ten professional fishermen in Norway with Krogarn nets, the open season of fisheries has been cut in recent years. Fjord fishery had been quite good in the recent years and it involves Norwegian and Kven fishermen.

In the 2000s the fishery in Neiden has fluctuated around 1000 kilos. There has not been a bad year in the 2000s for salmon. On the Norwegian side there are no fisheries conflicts. Net fishermen could consider cutting their season shorter in Finland.

There are natural stocks of pike and grayling. Some years ago in the spring many pike fish were caught to manage the numbers. In older times there existed a net fishery for pikes in the spring, but as it has stopped, now pike numbers are up.

Sea trout is doing well. Biggest grayling has been 2,5 kilos in the summer 2012. Sea trout enters the Neiden river later than salmon. One wish for improvement is that sea trout could be fished for longer period in the autumn.

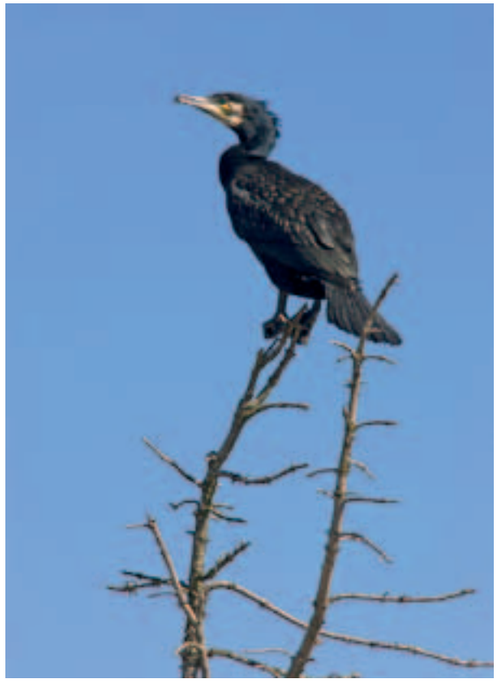
Regarding the management of the river, Neiden needs to be removed from the same administration as Tana, because of the disagreements there. Neiden could have its own negotiations between Norway and Finland. FFS can make rules more strict if needed.

According to the Neiden fishermen the role of Sámi special rights needs to be explained carefully and in a through out manner. They may have rights to fish, but it cannot replace other local peoples' rights regarding the fishery, so it should not be only for the Sámi. In Neiden the Skolts and their descendants are directly involved in the Fiskefelleskap activities, also in leadership positions, and there have been no conflicts. Skolts in Neiden also have been involved in the development of the rules for the river. Käpälä seining would have been lost without the other local people than Sámi. Finnmark Law does not apply in Neiden.

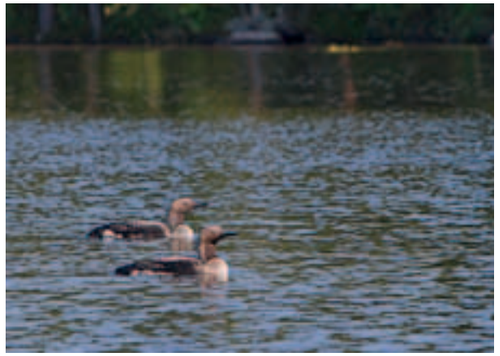
Impacts from Murmansk region contain a danger of atomic explosion on Kola Peninsula. Effects from the Novaya Zemlya explosions may have caused cancer. The mine in Kirkenes (Syd Varanger Gruv) released some toxins into the fjord in 1996 and it is unknown how do these substances travel in the fjord ecosystem and food chains. Neiden however is away from the Kirkenes mine and direct impacts. According to Arvola "we need to trust the authorities that they know what they are doing".

There is a plan for railroad from Finland to Kirkenes perhaps also to Nikel. In Ristivuono Fjord plans are made also for oil terminal. Arvola feels that "we cannot conserve nature in all areas, we need jobs too".

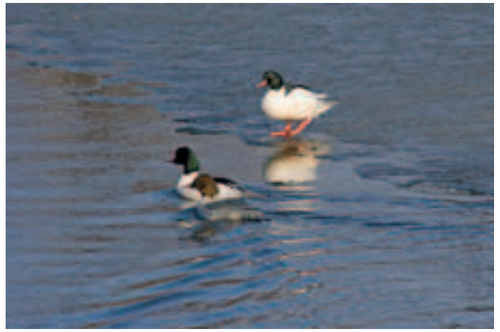
Relationship with researchers has been mixed. In earlier times results were not released to local people. Now things are better, especially with RKTL and Norway. FFS believes in the scientific recommendations; what can be saved, will be saved on Neiden. Role of



*Cormorant*



*Black-throated Loon (Gavia arctica)*



*Merganser*

researchers is very important in managing the river.

Observations about birds include that there used to be more Arctic Terns in the village. Now sea gulls are more plenty, especially smaller ones. They have specialized in catching smolts. Gulls are protected during nesting times so they impact on the salmon. Mergansers also catch a lot of salmon. Loon and red-throated loon are more common in upstream waters.

Mink has appeared and some trapping for it has taken place. Seals reside in the delta of Neiden, sometimes coming up to Skoltefossen Rapids. Norwegian law allows shooting seals in a salmon river. In the lower part of Neiden there is a nature protection area, where there is no hunting at all. Finnmarkes Fylke gives a conservation method for 500 meters from the mouth of the river towards inland. Seals have increased. There can be over 50 residing at the mouth, they can be counted from the ice, easy to observe. King crab has not impacted on salmon.

## 3. Recommendations for the Neiden Watershed

### 3.1. Introduction for Neiden

The collaborative management suggestions here are based on a number of actions and recommendations that view the river in parts. Secondly the actions have been positioned in administrative levels. What follows needs to be coordinated and harmonized with the existing and past policies of the watershed.[10]

[10] We have not identified specific, existing concerns, such as the guidelines to prevent the spreading of the *gyrodactylus salaries*. All such policies need to be kept and maintained (for example in Länsman 2010) when appropriate. These recommendations first and foremost tackle the collaborative management of the river and should be reviewed in parallel with existing legislation and guidelines from Finland and Norway and to prepare for the future obligations of Indigenous rights and responsibilities, such as ILO 169 and CBD Article 8j.



The river parts are:

1. Silisjoki watershed
2. Upper reaches of Neiden river west of lake Opukasjärvi
3. Lake Opukasjärvi
4. Zone between lake Opukasjärvi and the Norwegian-Finnish border
5. Norwegian part of Neiden, including in some parts the delta of Neiden and the fjord ecosystem

In short the field season 2012 was for the first time an occasion when the Skolt Sámi were able to share their observations, opinions and management choices for the watershed in a meaningful way. The local people in Neiden, on the other hand, have had more experience in sharing their observations for the fishery with scientists.

To summarize, based on the Indigenous and local knowledge observations, workshops, database archival materials and scientific data the following steps to start implementing collaborative management along the Neiden:

**A.** A formal call of parties should be instituted as a welcoming step towards a collaborative management by the nationstates Finland and Norway. These parties should include:

- Skolt Sámi as the Indigenous peoples of the watershed
- Kven and other local representatives from the Neiden Fiskefelleskap
- Government of Finland and appropriate representatives from state organizations
- Government of Norway and appropriate representatives from state organizations
- Local business representatives
- Civil society members

**B.** A Conference should be held at the earliest possible date after the call has been accepted by all parties to start formulating the elements of the collaborative management of the Neiden watershed with a common aim of creating a new resource use and management body. This Conference should investigate the role and scope of international Indigenous commitments that Norway and Finland have, as well as including the concerns voiced by the international non-govermental organization such as NASF on addressing all steps of the life-cycle of the salmon, from the sea to the upper reaches of Neiden.

**C.** Indigenous knowledge of the Skolts and traditional local knowledge of the Kvens, Norwegians and Finns along the river should be recognized as a crucial source of information about environmental health and situation with the salmon and associated watershed.

**D.** Scientific research that is conducted along the watershed should include culturally-appropriate dissemination workshops in the local communities in local languages to make sure the information about the river is shared and seen by all parties.

**E.** Tourist fishery along the river should be researched though-out in terms of the impacts it has.

**F.** Visibility of Skolt Sámi heritage, oral histories, relationship with the river and culture should be widely promoted along the watershed for example with information boards, brochures and other public materials.

**G.** Additionally it is proposed that smaller management steps will be initiated immediately to improve the environmental health of the salmon and the watershed. These are not replacing the former steps of prevention of spread of salmon diseases and so on, rather new measures to be implemented over the 2013-2015 period:

- A burbot and pike fishery should be activated on selected sites, including lower Neiden and lake Opukasjärvi to limit the number of predatory fish. This should include both winter fishery in March as well as open season net and fish trap fishery.
- Joint review of the salmon spawning sites both from Indigenous knowledge and science should lead to a systematic and well-executed renewal of those sites that have been lost, and preservation of those sites that are well-known.
- A state-sponsored network of dry toilets along the main tourist routes of the river should be installed to prevent urine and human feces from entering the stream.
- A full review of the impacts of the Sydvaranger Gruv mine on the migratory salmon.

## A. River-wide and International Management Priorities

In the following the steps proposed are explored in detail and contrasted with associated risks if not implemented.

### A1. Reset and reform of all fishing licences for the river

Proposed action: In order to protect the future development of the salmon stocks and answer to the multiple drivers influencing the river, the licensing for the fisheries will be reformed. Licenses will be given, but a quota system is taken into use. This quota and amounts of licenses are to be reviewed every year according to the collaborative management council recommendations based on both science and Indigenous/traditional knowledge. Closures and minimum sizes of harvests will be jointly agreed on too, in accordance with Finnish and Norwegian law. New system of licences will include, as a minimum:

- Skolt Sámi licenses for nets: In order to fulfil existing and upcoming commitments and rights in the context of Article 8j of the Convention on Biological Diversity, overall development of Sámi rights and land use documentation and cultural uses of the river, a specific category of Skolt net fishery licences will be installed. Possible occasional seining permits will be issued as needed.
- Local resident net licenses: In accordance with Finnish law and rights provided by the municipality residence in Inari, local people living in the watershed territory will be provided with licenses to harvest on the river with nets.
- Local angling rights: Angling licences for the local people will be provided in accordance with the Finnish law and rights provided by the municipality residence in Inari.
- A special license will be created for the cultural harvest of *käpälä*-seine on the Norwegian side of Neiden.
- A license for tourist salmon fishery in Finland: Subject to TEK and science recommendations, amounts and numbers of licenses will be provided to support the local businesses and outsiders who wish to fish on Neiden on the Finnish side.
- A license for tourist salmon fishery in Norway: Subject to TEK and science recommendations, amounts and numbers of licenses will be provided to support the local businesses and outsiders who wish to fish on Neiden on the Norwegian side.
- A license for sea trout harvest in Finland and Norway
- A new "eco-license" for harvest of pike in Finland and Norway: As a totally new system of a licensing, tourists will have also the option of choosing, on special parts of the river and designated spots, to harvest pike. This green/eco license is for free, and will require new monitoring measures. It should be marketed as a possibility for the outside anglers to contribute to the well-being of the salmon and trout habitats along the river by harvesting predator fish that influence smolts, and provide local mechanisms for climate adaptation by removing fish that succeeds in warmer waters and expands their range as Neiden warms.

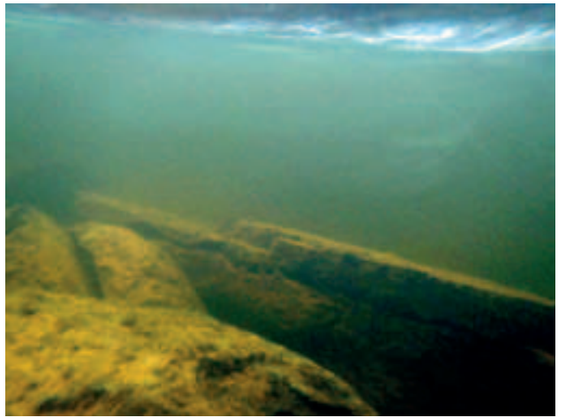
**Risks if not implemented:**

- Local emerging conflicts between different fisheries will grow.
- International and national commitments, such as Sami rights and CBD issues will not be taken seriously in management.
- Erosion of Sámi and local Kven and other cultural heritage as living practices die out.
- If no quota system is issued, results are unbalanced fisheries, where tourist impacts are not limited at all, but local impacts are, thus furthering the simmering conflict.
- Local and Indigenous knowledge removed from management.
- Number of pikes and other predatory fish will continue to expand their ranges.

### A2. Investigate Watershed and International Priorities (from High Seas to upper reaches of Neiden)

**Proposed actions:**

- Identify and respond to recommendations from the international non-governmental organisations such as the North Atlantic Salmon Fund: Role of coastal fisheries and methods close to Neiden fjord and along the Finnmark coast and what does it imply for Neiden, harmonize practices with the International Law of the Sea article 66, investigate transferability of management practices from other parts of the range of Atlantic salmon.
- Priorize recommendations from the international scientific process KolArctic to be released in December 2013: This scholarly process will provide totally new information on genetical and biological diversity of the Barents salmon habitats. It will have profound scientific consequences for management and fisheries. All of the science-based results are needed in the collaborative management. It is also needed to take the science results into the Neiden watershed villages to lay audiences and stakeholders in culturally appropriate workshops.
- Investigate using multi-disciplinary methods the full impact of Syd-Varanger mining operations to the Neiden stocks and their migrations: Local people, both Sámi and others have raised this concern already in the 1990s, and their demands have not been answered. As the smolts travel through the marine areas impacted by this mine, past and present impacts need to be explored.
- Return to the Finnish concerns from 1990s: In 1990s when the negotiations were conducted between Norway and Finland, there was a question regarding future of salmon farming along the Neiden fjord and whether this could be indefinitely delayed or forbidden. Policy options towards this goal should be priorized.
- Impact of coastal professional fishery to the Neiden stocks: There is a need of a new engagement with the coastal non-Indigenous professional fishermen who still harvest salmon in the Neiden fjord and adjacent region. A mapping of their harvest locations, marine uses, and catch statistics contributes to the overall picture. Secondly many of these aging fishermen carry cultural knowledge regarding the fjord so oral history interviews should be launched with them to document their observations and opinions.
- Investigation of Skolt Sámi coastal harvest sites, place-names and sacred sites along the Neiden fjord: While some academic publications (Mustonen and Mustonen 2011) contain preliminary investigations of *how and where* the Skolt Sámi in historical times have occupied the Neiden fjord, a full and proper research initiative including the Skolts as a primary partners is needed.



*(Top) River Näätämö and its algae seen from underwater. (Bottom) Perch and pike gather for spawning.*

- Summarization of above actions which will contribute to the on-going co-management.

**Risks if not implemented:**

- Policies will only target sectoral and local actions and not the whole chain of salmon habitats.
- Science recommendations will be lost in policy.
- Science recommendations will not be understood in local communities.
- Salmon seen only as a resource, not as a source of culture, practices, languages, land use, handicrafts and so on.
- Conflicts between international law and national legislations will continue.
- Conflicts between coastal fishermen and other groups will continue.
- Impacts from industrial land uses will be seen only through narrow impact assessments and not as a chain of impacts.
- Salmon farming with its problems will move to the Neiden fjord.
- Overall understanding of accumulative impacts and will not emerge.

### A3. Revisit Stocking Policy

**Proposed actions:**

- Investigate possibilities and threats associated with using watershed-based roe to renew stocks of grayling and salmon, and other species as needed: A ban on stocking can continue, but in those parts of the watershed where grayling and salmon stocks have been lost, the role of re-stocking may be relevant, if the roe or juveniles are Neiden-born and –bred. The Ministry of Agriculture and Forestry has issued a ban on stockings to all waterways that lead to Barents Sea, but pilot stockings may be considered as described here.
- Provide an account of the Silisjoki tributary stockings on the Norwegian side: According to local oral histories on the Finnish side of Neiden, there is an obervation that Norwegian authorities have restocked salmon at the upper parts of Silisjoki river. The records and implications of this actions should be explored.

**Risks if not implemented:**

- Stocks of grayling in some parts of the watershed will be lost.
- Watershed-based stocking may contribute positively to renewal of salmon spawning. However, this should be done in a careful and science-based way.

*(Top) Drying pike.*
*(Bottom) Smoked perch.*

### A4. Communications and Land Use Decisions

**Proposed actions:**

- A wide range of partners applies for European Union Life Funds to initiate watershed restoration and protection project: While Neiden watershed remains in almost pristine condition, some parts need renewal and land use management, such as the salmon spawning site restorations and other local actions. European Union Life funding policy could allow for a multi-million watershed restoration project to implement these recommendations and collaborative management tools.
- The total land use on the Neiden watershed should be mapped: A mapping of this scale should include all existing and future conservation zones, erämaa-status zones, modern-day Skolt Sámi land uses and cabins, and review of spawning sites both from Indigenous and science perspectives. This mapping would be then used to plan future steps in the region.
- Simultaneously with the mapping, policy process should be initiated on innovative, far reaching and cross-border actions to make sure both the fishery and the river are protected and rights respected: This will include investigating a permanent ban on roads, bridges, infrastructure and further hydroelectricity. Plans for a new Neiden cross-border National Park should be initiated. However, this park should be based on totally new set of collaborative management principles and rights for the local and Indigenous peoples to continue their harvest. Establishment of permanent collaborative council, that meets three times a year, is needed.
- A set of posters and signs should be installed around heavy tourist use areas: These signs explain the roots and modern day situation of Kven and Skolt Sámi culture, the use of trails by different Skolt families and concept of traditional ownership and management, and role of place names and cultural heritage of the region (as proposed also in Länsman et al. 2005, but with stronger emphasis on the Indigenous culture of the region).
- Dry toilets should be installed in heavy use areas on the Finnish side: Human feces and urine can contribute to the euthrophication of the watershed on especially heavy use areas. A system of dry toilets which are emptied at the end of the season or in those times when needed would stimulate “green” thinking and lessen such impacts.

**Risks if not implemented:**

- Watershed restoration stops. Climate adaptation becomes harder. Focus is lost.
- Mapping of Skolt and local land uses are known only to a handful of scholars but river users, administrations and policy makers do not possess enough knowledge of the situation on the ground, leading to bad policies.
- Balance and need of conservation and uses of the river is not reached. Instead old, new and emerging conflicts continue.
- Human impacts to the river continue uncontrolled.

## B. Collaborative Management Recommendations to the Different River Parts

Here proposed actions focus on very practical and hands-on approach, instead of big macro policies. Majority of these recommendations require very little funds.

### Parts 1-2: Upper Reaches

**Proposed actions:**

- Ecological restoration of spawning sites: Using TEK and science, “lost” and damaged salmon spawning sites are identified, and in collaboration with local people, all sites are restored.
- Along the Silisjoki tributary a set of burbot and pike harvest is installed: By providing permanent resources to local fishermen, predatory fish such as burbot and pike are harvested in the upper lompolo ponds and other areas. These fish are to be used by the Skolt handicrafts people and as a subsistence food source. Fishery includes nets and hooks. Careful harvest statistics and TEK observations are needed to ensure that pike and burbot is not fished out. They have a role in the ecosystem too.
- Increased erosion sites are identified: River change and course alterations due to erosion of riverbanks should be mapped.

- Impacts from the forestry towards Kaamanen and its role should be investigated.

**Risks if not implemented:**

- Past ecosystem alterations will remain unknown.
- Burbot and pike continue to impact salmon productivity.
- Sites of erosion will continue to be unmonitored.
- Long-range impacts from forestry continue uninvestigated.

**Part 3: Lake Opukasjärvi**
**Proposed actions:**

- Ecological restoration of spawning sites: Using TEK and science, "lost" and damaged salmon spawning sites are identified, and in collaboration with local people, all sites are restored.
- Along the lake burbot and pike harvest is installed: By providing permanent resources to local fishermen, predatory fish such as burbot and pike are harvested on the lake. These fish are to be used by the Skolt handicrafts people and as a subsistence food source. Fishery includes nets and hooks. Careful harvest statistics and TEK observations are needed to ensure that pike and burbot is not fished out. They have a role in the ecosystem too. The "green" license can be used to stimulate tourist harvest and use of pike.
- Various areas where waterplants have started to grow more aggressively should be identified: Removal of these plants may be an action to slow lake ecosystem change.
- Dry toilets to be installed along the lake: In heavy-use areas with trails and tourist uses close to the lake, a system of dry toilets should be installed to control human waste impact to the lake.
- A pilot site for a salmon spawning area: In 2013 a pilot site for restoration of a salmon spawning spot should be chosen and restored. Lake Opukasjärvi provides an interesting and easily-accessible site for this work. This would provide valuable information on success levels and possibilities of expanding this methodology to other parts of watershed and results could be seen already in 2014.
- Renewed seining: Seining along the lake Opukasjärvi may provide crucial new information on stocks and habitats of fish.

**Risks if not implemented:**

- Past ecosystem alterations will remain unknown.
- Burbot and pike continue to impact salmon productivity.
- Waterplant growth will continue unchecked.
- Human waste impacts will continue.
- Spawning site restoration remains only as a plan, with no practical results.
- Seining sites and knowledge of them will be lost.

**Part 4: Finnish Side of Neiden from Opukasjärvi to Border**
**Proposed actions:**

- Ecological restoration of spawning sites: Using TEK and science, "lost" and damaged salmon spawning sites are identified, and in collaboration with local people, all sites are restored.
- Along the Finnish part of Neiden a set of burbot and pike harvest is installed: By providing permanent resources to local fishermen, predatory fish such as burbot and pike are harvested in the upper lompolo ponds and other areas. These fish are to be used by the Skolt handicrafts people and as a subsistence food source. Fishery includes nets and hooks. Careful harvest statistics and TEK observations are needed to ensure that pike and burbot is not fished out. They have a role in the ecosystem too.
- Dry toilets to be installed along the lake: In heavy-use areas with trails and tourist uses, a system of dry toilets should be installed to control human waste impact to the river.
- Skolt trails, place names and cultural knowledge should be shown in multiple languages along the river: This action allows the rich cultural history and Skolt relationship with the river to receive wide range of readers and provide further information of these topics. Brochures can be produced too.

**Risks if not implemented:**

- Past ecosystem alterations will remain unknown.
- Burbot and pike continue to impact salmon productivity.
- Human waste impacts will continue.
- Skolt Sámi culture and relationship with the river will continue to be marginalised with no information about the whole cultural complex.



**Part 5: Norwegian Side of Neiden from Border to Sea including coasts**
**Proposed actions:**

- In addition to the proposed steps on the Finnish side, the estuary and fjord should be declared as a salmon farming-free zone permanently: This minimizes the risks of diseases and other impacts from the fish farms to those Neiden salmon which travel through the area. The fjord is considered to be a "national spot" in Norway so this acts as a preventive status for the fish farms, but role and impacts of adjacent fjords with their fish farms is another topical issue.
- The hydroelectric operations on the river Kallojoki by the Varangerkraft power company cause impacts to the river. These should be clearly investigated, especially the water level changes to the salmon migrations. Such an investigation should include both TEK and science observations. Financial compensations may be needed too.
- Role of seal harvest: Using science and local knowledge, the role and capacity to harvest seals in a limited way may be considered if their impacts to the salmon stocks are proven to be relevant.
- Installment of tourist fishery for the pike: This will be seen as a new concept which may trigger some resistance at first. Therefore this "free license" needs to be carefully promoted and introduced.
- Role of Kven culture in the harvest and history to be portrayed in signs.

**Risks if not implemented:**

- Burbot and pike continue to impact salmon productivity.
- Seal impacts may be unchecked.
- No clear information available on the impact from the Kallojoki hydroelectric station t the river.
- Kven histories and culture remains marginalized in relationship to the river.

*Lake Opukasjärvi.*

# D. Conclusions for the Ponoi and Näätämö River Collaborative Management Plan

The Barents area and its peoples and ecosystems are undergoing a historical shift. New management, new respect and new understandings of multiple drivers affecting the land and the sea need to be understood, if the survival of both living communities and species is the target. This report has reviewed oral histories, scientific materials and policy recommendations from a vast range of sources to offer collaborative management tools for the Neiden and Ponoi rivers, two of the crucial Atlantic salmon streams in the region. A set of community workshops will be organized throughout 2013 and 2014 to allow proper dissemination and distribution of the materials to the local peoples, authorities, media and governments. Authors are very thankful to the sponsors, Sámi, Kven, Russian, Pomor, Norwegian and Finnish participants in the workshops and other events which took place. Only by working together we can achieve real results to address the changes, which are now underway and will affect us all.

*Rapids of Pikkuköngäs.*



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(a) Ulkoministeriö – UM. Teno- ja Näätämöjoen kalastussopimusneuvottelut, Valtuuskunnan kokous Helsingissä 18.3.1999. Kokousraportti. 26.03.1999.
(b) Ulkoministeriö – UM. Teno- ja Näätämöjoen kalastussopimusneuvottelut Helsingissä 20.-21.1.1999. Kokousraportti. 19.02.1999.
Vigfússon, Orri. Private email communications. 1st December 2011.
(c) Ulkoministeriö – UM. Teno- ja Näätämöjoen kalastussopimusneuvottelut Oslossa 27. – 28.10.1998. Kokousraportti.

*The morning sun melts the night frost on bog whortleberry in the birch forest along the Näätämö River.*

# F. Appendix: The Sevettijärvi Declaration 2011

On 25-30 September 2011, representatives of indigenous peoples' local assessments carried out in China, Ecuador, Finland, India, North America, Panama, Peru and Thailand under the Indigenous Peoples Biocultural Climate Change Assessment (IPCCA) initiative met in the community of Sevettijärvi, located in the boreal forest of North East Finland.

The meeting was hosted by the Skolt Sámi Nation and Snowchange Cooperative. IPCCA members shared emergent findings from their local assessments and discussed adaptation and mitigation options for indigenous peoples, integration of bioculturral dimensions in assessments, and approaches and strategies for addressing climate justice. As a result, recommendations for future actions were developed.

From our diverse but united perspectives we conclude that the global climate system is in a state of deepening crisis. We salute the work of United Nations Framework Convention on Climate Change's Intergovernmental Panel on Climate Change (IPCC), and other international scientific assessments. We stress that the complex relationships between conditions of the forests, water systems and climate need to be first and foremost understood from the perspectives and worldviews of the most vulnerable, such as indigenous peoples and other marginalized communities, who are on the frontlines of climate change.

Locally, we see our calendars shifting, ecosystems and species disappearing, food shortages, cultural disruption and destruction of livelihoods. For example, on Skolt Sámi lands, waters don't freeze in the same way anymore, and in the autumn, instead of proper snow cover, ice rain falls on the ground, impacting reindeer food cycles. In the Republic of Sakha-Yakutia, Siberia, Russia, in the lands of the Chukchi reindeer herders, the permafrost is melting, having major implications for global climate change and weather systems as millions of tons of greenhouse gasses which are currently trapped in the permafrost will release additional emissions into the atmosphere.

In Kuna Yala, Panama, sea level rise is threatening the existence of Kuna communities located on coral islands and livelihoods based on marine, coastal and forest ecosystems. Implementation of REDD projects in the Ecuadorian Amazon are violating the collective rights of indigenous peoples, such as the right to free, prior and informed consent. Impacts are severe in mountain ecosystems, such as in the Peruvian Andes, where the ecological range of native potatoes and other crops are shifting, leading to species extinctions and endangering the food security and culture of the Quechua peoples.

Across the world, indigenous peoples' crops and agricultural cycles, the basis of their food security, are similarly disrupted, such as millets and pulses of the hilly forest based Adivasis in India and maize and rice of indigenous peoples of the mountain regions of South-West China and Thailand. In Pacific North America the loss and warming of freshwater systems and ocean acidification is directly resulting in increased loss of cultural and ecological keystone species, especially the salmon. Climate change is also resulting in the re-emergence of life-threatening diseases such as Malaria and Dengue. Our Elders and spiritual leaders tell us that the world as it is, will never be the same.

However, in spite of these deepening crises, emerging trends of biocultural resilience, resurgence and re-diversification of our ecosystems, give us hope that we can develop creative solutions for our communities and ultimately for the continuing existence of all life on Earth. Our indigenous efforts must be matched with concrete steps by nations around the world to reduce consumption patterns and change the paradigm of development based on economic growth, the drivers of human induced climate change.

## The Importance of Indigenous Peoples and their Initiatives:

We affirm that indigenous peoples continue to make major contributions to the understanding of climate change. The IPCCA is an example of how indigenous communities are undertaking assessments on their own terms. Intercultural methodologies that bridge traditional knowledge and Western science provide essential local information to assess climatic conditions and trends. We stress that these efforts must be led by indigenous peoples and local communities and mainstreamed into international and national climate change assessments and policy processes.



We alert that recent treaties such as the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) establishes international minimum standards for the respect, protection and fulfilment of indigenous peoples' rights. Indigenous knowledge systems are recognized as based on the distinctive spiritual relationship that indigenous peoples have with their territories, and should be respected and considered in climate change assessments and development of adaptation and mitigation responses. This UN Declaration obliges all UN scientific and technical bodies, such as the IPCC, to appropriately include indigenous knowledge in assessment reports of climate change, such as the upcoming Fifth Assessment Report.

**We therefore:**

Call upon the IPCC to include an independent chapter on indigenous knowledge written and developed by indigenous peoples. The chapter should provide an assessment of how climate change affects indigenous livelihoods and rights, in view of developing adaptive strategies based on indigenous peoples spiritual, cultural and ecological values.

Request the United Nations Permanent Forum on Indigenous Issues (UNPFII) to formally request the IPCC to include a specific chapter on indigenous peoples. The UNPFII should also establish a Traditional Knowledge and Practice body involving indigenous leaders, educational institutions, experts and scholars, to guide its work and that of other UN processes.

Request national governments to provide full support to indigenous peoples' own assessments and to invest in education and research institutes that empower indigenous voices in climate change science and policy.

Alert indigenous peoples of the deepening inequities between Western science and traditional knowledge in climate change science and policy. We call upon indigenous peoples' organisations to communicate the inequities to the general public and powerful institutions such as the IPCC and to make all efforts to redress the balance of power.

## Climate Change and the UN Declaration on the Rights of Indigenous Peoples:

We celebrate the adoption, in September 2007, of the UNDRIP as the culmination of decades of indigenous peoples' struggle for the recognition of their rights. The rights enshrined in the Declaration apply to all proposed adaptation and mitigation solutions and should serve as the international minimum standards for respect, protection and fulfillment of indigenous peoples' rights. Through respecting rights, we can build indigenous responses to climate change based upon traditional knowledge and the voices of youth, women and Elders.

Recognising that indigenous women are being impacted differently and more by climate change, we promote a gendered approach that seeks climate justice for the most vulnerable. We call upon all governments to implement the Declaration and hold all international institutions accountable for its full implementation in climate change adaptation and mitigation projects.

We strongly reject false solutions such as REDD/REDD+, which threaten our livelihoods and adaptive strategies, and note that the Declaration's founding principle of Free Prior and Informed Consent should be the baseline for any mitigation or adaptation intervention within indigenous communities and territories. Unlike REDD/REDD+, forest tenure and governance by indigenous peoples has been proven to reduce illegal logging and creates economic benefits from sustainable forest use as well as strengthening livelihoods and food security. In support of indigenous responses to the climate crisis, we demand policies and legislation that ensure indigenous forest governance and nurture forest biocultural systems.

## Redressing Injustices to Eastern Sámi Peoples:

We salute the UN Commission on Human Rights Moratorium on the slaughter of reindeer of the Inari Sámi of Nellim issued on September 23, 2011. In addition to the 2005 Moratorium on logging in the same area, this is a historical turn of events in the development of Sámi rights in Finland. We wish to recognize this significant victory and urge the government of Finland to recognise the land and water rights of the Sámi as enshrined in international law. This process should be based on a full-scale land use and occupancy study of international standards.

We are deeply concerned by several disturbing processes which threaten the existence of the language, culture and lands of Eastern Sámi peoples. The Eastern Sámi have demonstrated a remarkable ability to survive past genocidal trends both in Finland and Russia. Now their homeland is becoming a geopolitical hotspot due to the opening of the Northeastern

Passage. Extensive mining plans and construction of a pipeline on the Kola Peninsula of Russia as well as development of off shore oil and gas exploration in the Barents Sea constitute direct threats to the ecosystems and the people of the area.

Now the very survival of the Eastern Sámi Nations and their homelands is under threat. We urge the world community and especially the UNPFII to investigate the situation of the human and Indigenous rights of the Eastern Sámi peoples in Russia and Finland. On the basis of this we demand that the governments of Russia and Finland commit to redressing centuries of injustice through jointly implementing the UNDDRIP with the Eastern Sámi peoples.

| | |
|---|---|
| **Tiina Sanila-Aikio** | Saa'mi Nue'tt Finland |
| **Tero Mustonen** | Snowchange Cooperative Finland |
| **Alejandro Argumedo** | Indigenous Peoples' Biocultural Climate Change Assessment initiative Asociacion ANDES Peru |
| **Dennis Martinez** | Indigenous Peoples' Restoration Network USA |
| **Sagari Ramdas** | Adivasi Aikya Vedika Anthra – Yakshi India |
| **Sakda Saenmi** | Network of Indigenous Peoples in Thailand Indigenous Peoples' Foundation for Education and Environment Thailand |
| **Jose Proaño** | Land is Life Ecuador |
| **Jorge Andreve** | Fundacion para la Promocion del Conocimiento Indigena Panama |
| **Yiching Song** | Center for Chinese Agricultural Policy China |

*Tero Mustonen, Filip Jefremoff and Vladimir Feodoroff discuss the salmon observations in a fish camp.*



# Executive Summary: Ponoi and Näätämö/Neiden River Collaborative Management Plan

## Introduction

This report contains results of a project "Skolt Sámi Survival in the Middle of Rapid Change" that worked from 2009 to 2013 in the Näätämö/Neiden watershed. This project manifested as a cooperation between the Skolt Sámi and other Eastern Sámi communities, Sámi Council, Indigenous Peoples Climate Change Assessment – IPCCA, United Nations University – Traditional Knowledge Initiative, the Snowchange Cooperative and the Saa'mi Nue'tt cultural organization. The project is part of the international Indigenous Peoples Climate Change Assessment (IPCCA) initiative that is being developed and coordinated by a Peru-based indigenous non-profit organization, ANDES, and supported by UNU. By applying the IPCCA methodology of community-led self-reflection, evaluation, and future-visioning based on local worldviews and traditional knowledge, the Sevettijärvi Skolts developed a community-based climate change adaptation plan. Out of this process a collective consensus has emerged that the climate change challenges faced by the reindeer, while significant, are manageable given the present-day nature of reindeer herding. Instead, the Skolt Sámi identified their customary salmon fishery, the other half of their traditional subsistence and cultural identity, as a much greater concern. As a result, the Snowchange-Skolt partnership has chosen to focus their climate change adaptation efforts on enhancing the resilience of the Skolts' traditional salmon fishery along the Näätämö River. Scientists have also identified that the stocks of the Atlantic salmon have diminished in the past 30 years, mostly due to fishing and human alterations in the habitats of the fish. Therefore the focus on the salmon is justified as concern and is shared both in Indigenous and local societies (with their TEK – traditional ecological knowledge) and in science. Additionally the work was expanded with the co-funding from the Nordic Council of Ministers (with the project *"Ponoi and Neiden – Lifestreams of Eastern Sápmi"*) to cover additional workshops in the Neiden watershed and the opinions of the local Kven fishermen in Norway and the Ponoi watershed in the Murmansk region, Russia. Ponoi is a significant salmon river in the region. This report and Executive Summary presents the Ponoi and Näätämö River Collaborative Management Plan as a basis for future development of these rivers. This work was funded by the United Nations and the Nordic Council of Ministers.

## 1. Recommendations for Neiden

The collaborative management suggestions here are based on a number of actions and recommendations that view the river in parts. These river parts are:

1. Silisjoki watershed
2. Upper reaches of Neiden river west of lake Opukasjärvi
3. Lake Opukasjärvi
4. Zone between lake Opukasjärvi and the Norwegian-Finnish border
5. Norwegian part of Neiden, including in some parts the delta of Neiden and the fjord ecosystem

In short the field season 2012 was for the first time an occasion when the Skolt Sámi were able to share their knowledge, observations, opinions and management choices for the watershed in a meaningful way. The local people in Neiden, on the other hand, have had

*A view of Opukatsokka area, close to Lake Opukasjärvi.*

more experience in sharing their observations for the fishery with scientists. To summarize, based on the Indigenous and local knowledge observations, workshops, database archival materials and scientific data the following steps to start implementing collaborative management along the Neiden river:

**A.** A formal call of parties should be instituted as a welcoming step towards a collaborative management by the nation-states Finland and Norway. These parties should include:

- Skolt Sámi as the Indigenous peoples of the watershed
- Kven and other local representatives from the Neiden Fiskefelleskap
- Government of Finland and appropriate representatives from state organizations
- Government of Norway and appropriate representatives from state organizations
- Local business representatives
- Civil society members

**B.** A Conference should be held at the earliest possible date after the call has been accepted by all parties to start formulating the elements of the collaborative management of the Neiden watershed with a common aim of creating such a new resource use and management body. This Conference should investigate the role and scope of international Indigenous commitments that Norway and Finland have, as well as including the concerns voiced by the international non-govermental organization such as NASF on addressing all steps of the life-cycle of the salmon, from the sea to the upper reaches of Neiden.

**C.** Indigenous knowledge of the Skolts and traditional local knowledge of the Kvens, Norwegians and Finns along the river should be recognized as a crucial source of information about environmental health and situation with the salmon and associated watershed.

**D.** New investigations, land use and conservation actions should be considered for the watershed, including:

- permanent ban on salmon farming in Neiden fjord and associated fjords.
- Past marine cultural heritage, including place names and uses of the lands and waters of the Skolt Sámi should be investigated.
- Professional coastal fishermen still harvesting on the Finnmark coasts should be documented and explored.
- Stockings of grayling and whitefish should be re-visited, if the roe is derived from the Neiden watershed.
- The long-term impacts of the stockings to Silisjoki and other parts of the watershed from 1960s to 1990s should be explored.
- The full contemporary land use of the Skolt Sámis and other river users should be mapped.
- A permanent ban on hydroelectricity development should be initiated.
- A survey into establishment of a cross-border Neiden National Park with full collaborative management should be explored.
- Limited hunting of seals on the delta should be explored, if appropriate.

**E.** Scientific research that is conducted along the watershed should include culturally-appropriate dissemination workshops in the local communities in local languages to make sure the information about the river as shared and seen by all parties.

**F.** Tourist fishery along the river should be researched though-out in terms of the impacts it has and the permit system of the river reformed with a quota system introduced. This includes a totally new license of a "green fishery" to catch predator fish, pikes along the watershed for free. This reform will also require new monitoring regulations.

**G.** Visibility of Skolt Sámi heritage, oral histories, relationship with the river and culture should be widely promoted along the watershed for example with public information boards, brochures and other public materials.

**H.** Additionally it is proposed that smaller management steps will be initiated immediately to improve the environmental health of the salmon and the watershed. These are not replacing the former steps of prevention of spread of salmon diseases and so on, rather new measures to be implemented over the 2013-2015 period:

- A burbot and pike fishery should be activated on selected sites, including lower Neiden and lake Opukasjärvi to limit the number of predatory fish. This should include both winter fishery in March as well as open season net and fish trap fishery.
- Joint review of the salmon spawning sites both from Indigenous knowledge and science should lead to a systematic and well-executed renewal of those sites that have been lost, and preservation of those sites that are well-known.
- A state-sponsored network of dry toilets along the main tourist routes of the river should be installed to prevent urine and human feces from entering the stream.
- A full review of the impacts of the Sydvaranger Gruv mine on the migratory salmon.



## 2. Recommendations for the Ponoi Watershed

The development of collaborative management structures for Ponoi watershed operate in the context of todays Russia. Some steps can be advanced, but the following discussions should be seen as a view, a road map, towards future. Realistic development of a functioning watershed management built both on Komi and Sámi as well as salmon tourist needs will take years. Based on the work in the communities along Ponoi during our project, we wish to bring the following steps into the discussion as a basis for future management options:

- A comprehensive review of salmon stocks from the whole chain of habitats from high seas to upper Ponoi should be installed: In 2013 in addition to these traditional knowledge results expressed here, the KolArctic science project will issue major new scholarly information about the salmon stocks in the region. They together with the TEK observations and NASF concerns should be taken as a basis of development of the watershed.
- A Ponoi watershed-based international plan should be created as a basis of future work: This plan should include federal and regional commitments towards the watershed. Special attention should be placed on questions of local and Indigenous concerns as well as conservation needs. A permanent ban on mining and hydroelectricity would make sure the river has the capacity to remain a well-productive salmon stream.
- If a Plan is installed to develop Ponoi watershed in a sustainable manner, a call of parties should be initiated from the regional and federal centers: This call should be directed towards local villages, including Sosnovka, as well as Sámi, Komi and Pomor organisations and salmon tourist companies. Regional and federal agencies will play a prominent role too.
- Past damages to the river and key habitats should be mapped to co-incide with this call of parties: These include the industrial legacies from the Soviet times which are visible in the water quality data (mercury, nickel, phenols, oil) and other impacts.
- The report has identified an equity problem between local and Indigenous harvest and the "outside" salmon tourist companies: There is an immediate need of a conflict resolution process between the parties involved and the identification of problems.
- Number and role of salmon tourist "checkpoints": The instalment of "checkpoints" with guards in some parts of the river has caused perceptions of exclusive uses of river. These checkpoints should be dismantled and agreements reached as a part of a conflict resolution process on user zones and mutual respect.
- Workshops should be held in Krasnochelye, Kanevka and Sosnovka to explain science results and TEK results: Local people feel excluded from the information and development of the river. Therefore culturally appropriate workshops should be held along the river to make sure all local people are involved.
- Review of local rights to fish: There is confusion and mismanagement regarding Indigenous Sámi rights, Komi rights and local rights to harvest fish. These rights should be reviewed and harmonized. This will prevent "poaching" by local people and the real poaching too.
- Impact from motor boats on salmon spawning sites and roe should be investigated: Oral history interviews identify this to be a relevant topic in all communities and harvest areas along the river. Therefore a science and TEK-based survey into this topic should be identified.
- Mapping of Place Names in Pomor, Sámi and Komi: This mapping should be initiated as soon as possible. It will provide crucial information of habitats, past land uses and cultural heritage of the region.
- Promotion of Pomor, Sámi and Komi culture along the river: Using signs, posters, brochures and other means the visitors can immerse themselves in the rich cultural heritage of the region and invisible histories become more visible.
- Using models from other parts of Russian North,

a new national park with cultural harvest should be discussed: Here a workshop on the Kolyma experiences could benefit the Ponoi development.

## Conclusions

This report proposes for the first time active collaborative management for Finnish-Norwegian river of Neiden and the Ponoi river in the Murmansk region of Russia. Because some of the proposals are far-reaching and call of innovative and bold decisions (on Indigenous rights, ecosystem-based management, Indigenous and traditional knowledge as a valid source of information) some stakeholders may not agree with all proposals. Therefore results of the Ponoi and Näätämö/Neiden River Collaborative Management Plan 2013 should be widely disseminated in the villages of the watersheds, with national authorities, science forums and Indigenous peoples' organizations to allow further refining of the proposals. However, we urge all responsible bodies to start to implement the spirit and intent of this Plan as soon as possible, given the multiple changes underway in the region and in the Arctic.

*In Finnish Lapland, reindeer no longer roam freely, having to navigate their way throughout the growing network of primary and secondary roads.*



# Tiivistelmä: Ponoin ja Näätämö-joen yhteishallintaraportti

## Johdanto

Tähän raporttiin on koottu tulokset vuosina 2009-2013 toteutetusta "Skolt Sámi Survival in the Middle of Rapid Change" (Kolttien selviytyminen äkillisten muutosten keskellä) –hankkeesta, joka keskittyi Näätämöjoen valuma-alueelle. Projekti oli eri koltta- ja itäsaamelaisyhteisöjen, Saamelaisneuvoston, Alkuperäiskansojen ilmastonmuutosarvion, YK:n yliopiston, Saa´mi Nue´tt ry:n sekä OSK Lumimuutoksen yhteistyö. Alkuperäiskansojen ilmastonmuutosarvio - IPCCA on kansainvälinen aloite, jonka keskus sijaitsee Perussa. Aloitetta koordinoi ANDES –järjestö, ja sen rahoituksen hoitaa YK:n yliopisto.

IPCCA on kehittänyt alkuperäiskansojen tietoja ja perinnettä kuuntelevan menetelmän, jonka avulla Sevettijärven koltat tunnistivat ilmastonmuutokseen liittyviä paikallisia huolenaiheita. Vaikka säämuutokset vaikuttavat myös poronhoitoon, Näätämö-joen lohi koettiin olevan muutosten osalta keskiössä. Lohi on koltille kielen, kulttuurin ja perinteen tuottaja ja uudistaja ruuan lisäksi. Tämän vuoksi koltat päättivät keskittää hankkeen toimet lohen selviytymismahdollisuuksien parantamiseen, perinnetiedon elvyttämiseen ja pyynnin tarkastelun eri osa-alueisiin. Myös luonnontiede on tunnistanut, että atlantinlohen kannat ovat taantuneet viimeisten kolmenkymmenen vuoden aikana. Pääsyynä on ollut pyynti ja ihmisen aiheuttamat muutokset lohien elinalueilla (vesivoiman rakentaminen, saasteet, tiestö jne.). Perinnetiedolla ja tieteellä on siis yhtenäinen näkemys loheen kohdistuvista yleisistä paineista.

Vuonna 2011 YK:n hankkeeseen saatiin lisätukea, kun Pohjoismaiden ministerineuvosto osoitti lisärahoituksen, hankenimellä "Ponoi and Neiden – Lifestreams of Eastern Sápmi" toimintaan. Tämä mahdollisti työn laajentamisen Neidenin kveenivästön pariin Norjassa. Lisäksi PMN:n varoilla voitiin aloittaa saamelaisten, komien, pomorien, venäläisten ja karjalaisten mielipiteiden keruu Ponoi-joen kehittämisestä Murmanskin alueella, Venäjällä. Ponoi on yksi Barentsin alueen tärkeimmistä lohijoista. Tässä tiivistelmässä, joka julkaistaan myös venäjäksi, koltaksi, norjaksi ja englanniksi, esitellään hankkeen aikana kehitetyt yhteishallintasuositukset. Työn on rahoittanut pääasiassa Yhdistyneet kansakunnat ja Pohjoismaiden ministerineuvosto.

## 1.Suositukset Näätämö-joen kehittämiseksi

Hankkeessa todettiin Näätämö-joen olevan luonnonolosuhteiltaan erinomaisessa kunnossa. Yhteishallinnan edistämiseksi Näätämö-joki tulisi jakaa hallinnollisiin vyöhykkeisiin ja toimenpidealueisiin, joita ovat alustavan jaon mukaan:

1. Silisjoen valuma-alue
2. Näätämöjoen yläosat Opukasjärveltä länteen
3. Opukasjärvi
4. Opukasjärven ja Suomi-Norja-rajan välinen vyöhyke
5. Norjan puoleinen Näätämö, mukaan lukien joen suisto ja vuono

Yleisesti todettakoon, että hankkeessa toteutettu kenttäjakso 2012 oli ensimmäinen kerta, kun mukaan valitut kolttasaamelaiset saivat esittää tietojaan, perinnettään, havaintojaan ja hallintaehdotuksiaan kulttuurisesti omista lähtökohdistaan. Koltilla on ollut usean vuosikymmenen ajan mahdollisuus antaa tietojaan viranomaisille, mutta tiedonvaihdon tavat ja paikat on määritelty valtakulttuurin ja viranomaisten ehdoilla. Paikalliset Neidenin kylässä Norjassa ovat olleet toisaalta pidempään suorassa vuorovaikutuksessa viranomaisten ja tutkijoiden kanssa. Hankkeessa perustettiin perinnetietokanta, dokumentoitiin alkuperäiskansojen ja paikallisten tietoa ja vertailtiin sitä olemassa olevaan tieteelliseen tutkimukseen. Näiden toimien tavoitteena oli kehittää Näätämö-joen yhteishallinta vahvalle pohjalle ja aloittaa sen toteutus. Hankkeen tulokset voidaan tiivistää seuraaviin, yleisiin suosituksiin (tarkemmat yksityiskohdat raportissa):

**A.** Norjan and Suomen valtioiden tulisi virallisesti kutsua kokoon yhteishallintaryhmä, johon tulisi kuulua ainakin:

- Kolttasaamelaiset valuma-alueen alkuperäiskansana
- Kveenit ja muut paikalliset Neidenin kalaosakaskunnan (Neiden Fiskefelleskap) jäsenet
- Suomen valtio ja tarvittava edustus valtion vastuujärjestöistä
- Norjan valtio ja tarvittava edustus valtion vastuujärjestöistä
- Muut paikalliset kansalaisyhteiskunnan toimijat ja kansalaiset
- Yritysten edustajat

**B.** Kutsun jälkeen, viipymättä, tulisi järjestää laaja konferenssi Näätämön valuma-alueen yhteishallintaelimen perustamiseksi. Konferenssin tulisi selvittää ja vahvistaa kansainväliset velvoitteet, joita Suomella ja Norjalla on liittyen alkuperäiskansoihin (ja muihin paikallisiin tahoihin) sekä huomioida kansainvälisten järjestöjen esittämät huolenaiheet (kuten ne, joita on esittänyt North Atlantic Salmon Fund). Tarkastelun pohjana tulisi olla koko lohen käyttämä alue ja ekosysteemit valtamereltä Näätämö-joen latvoille.

**C.** Kolttien alkuperäiskansatieto ja suomalaisten, norjalaisten ja kveenien paikallinen tieto tulisi hyväksyä tieteellisen tiedon rinnalla vastaavanarvoisena, merkittävänä tietolähteenä, kun valuma-alueen ympäristön ja lohen tilaa arvioidaan.

**D.** Näätämön alueella tulisi harkita uusia selvitys-, maankäyttö- ja luonnonsuojelutoimia, mukaan lukien;

- lohen kassikasvatuksen pysyvä kieltäminen Näätämö-vuonossa ja mahdollisesti naapurivuonoissakin
- kolttasaamelaisten merellisen kulttuuriperinnön, erityisesti paikannimien ja maankäytön selvittäminen Näätämö-vuonossa
- merellä toimivien ammattikalastajien tiedon ja kokemusten hyödyntäminen
- istutusten roolin uudelleenarviointi harjuksen ja siian osalta, jos mäti on valuma-alueelta
- Silisjoen ja muiden 1960-1990-luvun kalaistutusten pitkäaikaiset vaikutukset valuma-alueelle
- kolttasaamelainen ja muu alueen maankäyttö tulisi selvittää kartoituksilla
- vesivoiman lisärakentamisen kieltäminen
- Näätämön rajat ylittävän kansallispuiston perustamisselvitys, joka pohjaisi yhteishallintaan
- Hylkeiden metsästyksen rajoitettu salliminen suistoalueella

**E.** Valuma-alueella tapahtuvan tieteellisen tutkimuksen tulokset tulisi jalkauttaa kulttuuria kuunnellen kyliin (Näätämö, Sevettijärvi, Neiden) paikallisilla kielillä. Näin varmistetaan, että kaikilla toimijoilla olisi pääpiirteissään samankaltainen tieto käytettävissään.

**F.** Alueen virkistyskalastus, mukaan lukien turistipyynti, tulisi arvioida vaikuttavuudeltaan. Samassa yhteydessä esitetään laajaa uudistusta luvitukseen, jossa otetaan käyttöön kiintiöt. Sen tarkemmat yksityiskohdat on esitelty raportissa. Luvituksen uutena kategoriana on ”vihreä kalastuslupa”, ilmainen pyyntilupa, jonka avulla joella vierailijat voivat pyytää ilmaiseksi petokaloja, pääasiassa haukea, jotka vaikuttavat lohen määrään. Tämänkaltainen uusi lupa vaatii myös uusia valvontamenetelmiä.

**G.** Kolttasaamelainen kulttuuriperintö ja suhde jokeen tulee saada näyttävästi esille. Myös kveenien kulttuuri ja asutushistoria tulisi saada paremmin esille. Tämä voidaan toteuttaa valuma-alueelle asennettavilla kylteillä, esitteillä ja julkisella tiedotuksella.

**H.** Yllä olevien laajojen uudistusten lisäksi esitetään välittöminä toimenpiteinä vuosille 2013-2015:

- Mateen- ja hauenpyynnin käynnistämistä valikoiduilla alueilla, erityisesti ala-Näätämöllä ja Opukasjärvellä. Petokalapyynti, jolla vähennetään smolttien hävikkiä, voidaan toteuttaa kevään kutupyynnillä, sekä kesäkauden rysä-, uistin- ja verkkopyyntinä. Viranomaiset maksaisivat palkkaa paikallisille kalastajille erityisesti kiinteiden pyydysten avulla tapahtuvasta hoitokalastuksesta.
- Lohen menetetyt ja olemassa olevat kutualueet tulisi tunnistaa sekä perinnetiedon että tieteen keinoin, ja tiedot yhdistää. Kun näin on tehty, hyödyntäen esimerkiksi EU:n LIFE – rahoitustyökalua näiden kutualueiden ennallistaminen tulisi käynnistää. Yhden kutualueen elvytys voidaan toteuttaa jo kesällä 2013 pilotinomaisesti.
- Valtiorahoitteinen kuivakäymäläverkosto, erityisesti paljon käytettyjen turistireittien varrelle, estäisi ihmisten jätösten ja virtsan vaikutuksia vesistöön ja hidastaisi rehevöitymistä.
- Sydvaranger Gruv –kaivoksen kokonaisvaltainen, perinnetietoa ja tiedettä hyödyntävä vaikutusarvio loheen, tulisi selvittää mahdollisimman pian.



## 2. Suositukset Ponoi-joen kehittämiseksi.

Ponoi-joen yhteishallinta kiinnittyy Venäjän yleiskehitykseen. Tämän vuoksi seuraavat ehdotukset tulee nähdä suosituksina ja tiekarttana tulevaisuuteen. Sellainen hallintomalli, jossa komien, saamelaisten, muiden paikallisten ja lohiturismin sekä valtion intressit saataisiin sovitettua yhteen tulee viemään vielä vuosia. Hankkeessa saatujen tietojen pohjalta esitämme kuitenkin toimia:

- Ponoi-joen lohen tila tulisi selvittää merellisiltä alueilta Ponoin latvoille asti. Vuoden 2013 aikana julkaistaan merkittäviä tieteellisiä tuloksia Ponoilta, mukaan lukien KOLARCTIC-hankkeen loppuraportti. Lisäksi alueen perinnetietoa on kerätty ja kansainväliset järjestöt, kuten NASF ovat antaneet omia suosituksiaan valuma-alueen kehittämisestä. Kaikki nämä tietolähteet tulisi hyödyntää joen hallinnassa.
- Ponoi-joelle tulisi perustaa kansainvälinen kehityssuunnitelma. Suunnitelmassa tulisi olla mukana Murmanskin alueen ja Venäjän liittovaltion velvoitteet, erityiskysymyksinä paikallisten ja alkuperäiskansojen oikeudet ja luonnonsuojelulliset toimet. Pysyvä vesivoima- ja kaivannaistoimintakielto valuma-alueella takaisi joen säilymisen hyvin tuottavana lohijokena.
- Jos kehityssuunnittelu käynnistetään, aluekeskuksen ja Moskovan tulisi kutsua mukaan myös paikalliset kylät, mukaan lukien Sosnovka, Luujärven piiri, ja saamelais-, komi- ja pomorijärjestöt sekä lohiturismiyritykset. Liittovaltion viranomaistoimijoiden läsnäolo on välttämätöntä.
- Kehityssuunnittelun yhteyteen tulisi saada kartoitus Neuvostoliiton aikaisten ympäristökuormitusten vaikutuksesta, erityisesti elohopean, nikkelin, fenolien ja öljypäästöjen osalta.
- Tässä raportissa on tunnistettu, että paikallisten kotitarvepyynnin ja lohiturismin välillä on tasavertaisuusongelmia. Näiden tahojen välillä tulisi käynnistää viipymättä konfliktinratkaisuprosessi.
- Paikallisten mielestä lohiturismiyhtiöiden perustamat tarkistuspisteet Ponoin eri osissa ovat aiheuttaneet tilanteen, jossa osa Ponoita on rajattu erityiseen, kaupalliseen käyttöön. Nämä tarkistuspisteet tulisi purkaa, ja sopimusperustein rajata joen käyttöalueet eri toimijoiden kesken.
- Tieteellisten ja perinnetietoon pohjaavien havaintojen tulokset tulisi esitellä laajasti valuma-alueen kylissä Krasnotseljessä, Kanevkassa ja rannikon Sosnovkassa. Tämä lisäisi paikallisten tietoa joesta ja sen käytöstä.
- Ponoi-joen alueella on epäselvyyttä ja hallinnollisia päällekkäisyyksiä paikallisten oikeudesta pyyntiin. Saamelaisten, komien ja muiden paikallisten oikeudet tulisi vahvistaa ja selkiyttää. Samalla salapyynti saadaan kuriin.
- Moottoriveneiden vaikutus lohen kutualueisiin tulisi selvittää. Perinnetietojen mukaan koko valuma-alueella moottoriveneet aiheuttavat lohen kutualueille vaurioita. Asia tulisi selvittää hyödyntäen sekä tiedettä että perinnetietoa.
- Pomorien, saamelaisten ja komien paikannimien kartoitus tuottaisi merkittävää uutta tietoa alueen luonnosta, maankäytöstä ja kulttuuriperinnöstä.
- Pomorien, saamelaisten ja komien kulttuurin edistäminen joella voidaan toteuttaa informaatiotauluilla, julisteilla, esitteillä ja muilla keinoin. Näin alueen lähes näkymätön kulttuurihistoria saadaan paremmin esille.
- Hyödyntäen Venäjän muiden pohjoisosien, kuten Sahan tasavallan (Kolyma) ja Karjalan malleja, tulevaisuudessa tulisi perustaa uusi Ponoin kansallispuisto. Sitä ennakoiden alueella voidaan järjestää työpaja, jossa esimerkiksi Kolyma-joen kokemuksia esitellään laajemmalti.

## Johtopäätökset

Ponoin ja Näätämö-joen yhteishallintaraportti 2013 esittää ensi kertaa konkreettista mallia Barentsin alueen kahden merkittävän lohijoen kehittämiseksi yhteishallinnan keinoin. Näätämö on Suomen ja Norjan rajajoki ja Ponoi sijaitsee Murmanskin alueella, Venäjällä. Molemmat ovat itäsaamelaisten perinteistä kotiseutualuetta, vaikka nykyään seudulla asuu muitakin kansoja. Osa tässä esitetyistä uudistuksista ja aloitteista kehittää valuma-alueita kokonaisvaltaisesti ja vaatii merkittäviä, innovatiivisia päätöksiä. Näitä

ovat esimerkiksi alkuperäiskansojen ja paikallisten pyynnin turvaaminen, valuma-alueen kokonaiskehitys ja paikallisen ja alkuperäiskansatiedon roolin vakiinnuttaminen tietolähteenä. Kaikki toimijat eivät välttämättä jaa näitä käsityksiä. Tämän vuoksi Ponoin ja Näätämö-joen yhteishallintaraportin tuloksia tulisi laajasti käsitellä alueen kylissä, kansallisten viranomaisten ja tieteen piirissäsekä alkuperäiskansojen järjestöissä. Tämän lisäksi kehotamme kaikkia mahdollisia tahoja soveltamaan välittömästi raportin yleisesti tunnistamia suuntia ja seikkoja, jotta arktisella alueella käynnissä olevat, monialaiset prosessit voidaan huomioida valuma-alueiden ja lohen elinympäristöjen kehityksessä.

*(Left) Fishing cabin of late Jouni Moshnikoff.*
*(Right) Stream pool of Aleksinsuvanto on Näätämö river.*

# Sammendrag: Rapport om felles forvaltning av Ponoi- og Neidenelva

## Innledning

I denne rapporten har man samlet resultatene av prosjektet «Skolt Sámi Survival in the Middle of Rapid Change» (Hvordan skoltesamene klarer seg i de raske endringene) som ble gjennomført i årene 2009–2013 og som var konsentrert om Neidenelvas nedbørsfelt. Prosjektet var et samarbeid mellom skolte- og østsamesamfunn, Samerådet, Urfolks klimaendringsvurdering, FN-universitetet og Saa'mi Nue'tt-organisasjonen samt OSK Lumimuutos (Snowchange Cooperative). Urfolks klimaendringsvurdering – IPCCA – er et internasjonalt initiativ med senter i Peru. Initiativet koordineres av organisasjonen ANDES og finansieres av FN-universitetet.

IPCCA har utviklet en metode som lytter til urfolks kunnskaper og tradisjon. Ved hjelp av den metoden identifiserer skoltesamene lokale bekymringsvekkende ting i tilknytning til klimaendring. Selv om klimaendringene også påvirker reindriften, opplevde man at laksen i Neidenelva sto sentralt i forbindelse med endringene. Laks er for skoltesamene også noe som produserer og fornyer språket, kulturen og tradisjonen, i tillegg til å være mat. Derfor bestemte skoltesamene seg for å konsentrere aktivitetene i prosjektet til å bedre laksens overlevelsesmuligheter, restituere tradisjonskunnskap og betrakte ulike delområder av fangst. Også naturvitenskapen har konstatert at bestandene av atlantisk laks har gått tilbake gjennom de siste tretti år. Hovedårsaken har vært fangst og menneskeskapte endringer i laksens leveområder (utbygging av vannkraft, forurensing, veinett osv.) Tradisjonskunnskapen og vitenskapen har altså et sammenfallende syn på det generelle presset laksen er utsatt for.

I 2011 fikk man ytterligere støtte til FN-prosjektet, da Nordisk Ministerråd ga tilleggsfinansiering for tiltaket med prosjektnavn *«Ponoi and Neiden – Lifestreams of Eastern Sápmi»*. Dette gjorde det mulig å utvide arbeidet til å omfatte den kvenske befolkningen i Neiden i Norge. I tillegg kunne man med Nordisk Ministerråds midler begynne en innsamling av meninger om utvikling av elva Ponoi i Murmansk-distriktet i Russland. Ponoi er en av de viktigste lakseelvene i Barentsregionen. I dette sammendraget, som også vil bli publisert på russisk, skoltesamisk, norsk og engelsk, skal man presentere anbefalingene om felles forvaltning som er utviklet gjennom prosjektet. Arbeidet er hovedsakelig finansiert av Forente Nasjoner og Nordisk Ministerråd.

## 1. Anbefalingene om utvikling av Neidenelva

I prosjektet slo man fast at Neidenelva er i utmerket stand med hensyn til naturforholdene. For å fremme felles forvaltning burde Neidenelva deles opp i forvaltningssoner og tiltaksområder, som etter en foreløpig deling er:

1. Silisjoki-elvas nedbørsfelt
2. Øvre løpet av Neidenelva vest for Opukasjärvi
3. Opukasjärvi-innsjø
4. Sonen mellom Opukasjärvi og den finsk-norske grensen
5. Neidenelva på norsk side, inklusive elveosen og fjorden

Generelt kan man konstatere at prosjektets feltarbeidsperiode 2012, var første gangen de skoltesamer som var valgt til å delta, fikk presentere sine kunnskaper, sin tradisjon, sine observasjoner og forslag til forvaltning ut fra sine egne kulturelle utgangspunkter. Skoltesamene har i flere tiår hat mulighet for å komme med sine opplysninger til myndigheter, men måten og stedet for informasjonsutvekslingen har vært definert ut fra majoritetskulturens og myndighetenes betingelser. På den andre siden har lokalbefolkningen i bygda Neiden i Norge i lengre tid hatt direkte vekselvirkning med myndigheter og forskere. I prosjektet ble det etablert en tradisjonsdatabase, dokumentert urfolks og lokalbefolkningens opplysninger og sammenlignet disse med eksisterende vitenskapelig forskning. Målet for disse tiltakene var å utvikle en solid basis for felles forvaltning av Neidenelva og sette i gang gjennomføring av den. Prosjektets resultater kan sammenfattes i følgende, generelle anbefalinger (nærmere detaljer i i rapporten):

**A.** Den norske og den finske staten bør offisielt kalle sammen en felles forvaltningsgruppe som i det minste bør bestå av:

- Skoltesamer som nedbørsfeltets urfolk
- Kvener og andre lokale medlemmer av Neiden Fiskefellesskap
- Den finske staten og en nødvendig representasjon av statens ansvarsorganisasjoner
- Den norske staten og en nødvendig representasjon av statens ansvarsorganisasjoner
- Andre lokale aktører og borgere i det sivile samfunnet
- Representanter for bedrifter

**B.** Umiddelbart etter innkallingen bør det arrangeres en omfattende konferanse for etablering av et felles forvaltningsorgan for Neidenelvas nedbørsfelt. Konferansen bør utrede og fastsette de internasjonale forpliktelser som Finland og Norge har i forhold til urfolk (og andre lokale aktører) samt være oppmerksom på bekymringer som internasjonale organisasjoner har fremsatt (f.eks. de som North Atlantic Salmon Fund har kommet med). Drøftingen bør ta utgangspunkt i hele området som laksen benytter seg av og økosystemene fra sjøen til kildene av Neidenelva.

**C.** Skoltesamenes urfolkskunnskap og finners, nordmenns og kveners lokale kunnskap bør godkjennes som en betydningsfull kunnskapskilde likeverdig med vitenskapelig kunnskap ved vurdering av nedbørfeltets miljø og laksens tilstand.

**D.** I Neidenvassdragsområdet bør det overveies nye utredninger, arealdisponerings- og naturverntiltak, inklusive:

- et permanent forbud mot lakseoppdrett i Neidenfjorden og eventuelt også i nabofjordene
- undersøkelse av skoltesamenes kulturarv i tilknytning til sjøen, spesielt angående stedsnavn og arealbruk ved Neidenfjorden
- utnytting av kunnskapene og erfaringene til yrkesfiskere som fisker på sjøen
- en ny vurdering av rollen til utsetting av harr og sik, hvis rogna kommer fra nedbørsfeltet
- langtidsvirkninger i nedbørsfeltet av fiskeutsetninger i Silisjoki og andre steder i perioden 1960-1990
- skoltesamisk og annen arealutnyttelse i området bør utredes ved hjelp av kartlegging
- forbud mot ytterligere utbygging av vannkraft
- utredning av etablering av en grenseoverskridende nasjonalpark i Neiden basert på felles forvaltning
- tillatelse til en begrenset selfangst i elveosen

**E.** Resultatene av vitenskapelig forskning på nedbørsfeltet bør med respekt for kulturen bringes videre til bygdene (Näätämö, Sevettijärvi, Neiden) på deres lokale språk. Slik vil man sikre at alle aktører i hovedtrekk har lik kunnskap til sin rådighet.

**F.** Man bør vurdere virkningene av rekreasjonsfiske i området, inklusive turistfiske. I samme forbindelse foreslås det en omfattende fornyelse av fiskekortsystemet ved at man tar i bruk kvoter. Nærmere detaljer av dette er presentert i rapporten. En ny fiskekortkategori er et «grønt fiskekort», et gratis kort som de som kommer til elva, kan fiske rovfisk gratis med, hovedsakelig gjedde, som påvirker mengden av laks. Et slikt fiskekort krever også nye oppsynsmetoder.

**G.** Den skoltesamiske kulturtradisjonen bør trekkes tydelig frem. Også den kvenske kulturen og bosetningshistorien burde komme tydeligere frem. Dette kan gjennomføres ved hjelp av skilting i nedbørsfeltet, brosjyrer og offentlig informasjon.

**H.** I tillegg til foran nevnte omfattende reformer foreslås det som umiddelbare tiltak i årene 2013–2015:

- Igangsetting av fangst av lake og gjedde i utvalgte områder, særlig i nedre Neidenelva og i innsjøen Opukasjärvi. Rovfiskfangsten, som reduserer smolttapet, kan gjennomføres med gytefangst om våren og ruse-, sluk- og garnfangst om sommeren. Myndighetene kunne betale godtgjørelse til lokale fiskere, særlig for kultiveringsfiske med faste redskaper.
- Man bør identifisere laksens tapte og eksisterende gyteområder ved hjelp av både tradisjonskunnskap og vitenskapelige metoder, og slå dem sammen. Når dette er gjort for eksempel ved å bruke EUs LIFE-finansieringsverktøy, bør restaurering av disse gyteområdene settes i gang. Restituering av ett gyteområde kan gjennomføres allerede sommeren 2013 som pilotprosjekt.
- Et statlig finansiert nettverk av tørrklosetter, særlig langs mye benyttede turistruter, ville hindre at menneskets avføring og urin påvirker

vassdraget, og dermed bremse på tilgroing.
- Virkninger av Sydvaranger Gruve AS på laksen bør utredes snarest mulig på en helhetlig måte som utnytter tradisjonskunnskap og vitenskap.

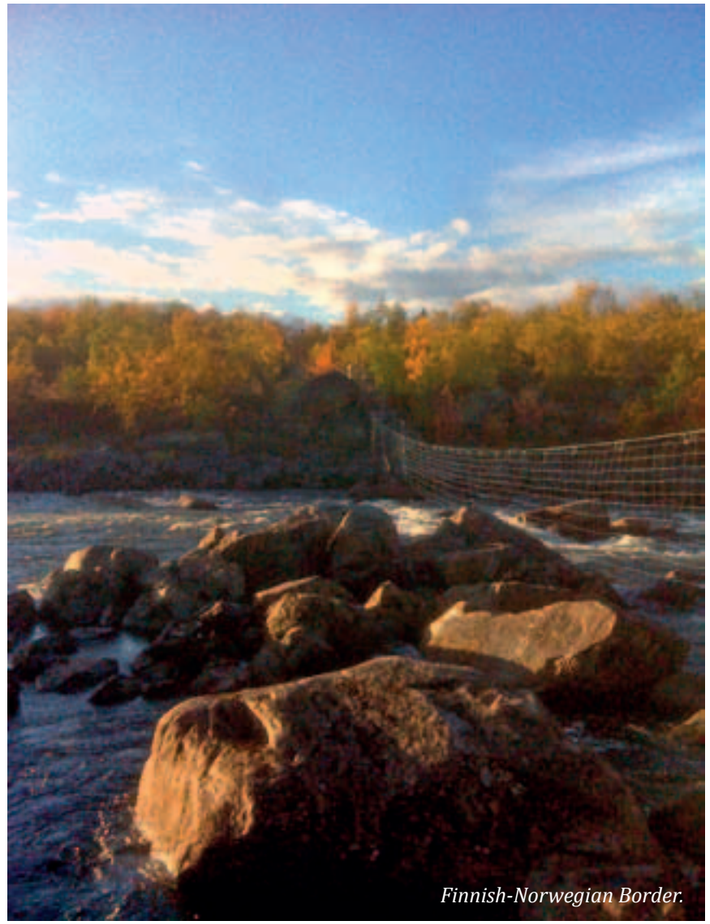
## 2. Anbefalingene for utvikling av elva Ponoi

Utvikling av felles forvaltning av Ponoi er avhengig av den generelle utviklingen i Russland. Derfor bør følgende forslag ses på som anbefalinger og veikart til fremtiden. En slik forvaltningsmodell hvor interessene til komier, samer, annen lokalbefolkning og på den andre siden lakseturismen og staten kan samordnes, vil ta mange år. Ut fra de opplysninger vi har fått gjennom prosjektet, legger vi likevel frem følgende tiltak som fremtidige utviklingsmuligheter:

1. Tilstanden for Ponoi-laksen bør undersøkes fra sjøen til Ponois kildeelver. I løpet av 2013 vil det bli publisert betydelige vitenskapelige resultater angående Ponoi, inklusive KolArctic-prosjektets sluttrapport. I tillegg har man samlet tradisjonskunnskap fra området, og internasjonale organisasjoner som NASF har gitt sine egne anbefalinger om utvikling av nedbørsfeltet. Alle slike datakilder bør utnyttes i forvaltningen av elva.
2. Det bør etableres en internasjonal utviklingsplan for Ponoi-elva. Planen bør omfatte forpliktelsene for Murmansk-regionen og den russiske føderasjonen, med særspørsmål om lokalbefolkningens og urfolkenes rettigheter og naturverntiltak. Et permanent forbud mot vannkraftutbygging og gruvevirksomhet i nedbørsfeltet ville garantere for at elva forblir en meget produktiv lakseelv.
3. Hvis utviklingsplanleggingen settes i gang, bør regionsentret og Moskva invitere også med de lokale bygdene, inklusive Sosnovka og Lovozero-området, og same-, komi- og pomororganisasjoner samt lakseturismebedrifter. Det er nødvendig at føderasjonens myndighetsaktører er til stede.
4. I forbindelse med utviklingsplanleggingen bør man foreta en kartlegging av virkningen av Sovjet-tidens miljøbelastninger, især utslipp av kvikksølv, nikkel, fenoler og olje.
5. I denne rapporten har man konstatert at det fins et likeverdighetsproblem mellom fiske til husbruk og lakseturisme. Det bør umiddelbart settes i gang en prosess for å løse konfliktene mellom disse partene.
6. Ifølge lokalbefolkningen har de oppsynsstasjonene lakseturismeselskapene har etablert i ulike deler av Ponoi, ført til en situasjon hvor en del av Ponoi er skilt ut til separat kommersiell bruk. Disse oppsynsstasjonene bør legges ned og elvas brukssoner deles mellom ulike aktører gjennom avtaler.
7. Resultater av observasjoner basert på vitenskap og tradisjonskunnskap bør få en omfattende presentasjon i nedbørfeltets bygder Krasnotselje, Kanevka og i Sosnovka ved kysten. Dette ville øke lokalbefolkningens kunnskaper om elva og bruken av den.
8. I Ponoi-elvas område er det uklarhet og forvaltningsmessig overlapping angående lokalbefolkningens rett til fangst. Rettighetene til samer, komier og annen lokalbefolkning bør styrkes og avklares. Samtidig ville man få bukt med tyvfisket.
9. Motorbåtenes virkning i laksens gyteområder bør undersøkes. Ifølge tradisjonskunnskap påfører motorbåtene skader på laksens gyteområder i hele nedbørsfeltet. Dette bør undersøkes ved å utnytte både vitenskap og tradisjonskunnskap.
10. Kartlegging av stedsnavn pomorene, samene og komiene bruker, vil skape betydningsfull ny kunnskap om områdets natur, arealbruk og kulturarv.
11. Fremme av pomorenes, samenes og komienes kultur langs elva kan gjennomføres ved hjelp av informasjonstavler, plakater, brosjyrer og andre midler. Slik får man bedre frem områdets nesten usynlige kulturhistorie.
12. En ny Ponoi nasjonalpark bør i fremtiden etableres ved å utnytte modeller fra andre nordlige deler av Russland, som republikken Saha (Kolyma) og Karelen. Som forberedelse til dette kan det arrangeres workshop, hvor man for eksempel presenterer mer omfattende erfaringer fra Kolyma-elva.

### Konklusjoner

Rapporten om felles forvaltning av Ponoi og Neidenelva 2013 presenterer for første gang en konkret modell for utvikling av to viktige lakseelver i Barentsregionen ved hjelp av felles forvaltning. Neidenelva er en finsk-norsk elv og Ponoi ligger i Murmansk-distriktet i Russland. Begge områdene er østsamenes tradisjonelle hjemtrakter, selv om det i dag også bor andre folkeslag der. En del av de foreslåtte reformene og initiativene for å utvikle nedbørsområdene på en helhetlig måte krever betydelige, innovative beslutninger (for eksempel initiativene for å sikre urfolks og lokalbefolkningens fangstmuligheter, for helhetlig utvikling av nedbørsområdene, for å befeste urfolkskunnskapens rolle som kunnskapskilde). Alle aktører deler nødvendigvis ikke disse oppfatningene. Derfor bør man behandle resultatene av felles forvaltningsrapporten for Ponoi og Neidenelva i en stor bredde i områdenes bygder, hos nasjonale myndigheter og vitenskapelige kretser samt i urfolks organisasjoner. I tillegg oppfordrer vi alle mulige aktører til umiddelbart å anvende rapportens generelle retningslinjer og punkter for at det kan tas hensyn til de mangfoldige prosessene som foregår i Arktis, i utvikling av nedbørsfelt og laksens leveområder.



*Finnish-Norwegian Border.*

# Основные положения отчета: План совместного управления в районе рек Поной и Нейден (Наатамо)

## Введение

Отчет содержит результаты проекта «Выживание саамов-скольтов в меняющемся мире», который осуществлялся в бассейне реки Нейден с 2009 по 2013 год. Проект проводился при участии и поддержке саамов-скольтов и других общин восточных саамов, Совета Саамов, проекта «Оценка Изменения Климата Коренными Народами» (IPCCA) и инициативы «Традиционное Знание» Университета Организации Объединенных Наций, кооператива Сноучэндж, и культурной организации Саами Нуэтт. Проект является частью международной инициативы «Оценка Изменения Климата Коренными Народами» (IPCCA), которая развивается и координируется некоммерческой организацией коренных народов ANDES (Перу) при поддержке Университета Организации Объединенных Наций. На основе IPCCA методологии, которая включает общинную рефлексию, оценку и проектирование будущего на основе местных форм мировосприятия и традиционного знания, скольты из Севеттиярви подготовили план приспособления общины к изменению климата. В ходе подготовки этого плана все участники сошлись во мнении, что климатические изменения создают значительные трудности для оленей, однако на современном этапе оленеводства эти трудности преодолимы. Гораздо большую озабоченность саамов-скольтов вызывает традиционный промысел лосося, который также является неотъемлемой частью их традиционной хозяйственной деятельности и культурной идентичности. Основываясь на этих наблюдениях, скольты и кооператив Сноучэндж приняли решение сосредоточить совместную работу по приспособлению к изменению климата на сохранении традиционного для скольтов промысла лососевых на реке Наатамо. Научные исследования также показали, что численность атлантического лосося за последние 30 лет уменьшилась. Уменьшение связано прежде всего с выловом рыбы и воздействием человека на среду обитания лосося. Озабоченность ситуацией с лососем разделяют и коренные и местные жители (на основе своего ТЭЗ – традиционного экологического знания) и научные специалисты, что послужило основанием для выбора лосося в качестве основной темы проекта. Кроме того, получение дополнительного финансирования от Совета Министров Северных Стран (проект «Поной и Нейден – потоки жизни восточных саамов») позволило расширить рамки проекта: были проведены дополнительные семинары в бассейне реки Нейден и исследование мнения местных рыболовов квенов в Норвегии и жителей бассейна реки Поной в Мурманской области (Россия). Поной является важной семужной рекой региона. «План совместного управления в районе рек Поной и Нейден», представленный в этом отчете, может стать основой для дальнейшего развития этих рек. Проект финансировался Университетом Организации Объединенных Наций и Советом Министров Северных Стран.

## 1. Рекомендации для реки Нейден

Предложения по совместному управлению основываются на ряде мер и рекомендаций для отдельных участков реки, включая:

1. бассейн реки Силисйоки;
2. верховье реки Нейден, к западу от озера Опукасярви;
3. озеро Опукасярви;
4. участок между озером Опукасярви и норвежско-финской границей;
5. норвежский сегмент реки Нейден, включая отдельные участки дельты и экосистемы фьорда.

Во время полевых работ 2012 саамы-скольты впервые получили возможность поделиться своими знаниями, наблюдениями, мнением и предпочтениями в сфере управления бассейном реки Нейден. В прошлом только жители поселения Нейден имели опыт передачи своих рыболовецких наблюдений. Обобщая знания, накопленные местным и коренным населением, семинары, архивные материалы, и научные данные, отчет предлагает следующие меры по разработке совместного управления реки Нейден:

**1.** Финляндия и Норвегия должны опубликовать официальное приглашение к совместной работе всех заинтересованных сторон. Это станет первым шагом к введению совместного управления. Необходимо включить в список заинтересованных сторон:

- саамов-скольтов, коренной народ бассейна реки Нейден;
- квенов и других представители организации «Neiden Fiskefelleskap»;
- правительство Финляндии и представителей соответствующих государственных организаций;
- правительство Норвегии и представителей соответствующих государственных организаций;
- представителей местного бизнеса;
- представителей гражданского общества.

**2**. После принятия всеми заинтересованными сторонами приглашения к совместной работе необходимо созвать конференцию, чтобы начать процесс выработки механизмов совместного управления бассейном реки Нейден. Целью этого процесса должно стать создание новой организации, которая будет управлять ресурсами региона. Конференция должна изучить роль и масштаб международных обязательств, принятых на себя Финляндией и Норвегией в области прав коренных народов. Конференция также должна принять во внимание точку зрения международных неправительственных организаций, таких как NASF, о необходимости учета особенностей всего жизненного цикла лосося, от моря до верховьев Нейден.

**3.** Знания, накопленные коренным народом скольтов и другими местными жителями (квенами, норвежцами и финнами) должны рассматриваться как основной источник информации о состоянии окружающей среды в бассейне реки Нейден, включая состояние лососевых пород рыбы.

**4.** Необходимо рассмотреть возможность проведения следующих мероприятий по сохранению природы и ограничению форм землепользования в бассейне реки Нейден:

- Постоянный запрет на искусственное выращивание лосося во фьорде Нейден и других прилегающих фьордах.
- Проведение исследования морского культурного наследия, включая топонимику и формы использования земель и водных объектов саамами-скольтами.
- Документирование и изучение деятельности профессиональных прибрежных рыболовов, которые ведут свою деятельность на побережье Финнмарк.
- Переоценка мер по пополнению популяции хариуса и сига искусственно выращенными особями, если икра берется из бассейна реки Нейден.
- Оценка долгосрочного воздействия мер по искусственному пополнению популяции рыб на реке Силисйоки и других участках бассейна с 1960-1990.
- Картографирование современного землепользования саамов-скольтов и других пользователей реки.
- Постоянный запрет на развитие гидроэнергетики.
- Изучение возможности создания трансграничного национального парка «Нейден» под совместным управлением.
- Если необходимо, можно ввести строго ограниченную охоту на небольшое количество тюленей в дельте реки.

**5.** Научно исследовательские проекты в этом регионе должны включать семинары для местных общин с целью обмена информацией между всеми заинтересованными сторонами. Семинары должны быть адаптированы к местной культуре, в частности они должны быть на местных языках.

**6.** Необходимо изучить воздействие туристической рыбалки на состояние реки и реформировать систему разрешений на рыбалку с помощью введения квот. Необходимо ввести новый тип бесплатных лицензий на «эко-рыбалку» на вылов хищных пород рыб (щука). Реформа потребует введения новых норм мониторинга.

**7.** Следует активнее распространять в регионе информацию о наследии саамов-скольтов, включая устные предания, взаимоотношения с рекой и культуру, с помощью брошюр, информационных досок и других мер.

**8.** Кроме того, необходимо незамедлительно принять ряд малых управленческих шагов для улучшения экологического состояния реки и популяции лососевых рыб. Эти шаги не отменяют введенные ранее меры, такие как меры по предотвращению распространения заболеваний среди лососевых, но дополняют их. Следующие меры должны быть приняты в 2013-2015:

- Вылов налима и щуки необходимо активизировать на некоторых участках, включая нижнее течение реки Нейден и озеро Опукасярви, чтобы снизить численность хищных пород рыб. Необходимо разрешить как подледный лов в марте, так и сезонный лов сетью и ловушками.
- Объединение накопленных коренным населением знаний о нерестилищах с научными наблюдениями будет способствовать систематическому и эффективному восстановлению утерянных и сохранению хорошо изученных нерестилищ
- При государственном финансировании необходимо создать сеть сухих эко-туалетов вдоль туристических маршрутов, чтобы предотвратить попадание мочевых и фекальных выделений в водную систему.
- Необходимо провести новую оценку воздействия горных работ компании «Sydvaranger Gruv» на миграцию лосося.

## 2. Рекомендации для бассейна реки Поной

Развитие механизмов совместного управления для бассейна реки Поной должно учитывать условия современной России. Некоторые мероприятия могут быть проведены уже на данном этапе, но в целом, представленное обсуждение можно рассматривать как перспективный план, ориентир для будущего. Создание и введение новой модели управления бассейном реки Поной, которая будет учитывать нужды коми, саамов и туристов-рыболов, займет несколько лет. Опираясь на работу, проведенную в расположенных вдоль Поноя поселениях, мы бы хотели вынести на обсуждение ряд возможных управленческих мер:

1. Необходимо провести детальное обследование запасов лососевых пород рыб по всей цепочке их мест обитания от моря до верховий Поноя. В течение 2013 года научный проект «КолАрктик» должен собрать новые научные данные о запасах лососевых пород рыб в регионе. Эти данные могут быть объединены с традиционными формами знания, которые представлены в данном отчете. Результаты проекта «КолАрктик», ТЭЗ наблюдения и NASF рекомендации должны стать основой для развития бассейна реки Поной.
2. Необходимо разработать международный план по бассейну реки Поной, который послужит основой для дальнейшей работы. План должен включить в себя обязательства федеральных и региональных властей по бассейну реки Поной. Особое внимание необходимо уделить опасениям, высказанным местным и коренным населением, и сохранению природы. Полный запрет на проведение горных работ и развитие гидроэнергетики обеспечит сохранение за Поноем статуса важной семужной реки.
3. Если план устойчивого развития бассейна реки Поной будет разработан, то региональные и федеральные власти должны пригласить к совместной работе местные поселения, включая Сосновку, организации саамов, коми, поморов и туристические компании, организующие рыбалку. Региональные и федеральные организации также должны играть важную роль.
4. Параллельно с инициированием общественного обсуждения необходимо нанести на карту основные места обитания местной фауны и нанесенный реке ущерб (включая индустриальные объекты советских времен, которые оказывают влияние на качество воды: ртуть, никель, фенолы, нефть).
5. Отчет выявил проблему несправедливого распределения прав на рыбную ловлю между местными и коренными жителями с одной стороны и туристическими компаниями с другой. Необходимо начать уже в ближайшее время процесс разрешения конфликта с привлечением всех заинтересованных сторон и выявить существующие проблемы.
6. Количество и роль туристических постов охраны. Создание туристических постов охраны на некоторых участках реки создает впечатление, что река не находится в общем пользовании. Эти посты необходимо снять. В рамках разрешения конфликта необходимо достичь соглашения о разделении зон вылова и о взаимном уважении их границ.
7. Необходимо провести семинары в Красношелье, Каневке и Сосновке для того, чтобы представить населению результаты научных исследований и наблюдений ТЭЗ . Местные жители ощущают, что они не получают полную информацию, и не могут оказать влияние на развитие реки. Следовательно, необходимо провести рабочие семинары, которые будут адаптированы к местным культурным особенностям, чтобы вовлечь местных жителей в процесс принятия решений.
8. Пересмотр прав местного населения на вылов рыбы. Существующая система норм, регулирующих вылов рыбы коренными саамами, коми и другими местными группами, вызвала путаницу и непонимание на местах. Необходимо обновить и гармонизировать эту систему, что поможет пресечь как «браконьерство» местного населения так и настоящее браконьерство.
9. Необходимо изучить воздействие моторных лодок на нерестилища и икру лососевых. Устные предания, собранные во время интервью, показали, что эта тема волнует жителей всех поселений. Необходимо провести дополнительные научные и ТЭЗ исследования по этой теме.
10. Нанесение на карту топонимов поморов, саамов и коми. Эту работу необходимо провести как можно скорее, поскольку она поможет собрать важную информацию о среде обитания местной фауны, землепользовании в прошлом и о культурном наследии региона.
11. Продвижение культуры поморов, саамов и коми вдоль реки Поной. Указатели, плакаты, брошюры и другие средства помогут туристам погрузиться в богатое культурное наследие региона. Невидимая история приобретет видимые формы.
12. Необходимо начать обсуждение возможности создания нового национального парка с сохранением традиционных форм рыбалки. Можно использовать модели, реализованные в других регионах российского Севера. Семинар, который познакомит местное сообщество с опытом Колымы, внесет вклад в развитие Поноя.

*Boats along the bank of Ponoi, Krasnochelye.*

## Заключение

Данный отчет впервые выносит на общее обсуждение идею совместного управления для финско-норвежской реки Нейден и реки Поной Мурманской области (Россия). Поскольку некоторые из внесенных предложений требуют нестандартных и смелых шагов (в области прав коренных народов, управления на основе экосистем, использования коренных и традиционный форма знания в качестве источника информации), некоторые заинтересованные стороны могут не согласиться со всеми предложениями. Для дальнейшей работы над предложениями необходимо распространить результаты, изложенные в «Плане по совместному управлению в районе рек Поной и Нейден 2013», среди поселений, расположенных в бассейнах этих рек, властных структур, научного сообщества и организаций коренных народов. Однако, принимая во внимание все те изменения, которые происходят в этих регионах и в Арктике, мы бы хотели призвать ответственные организации начать скорейшее воплощение основной идеи, изложенной в этом плане.

*Views of the fishing cabin owned by Vladimir Feodoroff at the streampool Pyöreäsuvanto on Näätämö river.*



# Vuännõs: Pue'nn- da Njauddâmjooggi õhttsažvaaldšemraportt

## Alggsää'n

Tän rapo'rtte lie norrum pohttmõõžž ee'jjin 2009-2013 čõõđtum “Skolt Sámi Survival in the Middle of Rapid Change” (Nuõrttsaa'mi spraavdõõttmõš krootai muttõõzzi kõõskâst) –ha'nǩǩõõzzâst, kåå'tt čiŋlmõõvi Njauddâmjoogg kolggâmvoudda. Projekt leäi jee'res nuõrttsää'mõhttsažkoo'ddi, Sámiráđđi (Sää'msuåvtõs), Alggmeerai ääim-muttâsa'rvvõõzz, Õhttõõvvâm meerkoo'ddi universiteett, Saa'mi Nue'tt rõ:zz di vuässõskå'dd Muõttmuttõõzz õhttsažtuâjj. Alggmeerai ääim-muttâsa'rvvõs – IPCCA lij meeraikõskksaž aalgtõs, koon kõõskõs lij Peru-jânnmest. Aalgtõõzz koordinâstt ANDES-organisaatia, da tõn teäggad Õhttõõvvâm meerkoo'ddi universitett.

IPCCA lij raajjâm alggmeerai teâđaid da ä'rbbvuõđ kuvddleei mõõntõõllmõõžž, koon veäkka Če'vetjääu'r sä'mmla tuõ'tte ääim-muttõ'sse kuulli pääiklaž eettmõõžžid. Hå't sõŋŋmuttõõzz vaikkte puäʒʒhoiddu še, ǩiõ'ččeš, što Njauddâmjoogg luõss lij muttõõzzi diõtt kuvddlõõzzâst. Luõss lij veär lâå'ssen ǩiõl, kulttuur da ä'rbbvuõđ raajji da oođeei sä'mmlaid. Tän diõtt sä'mmla mie'rree kõskkeed ha'ŋǩǩõõzz tuåimid luõzz spraavdõõttâmvuei'ttemvuõđi pue'rumu'šše, ä'rbbteâđ jeälltumu'šše da šeellmõõžž jee'res vuä'ssvuu'di ta'rǩstõõllmõ'šše. Luått-tiõđ lij še tuõttâm, što atlaantluõzzi mie'rr lij occnam mââimõs koummlo ee'jj se'st. Vä'lddmäi'nnen lie leämmaž šee'llem da oummu tuejjääm muttõõzz luõzzi jie'llemvuu'din (čää'ccviõgg raajjmõš, kaa'st, čuõkku dno.). Ä'rbbteâđast da tiõttjest lij nääi't õhttnaž vuäinalm luõ'sse vaikkteei takai kuârmtumuužžin.

Ee'jj 2011 Õhttõõvvâm meerkoo'ddi ha'ŋǩǩõ'sse vuõžžuš lâå'sstuärjjõõzz, ko Tâ'vvjânnmi ministersuåvtõs uu'di lâå'ssteäggtõõzz, ha'ŋǩǩõsnõõmin “Ponoi and Neiden – Lifestreams of Eastern Sápmi” –tuåimmjumu'šše. Tän tuärjjõõzz veäkka tuâjj veiddni kveenimeer kõ'sǩǩe Ta'rre. Lâå'ssen Tâ'vvjânnmi ministersuåvtõõzz teäggtõõzzin vuõi'tteš altteed sä'mmlai, komi-meer, pomor-meer, ruõššlai da ka'rjjlai ǩiõččâmvue'jji noorrmõõžž Pue'nnjoogg ooudâsviikkmõõžžâst Muurman vuu'dest, Ruõššjânnmest. Pue'nnjokk lij õhtt Barents-vuu'd väážnmõs luõssjooggin. Tän vuännõõzzâst, koon õlmståå'ttet še ruõšš-, sää'm-, taar- da eŋgglõsǩiõ'lle, čiõ'lǧǧeet ha'ŋǩǩõspåå'jest rajjum õhttsažvaaldšemra'vvjõõzzid. Õhttõõvvâm meerkåå'dd da Tâ'vvjânnmi ministersuåvtõs lie teäggtam šuurmõs vuä'zz tuâjast.

### 1. Ra'vvjõõzz Njauddâmjoogg oudâsviikkâm diõtt

Ha'ŋǩǩõõzzâst tuõ'tteš, što Njauddâmjokk lij luâđjeällmõõžžin vuõssklaassaž vue'jjest. Õhttsažvaaldšumuužž aalgtem diõtt Njauddâmjoogg õõlgči jue'ǩǩed vaaldšem- da tuåimmamvuu'did, kook vuäitče lee'd:

1. Silisjoogg kolggâmvu'vdd
2. Njauddâmjoogg pâ'jjvuä'zz Opukasjääu'rest viõsttra
3. Opukasjäu'rr
4. Opukasjääu'r da Lää'ddjânnam-Taarr-raai kõskksaž vu'vdd
5. Taarr peällsaž Njauddâm, mie'ldd looggee'l jokkvuällõõgg da vuõn

Vuei'tet särnnad, što ha'ŋǩǩõõzzâst čõõđtum joogg tu'tǩǩeempåå'jj 2012 leäi vuõssmõs vuârr, ko mie'ldd va'lljuum sä'mmla vuõžžu mušttled sij teâđaid, ä'rbbvuõđ, vuämmšõõzzid da vaaldšeme'tǩǩõõzzid kulttuurlânji jii'jjez vue'lǧǧemaalgin. Sä'mmlain lij čõõđ ääi'j leämmaž vuei'ttemvuõtt u'vdded teâđaid ve'rǧǧnee'ǩǩid, leâ'ša teâđvaajtumuužž vue'jj da pääi'ǩ lie meä'rtum vä'lddkulttuur da ve'rǧǧnee'ǩǩi määinaivui'm. Pääiklaž oummu Njauddmest (Neiden) Taarrâst lie leämmaž nuu'bb tää'zzest kuu'ǩǩab vuõigg vuârrvaikktõõzzâst ve'rǧǧnee'ǩǩi- da

*Summer shelter and a freshwater spring traditionally owned by Filip Jefremoff.*

*Niskavaara hill view and the yellow pond of Rautuselkä area.*



*Strange formations on a tree limb collected by Filip Jefremoff.*

tu'tǩǩeejaivui'm. Ha'ŋǩǩõõzzâst aalgteš ä'rbbteâđ teâttnorldõõgg, dokumentõ'stteš alggmeerai da pääiklaž oummi teâđ da ve'rddõ'lleš tõn ânn'jõž tiõđlaž tu'tǩǩumu'šše. Täi tuåimi täävtõssân leäi vuäžžad Njauddâmjoogg õhttsažvaaldšumu'šše šiõgg aalg da altteed tõn čõõđtumuužž. Ha'ŋǩǩõõzz pohttmõõžžid vuei'tet vuänneed puõ'tti, takai ra'vvjõõzzid (tää'rǩab teâđ rapoorttâst):

**A.** Taarr da Lää'ddjânnam valdia õõlgče veerje'ld kǻččad õ'htte õhttsažvaaldšemjoouk, koozz kuulče:

- Nuõrttsä'mmla kolggâmvuu'd alggmeeran
- Kveeni-oummu da jee'res pääiklaž Njauddâm kue'llvuä'sspie'llkåå'dd (Neiden Fiskefellesskap) vuässla
- Lää'ddjânnam valdia da taarbšum ee'ttkâsttmõš valdia va'sttõsorganisaatiain
- Taarr valdia da taarbšum ee'ttkâsttmõš valdia va'sttõsorganisaatiain
- Jee'res pääiklaž meerlažõhttsažkåå'dd tuåimmjeei da meerla
- Põrggsi ee'ttkõ'stti

**B.** Kååčč mâŋŋa, mâå'jeeǩâni, õõlgči riâššâd veiddsõs konfereenss Njauddâm kolggâmvuu'd õhttsažvaaldšemorgaan aalgtem diõtt. Konferenss õõlgči se'lvvted da nââneed meeraikõskksaž õõlgtõõzzid, kook Lää'ddjânnmest da Taarrâst lie kuõskee'l alggmeeraid (da jee'res pääiklaž vuä'sspie'lid), di vä'ldded lokku meeraikõskksaž organisaatiai ou'ddepohttam huõlid (ouddm. huõlid, koid North Atlantic Salmon Fund lij peäggtam). Ta'rǩstõõllmõõžž vuåđđan õõlgče lee'd ceâl luõzz âå'nnem vu'vdd da ekosysteem vä'lddmiârâst Njauddâmjoogg laa'đvid.

**C.** Nuõrttsä'mmlai alggmeerteâđ da lä'ddlai, taa'ji da kveeni-oummi pääiklaž teâđ õõlgči priimmâd tiõđlaž teâđain seämma ärvvsaž, miârkteei teâttkäivvan, ko ärvvtõõlât kolggâmvuu'd pirrõõzz da luõzz vue'jj.

**D.** Njauddâm vuu'dest õõlgči tu'mmjed ođđ se'lvvtem-, mäddâå'nnem- da luâđsuejjeemtuåimid, mie'ldd looggee'l;

- luõzz äiddšõddumuužž põõšši ǩeâlddmõõžž Njauddâmvuõnâst da vuäittmõõžži mie'ldd â'lddvuõnin še
- nuõrttsä'mmlai miârrlaž kultturää'rb, jeärben päi'ǩǩnõõmi da mäddâânnmõõžž se'lvvtumuužž Njauddâmvuõnâst
- miârâst tuåimmjeei ämmatkue'llšii'll'ji teâđ da ǩiõččlâsttmõõžž äu'ǩǩumuužž
- suä'vvel da šaapš išttumuužži rooll o'đđestärvvtõõllmõõžž, jõs meei'n lie kolggâmvuu'dest
- Silisjoogg da jee'res 1960-1990-låågg kue'llišttumuužži ku'ǩesäiggsaž vaikktõõzz kolggâmvoudda
- nuõrttsä'mmlai da jee'res õõ'nn'ji mäddâânnmõõžž vuu'dest õõlgči se'lvvted karttjumuužživui'm
- čää'ccviõgg lâå'ssraajjmõõžž ǩeâlddmõõžž
- Njauddâm raajid pâ'jldeei meermeä'ccvuu'd vuâđđeemse'lvvtõõzz, kåå'tt vuâđđõõvči õhttsažvaaldšumu'šše
- Nue'rji mie'cstumuužž rää'jtum luâšttmõõžž jokkvuâllõõggâst

**E.** Kolggâmvuu'dest šõõddi tiõđlaž tu'tǩǩumuužž pohttmõõžžid õõlgči maaccted kulttuur kuvddlee'l siidid (Njauddâm, Če'vetjäu'rr, Vue'll-Njauddâm (Neiden)) pääiklaž ǩiõlivui'm. Nääi't ainsmâå'ttet, što puk tuåimmjeejain le'čči timâ'mmet seämmanallšem teâtt åå'nnemnalla.

**F.** Vuu'd virkkõõvvâmkue'llšeellmõõžž, mie'ldd looggee'l tu'ri'stšeellmõõžž, vaikktõõzzid õõlgči ärvvtõõllâd. Seämma õhttvuõđâst e'tǩǩeet veiddsõs oođumuužž låå'ppriâššmõ'šše, ko'st vää'ldet âânnmõ'šše šee'llem-meä'rid. Tõn tää'rǩab teâđaid lie čiõ'lǧǧääm rapoortâst. Låå'ppriâššmõõžž ođđ kategorian lij "ruânn kue'llšee'llemlåå'pp", määuste'mes šee'llemlåå'pp, koon veäkka jooggâst kõ'll'jeei oummu vuäi'tte šee'lled pää'nnkue'lid, jäänaš nu'ǩǩšid, kook vaikkte luõzz meärra. Tännallšem ođđ låå'pp õõlgat ođđ vuåppâmvue'jjid.

**G.** Nuõrttsä'mmlai kultturää'rb da õhttvuõđ jo'ǩǩe âlgg vuäžžad pue'rben ou'dde. Kveeni-oummi kulttuur da aazztemhistoor õõlgči vuäžžad še pue'rben ou'dde. Tän vuei'tet čõõđted kolggâmvoudda ciâggtum teâttkõõlbi- da brosuu'rivui'm di õõlmâs teâđtumuužžin.

**H.** Â'lnn åårrai veiddsõs oođumuužži lâå'ssen e'tǩǩeet jå'ttlõs tuåimmen ee'jjid 2013-2015:

- Vue'šn- da nu'ǩǩežšeellmõõžž alttumuužž va'lljuum vuu'din, jeärben Vue'll-Njauddâmjooggâst da Opukasjääu'rest. Pää'nnkue'li šeellmõõžž, koin uu'cceet luõssââlgai pråppumuužž, vuei'tet tue'jjeed ǩeâđđa kååđđpoodd da ǩeässa miirš-, vuõgg-da säi'mmšeellmõššân. Ve'rǧǧnee'ǩǩ määusče pää'lǩ pääiklaž kue'llšii'll'jid jeärben põõšši šee'llemneävvaivui'm šõõddi håiddšee'llmest.



- Luõzz mõõntum da ânn'jõž koođđâmvuu'did õõlgči tuõttâd ä'rbbteâđ di tiõtti veäkka, da õhtteed. Ko nääi't lij tue'jjuum äu'ǩǩee'l ouddmiârkkân EU LIFE –teäggtemtuâjjneävv, täi koođđâmvuu'di maacctumuužž seämmavuâkksen õõlgči aalgted. Õõut koođđâmvuu'd jeälltumuužž vuei'tet čõõđted ju'n ǩeässa 2013 pilottnalla.
- Valdia teäggtem nuu'žniǩsäi'mmõs, jeärben jiânnai õnnum tu'ri'stǩeäini kuâŋŋsid, cõõggči oummi põõški da koožž vaikktõõzzid čää'ccvoudda da meälgte'či rippõõvvmõõžž.
- Sydvaranger Gruv –roggâmtuåim ceâl vaikktõõzz luõ'sse õõlgči se'lvvted sõõrgab.

## 2. Ra'vvjõõzz Pue'nnjoogg ooudâsviikkâm diõtt

Pue'nnjoogg õhttsažvaaldšumuužž ooudâsviikkmõ'šše vaaikat Ruõššjânnam takaiooudâsviikkmõš. Tän diõtt puõ'tti e'tǩǩõõzzid âlgg vuei'nned ra'vvjõssân da čuâggaskarttân puõ'ttiäigga. Nåkam vaaldšem-maall aalgtumuužžâst, ko'st komi-oummi, sä'mmlai, jee'res pääiklaž oummi da luõsstu'rii'sm di valdia intreessid vuäžžčeš suânn'jed õ'htte, lij ku'ǩesäiggsaž tuâjj. Ha'ŋǩǩõõzzâst vuõžžum teâđai vuâđeld e'tǩǩeep kuuitâg puõ'tti tuåimid puõ'ttiäái'j ooudâsviikkâmvuei'ttemvuõttân:

1. Pue'nnjoogg luõzz vue'jj õõlgči se'lvvted miârrlaž vuu'din Pue'nnjoogg laa'đvi räjja. Ee'jj 2013 ääi'j õlmstâå'ttet väážnai tiõđlaž pohttmõõžžin Pue'nnjooggâst, mie'ldd looggee'l KOLARCTIC-ha'ŋǩǩõõzz lopprapoort. Lâå'ssen vuu'd ä'rbbteâtt lij norrum da meeraikõskksaž organisaatia, mâ'te NASF lie ouddam jii'jjez ra'vvjõõzzid kolggâmvuu'd ooudâsviikkmõõžžâst. Puk täid teâttkäaivaid õõlgči äu'ǩǩeed joogg vaaldšumuužžâst.
2. Pue'nnjo'ǩǩe õõlgči vuâđđeed meeraikõskksaž ooudâsviikkâmplaan. Plaanâst õõlgče lee'd mie'ldd Muurman vuu'd da Ruõššjânnam lettvaldia õõlgtõõzz, påådkõõččmõssân pääiklaž da alggmeerai vuõiggâdvuõđ da luâđsuejjeemtuåim. Põõšši čää'ccviõgg- da roggâmtuåimiǩiõld staane'či joogg seillmõõžž šiõgg luõssjokkân.
3. Jõs ooudâsviikkâmplaanumuužž altteet, vu'vddkõõskõõzz da Moskova õõlgče kǻččad mie'ldd še pääiklaž siidid, mie'ldd looggee'l Sosnovka, Luujääu'r kruugg da sää'm-, komi- da pomororganisaatiaid di luõsstu'ri'smmpõrggsid. Lettvaldia ve'rǧǧneǩtuåimmjeejai mie'lddåårrmõš lij viâlt'te'm.
4. Ooudâsviikkâmplaanumuužž õhttvuõ'tte õõlgči vuäžžad karttjumuužž Suåvvtõsleett poodd pirrõskuârmtumuužži vaikktõõzzin, jeärben jie'llisiilb, nikkeel, fenoli'i da oljjnjie'šši vuä'zzest.
5. Tän rapoortâst lij tuõttum, što pääiklaž oummi dommtarbbšeellmõõžž da luõsstu'rii'sm kõõskâst lij tää'ssverddsažvuõđlaž vaiggâdvuõđ. Täi joouki kõõskâst õõlgči mâå'jeeǩâni aalgted konfliikti rä'tǩǩeemproseess.
6. Pääiklaž oummi miõlâst luõsstu'ri'smmpõrggsi vuâđđeem ta'rǩǩeempääi'ǩ Pue'nnjoogg jee'res vuu'din lie tue'jjääm vue'jj, ko'st Pue'nnjoogg vuä'ss lij jeä'rdum pååđ-, kaauplaž âânnmõ'šše. Täid ta'rǩǩeempääi'ǩid õõlgči pu'rǧǧeed da suåppmõšvuâđeld jue'ǩǩed joogg åå'nnemvuu'did jee'res tuåimmjeejai kõskkân.
7. Tiõđlaž da ä'rbbtiõttu vuâđđõõ'tti vuâmmšõõzzi pohttmõõžžid õõlgči čiõ'lǧǧeed veiddsânji kolggâmvuu'd siidin Krasnotseljest, Kanevkast da reddtõõgg Sosnovkast. Tät lâå'zzte'či pääiklaž oummi teâđ jooggâst da tõn âânnmõõžžâst.
8. Pue'nnjoogg vuu'dest lie pannčiõlgâsvuõtt da vaaldšemnallšem pâjjlõsvuõđ pääiklaž oummi vuõiggâdvuõđâst šeellmõ'šše. Sä'mmlai, komi-oummi da jee'res pääiklaž oummi vuõiggâdvuõđid õõlgči raaveed da raajjâd čiõlggben. Seämmast peittkue'llšeellmõ'šše vuei'tet vaikkted.
9. Motorvõnnsi vaikktõõzz luõzz koođđâmvuu'did õõlgči se'lvvted. Ä'rbbteâđai mie'ldd ceâl kolggâmvuu'dest motorvõnnâz pä'rttee luõzz koođđâmvuu'did. Ää'šš õõlgči se'lvvted äu'ǩǩee'l tiõtti da ä'rbbteâđ.
10. Pomor-oummi, sä'mmlai da komi-oummi päi'ǩǩnõõmi karttjumuš raajči väážnai ođđ teâđ vuu'd luâđast, mäddâânnmõõžžâst da kultturää'rbest.
11. Pomor-oummi, sä'mmlai da komi-oummi kulttuur ooudâsviikkmõõžž jooggâst vuei'tet čõõđted informaatiataauli-, plakaatti-, brosuu'ri-di jee'res vue'jjivui'm. Nääi't vuu'd âlddsin kuâst'te'mes kultturhistoor vuäžžat pue'rben ou'dde.

12. Äu'ǩǩee'l Ruõššjânnam jee'res tâ'vv-vuä'zzi, mâ'te Saha tää'ssvää'ld (Kolyma) da Ka'rjjel maallid, puõ'ttivuõđâst õõlgči vuâđđeed ođđ Pue'nnjoogg meermeä'ccvuu'd. Tõn poodd vuu'dest vuei'tet riâššâd tuâjjpõõrt, ko'st ouddmiârkkân Kolymajoogg ǩiõččlâsttmõõžžid čiõ'lǧǧeet veiddsânji.

## Juurdpuättmõõžž

Pue'nn- da Njauddâmjooggi õhttsažvaaldšemraportt 2013 čuä'jat vuõss vuâra konkreettlaž maall Barents-vuu'd kuei't väážnai luõssjoogg ooudâsviikkâm diõtt õhttsažvaaldšumuužž veäkka. Njauddâm lij Lää'ddjânnam da Taarr raajj-jokk da Pue'nnjokk lij Muurman vuu'dest, Ruõššjânnmest. Kuhttu lie nuõrttsä'mmlai ää'rbvuâlaž jälstemvuu'dest, hå't ânn'jõžääi'jest vuu'dest jälste jee'res meer še. Vuä'ss tä'st e'tǩǩuum oođumuužžin da aalgtõõzzin ooudâsveekk kolggâmvuu'did obbnes da õõlgat väážnai, innovatiivlaž tu'mmstõõggid (ouddmiârkkân alggmeerai da pääiklaž oummi šeellmõõžž staanâm diõtt, kolggâmvuu'd obbooudâsviikkmõ'šše, pääiklaž da alggmeerteâđ rooll tue'jjumuužž põõšši teâttkäivvan kuõskki aalgtumuužž). Puk tuåimmjeei jie jue'jj täid vuäinlmid. Tän diõtt Pue'nn- da Njauddâmjooggi õhttsažvaaldšemrapoort pohttmõõžžid õõlgči ǩiõtt'tõõllâd veiddsânji vuu'd siidin, meerlaž ve'rǧǧnee'ǩǩi da tiõtti kruuggâst di alggmeerai organisaatiain. Tän lâå'ssen au'ʒʒjep puk vuä'sspie'lid suåvvted tâ'lles rapoort takainalla tuõttâm vuu'did, što arktlaž vuu'dest joo'tti, määŋgvaaldšem proseessid vuei'tet vä'ldded lokku kolggâmvuu'di da luõzz jie'llempirrõõzzi ooudâsviikkmõõžžâst.