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Encountering the Changing Barents -Research Challenges and Opportunities

Paul Fryer, Carol Brown-Leonardi and Päivi Soppela (eds.)







Arctic Centre Reports 54

Encountering the Changing Barents – Research Challenges and Opportunities

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Edited by Paul Fryer, Carol Brown-Leonardi, and Päivi Soppela

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Table of Contents

Preface Marjo Lindroth, Päivi Soppela and Paula Kankaanpää7
Map of the Barents Region
I Papers
1. The Changing Barents Region: Challenges and Opportunities for Researchers Päivi Soppela, Carol Brown-Leonardi, Paul Fryer, and Paula Kankaanpää11
 Sustainable Forest Management through Forest Certification in Russia's Barents Region: Processes in the Relational Space of Forest Certification <i>Moritz Albrecht</i>
3. Ionic Budget of Winter Snow on Vestfonna Ice Cap, Svalbard <i>Emilie Beaudon</i>
4. The Prospects for the Development of a Barents Identity Region Bjarge Schwenke Fors
5. Challenges to Energy Security of the Regions of European Russian North Anastasia Gasnikova
6. Ethical Dilemmas of Making Sensitive Research: Ethnosexual Encounters in Border Regions of Russia Elina Ihamäki
7. Spatial Distribution of Microorganisms in the Polar Regions Marie Šabacká
II Expert Perspectives
8. Political Discourse and Consensus-Decision-making amongst the Deh Cho Dene: First Nation Politics in the Northwest Territories, Canada <i>Carol Brown-Leonardi</i>
9. The Socio-Economic Development of Murmansk Oblast: Tendencies, Problems and Prospects Vladimir Didyk and Larisa Riabova95

10. Academic Writing about Arctic Tourism: Othering of the North Arvid Viken	110
III Programme	
11. Programme: Barents Region scientific excursion, 8–17 August 2008	121
12. List of Excursion Participants	122
13. Photo Album	.123

PREFACE

This volume of the Arctic Centre Reports contains the papers of the Barents Arctic Network of Graduate Schools' (BANG) first scientific excursion, "Encountering the Changing Barents", which took place 8–17 August 2008. The idea of the excursion was to bring together PhD students and senior scientists specialised in the problems of the Barents Region, representing the various disciplines. The scientific focus of the excursion was the change the Barents region is facing in various forms, extending from socio-economical challenges to climate change.

BANG was initiated by the Arctic Graduate School, ARKTIS, and it is co-ordinated by the Arctic Centre, University of Lapland. NordForsk is funding BANG for 2007–2010. BANG brings together PhD students and senior scientists of the Barents region, creating co-operation between multi-disciplinary research schools and programmes. The main BANG activity in 2007–2010 is to organise scientific excursions in the Barents Region and to support the mobility of the PhD students and researchers within the network.

The 2008 excursion involved travelling by bus between four BANG partner institutions: the Arctic Centre in Rovaniemi, Finland; the CEPIN Research School in Tromsø, Norway; the Barents Institute in Kirkenes, Norway; and the Kola Science Centre in Apatity, Russia. The Finnmark University College, Norway, was also visited. In addition to visits to partner institutes, the excursion included lectures by faculty, student seminars and presentations by local researchers, as well as discussions with local stakeholders. The purpose of the excursion was to promote the exchange of experiences and dialogue between different disciplines and researchers, institutions and local people. The excursion provided an opportunity to study the important views of research topics in real life situations.

There were 9 PhD students and 3 academic staff members participating in the excursion. Students prepared abstracts, full-length papers of their research topics and oral presentations. The presentations took place during a two-day seminar in Lovozero, Russia. The senior academics gave feedback to the students during the seminar and excursion.

The student papers have been peer-reviewed and edited for publication after the excursion by the faculty members, Dr. Paul Fryer (University of Eastern Finland) and Dr. Carol Brown-Leonardi (Open University, UK), and by Senior Scientist Dr. Päivi Soppela, Co-ordinator of ARKTIS (Arctic Centre). The first section of these proceedings includes an introductory paper to the changing Barents Region and its challenges and opportunities for researchers, written by the editors and Professor Paula Kankaanpää, Director of the Arctic Centre and BANG. The second section includes 6 PhD student papers from different disciplines, extending from anthropology to glaciology. The third section consists of expert papers, the excursion programme, a list of participants and a photo album.

We are thankful to Dr. Anna Sinisalo who made the first steps of the practical organisation of the excursion and acted as the BANG Co-ordinator during 2007–2008. Warmest thanks to all who participated in the excursion and contributed to the publication of this volume of proceedings. Thank you also to Dr. Jukka Jokimäki, chief editor of the Arctic Centre Reports, for providing valuable comments on this publication, and to Lea Kervinen (Karelian Institute, University of Eastern Finland), who prepared the layout. We want to thank Nordforsk for funding the excursion.

Rovaniemi 17 May 2010

Marjo Lindroth, Päivi Soppela and Paula Kankaanpää



Map of the Barents Region

I Papers

1. The Changing Barents Region: Challenges and Opportunities for Researchers

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1.1. Introduction

The Barents region is expected both by economists and scientists to have noticeable influence on global development over the next few decades in terms of natural resource development, tourism, infrastructure development, marine transport, nature protection, indigenous peoples' rights, and political transition. A new generation of researchers is arising for whom doing research across the borders of the Barents Region is a natural part of their work. In this paper, the challenges and opportunities that the evolving Barents Region has for researchers will be explored and highlighted within the context of the numerous cross-border and multi-disciplinary educational programmes that exist today, including the Barents Arctic Network of Graduate Schools (BANG).

1.2. What is the Barents Region and Why is it Important?

From the European Union's perspective, the Barents Region is seen as an extension of the Baltic Sea region, one of so-called 'macro areas' of the EU, in addition to the EU member states. After joining the EU in 1995, and more specifically since 1997, Finland actively has promoted 'Northern Dimension' policies in the EU, which focus on cooperation with Northwest Russia (Heininen 2004; M. Heikkilä 2006). The Barents Region is regarded as an important element in the EU's Northern Dimension policy, connecting the EU states, Norway and Russia.

The Barents Euro-Arctic Region is a geopolitical area established for international co-operation after the collapse of the Soviet Union in the 1990s. The region covers the northernmost parts of Norway, Sweden, Finland and Northwest Russia (see map on page 8). It is regarded as one of Europe's largest regions for interregional co-operation, comprising 1.7 million km² in area and approximately 5.5 million inhabitants. Two-thirds of the area and population are found in the Russian Federation. The region as a whole is sparsely populated, with a high proportion of the population concentrated in relatively big settlements (ADHR 2004). Several indigenous peoples and minority groups live in the region, amongst others the Saami, Nenets, Karelians, Vepsians and Komi. Lately, both northern Fennoscandia¹ and Northwest Russia have been suffering from diminishing numbers of inhabitants, mainly due to outmigration in search of employment opportunities in the south (ADHR 2004). The wealth and diversity of the region's natural resources, eg., forests, fish, minerals, oil and gas, as well as the recreational value of nature, offers great opportunities to the Barents Region but at the same

¹ Fennoscandia is a geographic area including the Scandinavian Peninsula, or Sweden and Norway, in addition to Finland, Russian Karelia and the Kola Peninsula. Unlike the term 'Nordic countries', Fennoscandia does not include Denmark, Iceland, Greenland or other geographically disconnected overseas areas.

time challenges ecological, social and political systems.

International co-operation in the Barents Region has historical precedents, for example the former trade and marine routes between Fennoscandia and Russia that existed long before any national borders existed. The current period of intense transnational co-operation developed during a period of dramatic political transformation following the former Soviet President Mikhail Gorbachev's 1987 'Murmansk Initiative' speech. Barents co-operation intensified as the Soviet Union first opened up and then collapsed and made way to new political opportunities in the European North (M. Heikkilä 1998; Heininen 2004). Barents co-operation was formally established in 1993 upon Norwegian initiative when the Kirkenes Declaration was signed by co-operating partners. Barents co-operation is organised on two levels: the Barents Euro-Arctic Council (BEAC) includes representatives from the governments of Denmark, Finland, Iceland, Norway, Russia, Sweden and the EU Commission, while the Barents Regional Council (BRC) operates at the regional level². The BRC unites 13 member counties and a representative of the indigenous peoples in the northernmost parts of Finland, Norway and Sweden and Northwest Russia. In addition, there is a common Working Group of Indigenous Peoples for both councils, including Saami, Nenets and Vepsian representatives. The main purpose of the BEAC is to promote sustainable economic and social development in the Barents Region and to contribute to peaceful development in the northernmost part of Europe. The chair of the BEAC rotates between Finland, Norway, Russia and Sweden. In 2008, an International Barents Secretariat was established to Kirkenes, Norway, meant to help and to stimulate multi-lateral co-

² For more information, see: www.beac.st and www.barentsinfo.org

operation within these structures. The Arctic Centre of the University of Lapland in Finland supports the secretariat by taking care of the outreach and communications services of the BEAC.

1.3. Barents Cross-border Co-operation

Regional actors generally have been active in taking cross-border initiatives in Barents co-operation. There is also active co-operation across the borders by non-governmental organisations and associations. In the early stages, Barents co-operation especially was noted for its strong interest in environmental issues (M. Heikkilä 1998). Co-operation has been institutionally effective but environmental results have been relatively modest (Tennberg 2007; Tennberg 2009). However, joint environmental programmes have been established, such as the Multi-lateral Nuclear Environment Programme in the Russian Federation in 2003. Also, the work done through the Northern Dimension Partnerships (NDEPs) has offered a new form of successful cooperation that has managed to fund and implement several concrete projects in the fields of energy efficiency, nuclear waste and waste water treatment. When the northern regions became international political actors in the 1990s, social and political questions were put on the agenda (Heininen 2004; M. Heikkilä 1998). Social and cultural issues have been an important focus in Barents co-operation, bringing together civil society elements from Russia and the Nordic countries, such as from the arts and the media³. Research, education and environmental questions have increased in importance in the 2000s (Kurtakko et al. 2004), while there has been active

³ For example, the Arctic Documentary Film Database (Afbare). See: arcticcentre.ulapland.fi/afbare /index.asp

co-operation in the field of health and safety⁴ and the opening of new international border crossings between Finland and Russia.

Across the region, several questions are under discussion: How important is Barents co-operation? Does it impact on regional development processes? Who are the main actors? How do different Barents strategies lead collaboration between different actors? How can education, in particular higher education, have a wider role in the development of the region's societies (Jokelainen 2010)? Furthermore, what are the real needs of research and development? The content of education is critical; especially how well it fulfils local needs and how it interprets development. The current discussion between the universities and other sectoral actors about the goals and means of Barents Region collaboration shows that different parties are seeking a common agenda for cooperation. Policymakers and economic actors place great expectations on higher education, including the hopes for technical and economic innovations, as well as for governance of social and environmental problems. At the same time, in the recent seminar of the Barents Cross-Border University in Rovaniemi, the universities raised the question of which role the higher educational institutes can and should take to help business to meet the challenges of the Barents Region (Järvinen 2010).

1.4. Role of research and education

Secondary schools and universities are seen as good actors and promoters of regional development in the Barents Region (ADHR 2004; Jokelainen 2010).

The Joint Communiqué of 14–15 November 2007⁵ by ministers and representatives of Denmark, Finland, Iceland, Norway, the Russian Federation, Sweden, the European Commission and indigenous peoples' organisations stated that there was a need for the strengthening of co-operation between higher education and research institutions in the Barents Region and for making the region more attractive to students and researchers from both within and outside the region. One example of formalised cooperation in higher education is the abovementioned Finnish-Russian Barents Cross-Border University established in 2005. It is a network of eight universities that has developed joint Master's programmes, eg., in environmental and information technology, comparative social work, health and well-being, and aims to support regional development and contacts with other sectors of society⁶. Another example is the virtual University of the Arctic (UArctic) and its programmes, the cooperation network of which covers the whole Circumpolar Arctic⁷.

Due to the complex nature of social and environmental issues, the research agenda of the Barents Region requires a multi-disciplinary approach. It embraces broad themes such as geopolitics, transnational co-operation, regional planning, construction, infrastructures, environmental challenges, sustainability and adaptation to rapid socio-economic changes. Ongoing issues under discussion include the development of international agreements and governance, relations between regions and nationstates, centres and peripheries and the role of indigenous peoples (M. Heikkilä 2006). Nowadays, planning and decision-making processes, for example in land-use, are highly knowledge-intensive. In

⁴ For more details, see the Finnish Institute of Occupational Health's Barents Newsletter on Occupational Health and Safety: www.ttl.fi/en/ publications/electronic_journals/barents_newsletter/ pages/default.aspx

⁵ See: BEAC 2007

⁶ See: bcbu.oulu.fi

⁷ See: www.uarctic.com

addition to expert knowledge provided by scientists from different disciplines, the lay and traditional knowledge of local and indigenous peoples is used in planning processes and governance (Forbes et al. 2006; L. Heikkilä 2006; Helander-Renvall 2007; Hukkinen et al. 2008). The purpose of collaborative planning and public participation is to bring different kinds of social knowledge into planning processes. As there are a rather limited number of stakeholders in the North, it is fair to expect that cooperation between researchers, the public and private sectors is realistic and such a dialogue can produce fruitful results. However, it is not possible to create the dialogue without capacity building, i.e. education and training.

There exist a few cross-border Master's and Bachelor's programmes in the Barents Region, such as those offered by the universities under the umbrella of the UArctic and the Finnish-Russian Barents Cross-Border University. However, there are still relatively few doctoral programmes focussed on research issues in the Barents Region. One of the few examples is the Arctic Graduate School (ARKTIS), run by the Arctic Centre, University of Lapland (2003- to the present) and funded by the Finnish Academy. This multi-disciplinary doctoral programme educates Arctic experts to have a broad understanding of the social, economic and ecological problems of the Arctic, and trains students to be able to communicate across disciplines. In 2007, the Arctic Centre received three years' funding from NordForsk to initiate the Barents Arctic Network of Graduate Schools (BANG), which brings together PhD students and senior scientists from the Barents Region and beyond. The goal of the BANG is to strengthen co-operation in multi-disciplinary research education by organising scientific excursions throughout the region. The Circumpolar Arctic PhD networks, CAES (Circumpolar PhD Network in Arctic Environmental Studies) and CASS (Circumpolar Arctic Social Sciences PhD Network)

are the predecessors of ARKTIS and BANG. Previously, CAES conducted a series of travelling PhD courses in the North, covering themes with wide perspectives, such as eco-tourism and sustainable reindeer husbandry (Soppela et al. 2002), industrial impacts (Viventsova and Ruth 2004) and training in multi-disciplinary communication. The Calotte Academy, organised by the Northern Research Forum (NRF), is also an arena collecting social science researchers, students and stakeholders for joint discussions⁸.

Various funding agencies, such as the Nordic Council of Ministries and the EU's Interreg and ENPI (European Neighbourhood and Partnership Instrument) programmes support Barents collaboration in research, education and development projects. Funding increasingly is directed at research and development projects responding to the joint challenges of partner states, such as climate change or the global recession, and involving equal partnerships rather than focusing only on one or two participating countries (Jokelainen 2010). For example, the EU's Strategy 2020 is directed at supporting territorial collaboration of large macro-regions, such as the Barents Region. At the same time, such areas are expected to clearly show their specific regional features and needs (Europe 2020 Strategy).

At present, the importance of Arctic areas, including the Barents Region, increasingly is recognised. For example, Norway adopted its 'Strategy for the High North' in 2007 and Russia signed its Arctic policy document in autumn 2008. At the moment, the EU's Arctic Report is under preparation and a European Arctic Strategy is being discussed. The Commission of European Communities has published a communication on the European Union and the Arctic Region in 2008 (COM 2008) and the Foreign Affairs Council of the

⁸ See: www.nrf.is

European Union has published its conclusions on Arctic issues (European Commission 2009) and requested the European Commission to present a report on progress made in these areas by the end of June 2011. Furthermore, the EU is considering establishing an EU Arctic Information Centre. The debate about its possible location has thus far gone in favour of the Arctic Centre at the University of Lapland in Rovaniemi, the EU's northernmost university city (eg., Jaakonsaari 2010)⁹. Recently, the Cabinet Finnish Committee on European Union Affairs adopted the proposal for Finland's national strategy for the Arctic region (Finnish Government 2010). The Strategy focuses on issues relating to security, the environment, economy, infrastructure and indigenous peoples in the Arctic. Proposals for the development of the EU's Arctic policy are also presented. In the Strategy the Finnish Government supports officially the EU Arctic Information Centre to be located at the Arctic Centre. The Arctic Centre is an international and national research institute within the circumpolar Arctic and Barents Region, as well as an Arctic communicator with a scientific exhibition, conducting and conveying internationally-recognised, multi-disciplinary research that concerns constantly-changing Arctic issues.

1.5. How is the Barents region changing?

Global change, including climate change and the globalisation of economic and natural resource markets, poses a great challenge to the entire Arctic area (AHDR 2004). It is predicted that climate change will have the strongest impact especially in the Arctic. The expectations for future developments in the Barents Region include both economic promises and environmental concerns. The Barents

Region is a major investment area for all of Europe. Increases in global demand for energy and natural resources, including all mineral and renewable resources, as well as the recreational value of nature, has made the Barents Region an important area of rapid new economic development. The Lapland Chamber of Commerce and Regional Council of Lapland estimate that there will be investments even of 50 billion euro in the Barents Region by 2015 (Kankaanpää 2009: 647-649). Of this sum, over half is expected to be spent on the Barents gas industry; some 5.6 billion euro will be invested in Murmansk Harbour and 3.8 billion euro in Lapland (Kankaanpää 2009: 648-649). In Lapland, economic investments are made mainly in the mining industry, infrastructure development and the tourism industry.

Regional development and modern livelihoods in the North are based more directly on natural resources and the environment than in densely populated southern regions (ADHR 2004). The above-mentioned plans - if fulfilled even partially in the future - will have major environmental and social impacts on the people and environment of the Barents Region (Kankaanpää 2009). Conflicting interests and protests also have arisen in connection to several development plans. Some have criticised that politicians prefer big industrial projects that exploit natural resources to small enterprises that rely upon regional or cultural strengths. The way in which large-scale resource exploitation is currently organised is characterised by outside control and resources moving out of the region (ADHR 2004). The construction of power plants, roads and railways, for example, may compete with subsistence livelihoods, recreation and other land uses (Suopajärvi 2001). Although improvements in economic welfare are welcomed, the importance of a healthy natural environment for local inhabitants has been highlighted as an essential prerequisite of living in the North most of all. One's relationship to nature

⁹ For further information, see: www.arcticcentre.org and www.arcticfinland.fi

and living according to the seasons is meaningful to northerners (Suopajärvi and Valkonen 2003; Helander-Renvall 2007; Heinämäki 2010). Activities such as hunting, fishing and berry picking are valued and seen as a part of a good life. Reindeer herding and other subsistence livelihoods are important sectors of primary production to both indigenous and local people's cultures, and are strongly dependent on viable natural resources (L. Heikkilä 2006). Their modern development calls for cooperative planning and improved management practices (Forbes et al. 2006; Kitti et al. 2006; Hukkinen 2008).

In 2005 the International Arctic Research Planning process summarised the views of several international scientific organisations that have clearly highlighted the international vacuum of specialists in various fields of Arctic sciences¹⁰. In addition to such international research forums, industrial actors have themselves raised the problem of the lack of multidisciplinary scientific data available for development (Kankaanpää 2009). Sustainable social, environmental and economic development in the Barents Region seems possible only if there are enough highly educated people locally both in government and industry who have a holistic understanding of the challenges of the region, and who are capable of working in co-operation with local and indigenous peoples (see eg., Nenseth and Strand 2008).

1.6. Role of Local and Indigenous Peoples in Barents Research and Co-operation

Scientific research projects in the Barents region, which have included the local and indigenous peoples, have provided insightful information into more than one aspect of Arctic life and its environment. Indigenous peoples' organisations participate as Permanent Observers in the work of the Arctic Council. Indigenous representation is also present in the Barents Euro-Arctic Council (BEAC). Although the Barents Regional Council has included indigenous peoples since 1993, the Working Group of Indigenous Peoples (WGIP) established in 1995 represents their rights and provides recognition for Saami, Nenets and Vepsians in the Barents region. Indigenous peoples are also represented by the Chair of the WGIP at the ministerial level in the Barents Regional Arctic Council. The BEAC is a forum for intergovernmental co-operation in the Barents Region, which supports the progression of cooperation, as well as new initiatives and proposals. Within this structure, the WGIP holds an advisory role in both the Barents Council and Regional Council¹¹.

Academic institutions in the Barents North, such as the Saami University College, Finnmark University College and the University of Tromsø in Norway; the Saami Education Institute, Universities of Oulu and Lapland and the Lapland Consortium for Higher Education in Finland; the Saami Educational Centre and Universities of Umeå and Luleå in Sweden; and Murmansk State Technical and Pedagogical Universities and Murmansk Institute of Humanities in Russia - amongst others offer various educational opportunities for local and Saami communities, ranging from the arts, natural and social sciences, law, traditional activities and multi-disciplinary collaborative research. Traditional ecological knowledge, also known as TEK, which is based on the oral narratives of indigenous peoples, also has been used successfully in collaboration with Western science. Traditionally, this knowledge

¹⁰ See, for example, ICARP: web.arcticportal.org/iasc/icarp

¹¹ See the pages on Indigenous Peoples in the Barents Region: http://www.beac.st/in_English/Barents_Euro-Arctic_Council/Indigenous_Peoples.iw3 16

supports the sustenance of local environments and maintenance of cultural identities (Johnson 1992; Helander-Renvall 2008). Indigenous folklore or oral narratives are central to indigenous societies and are revealed through stories, songs and legends passed down by elders (Mullings-Brown Moore 2005). Across the circumpolar North, oral narratives have had an increasingly influential and explicit role in indigenous social and political life and science.

The cultural and political position of the indigenous Saami in all four Barents countries is an issue of common concern, and the Saami have developed their activities and organisations across the borders. The relationship between indigenous peoples and states traditionally has been based on land and economics. In recent years, indigenous communities world-wide have altered significantly their approach to negotiating land settlements and self-determination treaties with their governments and to their relationships to other indigenous peoples. Indigenous values, cultures and knowledge have a central role in negotiation and in the political system as an instrument to improve indigenous politics as well as research opportunities (Mullings-Brown Moore 2005). For instance, local indigenous involvement in research in Arctic Canada, as well as in the Barents Region, has served to understand the environment, in addition to contributing to the progression of land settlement and negotiations processes, and has led to research projects that require indigenous traditional knowledge¹². These projects have included collaborations between

government departments, academic institutions and researchers, and indigenous communities.

The independent and co-operative research that has been conducted in the Arctic and the Barents Region involving local and indigenous communities has often occurred as a result of the relationship with 'southern' Europeans. These types of co-operative research projects can be separated into two types; the first acts to provide evidence that supports the rights of indigenous peoples to their territorial land and homelands. The second focuses on exploration and industrial development that could potentially take place in traditional areas (Mullings-Brown Moore 2005). Indigenous peoples usually seek to protect traditional lands through research, using TEK to identify local wildlife, geographical features and locations to reassert their heritage through occupancy and land use (Johnson 1992). For example, the World Wildlife Fund of Europe has assisted in conserving community-supported protected areas, such as parts of the Scandinavian Boreal Forest against large-scale exploitation and development into intensively managed secondary forest for the paper industry. The reduction of old-growth forests threatens the Saami way of life in terms of the right to graze reindeer¹³. Furthermore, it is worth noting that a new generation of researchers are appearing, especially in northern Fennoscandia, which is local and/or indigenous itself and is conducting important research into indigenous peoples' social and political agendas (Valkonen 2009; Heinämäki 2010). Other concrete examples of this research, notably undertaken within the ARKTIS Arctic Graduate School, include sustainable development and reindeer management (L. Heikkilä 2006), land use conflicts (Riipinen 2008), and Saami educational systems (Aikio-Puoskari 2009). ARKTIS and other northern-oriented and -located PhD training

¹² See, for example, Lewis et al. (2009) for research on beluga whales in eastern Hudson Bay using traditional ecological knowledge (TEK) and satellite telemetry. Also, the ENSINOR project examined co-operation between reindeer herders, scientists and oil and gas developers on the Yamal Peninsula of Arctic Russia; see: http://www.arcticcentre.org/InEnglish/RESEARCH/Proje cts/Pages/ENSINOR.iw3

¹³ See, for example, the Taiga Rescue Network: www.taigarescue.org/en//index.php?sub=1&cat=1 17

programmes have a pioneering and responsible role in bringing forward important northern and indigenous research themes and raising the overall scientific level, visibility and appreciation of Arctic research.

In research undertaken in the Barents Region, TEK has given insights into many aspects of northern and Saami cultures: cultural identity, original languages and reindeer herding, for instance. The final report of the RENMAN project, for example, involved working with reindeer herders from northern Norway, Sweden, Finland and the Kola Peninsula in Russia (Forbes et al. 2006). Indigenous TEK was an important element in understanding the effect of environmental and socioeconomic change on the pastoral habits of reindeer and the reindeer herding community (Blind 2006; Kitti et al. 2006). The role of traditional ecological knowledge in the transference of contemporary reindeer herding knowledge to younger generations also is under constant study (Helander-Renvall 2008).

Co-operation in scientific research in the Barents Region and in the Arctic has a number of benefits for both the scientific and local/ indigenous communities which can be seen as 'capacity building'. For its part, scientific research has raised awareness of the indigenous political dialogue and traditional knowledge, which is at the centre of indigenous social and political life. The involvement of indigenous peoples in scientific programmes has in turn increased indigenous peoples' general awareness of scientific processes. Collaborative research creates opportunities to bring various communities, states, regions and scientists together, in which future decisions in indigenous homelands, territories or across the Barents Region and Arctic are taken and discussed. Equally, scientific knowledge may be used by indigenous peoples as a political tool, which enables them to gain knowledge of aspects of their traditional land, while information that is

locally important can be disseminated both nationally and internationally. Essentially, the sharing of scientific knowledge in the Arctic and Barents Region is promoting a dialogue of commitment and support between local and indigenous communities and scientists.

1.7. Conclusions and Challenges for the Future

The Barents region is a geopolitical concept and forum, the purpose of which is to intensify transnational co-operation between northernmost Norway, Sweden, Finland and Northwest Russia. While economic development is expected to play a dominant role in this Barents cross-border cooperation, continuously increasing its importance in the European perspective and offering numerous opportunities, it also has risks. For the individual researcher, the opportunities and risks highlighted below pose several challenges to effectively conducting one's work in the region.

While interest in natural resources and development has been increasing greatly in the region, offering experts and scientists opportunities to contribute to these processes, invariably conflicts have arisen and sometimes squeezed researchers between different interests, making continued research difficult or untenable. In the long-standing, but now settled, Upper Lapland forest conflict over logging in reindeer grazing areas in northern Finland, researchers were positioned by both sides to make their cases (Greenpeace 2005; Riipinen 2008; Gritten et al. 2009). The situation in the Barents Region is complex – while co-operation across borders has been institutionalised between the three Nordic states since the 1950s, it has only been 20 years that the Russian Northwest has been open to outsiders after decades of Soviet isolationism.

While the 1990s brought an atmosphere of genuine openness and co-operation, a marked 18 change in Russian policy can be noted in the period starting from 2000. Scientists from both the domestic and international communities have had access to their research sites curtailed or denied. One such example of state interference in research is connected to radioactive pollution in the Barents Sea, while large companies increasingly have had to negotiate around the 'strategic deposit laws' of May 2008 that have restricted access to certain natural resources and information surrounding them in the name of 'Russian national security'14. Restrictions can be found in many countries, though recent Russian developments have made some activities more difficult. Even though the future is unknown and challenges may remain for some time, researchers on all sides constantly work for the mutual benefit of the international scientific community and local societies.

Recently, sovereignty over the North has been increasingly contested. In August 2007, members from a Russian northern expedition involving a nuclear icebreaker and a research ship planted a titanium Russian flag on the bed of the Arctic Ocean to 'stake out' the country's self-perceived political and economic claims (Wilson Rowe 2009: 9). Initially, this action led to astonishment in the other Arctic States and speculations in the global media that geopolitical tensions were on the rise in the Arctic, as Canada, the United States and other Arctic states have their own claims to the region. As one commentator has noted, "clearly, Moscow sees the north as its most vulnerable, and easily expanded, frontier and seems willing to stake its claim with devastating force" (Matthews 2009; see also Wilson Rowe 2009). Such events can have the potential to impact upon Arctic co-operation and research within a tenser political environment. However, since this incident the Arctic coastal states, including Russia, have jointly pledged mutual understanding and cooperation through the forum of the Arctic Council. Also, the Arctic Ocean coastal states have conducted themselves in line with the law of the sea (Koivurova 2009a; 2009b) – an orderly evolvement that was further strengthened by the recent preliminary agreement concluded between Russia and Norway over their maritime boundary in the Barents Sea (Koivurova 2010).

An additional challenge to Barents research is economic – many of the proposed projects in various planning and study phases will ultimately depend upon financing – and since Arctic research is often relatively expensive due to natural conditions, those regional development projects that may be perceived to be on the European periphery are not always prioritised by companies or national capitals in the south.

Barents societies, nature and environment are under increasing stress and the entire Barents Region is facing rapid social, economic and environmental change. The long term development of the Barents Region is largely dependent on the utilisation of its vast natural resources, which is why the scientific community will continue to play an important role here in the future. There are many risks involved in conducting work in a region some would consider 'the periphery', but many researchers have accepted the challenge - both those born and working in the region and those who have chosen to live and work here - constituting a northern 'peripheral' research community. By activating existing networks of young researchers and supporting new ones, it is certain that future research agendas will address northern issues and acknowledge the voices of northerners in national and international debates.

¹⁴ On the problems associated with radioactive research, see examples cited by the Bellona Foundation: www.bellona.org/ . The effect of restrictive Russian laws on mining companies in the region is discussed by Khrennikov (2009).

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WWF Canada. 2008. WWF-Canada [online]. Available from: http://wwf.ca/ [Accessed 18 May 2010] 2. Sustainable Forest Management through Forest Certification in Russia's Barents Region: Processes in the Relational Space of Forest Certification¹⁵

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2.1. Introduction

With more than 80% of Europe's forest cover, Russia is the biggest exporter of round wood in the world, whereas Europe and East Asia are the main importers of these resources (FAO 2007: 90). Northwest Russia and especially the Barents Region of Russia play a major role in exports to the West (Karvinen et al. 2006: 82). Thus, Sustainable Forest Management (SFM) is important to safeguard this natural resource. However, since the 1990s Russian forestry has been better known for illegal logging activities and the destruction of pristine old-grown forests, whereby Western companies participate in cut and run practices (Greenpeace 2006; Hirschberger 2008).

Due to a lack of international binding agreements in forestry and the ineffectiveness of Russian legislation and bureaucracy leading to mismanagement, environmental Non-Governmental Organisations (NGO) are favouring voluntary certification schemes to address these problems (Gulbrandsen 2004: 75). Thus, by organising boycotts in the mid-1990s and continuously publishing reports about illegal and environmentally degrading forestry activities or the socio-economic failures of Western companies, the big transnational environmental NGOs achieved market influence with which they have tried to establish certification schemes to accomplish improvements in SFM (Kortelainen and Kotilainen 2006; Kortelainen 2008).

In this article I describe the recent state and future possibilities of SFM through certification by the Forest Stewardship Council¹⁶ (FSC) in Russia and its reliance on the relational space of forest certification. Thereby SFM is referred to as a 'dynamic and evolving' forest management concept to maintain and increase the value of forests in environmental, social and economical aspects for future generations as stated in the United Nations' Non-Legally Binding Instrument on all Types of Forests (UN General Assembly 2007: 3). Although the main focus will be on the Russian Barents Region, generic details and results will be presented as well. Following a theoretical section discussing the relational space of forest certification, a brief history of forest certification in Russia is presented in turn, followed by three examples of FSC certified forest companies in the Russian Barents Region.

2.2. Theoretical Framework: Relational Space of Forest Certification

Forest certification labels are often regarded as a form of non-state market-driven governance as described by Cashore (2002; Cashore et al. 2004). Within non-state market-driven governance, Cashore suggests green markets are a new source of governing authority (2002: 504; see also Kortelainen and Kotilainen 2006; Haufler 2003). In the Russian case,

¹⁵ This report is part of the Project, "Transnationalization of Forest Governance" funded by the Academy of Finland and carried out at the Department of Geography, University of Joensuu (Eastern Finland).

¹⁶ FSC is a voluntary forest certification scheme, supported by various international NGOs. See: www.fsc.org

due to the lack of domestic green markets, such markets are Western export regions. Hence the reason for certification is mostly applicable to exporting companies or foreign-based companies, which fear loss of reputation or boycotts organised by NGOs reminiscent of events in the mid-1990s (Kortelainen and Kotilainen 2006: 92; Kortelainen 2008: 1302). This explains the large share of certified forests and forest companies especially in the Russian Barents Region, due to the large proportion of exports going to Western markets and the higher local involvement of foreign-based companies (Välkky et al. 2008: 42). However, these green markets are based on business to business demand within the supply chain for certified wood products, while the green purchasing end-consumer has to be regarded more as a product by NGO campaigns than of purchasing reality (Kortelainen 2008).

Through these supply and demand networks, local places in the Russian resource peripheries become entangled in a relational space of forest certification, which is co-produced through market relations. These market relations interconnect actors and their aims as well as values and thereby guide the processes entangled in forest certification in certain directions. This type of relational space of market relations is described by Massey (2005) as in permanent construction, including a multiplicity of changing power relations. Even though such spaces are described as open, Murdoch (2006: 20) describes them as consensual and contested. Since relations, values and their resulting processes are built on consensus-based definitions by certain groups, alternative knowledge might be excluded from these processes. Hence, these processes construct spaces while being created through the interactions of different actors (Murdoch 2006: 22). Additionally, as pointed out by Harvey (1996: 261), these processes rely on defining attributes, which change over space and time, thus denying a permanence of relational space. Nevertheless, Murdoch (2006: 19)

describes the possibilities of constituted, temporary permanence within relational space. At present, one of these permanences is, as stated by Kortelainen (2008: 14), that the possibilities of certification in Russia increase in nodes connected through governance networks with the central European green markets and therefore are bound to the relational spaces of forestry with these markets. This accounts for certification in the Barents Region and influences the possibilities of an increased SFM through FSC certification.

Another aspect to point out is that even though certification systems and especially the FSC are described largely in a neo-liberal approach as nonstate market driven governance systems, state policy is still playing an important role in the relational space of forest certification. This might occur through changes in regulations or, as further described by Castree (2008: 142), through specific political flanking mechanisms, applied by the state to support non-state actors to fulfil traditionally state provided services. Considering Russia's recent history of political development in environmental protection issues (e.g. Oldfield 2006), one can suggest that environmental and social sustainability are not considered a high priority. Hence, the concept of relational space, because of its focus on shaping processes through interactions, is suitable to describe the possibilities or problems of SFM through forest certification on top of the descriptive aspects of onground measures achieved by Forest Management (FM) certificates¹⁷. The next two sections will focus on these on-ground effects by FSC and FM certification, following the approval of a FSC certificate.

¹⁷ Forest management certificates are performance based certificates of forestry management practices. 25

2.3. Forest Certification in the Russian Federation

Forest certification evolved as an issue for Russian forestry industries by the end of the 1990s, triggered by NGO protests and activities demanding consumer boycotts to protect old-growth forests in the Republic of Karelia and Murmansk Oblast, or province (Kortelainen and Kotilainen 2006; Tysiachniouk 2006; BCC 2008). Thus, large logging companies longed to obtain a credibility tool to guarantee environmentally sound products for their Western consumers, whereas NGOs regard FSC certification as favourable to avoid wood products from illegal or old-grown forests (Kotlobay et al. 2003: 49). Since 1998 the World Wildlife Fund (WWF) and the Russian Forest Club¹⁸ have been promoting FSC certification in Russia. However, the first FSC certificates were granted in 2000 and 2001 to two logging companies in Nizhnii Novgorod and Arkhangelsk Oblasts without WWF support based on internal requests by their Western co-owners from the UK and Germany (Tysiachniouk 2006: 274; Kotlobay et al. 2003: 50).

Since the first certified areas were established as mentioned above, Russia has experienced a massive increase in FSC certification by area through FM certificates and, even though less substantially, through Chain of Custody (hereafter referred to as CoC) certificates¹⁹ of wood processing or trading companies since 2004. By December 2008, the amount of FSC certified forestlands had risen from about 2 million hectares in 2004 to 20.3 million hectares with 70 CoC certificates (FSC Russia 2008). As a result, the share of Russian FSC certified forests represent about 20% of the global area of FSC certified forestlands. Since certification is regarded as increasing the quality of forest management in regards to environmental and socio-economic issues, this rapid increase seems to indicate some success for SFM in Russia. However, while slight decreases of certified areas due to suspended certificates occurred since April 2008, CoC certificates are constantly increasing (FSC Russia 2008).

In addition to FSC certification two national schemes have been developed since 2000, largely through industry and state support. In 2006, these systems, the National System of Voluntary Forest Management Certification in Russia and the Russian National Forest Certification Council signed a cooperative agreement to establish a common national standard approved under the international Programme for the Endorsement of Forest Certification²⁰ (PEFC) system to achieve an internationally recognised label (Karpachevskiy 2006). Supported by Russian politicians and described as favourable by officials from FSC and PEFC (FSC 2008a, PEFC 2008), the national PEFC standard was endorsed in March 2009. However, until now only some PEFC test plots have been established in co-operation with a Finnish forestry company, leaving FSC certification as the only fully operational system in Russia to study companies or landholders who have certified their logging or production facilities with an international label.

¹⁸ The Forest Club of Russia consists of NGOs, including the Socio-Ecological Union, Biodiversity Conservation Centre, Druzhinas for Nature Conservation Movement, Greenpeace Russia, Taiga Rescue Network, the Save Pechora Committee and other individuals. See, www.forest.ru (2008).

¹⁹ The Chain of Custody certificate concerns supply chain issues as procurement.

²⁰ See, www.pefc.org

2.4. FSC Certified Forests in Russia's Barents Region: Achievements and Problems

Due to the large share of forestry in the regional gross domestic products of the Republic of Komi (24%), Arkhangelsk Oblast (39%) and the Republic of Karelia (45%), forestry has to be seen as one of the main contributors to their economies (figures from 2003; Karvinen et al. 2006: 61). Additionally, these three regions are the main exporters in the Barents Region and amongst the four largest pulp producing regions in Russia. About 50% of pulp production was exported in 2004. The regional economic contribution of forestry for Murmansk Oblast as well as for the Nenets Autonomous Okrug²¹ are insignificant; thus, while still important on the local level for communities and private use (Välkky et al. 2008: 37), these latter regions are not discussed further in this paper.

FSC certificates are promoted as a tool for SFM providing logging, processing or trading companies with a credible label to prove proper management practices, especially in regard to exporting companies and their end customers in the green markets of the EU, mainly Germany, the Netherlands and the UK (Kortelainen and Kotilainen 2006: 89; FAO 2007: 94). On account of this point and the economic facts mentioned above, it is obvious why the Barents Region of Russia has to be considered an important region involved in the introduction of forest certification to Russia. By December 2008, 10.9 million hectares were certified under the FSC through FM certificates in the Barents Region. Arkhangelsk constitutes the most (4.7 million ha.), followed by the Republics of Karelia (3.5 million

ha.) and Komi (2.7 million ha.). Additionally, 36 FSC/ CoC certificates have been granted, with the Republic of Komi in first place with 20 CoC certificates. This can also be related to the republic's location as further away from the EU border and the smaller share of round wood exports (FSC Russia 2008). Thus, processing facilities for FSC products are more available in the Komi Republic.

Notwithstanding the positive numbers, the onground effects of certification are difficult to determine through statistics and these shares of regional economies. As FSC certificated areas are subject to annual controls by certification bodies accredited by the Accreditation Service International²², compliance with the FSC principles should be guaranteed. Nevertheless, due to the lack of a fully Russian FSC standard in the past, different certification bodies have used different standards or non-approved draft versions of standards, which may have resulted in different interpretations from case to case. This creates problems in the credibility of FSC certification as, according to Hirschberger (2005: 9), social issues might be neglected. However, these problems should be addressed by the new standard approved in November 2008, which applies to all certified areas though incorporating a transition period of one year to correct necessary changes (FSC 2008b). A further problem concerning the certification bodies is related to their credibility. As these companies are competing on free markets, customers are attracted by lower prices; thus, according to an FSC official (FSC 2008a), this could threaten the quality of the audits and open up possibilities of unreported failures. Nevertheless, Accreditation Service International controls the certification bodies annually, trying to guarantee good control. In Russia, ownership of land by the

²¹ The Nenets Autonomous Okrug (District) is part of Arkhangelsk Oblast at the federal level and has limited regional autonomy. As such, it is included in most statistics of Arkhangelsk Oblast (Välkky et al. 2008: 37).

²² ASI is an FSC owned Accreditation Company that offers services to FSC and other certification schemes (ASI 2008).

government is another problem, as according to FSC principles, states are excluded from the management process. Thus, the state represents a main stakeholder as landowner; it is accompanied by the Russian bureaucracy and its pitfalls. FSC officials raised this point in an attempt to moderate the influence of state authorities in general to the detriment of NGO interests (FSC 2008c). Yet, the capability to still operate independently within such a surrounding, driven by Western market demand, was deemed a strength of the FSC system.

2.4.1. Examples of FSC Certification

To better understand the standards and control mechanisms used, the following three cases are presented as an overview of on-ground effects of FSC/ FM certification.

2.4.1.1. The Priluzie Model Forest

The best known case for FSC certification in the Russian Barents Region, the Priluzie Model Forest (PMF), is situated in the Republic of Komi (See Map). Covering 749,409 hectares, the area is inhabited by 27,000 people, the majority (63%) being ethnic Komi, while Russians comprise most of the remaining population (32%) (Tysiachniouk and Meidinger 2006: 11). The Priluzie Model Forest was established in 1999 and guided towards certification by the WWF between 2000 and 2002. Since achieving FSC certification in 2003, the PMF is currently co-ordinated by the NGO Silver Taiga while being funded by the Swiss agency for Development and Co-operation (Axelsson et al. 2007; Silver Taiga 2008a). The process for certification was strongly based on governmental agencies and the Priluzie Leskhoz²³; however, public participation was encouraged as well. Public hearings carried out during the certification process were even integrated into the forest legislation of the Republic of Komi. Additionally, training facilities for SFM were established as a form of co-operation with other companies with CoC certification for better market access, connecting the Model Forest to Western markets (Silver Taiga 2008b; Tysiachniouk and Meidinger 2006: 12).

The local community in Priluzie was integrated into the process through the public hearings mentioned above, while the WWF and Silver Taiga provided information materials to schools, libraries and media. Furthermore, a Public Forest Council was established fostering more public participation (Tysiachniouk and Meidinger 2006: 13; Silver Taiga 2008b). Even though old-grown forests gained increased protection, forest practices themselves appeared to have changed only slightly, which according to Tysiachniouk and Reisman (2004: 168) is related to the separation of leasing contracts between the Leskhoz and logging companies, even though CoC certificates were obtained by the main logging companies. Strong criticism was put forward by the NGO FSC-Watch, which accused the Priluzie Model Forest institutions of disregarding indigenous rights by not separating indigenous people from ordinary citizens, as well as acting on behalf of Mondi Group, a global FSC certified forestry and wood processing company (FSC-Watch 2007). Concerned by this disregard for their interests, local Komi started to protest to defend indigenous rights, demanding that participation in the process be established (FSC-Watch 2007). However, according to Russian legislation, ethnic groups entailing more than 50,000 people are not considered as having indigenous status, which is the case with the Komi population. Therefore, the non-separate treatment of Komi is perfectly in line with Russian legislation; nevertheless, FSC normally relies on the UN definition for indigenous groups, which includes the Komi (FSC 2008c).

²³Forest Management Company established during soviet regime, formerly state owned.

2.4.1.2. Dvinskoy Forest Enterprise

A different example of FSC certification in the Russian Barents Region is the Dvinskoy forest Enterprise, owned by the German company Holz Dammers Moers, situated in Arkhangelsk Oblast, which was amongst the first FSC certified companies in 2000 (HDM 2008). The company controls 1,104,000 hectares in the region, whereby only 131,925 hectares were certified and used to provide FSC certified exports of sawn wood to Germany through a CoC certificated sawmill in Dvinskoy settlement (HDM 2008; FSC Russia 2008). The case of Dvinskoy and Holz Dammers Moers has to be regarded as a negative example of FSC certification as the certificate had already been suspended in 2002, but was regained in 2003 due to a few improvements concerning workers rights and logging practices (Tysiachniouk and Meidinger 2006: 7). According to Tysiachniouk and Meidinger (2006: 7), FSC certification brought almost no improvements in public participation or public information, contradicting what is stated on the company's homepage (HDM 2008). However, the certificate has been retained (FSC Russia 2008). The WWF recognised these failures but stated that because of the certification process at least important parts of old-growth forests in the region could be spared from logging in agreement with Holz Dammers Moers (Hirschberger 2005: 13). On the other hand, Greenpeace discovered logging practices in this logging moratorium area, which were confirmed by the accreditation body Smartwood in a 2006 audit (Smartwood 2006: 12). Still, the certificate remained valid after requiring the company to comply with corrective actions (Smartwood 2006: 22). Nevertheless, in March 2008 the certificate was suspended once again, which suggests that improvements in SFM have to be achieved to maintain the FSC-label and that control mechanisms have to be in place and functioning (FSC Russia 2008).

2.4.1.3. Maloshuikales

The third example, Maloshuikales, situated close to the White Sea in Arkhangelsk Oblast and managing 336,445 hectares of FSC certified forestland, is a remote settlement solely accessible by train (FSC Russia 2008). The similarly-named forest enterprise gained certification as a preventive measure to meet future customer demands. Due to its advanced technical modernisation and remote access, which decreased the possibility of illegal logging, certification was easily achieved. A moratorium on so-called 'High Value Conservation Forests' and improved on-time payment was implemented to achieve certification (Tysiachniouk and Meidinger 2006: 8-9). Interestingly, even though motivated by the company, public participation did not evolve, which according to Tysiachniouk and Meidinger (2006: 9) was due to the perception of employees of still regarding the company in terms of a Soviet enterprise. Therefore, social services provided today thanks to FSC certification were regarded as being a basic responsibility of the company anyway. Following the expiration of its own certificate after the first five years in 2008, Maloshuykales chose to join the group certification of PLO Onegales Group facilitating a continuous certification processes (GFA Certification 2008).

2.4.2. FSC Certification in Practice in Russia These examples illustrate the problems of describing the on-ground effects of FSC certification for SFM in the Russian Barents Region and in Russia in general, because of the large differences in outcomes described above. However, some common effects can be described for Russia as a whole, which display the importance and popularity of FSC in the Russian Barents Region as a tool for an approach to gain SFM. First, impacts can be seen in the increasing protection of High Value Conservation Forests, oldgrowth forests and habitat structures of endangered species, as well as soil and water protection due to improved management practices. Thereby, the reduction of illegal logging is very important in the Russian case as stated by Hirschberger (2005: 10). Second, as described by Hirschberger (2005) and Tysiachniouk and Meidinger (2006), FSC certification improves the conditions for workers in terms of safety, workers rights and participation in the decision-making process in many cases, as it fosters an increase in public participation. Third, information about SFM increases and provides a better basis of public and business stakeholders' knowledge in Russia and the Barents Region, setting the foundations to properly establish SFM in the future, by presenting possibilities and advantages. Thus, the increased quality of forest management and environmental protection due to FSC/ FM certification towards SFM practices is observed in the above mentioned studies. However, in the concluding section I will discuss FSC certification as an approach to SFM in regard to its reliability on the relational space of forest certification. Thus, drawing on my theoretical framework, I will point out the influences, obstacles and possibilities for FSC certification in Russia in relation to upcoming and ongoing processes.

2.5. Discussion: So what about the possibilities of an increase in SFM?

I begin by tying the success in recent times of FSC in Russia to different processes influencing the relational space of forest certification. As stated by Murdoch (2006), specific definitions or relations might be contested within relational space by restricting groups or ideas from participation. In the case of forest certification in Russia, the initial exclusion of PEFC certification internationally provided FSC with an advantageous position to increase its presence by being the only certificate within the relational space of forest certification in the country until March 2009. This situation enabled FSC to strongly increase certified areas, thus providing a larger basis for the emergence of its positive on-ground effects mentioned above, due to the fact that companies longed to obtain a credibility tool as a defence against NGO campaigns (Kortelainen and Kotilainen 2006: 95). However, taking into account Harvey's (1996: 261) statement denying a fixed relational space, the approval of a Russian PEFC standard in 2009 is going to change the defining attributes of forest certification in Russia. On account of the green markets as a source of governing authority as mentioned by Cashore (2002: 504) within the non-state market driven approach and due to a demand largely characterised as business to business, both systems can provide green market access. Additionally, PEFC is partially described as the more flexible, thus easier to implement system of the two (BMELV 2008), while critics regard this flexibility as resulting from weaker standards (FSC 2008a, 2008c). Despite their verification, these claims will have influence on the success of FSC, especially when NGO campaigns are decreasing in strength and effect as mentioned by officials of PEFC and WWF (PEFC 2008, WWF 2008).

Other issues affecting the permanent construction of relational spaces as described by Massey (2005) and thus changing the possibilities for approaching SFM through FSC certification in Russia are the announced round wood export tariffs by the Russian Government. Agreed upon by the government in February 2007, these export custom tariffs were set to increase export duties on unprocessed round wood, implementing a final tariff of $\notin 50/m^3$ and therefore making exports unprofitable (FFIF 2008). Even though postponed due to the financial crisis, these tariffs are most probably going to halt all round wood exports from Russia. Concerning the Russian Barents Region and its round wood exports to Finland, this stoppage might have the effect that Finnish CoC certificates will lose their rationale due

to non-existent FSC/ FM certificate requirements from Finland, cutting off an important link to the green Western markets. Especially in the Republic of Karelia and Arkhangelsk Oblast due to a lack of FSC/ CoC certificates compared to FSC/ FM certified areas, motivation to maintain the higher standards of FSC certification with reduced possibilities to utilise the label might drop. However, few concerns were expressed by FSC and WWF officials when presented with this problem (WWF 2008; FSC 2008a). Nevertheless, as mentioned by Castree (2008), this example shows that even though described as loosing influence within the neo-liberal approaches the state can retain strong power either through re-regulation, as in the custom tariffs, or through political flanking mechanisms, as in direct support for the PEFC system. Thus, the participatory approach of FSC reducing the state to be only one amongst many stakeholders in decision making might be seen as an obstacle to political support or to a supporting flanking mechanism in Russia. On the other hand, the broad exclusion of the state adds to the credibility of the system deemed as most important for voluntary certification schemes. Furthermore, it guarantees NGO support and therefore creates a marketing advantage in the green Western markets. However, the sufficiency of this for broad industrial acceptance and success is questionable, especially with PEFC on the edge of entering the Russian certification market, with its assumed higher state support and an equal acceptance by wood trading or processing companies in Western markets.

By shifting from the relations and processes motivating companies to become certified towards the effects emerging after certification is achieved, the relational space of forest certification continues to play a major role. Thus, certification outcomes are shaped by the relations between consumers, companies as well as NGOs and politicians inside or outside the resource peripheries. As stated by

Tysiachniouk (2006) and Kortelainen (2008), increasing ties of forest companies to Western markets and export shares are also increasing sustainable management in various cases, while supporting increased economic foundation. Additionally, as mentioned by Tysiachniouk and Meidinger (2006), higher involvement of NGOs in guiding the certification processes leads to higher local community involvement than that from certification motivated by the companies themselves as is displayed in the rather negative case of HDM or in Maloshuykales. Hence, direct on-ground effects are strongly influenced by market ties and different stakeholder involvement. Thus, on account of a lower level of NGO involvement within PEFC, FSC is presented as advanced in increasing SFM on participatory issues, which links the importance of processes within the relational space concerning the different systems and the actual effect on SFM. However, it cannot be ignored that PEFC most probably will have positive effects on SFM in Russia as well.

In general it has to be noted that FSC certification has an overall positive effect on SFM in Russia, especially in the Barents Region when companies decide to participate. Even though the shortcomings are numerous and most management practices cannot be considered fully sustainable, significant improvements of management practices and social standards prior to certification are recognised by numerous studies (e.g. Hirschberger 2005; Tysiachniouk 2006; Tysiachniouk and Meidinger 2006). This was additionally pointed out by a representative of the certification body GFA Certification (2008). The problem concerning a missing national standard and differing auditing practices, as well as the lack of full stakeholder inclusiveness which, according to Gulbrandsen (2004: 83), might have watered down the full effects of certification in Russia, can be partially addressed by the new approved standard. Nevertheless, possible problems with certification bodies and their credibility remain even though NGOs maintain an external control network on certificate holders and their certification bodies, while being an important internal node of the relational space of forest certification (FSC 2008c). Additionally, cases such as HDM show that certificates can get suspended due to non-compliance.

On account of company preferences, varying auditing costs may pose an obstacle to small-scale forestry companies with limited budgets and international ties as in the example of Murmansk Oblast. Even though FSC is trying to address these problems by cheaper group certifications, as is positively presented by the move of Maloshuykales into a group certificate, smaller companies still might prefer to join eventually cheaper or possibly less restrictive regional certification under PEFC standards. In general, companies' future decisions to support a specific system will become strongly influenced by the changing demand situation on the domestic as well as international market. Thereby, the political flanking mechanism by the Russian government, as well as by Western governments, for instance through green procurement directives accepting different standards, will play an increasing role. Thus, future development will show whether FSC certification is able to continue its rapid rise and improve its contribution to SFM in Russia while showing its ability to cope with future developments as the looming round wood custom tariffs or the emergence of PEFC certification in the Russian market. As described before, as a relational space, forest certification in Russia, due to its ongoing production through interactions and processes, is constantly in the making, something that also applies to an improved SFM through FSC certification in Russia's Barents Region. Nevertheless, in terms of a provisional permanence (cf. Murdoch 2006) of this relational space, FSC can be nominated as the most

successful alternative to approaching SFM practices in Russia and its Barents Region for almost a decade.

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3. Ionic Budget of Winter Snow on Vestfonna Ice Cap, Svalbard

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3.1. Introduction

Investigations focusing on the glaciology of the Vestfonna glacier (Nordaustlandet, Svalbard) form a part of the IPY-Kinnvika project – an International Polar Year initiative aimed at understanding the past, present and future environmental changes in the high Arctic. This study is a part of my PhD work and is the result of the preliminary investigations carried out on the Vestfonna ice cap in spring 2007.

Nordaustlandet is the northern-most island of the Svalbard archipelago. With an area of 2455 km² and a maximum altitude of 622m (Palosuo 1987), Vestfonna is the second largest ice cap on Nordaustlandet, the adjacent Austfonna being the largest one. Like most of the glaciers in Svalbard, Vestfonna is subject to significant melting during the summer. The seasonal melting makes paleoclimatic reconstructions from these polythermal glaciers difficult. However, Vestfonna's winter surface snow contains a chemical paleoclimatic record that has not been altered by melting and, therefore, the glacier can provide important climatic and environmental information (Watanabe et al. 2001). Preliminary studies of snow such as the characterisation of its density, its chemical composition and its structural stratigraphy are essential to interpret the ice core records. Indeed, stratigraphy of snow cover and its ionic budget can provide information on the annual accumulation rate at the drilling sites, behaviour of melt-water movement, formation mechanism of ice lenses, the elution rate of chemical species and other

physical processes that happen within the snowpack during a year.

This article is based on the ionic concentrations of snow pit samples from the two principal summits of the ice cap. Only few similar chemical investigations have been conducted previously on Vestfonna (Schytt 1964; Matoba et al. 2002). For instance, authors (e.g. Matoba et al. 2002) reported remarkably high salinities in winter snow, which they attributed to anthropogenic substances advected with warm air masses coming from the south. This study also concentrates on the winter snowpack with an outstanding saline feature. We show that this cannot be associated with warm air advection or with the frequently occurring super-cooled fog events resulting from a combination of open water off the coasts and freezing temperatures at the summit altitude. Instead, we propose frost flowers to be the main source of the observed airborne sea salt liquid particles (i.e. aerosols) loads in the snow.

Frost flowers grow on a thin layer of supersaturated brine (seawater) expelled from the refrozen surface of open leads (Rankin et al. 2002). By capillary action the brine surface is drawn up onto the frost crystal, leading to large concentrations of ionic seawater species in the frost flowers. When the sea ice surface temperature is below -8°C, mirabilite (Na₂SO₄·10H₂O), also known as Glauber salt, starts to precipitate from the brine and is incorporated into the sea ice matrix. Because of this fractionation, the brine and, thus, the frost flowers are depleted in sodium and sulphate. Due to their fragile structure, frost flowers are easily windblown and redistributed to the snow surface. From Antarctic observations, Rankin et al. (2002) and Wolff et al. (2003) hypothesised that frost flowers constituted the principal source of sea salt in the atmosphere and snow in winter. However, the frost flowers signature has never been described before in continental Arctic snow.
Authors (e.g. Wolff et al. 2003) have suggested that sea salt concentrations in ice cores can be used to infer aspects of the marine environment in the past, such as the extension of sea ice. Generally, such studies have assumed that the atmospheric sea salt concentrations are related to a combination of sea ice extent and wind speed. Hence, we speculate that the frost flowers' chemical signatures may also be used as a new sea ice extent proxy in Vestfonna cores. Their detection in ice cores from areas that, at present, are usually surrounded by multi-year pack ice could indicate that, at earlier periods, young sea ice was present instead.

3.2. Study site and methods

Having optimal water infiltration-refreezing conditions, summits were selected as snow pit sites. Snow samples were collected from two pits located at Summit Ahlmann (Pit 1; 79°59'N, 20°07'E, 597m a.s.l.) and Summit 95 (Pit 2; 79°56'N, 21°16'E, 617m a.s.l) on the Vestfonna ice cap in April–May 2007. Summit 95 is close to the Japanese drilling site of 1995 (79°58'N, 21°01'E, 600m a.s.l). Figure 3.1 shows the locations of the sampling sites.



Figure 3.1. Map of western Nordaustlandet with location of Kinnvika station, snow-pit sampling sites (Pit 1 and Pit 2), Automatic Weather Station

(AWS), Hinlopen Strait and Lady Franklinfjorden. Thick arrows show the main regional wind directions. The thin arrow shows the trajectory of airborne frost flowers particles.

3.2.1 Sampling

The samples were taken in accordance with the ITASE (International Trans-Antarctic Scientific Expedition) protocol (Twickler and Whitlow 1997). The sampling equipment was cleaned in the laboratory with ethanol and packed in polyethylene (PE) sealed bags prior to the fieldwork using a technique described by Kekonen et al. (2004). Disposable face masks, powder-free vinyl gloves and full-body clean suits were worn throughout on-site and off-site activities in order to minimise contamination during sampling, manipulations and analyses. The pits were dug as small trenches in the snowpack down to the visually located hard and icy layers (called the firn layer) corresponding to the previous summer or warm autumn surface. Snow samples from Pit 1 were taken continuously in 5cm increments down to a depth of 220cm by pushing clean plastic cups into the side-wall of the trench. In Pit 2 (180cm deep), 20cm vertical snow cores were retrieved using a clean metallic cylinder and placed into double PE bags. In the presence of ice layers, a sharp clean stainless-steel knife was used to cut the samples. The snow cores were also weighted for density measurements. After retrieval, the samples were stored and transported in insulated boxes to the laboratory where they were kept frozen at -22°C until analysed.

3.2.2 Analyses

We measured the nine major water-soluble ions with a Dionex DX-120 suppressed ion chromatograph at the Finnish Forest Research Institute (Rovaniemi Research Station). The anions (methanesulfonate acid or MSA, Cl⁻, SO_4^{2-} and NO_3^{-}) were determined using Dionex Ionpack AS15 columns. The cations (Na⁺, NH₄⁺, K⁺, Mg²⁺ and Ca²⁺) were determined using Dionex Ionpack CS12 columns. To minimise the effect of any systematic errors, samples were analysed in a random depth order. Virkkunen (2004) describes the analytical method in detail. A proportion of sulphate incorporated into snow can be attributed to sea salt, but volcanoes, atmospheric oxidation of biogenically produced MSA, and anthropogenic emissions, all also contribute to the sulphate aerosol burden. Thus, it is useful to differentiate sea salt and non- sea salt sulphate. The non- sea salt sulphate (nss-SO₄²⁻) and non- sea-salt calcium (nss-Ca²⁺) fraction have been calculated using sodium as the reference species assuming that all observed sodium comes from sea salt: [nss-X] = [X] - a [Na] (where X is the fractionated species and $a = [X]/[Na^{+}]$ in sea water).

3.3. Results

The samples of surface snow, i.e. the snow above the last summer layer, span the time period from the sampling time (April 2007) to the autumn of the previous year (2006). For each of the pits, Figure 3.2 shows the vertical variance of snow density and Log $[Na^{+}]/[Mg^{2+}]$ ratio, which was defined as a good indicator of summer melting in Svalbard snow by Grinsted et al. (2006). In both sites, fresh snow and superimposing wind packed snow layers composed the upper parts of the sampling wall. Below 120cm for Pit 1 and below 130cm for Pit 2 snow grains were coarser and depth-hoar layers were intercalated with thin ice layers (0.5 to 1cm thick). After this section, a firn horizon with more frequently occurring melt ice layers was found from 160cm to the bottom of the pits. The change in snow properties at 160cm is accompanied by a rapid decline in density in both profiles. In Pit 1 the density drop is coupled with a doubling value of the melt indicator Log [Na⁺]/ [Mg²⁺]. We assume that this transition at the depth of 160cm is the top of the 2006 summer layer. Based on the mean density of snow between 0–160 cm, we found that the accumulation rate was approximately 0.62 mweq.yr⁻¹ at Summit Ahlmann and 0.64 mweq.yr⁻¹ at Summit 95. These estimations are consistent with the 0.5 - 0.6 mweq.yr⁻¹ given by Sinkevich and Tarusov (1989).



Figure 3.2. Depth profile of the melting indicator Log $[Na^+]/[Mg^{2+}]$ (lower line) and density (upper line) for Pit 1 and Pit 2.

Mean values of the determined ionic species and the calculated nss- SO_4^{2-} , nss- Ca^{2+} and Na/Cl are presented in Figure 3.3 for both pits. The concentrations of major elements (Cl⁻, SO_4^{2-} , Na⁺, Ca^{2+} , Mg^{2+} , K^+) range from 1.84 to 84 μ EqL⁻¹ in Pit 1 and from 0.37 to 17.3 μ EqL⁻¹ in Pit 2.



Figure 3.3. Average concentration (μ EqL⁻¹) of each species in surface snow samples for Pit 1 (black bars) and Pit 2 (grey bars).

The concentration profiles for the cations Na⁺, Mg²⁺, NH⁴⁺ and for the anions NO₃⁻ SO₄²⁻ in Pit 1



Figure 3.4a. Vertical distributions of Na⁺, Mg²⁺,NH₄⁺ in Pit 1.

are shown in Figures 3.4a and 3.4b. There is a concentration peak present at about 100cm for Na⁺, Mg^{2+} and SO_4^{2-} . This snow layer between 95cm and 115cm presents ionic concentrations from 4 to 6 times higher than the calculated mean concentration for the upper layers together with the lower layers (excluding the firn layer starting at 160cm). Furthermore, the concentration of nss- SO₄²⁻ (Figure3. 4b) in this layer was found to be clearly negative. Pit 2 (data not shown) displays a regular decrease in ionic concentrations from the surface of the pit to the summer snow surface with the exception of a small peak between 85cm and 105cm. In the later, constituted in compacted snow including depth hoar, the order of magnitude of the concentrations does not exceed the range of concentrations of the upper layer (60cm thick). The density measured in the samples between 105cm and 115cm is slightly lower (361 kgm⁻³) than in the samples of the snow layer just above (411 kgm⁻³) and the one just below (432 kgm⁻³). This horizon also displays an icy layer and a higher Log [Na⁺]/[Mg²⁺] ratio (1.08).



3.4. Discussion

A comparison of the annual ionic budgets between the two sites (Figure 3.3) revealed the systematically higher concentrations in Pit 1. This indicates a variable geographical distribution of major marine ionic species on Vestfonna, with Summit Ahlmann showing a stronger marine influence than Summit 95. In addition, the lower nss- SO_4^{2-} and nss- Ca^{2+} contents observed in Pit 1 also point towards higher oceanic inputs at Summit Ahlmann compared to Summit 95.

Referring to the snow stratigraphy and densities described above, the snow layer at the depth of 1m in Pit 1 has not experienced the melting and probably corresponds to the previous winter snow layer.

3.4.1. Young Sea Ice as a Source of Fractionated Sea Salt in Winter

The origin of high salt concentrations and strong nss- SO_4^{2-} depletion found in winter snow at Antarctic coastal sites have been attributed to sea ice surface (Rankin et al. 2002). Other studies of Antarctic winter snow (e.g. Hall and Wolff 1998) confirm that air coming from fresh sea ice covered with frost flowers has a high salinity and a negative

nss- $SO_4^{2^-}$ signal. Based on the similar chemical characteristics found in Summit Ahlmann winter snow, we propose these features to represent a frost flower chemical fingerprint. Additionally, the sulphate to sodium ratio ($SO_4^{2^-}/Na^+$) in the winter snow, 0.092, is about 2/3 lower than that of sea water (0.25) and very close to the $SO_4^{2^-}/Na^+$ ratio measured by Rankin et al. (2002) in Antarctic frost flowers (0.085) and winter aerosols (0.1).

Earlier investigations on Vestfonna snow (Matoba et al. 2002) showed that peaks of δ^{18} O, Na⁺, Cl⁻ in winter snow were caused by advection of warm vapour with a high content of sea salt. These winter warm events were also associated with high NO₃⁻; NH₄⁺ and nss- SO₄²⁻ peaks. The authors concluded that sea water together with pollution generated by human activities were the main sources of this combination of ions in Vestfonna snow.

At Summit Ahlmann, however, several lines of evidence suggest a different source for the observed chemical characteristics in the winter snow pack. The concentrations of NO_3^- and NH_4^+ do not peak in winter snow and nss-SO₄ is clearly negative. We can therefore exclude anthropogenic contribution to the winter sea salt budget and assess that the sea salt source is depleted in sulphate. In addition, the Mg/Na (0.236) and Ca/Na (0.045) weight ratios (Table 3.1) are slightly higher than those in bulk sea water (SMOW, Standard Mean Ocean Water) (0.12 and 0.038, respectively), implying that sea salt aerosols incorporated into the winter snow are also depleted in sodium. This is to be expected if we assume that the depletion of both sodium and sulphate is due to crystallisation of mirabilite

 $(Na_2SO_4 \cdot 10H_2O)$ out of sea water at temperatures of less than -8.2°C. Simulations of sea water freezing along the Gitterman pathway by Marion et al. (1999) reveal that mirabilite is the only salt to precipitate out when sea ice is formed between -8.2°C and -22°C. Ice surfaces below -22°C are generally associated with multiyear ice on which frost flowers do not form. The ions deposited in Ahlmann winter snow clearly display a fractionated sea salt signature. We can conclude that sodium is the cation depleted with sulphate.

According to Rankin et al. (2002), sodium and sulphate depletion due to mirabilite precipitation are expected in glacier snow if this snow has been affected by a frost flowers wind deposition. Frost flowers grow on patches of thin slush layers on young sea-ice formed in leads of open water. To create these leads, appropriate meteorological conditions in terms of wind speed and direction are necessary and must be combined with sufficiently low temperatures (below -8°C) to allow fractionation to occur. Such cold temperatures are frequently reached during the winter in Nordaustlandet. Once offshore winds open up a coastal lead, new sea ice is produced. Then the wind direction must change to blow onshore in order to carry the aerosols derived from the frost flowers inland (Figure 3.5).

Patches of enriched brine on solid ice create an irregular surface with a greater roughness and

Table 3.1. Weight ratios of ions in Halley station frost flowers, Antarctica (HFF) (Hall and Wolff 1998), FrostFlower Layer (FFL) and bulk sea water (SMOW: Standard Mean Ocean Water).

	K/Na	Mg/Na	Ca/Na	Cl/Na	So ₄ /Na
HFF	0.0389	0.1400	0.0441	2.0400	0.0853
FFL	0.0220	0.2360	0.452	0.8120	0.0920
SMOW	0.0370	0.1200	0.0382	1.7900	0.2520



Figure 3.5. Schematic drawings of frost flower formation on young sea ice.

backscatter coefficient at radar frequencies than ice without flowers. A synthetic aperture radar (SAR, carried by the ERS-1 satellite), which is sensitive to the nature of sea ice surface, has been used to identify leads covered by frost flowers in the Arctic (Melling 1998; Ulander et al. 1995). In addition, a radar study conducted in the Svalbard archipelago using the ERS-2 satellite in March-April 1998 (Augstein 2000) registered strong reflectance around Svalbard, which was interpreted as frost flowers by Kaleshke et al. (2004). These observations support our assumption that frost flowers can form around Nordaustlandet and constitute a potential source of fractionated aerosols for Svalbard winter snow.

Moreover, the snow layer affected by the salinity peak shown here is too thick (20cm) for this salt content to have been conveyed by fog. It is well known that the importance of fog deposits (rime, hoar frost) has been overestimated in Nordaustlandet during the past and Schytt (1964) suggested that the snow mass contributed by fog deposits amounts to considerably less than 10 per cent of the total accumulation.

3.4.2. Summit Ahlmann under the Influence of the Hinlopen Strait in Winter

The records from the automatic weather station (AWS) in Ripfjorden (Figure 3.1) are used to locate the young winter sea ice formation area. Two predominant wind directions are observed: one is 290 to 340° (from the Arctic Ocean, NW) and the other is 110 to 135° (from Austfonna ice cap, SE). These wind directions are consistent with the dominant regional easterly winds (Niedzwiedz 1997; Dagestad et al. 2006) and with our field observations in spring 2007 and 2008 at Summit Ahlmann where strong winds came most of the time from the Arctic Ocean channelled by Lady Franklinfjorden (Figure 3.1). This suggests that the Arctic Ocean is not the frost flowers source area, since the frost flowers signature is not a continuous signal in the snow pack, but an infrequent event. The only plausible source is Hinlopen Strait (SSW).

Nevertheless, during field work in 2007 and 2008 we noted that the Hinlopen Strait was covered partially with a thin slick of ice and partially ice free, whereas Lady Franklinfjorden was completely frozen. Strong currents in the Hinlopen Strait continuously create exposed areas of sea water, which could freeze rapidly in the winter and create areas of local, freshly formed ice with a surface cover of concentrated brine. Moreover, the decrease in sea salt concentrations with increased distance inland (at Summit 95), indicates that the sea salt source is closer to Summit Ahlmann than to Summit 95. From these observations we can speculate that the principal source of saline air masses is most likely Hinlopen Strait, which is closer to Summit Ahlmann (about 45km) than to Summit 95 (about 60km). In order to verify this assumption, more snow sampling should be carried out all over the ice cap along with wind measurements. Hall et al. (1998) concluded from the observations made in coastal Antarctic regions that high wind speeds were not a factor promoting elevated concentrations of sea salt, but actually it was moderate wind speeds that seemed to be associated with these events. High wind speed would inevitably destroy the fragile flower crystals. It has to be verified that winds channelled straight to Summit Ahlmann by Lady Franklinfjorden are systematically stronger than south-western winds passing over Hinlopen in winter and bringing frost flowers particles.

3.4.3. Fractionated Salt as a New Sea Ice Production Proxy

It is more difficult to reconstruct the paleoclimate from ice cores that suffer from melting. Nevertheless, their reliability for paleoclimatic reconstruction has been demonstrated recently. Iizuka et al. (2002) successfully extracted information on environmental changes from chemical signals in a Nordaustlandet ice core. Also, Watanabe et al. (2001) reported that most of the chemical features contained in the initial snow of Austfonna still remained in the ice core. We could therefore expect that the preservation of the frost flowers chemical signature in Vestfonna ice is possible. If the signal described in this paper is not disrupted by melt percolation, it might serve as a potential proxy for sea ice production (extent) in winter via the reconstruction of past atmospheric conditions. Additionally, if higher sea salt levels measured in winter snow are systematically associated with moderate winds, we could attribute these high sea salt concentrations retrieved from ice cores from glacial periods to changes in sea ice production and not only to increased storminess causing a more efficient transport inland.

3.5. Conclusion

The chemical analyses of the snow pack from the two summits of Vestfonna ice cap show that Summit Ahlmann received a greater marine ionic contribution compared to Summit 95 and that the winter snow pack at Summit Ahlmann is enriched in sea salt fractionated in sodium and sulphate. As the particular nature of this saline content corresponds to a typical frost flowers signature described in aerosols and snow from Antarctic coastal regions, we hypothesise that frost flowers, possibly formed in Hinlopen Strait, could form a significant source of sea salt in winter snow in Vestfonna. We therefore suggest that sea salt records retrieved from ice cores from Summit Ahlmann may give us information on the past extent of new sea ice. However, to rigorously assess the reliability of the frost flowers chemical signature as a proxy for winter sea ice production around Nordaustlandet, the annual snowpack needs to be analysed at different locations on the Vestfonna glacier and more snow pit studies carried out along with continuous meteorological measurements should be performed. Studies of shallow ice cores

drilled at the two summits and new snow analyses are currently underway.

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4. The Prospects for the Development of a Barents Identity Region

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4.1. Introduction

In 1993 the Kirkenes Declaration, signed by the foreign ministers of Norway, Sweden, Finland and Russia, formally established the Barents Euro-Arctic Region (henceforth Barents Region). Covering 1,750,000km², the Barents Region is by far the largest region for transnational and interregional cooperation in Europe. The Barents Region consists of the Norwegian counties of Nordland, Troms and Finnmark, the Swedish counties of Norrbotten and Västerbotten, the Finnish provinces of Lapland, Northern Ostrobothnia and Kainuu, as well as Murmansk and Arkhangelsk Oblasts (provinces), the Nenets Autonomous Okrug (District) and the Republics of Karelia and Komi in Russia. The region has about six million inhabitants. Russians, Norwegians, Swedes and Finns are the largest ethnic groups, but several indigenous peoples and minority groups, like Komi, Karelians, Saami and Nenets, also live within the region's borders.

To this date the Barents Region lacks political autonomy. It functions first and foremost as a *framework* for co-operation and as a *channel* for communication between its different members. The co-operation is organised administratively on two levels. *The Barents Euro-Arctic Council* operates at the intergovernmental level, while the *Regional Council* unites the thirteen member counties, republics and provinces, as well as bodies representing the indigenous peoples of the region²⁴. In addition to the councils, Norway, Sweden and Finland have established their own national *Barents secretariats*. These institutions support and coordinate various projects across the region. The Norwegian secretariat is situated in the small town of Kirkenes, often considered to be the unofficial capital of the Barents Region.

The establishment of the Barents Region was initially one of many examples of strategic transborder region-building in Europe following the end of the Cold War. The motive was first and foremost to ensure transnational integration and secure stable and normalised relations between the Nordic states and Russia in the far north. The political instigators of the Barents Region originally had two goals. First, they aimed to strengthen transnational co-operation in the region. Secondly, they wanted to create a common regional consciousness amongst all the people inhabiting the area. The ambition was to transform the Barents Region from a region on paper only into a living identity region (Kirkenes Declaration 1993). The first goal has, at least partly, been reached. Nowadays there is a lot of Barents initiated co-operation going on across the national borders within a wide range of fields such as environment, economy, education, science, technology, culture and tourism. Whether or not the second goal has been reached is, however, much more uncertain. In 2003 the Barents Euro-Arctic Council once more stressed the need of strengthening Barents regional identity (Barents Euro-Arctic Region 10 Years Anniversary 2003).

Barents regional identity is the topic of this paper. However, I will not discuss the actual development (or lack of development) of it, but rather dwell on the *possibility* for such a development to take place. My basic assumption is that regional identity never

²⁴ See the Barents Euro-Arctic Council official website: http://www.beac.st/?Deptid=25866

evolves automatically. For an identity region to emerge some specific conditions must be favourable. After a brief introduction to regions and region building I will identify two such conditions. Then, focusing on these, I will consider the prospects for the emergence of a Barents identity region.

4.2. Regions

Of all territorial units the region is perhaps the least theorised one. While a vast literature on states and state building exists, research on regions and regionbuilding has been surprisingly neglected. Only recently has academic interest in the region as a phenomenon increased. This has been much due to the growth of L'Europe des régions (Labasse 1991), the newly integrated Europe, in which the region has attained an important role, economically, socially and culturally. In Western Europe the regional unit has been actively utilised through projects like the Euroregion²⁵ or Interreg²⁶ in order to generate transnational integration within the framework of the European Union. In Eastern Europe, after years of suppression under centralised socialism, the regional unit is now revitalised (Batt and Wolczuk 2002; Éger and Langer 1996).

'Region' is a complex concept and covers several definitions. Usually, the term describes a mediumsized geographic unit, smaller than the state, but considerably larger than a specific site or locality. However, there are exceptions, for example the Barents Region, which is considerably larger than any European country except for Russia. Regions can be sub-national or transnational: the former confined within, the latter transcending state borders. Some regions are functional, clearly defined for political and administrative purposes. Others are just historical landscapes lacking political superstructure and clear-cut borders.

4.3. Identity regions

Only some regions can be termed *identity regions*. These not only are delimited by physical, but also by social borders. Identity regions define local identity, people's sense of belonging. They evoke emotions, loyalty and passion much the same way as nation states do. Like the nation state the identity region is also an imagined community. People base their identity on a mental image of a larger unity, not on face-to-face interaction with other people. They "will never know most of their fellow-members, meet them, or even hear of them, yet in the minds of each lives the image of their communion" (Anderson 1983: 6).

The identity region is, like the nation state, often taken for granted by the people living within its borders. It is regarded as a natural and eternal unit. However, like all other territories, identity regions are in reality social products, both in their material and symbolic forms. They are constantly built and rebuilt through the conscious or unconscious acts of men (Paasi 1995: 44). Niemi (2000) distinguishes between two types of regional construction: regionalisation refers to processes of top-down, state controlled regional construction; whereas regionalism refers to processes where the region develops bottomup, from within or on behalf of the region itself. The active construction of the Barents Region is obviously a case of regionalisation, as it has been initiated at an intergovernmental level without paying much attention to processes on the ground.

The Finnish geographer Anssi Paasi has developed a four stage model for the construction of regions (Paasi 1986; 1996). Here the region initially appears only as an idea of a territorial space. This so-

²⁵ See the Council of Europe: http://www.coe.int/t/e/ legal_affairs/local_and_regional_democracy/areas_of_ work/transfrontier_co%2Doperation/euroregions/ default.asp

²⁶ See: http://ec.europa.eu/regional_policy/ interreg3/index_en.htm

called constitution of territorial shape is, in the second stage, followed by the constitution of a symbolic shape, for instance through the naming of the region. Thirdly, formal institutions are established aiming at identity building. Finally, the region is established within the regional structure as well as inscribed in the social consciousness of people within and outside its borders (Paasi 1996: 31–35). Only during this final phase does the identity region materialise. According to this model the identity region can be considered a region in its most perfected, fully-developed, form.

The identity region gets its shape through symbolic and spatial bordering processes. The Norwegian anthropologist Fredrik Barth, writing on symbolic bordering as a process of identification, concludes that it is the *boundary* that defines the group and "not the cultural stuff that it encloses" (Barth 1969: 15). Identity, that is an idea and a symbol of a 'We', is established and maintained only in relation to an idea and a symbol of an 'Other'. The spatial bordering (corresponding to Paasi's territorial shaping) involves a similar division, not of people but of space: Through spatial bordering a 'Here' is established and maintained in opposition to a 'There'. During the evolvement of an identity region these two bordering processes work in tandem so that the establishment of a 'Here' (the region within its physical borders) is combined with the establishment of a 'We' (the regional community) against a 'There' (other regions) and an 'Other' (other regional communities).

Further on we are less interested in the actual development of identity regions than in the possibilities for such a development to occur in the first place. Which conditions must be present for a non-identity region to become an identity region? Here I will point to two factors. First, identity regions can never appear out of thin air. They must have some foundation in reality. Secondly, identity regions do not develop in isolation, but in a sociospatial context that includes other territorial entities, borders and belongings. This context must be favourable for a new identity region to emerge.

4.4. The need for a solid foundation

The fact that identity regions are both imagined and socially constructed does not necessarily mean that they can develop arbitrarily whenever, wherever and in whichever form. For an identity region to develop, it must be underpinned by something shared and unique, some common symbols that unite the region's population as well as distinguish it from other regional groups. These symbols also must have the power to create belonging, evoke emotions and loyalty. Common language, religion and traditions can serve as such potent symbols and so can a shared history (see, e.g. Bialasiewicz and O'Loughlin 2002). In order to evaluate the chances for an identity region to evolve successfully we must first ask if such unifying and distinguishing symbols can be found and then estimate their aptitude for fostering regional community.

4.5. The need for a favourable territorial context

An identity region does not develop in isolation but within a larger socio-spatial context. This context consists of other spatial and socio-spatial units, states, regions and localities in the same area. The new region's possibility for growth depends on this context. For instance, if there are competing identity regions within its proximity, these might obstruct its growth. Therefore, when examining a potential identity region's chances for growth it is important to map its context and try to estimate how it limits or encourages the development of the new region.

Having pointed out these conditions two questions can be raised: first, can we find a solid foundation for a common identity in the Barents Region? Secondly, in which territorial context will a Barents regional identity evolve and can the context be described as favourable or hostile?

4.6. Foundations for a Barents identity region

The Barents region has a long history for crossborder exchange. During the time of the so-called *Pomor Trade*, from 1740 to 1917, there was for instance a lot of contact between communities of coastal northern Norway and parts of Northwest Russia (Niemi 1992; Nielsen 1994). During the heydays of this barter trade even a separate pidgin language emerged in the region called *Russenorsk* (Russian-Norwegian), combining elements from both Russian and Norwegian (Broch and Jahr 1984). Only after the Russian Revolution was the trade abolished and contacts broken.

Nowadays, promoters of the Barents Region often refer to the Pomor traders as a proto-Barents regional community. To what extent this really was the case is, however, most uncertain. Many historians contest the idea. Tunander describes the theory of a proto-Barents identity as nothing but a historical myth serving a modern strategy. "The romanticising of old trade routes - the Pomor trade - and the romanticising of the sea area as an economic, cultural or political unity - the Barents region - are used as instruments to overcome Cold War divisions" (Tunander 1994: 35). Similarly, Carillo writes: "Firstly, the think-tanks of the project have gone through the history of the High North to pick up those fragments of good Russo-Nordic relationship that are the most interesting in building a Northern identity. Thus, the Pomor co-operation period has especially been used in this attempt" (Carillo 1998: 15). Neither Tunander nor Carillo denies that there was a Pomor contact zone in the region, but they do not believe it ever fostered some kind of common regional identity. Their arguments are convincing.

Several sources describe how both Russians and Norwegians, even during the times of extensive cross-border contacts, were more eager to define themselves against each other than to form a unity (see, e.g. Serck-Hanssen 2007). It should also be emphasised that the Pomor trade never concerned more than a small part of today's Barents Region. The Swedish and Finnish parts, far away from the coastal routes, were not involved in the trading network at all.

History aside, there are several factors that do distinguish the Barents Region. Periphery is perhaps its most striking trait. Most of the extremely thinly populated region is located hundreds of kilometres away from the nearest big city and even further away from the closest capital. The region can, however, not be defined as one periphery. In reality we are talking about several peripheries, each first and foremost defined by its submission to a national centre: Moscow, Helsinki, Stockholm or Oslo. Within the region there is a conspicuous lack of centres. Transnational communication within the region, plane routes, railways and roads, are not at all developed. In order to go from one part of the Barents Region to another located in another country one often has to travel through two state capitals. This is very different from thriving transnational regions organised around one viable centre, like the Swedish-Danish Oresund (Copenhagen) Region.

In the Kirkenes Declaration harsh climate, wilderness and sparse population are referred to as unique and distinctive factors for the Barents Region. Richness in raw materials (fish, timber, coal, gas and oil) could be added to this list as well. 'Northerness' is also a common denominator. It is sometimes argued that this Northerness unifies the entire region and separates it from the 'South' and southerners, irrespective of national belonging (Hønneland 1998). It is, however, difficult to see how any of these rather diffuse characteristics can serve to unite and distinguish the region's population.

To some extent the Saami population constitutes a unifying factor in the Barents Region. This indigenous group, numbering about 100,000 people, inhabits huge parts of the region, including northern Norway, Sweden, Finland and the Kola Peninsula of Russia. The Saami are, however, internally strongly divided. Nationally, they belong to four different countries. Linguistically, they are split into several sub-groups speaking mutually unintelligible languages. Religiously, they are divided into Lutherans and Orthodox believers. A united Saami nation that in turn could unite the Barents Region has yet to develop.

Whereas the factors uniting the Barents Region are few and weak, the factors dividing it are strong and numerous. Several divides cut through the region. Firstly, there are the East-West divisions between Russia and the Nordic states. The religious border between Lutheran and Orthodox Christianity can be regarded as a fundamental cultural divide. According to Huntington's theories it is no less than a border between civilisations (Huntington 1993). The economic differences across the Nordic-Russian borders are immense. The living standard on the Russian side of the border is much lower than in the rich and highly-developed welfare states of Sweden, Finland and Norway. The political systems of Russia and the Nordic states also differ a lot, even after the demise of socialism on the eastern side. Secondly, there are the various national differences, not only between Russia and the Nordic states but also between the three Nordic countries. The language barrier between the Finno-Ugrian speaking Finns and the Germanic speaking Norwegians and Swedes obviously reduces the chances for a Barents community. Thirdly, the region displays an enormous heterogeneity as soon as one starts studying and comparing its many constituent parts. Even the Russian parts of the region are very

different from each other historically, economically and culturally.

4.7. The territorial context of the Barents Region

Several inner divides challenge the unity of the Barents Region, the 'civilisational' border between the Nordic countries and Russia, the national boundaries and the many sub-national differences. Some of these borders represent forms of territorial belonging that collide with and challenge the idea of a Barents identity region. The existence of no less than four centralised nation states is perhaps the greatest hindrance for the development of a Barents regional identity. As nations tend to be defined in opposition to each other the space for continuities and common symbols across the national borders remains limited.

The Barents Region must also compete for allegiance with several alternative transnational regions. The so-called North Calotte Region corresponds roughly to the Nordic part of the Barents Region. This regional construction is well known all over northern Norway, Sweden and Finland, although its position as an identity region is rather weak. Karelia, the vast borderland between Finland and Russia is another case. This is a very old and well-established identity region. Four ethnic groups, Russians, Finns, Karelians and Vepsians, live within its borders and all groups are strongly attached to it. We should also mention *Sapmi*, an ethnic macro-region, referring to all the lands populated by the Saami people.

Finally, the Barents region-building faces competition from a large number of sub-national coherently and solidly founded identity regions. The Russian part of the Barents Region includes for instance the firmly established political identity regions of Karelia and Komi, the latter the size of Spain with more than a million inhabitants. The entire Norwegian part of the Barents Region is called Northern Norway and constitutes one of five traditional 'regions' of Norway. For the population living here the regional identity as *nordlendinger* (North Norwegians) is very strong. Similar examples of vital identity regions are found in northern Sweden and Finland as well.

4.8. Conclusions: An emerging Barents regional identity?

Due to a lack of empirical material we do not know much about the development of the Barents identity on the ground. We do not even know whether it exists or not. The reason for this might just be that the emergence of a Barents regional identity seems too far-fetched for most researchers. Viken et al. (2007) touches upon the topic in a recent field study from Kirkenes, the 'capital' of the Barents Region. However, in this town on the Norwegian-Russian border where Barents rhetoric has been stronger than anywhere else they do not find many signs of a Barents identity: "Among people in Kirkenes there are other identities that are stronger than those relating to the border and to Barents rhetoric" and "the Barents identity element is strong only for the relative few, whereas the border is much more important and inscribed in other identities that people embody" (Viken et al. 2007: 65). When some youngsters eventually mention the region it is in negative terms. One informant is cited: "I feel that there is lot of talk about Barents, Barents, Barents...but do we really have that much to do with Barents?" (ibid.). The remark is followed by negative comments about Russians and a confirmation of national belonging. The study indicates that the Barents Region has yet to be realised as an identity region, even in the area that should be expected to form its very core.

I have argued here that regional identity can only evolve under certain circumstances and that the

development of an identity is determined by the inner foundations for unity and on the context for its potential growth. I have examined these factors in relation to the Barents Region in order to assess its possibilities for becoming an identity region. The Barents Region performs low against both factors. First, the foundations for unity and distinction are low. Distinguishing factors can be found, but perhaps apart from (the myth of?) historical unity these all seem far too diffuse to support a real Barents regional community. It is difficult to see how they can evoke real passion for and loyalty to the region amongst its inhabitants. Secondly, the development of a Barents identity region is challenged by the many other territories and borders we find within and across its borders. Most striking is the East-West divides that indeed seem far stronger than the North-South opposition, which is the foundation for the Barents region. In addition comes the national borders splitting it into different peripheries without much contact between themselves and, arguably, without much in common. Based on my findings the prospects for the development of a Barents identity region are therefore not the best.

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5. Challenges to Energy Security of the Regions of European Russian North

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5.1. Introduction

Scientists, political figures and businessmen often use the expression 'energy security'. However, they frequently do not explain what they mean by this concept. Defining concepts is important for a successful dialogue on any question. To begin with, countries supplying and consuming energy resources have different approaches to maintain their energy security. But territories within the bounds of a sufficiently large country differ from each other in terms of the climatic conditions and the structure of their economies as well as by many other parameters. These features are the reasons for different approaches to maintain energy security in different territories. This paper is devoted to the problems of energy security in the regions of the European Russian North. It begins with the analysis of the concept 'energy security'. Then an examination of the regions of the European Russian North will focus on exploring the challenges to the energy security of the regions, which are analysed, and then the measures taken to improve the situation are indicated.

5.2. The concept of energy security

The problem emerged for the first time in industrialised countries in the 1970s. At that time the Middle East crisis caused a reduction of oil

supplies and a rise in prices (Bushuev et al. 1998: 24). Energy security initially was connected basically with physical supplies of oil. Gradually it expanded to include supplies of not only oil, but also of other forms of energy, their prices and diversification of energy supplies (Jenny 2007). The World Energy Council defines energy security as a confidence that energy will be available at all times, in various forms, in sufficient quantities, and at affordable prices (WEC, cited in Bushuev et al. 1998: 25); this interpretation is widely accepted. According to the Doctrine of Energy Security of Russia (2000: 276), energy security means "a condition of the defence of the country (region), its citizens, society, state and economy saving them from threats to reliable fuel and energy supply". It is possible to mark out several interconnected components of energy security: reliability of energy supply, the price factor and a psychological factor. The description of these components in this paper is based on *Energy Security:* a market oriented approach by F. Jenny (2007).

Reliability of energy supply means that there are physical supplies of energy resources in sufficient quantities. It is a classical problem of energy security. Disruption of physical supplies results in a price spike and markets can react flexibly and re-allocate physical fuels under these conditions. Consumers, which are sensitive to price spikes, reduce their consumption, and thus there is a reallocation of fuel towards those consumers who are ready to pay a higher price (Jenny 2007). Some energy consumers adapt to higher prices, and some adapt even to the absence of fuel resources. However, inaccessibility of energy resources on account of too high prices can lead to disruptions of the economic system. Therefore, another important component of energy security is the price factor.

The *price factor* refers to affordable prices for energy resources. At this point, the interests of the actors differ. Producers are interested in the stability of high revenues. Consumers aspire to prices being not too high. Besides, transiting actors have interests in their own energy supply and transit revenues. Sometimes a danger of using prices or quantity of physical energy supplies to cause changes in nonenergy policy is discussed (Jenny 2007). In principle, consumers could threaten to boycott certain suppliers and vice versa. The psychological component in this context is as important as the economic component. Sometimes even an imaginary threat can have a political effect. Therefore, one more component of energy security is the psychological factor.

According to Skinner (cited in Jenny 2007), it may be said that energy security has two aspects. The first aspect is the fact of a quantity of energy resources delivered at a price. The second is a psychological notion of security, which is a feeling. For instance, supply quantity and the degree of dependence on external suppliers may be unchanged, but the feeling of security can increase or decrease with time. Political relations determine the feelings of security between the trading parties. It should be mentioned that it is often assumed that domestic energy resources are more secure than foreign resources. However, some experts argue that domestic sources provide no greater security than foreign sources (Jenny 2007).

The combination of all three of these components defines energy security. But even the acceptance of a single concept of energy security does not exclude the contradiction of the interests of the producers and consumers of energy resources and transiting actors. As the energy security problem was acknowledged and examined in the consuming industrialised countries for the first time, it was considered in terms of security for consumers who required reliable energy supplies. Now it continues to have an effect on the approach to the given problem. One of the examples is the report 'Russia's wrong direction: what the United States can and

should do' (Council of Foreign Relations 2006). In particular, it says that:

The United States should seek to reinvigorate the U.S.-Russian strategic energy dialogue (...) The goal of this revived dialogue should be to strengthen the energy security of the United States, which depends on strong global production, diverse sources of supply, effective markets, fair and consistent treatment of foreign investors, cooperation on crisis management, the physical security of energy infrastructure, and more efficient use of resources by itself and other industrialized economies ... True energy security can be advanced by increased Western participation in the development of Russia's vast resources.

The paper 'Russia's right direction: what does the United States want to do?', by Russian experts Ivanov and Simonov (2006), was a reaction to the above-mentioned report. Its authors wrote about the necessity of partnership with Western energy companies without infringing on Russian interests. They note that "we need foreign investments, but it does not mean that we (...) must transfer whichever resources to Western concerns for exploitation and actually reject our sovereign rights" (Ivanov and Simonov 2006). Then the authors argue the necessity for Russia "both to satisfy the requirements of the growing home market and increase supplies to Western and Eastern consumers" (Ivanov and Simonov 2006). To Ivanov and Simonov it is obvious that Russia is not going to deny its obligations and undermine the energy security of its foreign partners, but also Russia will demand observance of its own interests.

The agenda of the G8 countries' summit²⁷, which was held in St. Petersburg, Russia in 2006, included

²⁷ The G8 Group is an unofficial forum of the heads of the leading industrialised democracies (Russia, USA, Britain, France, Japan, Germany, Canada and Italy), in which the European Commission is also represented and

global energy security. The question of security is not only one for consumers but also for energy producers, something that was raised at the summit. It was pointed out that not only consuming importers required guaranteed energy supplies; their suppliers also needed some guarantees (Vlasova and Koksharov 2006: 52). G8 countries' leaders approved the document on global energy security at this meeting. They noted that the global character of energy security problems and the growing interdependence between producing, consuming and transiting countries required "strengthened partnership between all stakeholders to enhance global energy security" (G8 Russia 2006b). Despite the current disagreements, the results of the G8 summit held in 2006 may be considered as a step towards effective interaction in the energy sphere on a global scale.

The world economy is a complex system. Besides providing global energy security, each country aspires to provide its own energy security. An important feature of Russia should be noted in relation to this. Vast natural energy resources allow Russia not to fear the weakening energy independence of the country as a whole in the foreseeable future (maintaining independence is a major aspect of energy security for many other countries). At the same time, nonuniform allocation of productive forces and energy potential is typical of Russia. It creates difficulties for energy supplies in some regions. The Russian region in this paper is understood as a federal subject²⁸. In addition, Russian regions faced new problems in the 1990s. First of all, the new problems were connected to the serious national political, economic and ideological crisis. This crisis led to an aggravation of the Russian regions' problems. Determination of regions' development based upon their specific features, such as the structure of the economy, procurement of their own energy resources, geographical position, degree of integration in the federal and world economy etc., became more important under market conditions. Thus, the significance of the regional approach in research of all aspects of social and economic development increased.

An important point, which should be noted, is that Russian scientists usually do not take into account the psychological factor of energy security. The indicative analysis method was developed to estimate energy security. The method was described in a number of publications (Bushuev et al. 1998; Kovaleva and Kuklin 2003; Tatarkin and Makarov 2004). It implies a calculation of the indicators, that characterise the functioning of the fuel and energy complex²⁹. The indicators characterise the supply of consumers with electric and heat energy and fuel, the reproduction of basic production assets in the fuel and energy complex, the financial and economic condition of the fuel and energy complex and sometimes other parameters. The totality of indicators enables a calculation of the level of energy security. Thus, energy security in the works of Russian scientists is considered to be something objective. The conclusion is that the psychological factor is more urgent at the international level than at national or regional levels. The challenges to the energy security of the regions of the European Russian North are connected both with the features

fully participates. This forum was designed to harmonise attitudes to acute international problems. G8 countries annually meet at a summit held in every country by turn (G8 Russia 2006a).

²⁸ Russia is a federal state. The Russian Federation comprises 83 federal subjects: 46 oblasts (provinces), 21 republics, 9 krais (territories), 4 autonomous okrugs (autonomous districts), 1 autonomous oblast, and 2 federal cities (Moscow and St. Petersburg).

²⁹ The fuel and energy complex includes all the processes of extraction and processing of fuel resources (fuel industry) as well as the processes of production, transmission and distributions of electrical energy (electric power industry).

of the regions and internal Russian problems, which the national economy is facing.

5.3. Regions of European the Russian North as objects of energy security

The regions examined in this article are Murmansk and Arkhangelsk Oblasts, the Nenets Autonomous Okrug, and the Republics of Karelia and Komi. These regions have certain common features. First, the generation of large amounts of both electricity and heat energy is necessary in these regions because of their cold climate and the considerable long winter period. Secondly, the presence of rich natural (mineral, wood) resources causes the prevalence of power-consuming industries in the regional industrial mix. The largest enterprises of powerconsuming industries arose during the period of active industrial development in the Russian North (since the 1930s). Enterprises played a decisive role for cities and regions in which they were located. Their role is still significant today after the transition to a market economy - enterprises provide workplaces and support social programmes, and they are the largest tax-payers. Timber, woodworking and the pulp and paper industries (Republic of Karelia, Arkhangelsk Oblast, Komi Republic), non-ferrous metallurgy (Murmansk Oblast), ferrous metallurgy (Republic of Karelia), the chemical industry (Murmansk Oblast), and the fuel industry (Komi Republic, Nenets Autonomous Okrug) are developed in regions of the European Russian North at present (Rosstat 2006: 440-443). Thirdly, the regions are favourably located in relation to the industrial centres of the European part of the country. Fourthly, the regions have some common features of the energy complex which is described below.

The first two features are typical for regions of the Russian North on the whole. They clearly show that energy supply disruptions in the North can have dramatic consequences. A suspension of the largest power-consuming industries can cause significant material damage. A lack of electric and heat energy in blocks of flats can lead to hazards in public health. So, these features determine the great importance of energy security for all Russian northern regions. The third and fourth features are peculiar to regions of the European Russian North. These features distinguish them from the regions located in the Asian North of the country. The examined regions of the European Russian North form the Russian part of the Barents Euro-Arctic Region.

The European Russian North is rich in energy resources. Fuel resources are represented by oil and gas (the Timan-Pechora and Barents-Kara fields), coal (Pechora field), shale oil (Timan-Pechora shale oil basin), peat (peat extraction is concentrated in the Republics of Karelia and Komi) (Vorontsova et al. 2003). Hydro-power engineering is developed in Murmansk Oblast and the Republic of Karelia due to significant water power resources. Arkhangelsk Oblast also has water power resources, but combined heat and power plants (CHPP) prevail in its energy supply system. Nuclear-power engineering in the European North is represented by the Kola Nuclear Power Plant (NPP) in Murmansk Oblast.

Industrial development of the European North has always demanded the priority development of the energy complex. It has been necessary to provide reliable energy supplies to settlements and developing industry. Therefore a powerful fuel and energy complex was created here. This fuel and energy complex maintained the regions' energy security at a high level for a long time, but the situation changed in the 1990s. At that time the country experienced a deep economic crisis, which affected all branches of economy. During this period there was a recession in the economy of the European Russian North, as well as in the whole country. The recession caused a reduction in production and, as a consequence, a reduction in the overall energy consumption. The fuel and energy complex coped with the task to provide consumers with energy under these conditions. But when economic growth began, the demand for energy began to grow as well. At the same time, the problems of the fuel and energy complex became more acute and regions of the European Russian North faced serious challenges to their energy security. The problems and challenges have still not been overcome.

5.4. Analysis of challenges to the energy security of the regions of the European Russian North

The fuel and energy complex of the European Russian North is facing a number of problems that challenge energy security. The most significant are examined in this section of the paper.

5.4.1. Problems of the energy complex at the present time

A significant accumulated depreciation of generating capacity is typical of Russia on the whole. Some capacities were created during the realisation of the GOELRO plan³⁰. They were the Nivskaia HEPP-2, put into operation in 1934, and the Nizhnetulomskaia HEPP³¹, initiated in 1937 in Murmansk Oblast. The GOELRO plan envisioned the Murmanskaia CHPP as a very small step, but because of the post-war devastation and civil war it was brought into operation only in 1934 (JSC 'Kolenergo' 2009). Severodvinskaia CHPP-1 was started in 1941 and is the oldest large power plant in Arkhangelsk Oblast and the Nenets Autonomous Okrug; the main electricity and heat generating capacities of the regions (Arkhangelskaia CHPP and Severodvinskaia CHPP-2) were brought into operation in the 1970s. At the same time, some boiler plants (less than 7% of JSC 'Territorial Generating Company No. 2' heat capacities in the area) were commissioned in 1913 (JSC 'Territorial Generating Company No. 2' 2008). Capacities that were commissioned in the 1920-1930s have significantly deteriorated and are out of date. As a consequence, their efficiency is low. Of course, a large proportion of all capacities was created over the following decades. The depreciation of such capacities are less, but still significant.

The problem of capacity shortfall is an especially burning issue for the Republic of Karelia. The republic covers only 60% of its needs for electrical energy with its own capacities; the remaining volume is met by the capacities of the Leningrad NPP (Leningrad Oblast) and Kola NPP (Murmansk Oblast) (Institute of Economics of KarRC RAS 2006). The situation in Murmansk Oblast is different. The functioning power plants meet the Oblast's demands completely; more than half of the electric energy is generated by the Kola NPP, which consists of four power-generating units with an aggregated capacity of 1760 MW. The operating lives of its first and second power-generating units were prolonged by 15 years (until 2018-2019). A prolongation of the operating lives of its third and fourth power-generating units by 15 years is also expected (their planned operation lives will end in 2011 and 2014). Building a new large power plant is necessary to preserve the self-supporting Kola energy system. "The General Scheme of Electric Power Industry Objects Placement up to 2020" includes building a Kola NPP-2 equipped with four power-

³⁰ The GOELRO plan envisaged a major restructuring of the Soviet economy on the basis of the total electrification of the country. It started in 1920 and was basically fulfilled by 1931. GOELRO is the transliteration of the Russian acronym for "State Commission for Electrification of Russia" (Gosudarstvennaia komissiia po elektrifikatsii Rossii). For more information, see Great Soviet Encyclopaedia 2001.

³¹ HEPP = 'hydro electric power plant'.

generating units with an aggregated capacity of 1200 MW in 2015–2020 (Kola Science Centre RAS 2009). In case of a delay in building a new nuclear power plant, Murmansk Oblast will face the real threat of capacities shortfall after 2018–2019.

The insufficient diversification of the fuel supply is also a problem. A reliable fuel supply is important for all northern regions including those regions where electric energy is generated mostly by hydroelectric and nuclear power plants. It is explained by the fact that most of the fuel is used for generating heat energy. In practice, sometimes a regional fuel balance is poorly diversified; i.e. some kinds of fuel dominate. For example, fuel oil comprises more than 60% of the structure of consumable fuel in Murmansk Oblast (Rosstat and Murmanskstat 2005: 30). Coal makes up about 40% and fuel oil makes about 50% of consumable fuel in the Komi branch of the JSC 'Territorial Generating Company No. 9' (JSC 'Territorial Generating Company No. 9' 2008). The problem is aggravated by the fact that practically all consumable fuel is delivered to some regions (Murmansk Oblast, Republic of Karelia) from outside. The situation is interesting in Arkhangelsk Oblast: its fuel and energy balance is diversified (fuel oil comprises about 30%, coal over 25%, and gas over 20%), but about 94% of primary fuel and energy resources are delivered from other regions and only 6% comes from local fuels (firewood and waste wood) (CSR 'North-West' 2008). The enterprises using fuel are anxious because of the high probability of a rapid growth in prices for gas, coal, and fuel oil. Therefore, such enterprises seek to enter into long-term contracts for fuel supplies (JSC 'Territorial Generating Company No. 2' 2008).

It is considered that the development of shelf gas and condensate fields will give opportunities to diversify the fuel supply of regions and replace expensive fuel oil for cheaper gas. But there are obstacles to this. First, the development of large shelf fields requires significant investments; the development of the Shtokman gas and condensate field requires about 1100 billion rubles alone (Kola Science Centre RAS 2009); this sum is the equivalent of more than 30 billion US dollars at March 2009 rates given by the Central Bank of the Russian Federation (Central Bank of the Russian Federation 2009). Secondly, a significant share of extracted resources will be exported and there is a danger that long-term export contracts will be observed at the expense of Russian consumer interests. For example, a significant share of Shtokman gas will be exported to the Atlantic Basin markets by pipeline as well as in liquefied natural gas form (JSC 'Gazprom' 2009). Thirdly, home market prices for gas will significantly grow over the next years because of the liberalisation of the gas market (Gas Market 2007).

The relative isolation of regional energy systems essentially limits the opportunities of a functioning competitive market for electric energy in the regions. According to the former RAO UES³² company (2005), the relatively isolated territories in European Russian North are: 1) the zone of Arkhangelsk Oblast, including the Nenets Autonomous Okrug, and the Komi Republic. There is a restriction of 165 MW on the power flow from the Vologda junction; the structure of the generating systems is insufficient for competition; and 2) the zone of Murmansk Oblast and the Republic of Karelia, as there is a restriction of 550 MW on power flow to the Unified Energy System of the Northwest; pricing capacities are absent.

The poor development of intraregional trunk and distribution grids imposes restrictions on new connections between both producers and consumers

³² RAO UES is the acronym for the Russian open joint-stock company 'Unified Energy System of Russia'. The company ceased to exist as a separate legal entity on 1 July 2008.

of electric energy. As a result it becomes an obstacle to the social and economic development of the regions. It should be added that a non-uniform allocation of production and consumption of electric energy under the poor development of grid facilities is typical for regions of the European Russian North. The main producers and consumers are concentrated in a small number of industrial centres. At the same time there are small remote consumers, which are not connected to any energy system.

The problems mentioned above in many respects were caused by the crisis that Russia experienced in the 1990s. Repair work efforts were essentially limited, modernisation of functioning capacities was given no proper attention, and the volume of capital construction in the energy complex was abruptly reduced in that period because of a lack of financing. It should be noted that the lamentable state of the basic production assets of the energy complex would be a challenge to energy security under any (administrative or market) organisation of the economy. The belief in the absolute superiority of the market economy caused new challenges to the energy security of the regions of the European Russian North in the 1990s. These challenges were connected to the reform of the electric power industry to a great extent.

5.4.2. Electric power industry after reform

The goals and objectives of reforming the Russian electric power industry were formulated in the Russian Federation Government Resolution, "On Restructuring the Electric Power Industry of the Russian Federation" (Russian Federation 2001). Later they were formalised in the Concept of RAO UESR's Strategy for 2003–2008, "The '5+5'". According to the Concept, reform was aimed at increasing the efficiency of power utilities and making the sector attractive to private investment (RAO UES 2003). Subsidiaries of RAO UES of Russia, regional joint stock companies working in

the power sector ('AO-energos'), were acting before the reform and carrying out the function of supplying energy to territories. AO-energos were vertically integrated companies that exercised all the functions from energy production to energy supply for the end consumers. The reform assumed a restructuring and liberalising of the industry. As a consequence, natural monopoly functions (power transmission, dispatching) were separated from potentially competitive ones (production and supply, repair works and services) during the restructuring period. New structures responsible for separate functions were created instead of the vertically integrated AO-energos. Other objectives of reform included implementing an efficient system of market relations in competitive businesses, providing fair access to services rendered by natural monopolies, achieving effective and fair government control of natural monopolies (RAO UES 2003).

The requirement for the separation of functions did not concern regional AO-energos, which were completely isolated from the Unified Energy System of Russia (such regions are located in the Asian part of the country; an analysis of them is outside the scope of this paper). But relatively isolated regional AO-energos of the European Russian North were restructured over the course of reform. At the present time, the generating capacities and grids that were separated from regional AO-energos are owned by large companies serving the territories of several regions. For example, the JSC 'Territorial Generating Company No. 1' includes the generating capacities located in Murmansk Oblast, the Republic of Karelia and Leningrad Oblast. Hence, a significant share of the company's capacities - 2841.6 of 6278.4 MW (JSC 'Territorial Generating Company No. 1' 2008) - works under conditions of 'relative isolation' and cannot normally enter the electric energy market. The situation in Arkhangelsk Oblast and the Komi Republic is similar. Trunk and distribution grids

belong to large grid companies also serving the territories of several regions.

It is clear that a functioning competitive electric energy market objectively is limited (or even impossible) in the regions of the European Russian North. This specific feature of the regions examined is accompanied by organisational problems, which are typical for Russia as a whole: the weakening coordination between enterprises of the electric power industry, due to a considerable increase in the quantity of subjects in the industry, and the weakening of the state control of tariffs in the industry. In practice, the responsibility for the reliability of energy supply of territories has become unclear after restructuring and the privatisation of AO-energos.

Criticism of the liberal concept of reforming the electric power industry was made before the beginning of the reform and during its realisation. In practice, great attention was paid to questions of restructuring the industry, partial privatisation of enterprises and financial questions concerning these processes. At the same time the industry did not receive the expected inflow of investments for updating and creating new basic production assets. No wonder then that it was eventually realised that the electric power industry was strategically important and state support was necessary. A number of publications referring to RAO UES of Russia confirm it (There Will Not 2005; Rubchenko 2005a; Rubchenko 2005b). In particular, it is declared a necessity for the development of power machine building, programmes of development and placement of electric power industry objects in the long-term, and correction of tariff policies (Rubchenko 2005b). The latter means that tariffs should include an investment component, i.e. there should be an opportunity for investment in the development of the electric power industry due to tariffs. The tariffs should stimulate energy saving, but they should not be unreasonably overestimated. The

revision of reform does not mean a rejection of liberalisation and of a electric energy market. But future decisions should be made carefully and previous experiences should be taken into account. As a reliable energy supply gets special importance in the regions of the North, the decision to maintain significant state influence in the electric power industry is the factor that softens the negative consequences of the reform on energy security.

5.5. Measures for increasing energy security of the regions

Challenges to the energy security of the regions of the European Russian North dictate the necessity of taking measures directed to improve the situation. First of all such measures include the modernisation of basic production assets and the creation of new ones. These measures are necessary, firstly, because of the high depreciation of functioning capacities, secondly, for the prevention of capacities shortfall. Developing alternative energy, including nonconventional renewable energy sources (for instance, wind energy), is directed towards the same purposes. Capacities, which are created on the basis of nonconventional renewable energy sources, can be used both for the energy supply of small remote isolated consumers and for running an energy system.

One important task is energy saving by means of the introduction of less energy-intensive technologies, reduction of losses in electricity grids and heating networks, and control of energy consumption with measuring devices. Diversification of the fuel supply is possible by means of converting power plants to use more economical types of fuel, searching for new ways of delivering fuel for regional needs, and involving local fuel resources (for example, peat) in the energy balance.

An important tool for increasing the energy security of the regions of the European Russian North is the removal of grid limitations. Grid building should be directed towards the removal of technological limitations on electric energy overflows between regional energy systems and towards integrating the regional energy systems into the Unified Energy System of Russia. Intraregional grid building should be aimed at increasing the reliability of regional energy systems and at creating an opportunity to connect both new consumers and producers to electric energy.

A region's authorities are limited in their control of the energy complex. Government bodies of subjects of the Russian Federation can render assistance to projects from the viewpoint of increasing regional energy security. Assistance may be given, for example, in the form of a constructive approach to the co-ordination of placing electric power industry objects in a region's territory, the coordination of water use for producing electric energy by hydroelectric power plants, consideration of projects for the development of alternative energy sources, etc. The tasks of regional government bodies include tariff control in the power energy industry within the limits of its authority. A region also can inform the federal centre of its local interests and vision of ways to solve existing problems.

5.6. Conclusion

Energy security means a confidence that energy will be available at all times, in various forms, in sufficient quantities, and at affordable prices. Researching the energy security of different territories should take into account regional differences. Maintenance of energy security is of great importance for the regions of the European Russian North due to their cold climate and considerable proportion of power-consuming industries in the regional industrial mix. However, the regional fuel and energy complex is facing serious problems. Significant depreciation of generating capacity, capacity shortfalls (or threat of capacity shortfalls), insufficient diversification of the fuel supply and grid limitations are serious challenges to energy security. Unclear responsibility for the reliability of the energy supply, the weakening of the co-ordination of enterprises of the electric power industry and the weakening of state control over tariffs should be noted as a group of challenges to energy security, which were caused by reforming the electric power industry from 2003–2008. Measures for increasing regional energy security are determined by corresponding challenges. Structural interaction of energy enterprises and government bodies is a necessary condition for the maintenance of the energy security of the regions of the European Russian North in the long-term.

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6. Ethical Dilemmas of Making Sensitive Research: Ethnosexual Encounters in Border Regions of Russia

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6.1. Introduction

Ethical³³ considerations in research processes have become recognised more today in most fields of science than earlier. The kinds of ethical questions that a researcher encounters depends on the research subject and research setting. The concept of research ethics usually refers to good scientific practices and the internal self-regulation by scientific societies (Kuula 2002: 1). Research ethics directs also the choices of research subject. Therefore, the meaning of research ethics is to put an end to deficient scientific practices (Kuula 2002: 1).

Marilys Guillemin and Lynn Gilliam (2004: 263) have argued that there exists two major dimensions of ethics in qualitative research. The first dimension is 'procedural ethics' and the second one is 'ethics in practice'. Procedural ethics refers to the use of official ethical committees to grant permission to conduct human research from the point of view of its ethical perspectives. The dimension of 'ethics in practice' refers to the everyday ethics of doing research – the ethical questions that evolve during the research process. Guillemin and Gilliam (2004: 263) recognise the professional codes of ethics as some sort of third dimension of ethics. For ethnographers, the American Anthropological Association (AAA) gives some principles for professional ethics. This 'Code of Ethics' (AAA 1998) covers aspects of responsibilities towards research subjects, scholarships and science, the public and towards the students and trainees with whom anthropologists work.

In this article my aim is to reflect upon the ethical questions that I have been encountering during my own everyday research practice while using an ethnographic research method. In addition, I will consider the basis of some ethical guidelines that have been guiding my research process as it has been going on. When I began my doctoral research process, I perhaps did not give as much reflective thought to the different ethical dimensions of the research process as I should have done. From the point of view of my informants³⁴, my research topic could be classified as a sensitive one since it deals with the different type of sexual relationships between Finnish men and Russian women or men in/from the Northwest region of Russia. For my PhD work I have been interviewing Finnish men in Finland and in the small Russian border town of Sortavala³⁵. In Sortavala I also have conducted participant observation in a bar that is popular amongst Finnish men. In this tiny bar the women customers are often offering sexual services for payment.

³³ According to the Oxford Dictionary of Philosophy, "Ethics (Gk. ethos, character). The study of the concepts involved in practical reasoning: good, right, duty, obligation, virtue, freedom, rationality, choice" (Blackburn 1996: 126). In the research process ethics can be understood as a way of thinking about what is good and right.

³⁴ In this section I will speak about informants since this term is commonly used in ethnographic studies.

³⁵ The small countryside town of Sortavala is located approximately 70 kilometres from the Finnish border in the Republic of Karelia in Russia. The population of the town is slightly larger than 20,000 inhabitants.

6.2. What is Socially Sensitive Research? Does it Include Special Ethical Dilemmas?

Joan E. Sieber and Barbara Stanley (1988: 49) have defined socially sensitive research as:

Studies in which there are potential consequences or implications, either directly or for the participants in the research or for the class of individuals represented by the research. For example, a study that examines the relative merits of day care for infants against full-time care by the mother can have broad social implications and thus can be considered socially sensitive. Similarly, studies aimed at examining the relation between gender and mathematical ability also have significant social implications.

This definition draws attention to research subjects that are not automatically - but can be in certain contexts - sensitive research topics such as violence, sexuality, and death. This definition pays attention to the more extensive consequences of the 'less sensitive' research topics. Therefore, the scope of socially sensitive research topics actually can be quite wide. As such, in science ethical considerations are highly complex. From the ethical point of view Sieber and Stanley's (1988) standpoint can be understood to show the researcher's responsibility for research outcomes. These outcomes can influence people's lives and practices. Therefore, some sensitive topics, when researched, risk labelling and strengthening social stigmas in a general way of thinking, although this is not the purpose of the research. Also, some groups of people, such as children and the mentally ill, need some special ethical considerations when participating in research. For example, the ethical requirement for *participants*' informed consent to the research in such cases may be difficult to realise (see, e.g. Shaw 2008). This means that a participant understands that she/he is taking

part in the research on a voluntary basis³⁶ and understands how it is done and for what purpose. Participants also should be aware of the possible harms and risk that participation in the research can cause them. Participants should also understand his/her rights during the research and how the results of the research are going to be published (see, e.g. Clarkeburn and Mustajoki 2007). The research process can be in some situations too abstract to realise, because of the current cognitive skills of the person. This sets great responsibilities on the researcher in terms of the ethics of the research. In my study the sensitivity of the research can be understood as the need for delicacy in interview situations and in the writing up of the study. The question of confidentiality is very important. In my research case, the older age of the informant has affected the interview situation in such a way that I have been forced to explain constantly the purpose of the research, repeat the questions several times and thus have kept the actual interview situation shorter.

Despite some of these difficult ethical dilemmas, sensitive issues should be researched because they provide valuable knowledge of the social world and the results might help these people and other people in similar situations. Ethical problems should be seen more as research challenges to be overcome at a theoretical, methodological, or epistemological level. For example in the context of prostitution, it is relevant to think of the value of the old theories – are they unbiased? It is important also to consider the research methods in practice. Are the qualitative research strategies chosen so that they minimise the possible harms/risks to the informants during the research process? In general, is the knowledge produced in the research process made in a non-

³⁶ In some research cases social pressure or altruism can result in situations that make a person willing to participate or continue in the research. The concept of voluntary participation is, therefore, ambiguous (Gorden 1987: 98).

exploitative manner? When people in vulnerable situations are researched the research interaction and use of results sets many ethical concerns.

The question of harm is elemental in every research project. Accidental harm towards the research subject can occur at any stage of research. Researchers have a responsibility to avoid causing any type of harm to research participants³⁷. For example, the AAA 'Code of Ethics' only gives rough guidelines on research ethics and does not recognise at this very general level the special questions and/or situations of ethical and moral concern or dilemmas that might arise during the individual research process when ethnographic method is applied (see also Guillemin and Gilliam 2004; Walsh 2003). And yet the question must be asked if the AAA should do this at all. Ethical and moral dilemmas often are developing out of research interaction situations and reflect social and cultural contexts and codes. I would argue that there cannot be a very detailed guidebook to resolve these problems. The researchers and informants are different, as are the research contexts. Situations in which the actual research practices are in some way contradictory to these general guidelines can also occur. Therefore, ethical considerations are important to discuss in every research project.

6.3. Historical Background: Ethical Concerns in the Humanities and Social Sciences

Today, the rights of research participants are discussed more than previously. The ethical evaluations of the research process started in the field of medicine for which the first international standards were formed for the study of human beings after the Second World War. After the Nuremberg Trials³⁸, the 'Nuremberg Code' established that, for example, human participants of research should participate on a voluntary basis and should give their voluntary permission for the research. As well, unnecessary suffering in human research should be always avoided and participants should in such cases give their informed consent for any such research (Aita and Richer 2005: 121). However, preliminary estimates of research ethics were not yet realised at the institutional level at that time. Therefore, after the Second World War and before the 1960s, many unethical scientific studies were conducted especially in the field of medicine in terms of human testing (Kuula 2008: 135-136). In the field of medicine the preliminary estimates for ethical considerations of research became institutionalised first. The committees that evaluated the ethical standards of studies were formed at the end of the 1960s in medical faculties in Finland. However, it was as late as the end of the 1990s when this preliminary evaluation process was codified as Finnish law (Kuula 2008: 136). So far, in Finland in the field of social sciences and humanities, institutionalised ethical committees for evaluating research plans still do not exist. Furthermore, documentation and official permission for research are not required before the actual research begins. Recently, a special 'working group' has been evaluating the necessity for such a process in Finland, a result of research becoming more international (Kuula 2008: 135). According to the National Advisory Board on Research Ethics (2009: 9), for example sociologists in Finland do not consider an ethical evaluation as a

³⁷ According to Guillemin and Gilliam (2004: 271), research subjects should been seen more as research participants who are not 'abused' for the gains of the researchers, but more or less who work together with the researchers, thus turning the research also into their own project.

³⁸ The Nazi doctors who abused people in brutal medical experiments in concentration camps were convicted in Nuremberg (German – Nürnberg; Guillemin and Gilliam 2004).

necessity in all research cases. However, sociologists have mentioned that some international scientific journals publish only those articles for which the research has undergone an ethical evaluation process.

Today, existing ethical committees in other countries are also criticised by researchers for several reasons³⁹. Often, this practice only means an additional piece of paper to fill in for researchers, simply a bureaucratic action (Guillemin and Gilliam 2004: 263-264). However, Guillemin and Gilliam (2004) recognise that ethical committees can protect research subjects in some sense from exploitation and, in general, guide researchers to consider ethical standpoints in their research projects. In practice, however, ethical committees do not really control how researchers actually conduct their research. Therefore, researchers have in practice the final responsibility for ethical considerations and decisions in their research processes. Therefore, Guillemin and Gilliam (2004: 262) have suggested that the concept of reflexivity⁴⁰ should be understood as 'an ethical notion' in human research. They argue that the reflexivity in the research process could fill in the possible gaps between procedural and practical ethics and show how the ethical questions in the research process have been solved. Concerning my own research, the existence of an ethical committee would have directed the ethical considerations of my research process in a better direction from the beginning of my project. The tool of reflexivity has become therefore the most natural and important

way to consider the ethical and moral basis in my research from its beginning to end.

6.4. Ethnographical Method and Ethics

In my work I have been using the ethnographical approach that belongs to the anthropological tradition. The word ethnography can refer to the anthropology or the method/s or genre of writing research accounts (Hammersley and Atkinson 1995). In a plain way ethnography could described as a study of humans in their everyday cultural context (Hammersley 1990). The fieldworker usually spends a long time in a studied field obtaining different kinds of data in the context of his/her research. The ethnographer her-/himself is like a research instrument. Ethnographic thinking is more (or less) inductive and 'discovery-based' than deductive (Hammersley 1990). Nowadays the ethnographical approach⁴¹ is adapted in many different fields of human science (Hammersley and Atkinson 1995).

It is claimed that the ethnographic method⁴² is suitable for studying sensitive, distinct, complex and otherwise difficult processes (see, e.g. Hondagneu-Sotelo 1994). However, I consider that the predictability of ethical questions in the ethnographical research setting is not the best one. The physical and psychological boundaries of

³⁹ During the 1980s, research ethics committees evaluating studies about humans were institutionalised in the United States, Canada and Australia (Kuula 2008: 136).

⁴⁰ The concept of reflexivity can be understood narrowly as a self-reflection. In the research process it can be understood as the researcher evaluating his/her position, how s/he is positioned by informants, what kinds of choices and why the researcher makes them during the research process (Fingerroos 2003).

⁴¹ Although in ethnography several ontological, epistemological, methodological choices can be used, it is quite often connected to interpretive and hermeneutical approaches. In both, the aim is to accumulate the understanding of studied phenomena (Cuba and Lincoln 1998).

⁴² For example, Ian Shaw (2008: 403) has argued that qualitative research strategies from the point of view of ethics have no special advantages compared to quantitative research strategies. Qualitative and quantitative research strategies both have ethical concerns. These ethical concerns might differ, but still exist.

research making are not so axiomatic in ethnography, which often includes a long stay in the field (Walsh 2003: 1). As the field worker lives often his/her everyday life amongst informants, something interesting can come up in the context of the research framework anytime. The field worker lives in practice in the middle of ethically important moments during his/her entire stay in the field. Deatra Walsh (2003) has claimed that the ethnographic method is highly 'flexible', which brings into the research process many ethical concerns. According to Walsh (2003: 3), objectivity, biasness, researcher positioning and fluid boundaries are the issues in the ethnographical approach that usually cause more ethical and moral concerns than simply the requirement for the informed consent of research subjects.

For my research I have been interviewing Finnish men. The interviews have taken place in different locations and spaces. Each of these men have a different educational background and professional status. They are aged between their early 40s and 70s. Interviews lasted between one hour and up to four hours. All interviews were tape recorded. According to Kelchterman (1993), it is useful to make a biographical interview in a cyclical way. By this, Kelchterman means that it is very useful to analyse the data after every interview. Analysed interview opened up new subject areas for the next interview. Therefore interviews serve as cumulative sources of data. During the next interview situation the gaps in information can be filled in or used to clarify unclear topics. Also interrelations of events can be seen in a new light from the point of view of the interviewed and interviewer through recurrent narrations. Sensitive topics also might be brought up more easily. The above guidelines to a biographical interview have been directing my interview process during the research. I have had the possibility to interview almost all of my informants two times. During the first encounter I have used structured

interview techniques. The second interview encounter was based on conversations from the first one⁴³. Since the research topic deals with gender, masculinity, sexuality and ethnicity, the finding of informants has not been easy.

In my research process the use of the ethnographical method has not caused really tricky ethical dilemmas, since I have not been staying in the field for long periods. The interactive situations with informants have been short and mainly taken place either in an institutional space in the university, or in a private space at homes or in a rooming house in Sortavala. A few interviews were set in a café in the capital area upon the request of the informant. For them, it was not an issue to discuss 'the old issues' in this public space. However, the meetings with the informants that I held in university space have made the questions of anonymity⁴⁴, confidentially and harm more relevant. After or before the interview session I have normally gone with my informant to sit in the university café. In this situation other researchers who knew what I was researching might have deduced that the man was my informant. For

⁴³ In my study I am approaching my informants' stories as narratives, in which lived and told experiences are constructing each other (see, Tuomaala 2006). According to Tuomaala (2006: 273), narrative includes the dimensions of life-history and life-story. The past is reconstructed and reflected subjectively. The narrated events of the past can be experienced by the informant him-/herself or by other people. Narratives can be open, without endings and conventional forms. Narratives can have plots and chronology, but often narratives are constructed from pieces, short-stories and alternation of time scales (Ukkonen 2006: 24-25, 34).

⁴⁴ In my research case anonymity means that other people besides me would not know the names or other information that makes participants identifiable in the data. In some other research context the data can be anonymous, so that even the researcher does not know the participating persons (Gorden 1987: 101). example, on one occasion when I was sitting in the university café with two of my informants suddenly one woman approached us. She knew one of my informants. She immediately asked what he was doing in that place. He answered that I was doing research. Then the women looked at me and asked what the study is about. I did not react. My informant replied that it concerned their 'business' in Sortavala. My fellow researchers were sitting nearby. Therefore, different places where the researcher and the research project are known can reveal the informant (see, Gorden 1987; Kontula 2008). The university environment is not a very large one. The borders of confidentiality in situations where an interview has taken place in an informant's home have been decided by the informant. In my case there was no situation in which a member of the informant's family suddenly would walk in on an interview without knowing that research was being conducted (see, e.g. Kontula 2008).

In the case of Sortavala, I travelled there once with two of my informants from Finland. Other fieldtrips I have conducted myself. During this trip it was my informants' decision not to reveal my role as a researcher in an exact sense. They revealed to others who joined us only that they were showing me the town of Sortavala. Concerning my field observations in Sortavala, I have decided not to refer to the general conversations that have taken place in bars in situations when people have not known that I am a researcher or have not known what I am researching. From their point of view, I have been in other positions and roles than that of a researcher. Therefore, these people have not given their consent for this study and, in general, the value of these conversations from the point of view of ethnographic knowledge has not been high.

I would argue also that in cases when an ethnographer is staying a long period in the field the idea of informants' informed consent can be problematic. Are the informants always conscious when they are in the position of informant and when they are, for example, in the position of the ethnographer's friend? Or is the ethnographer always conscious of the position afforded him or her by the informants? I have not been living with the informants in the same place or spent free time with them except during one fieldtrip. Therefore, the positions and roles that I take are not as multifarious as they perhaps could be in such cases when relationships with the informants are more developed. Moreover, fieldwork has happened amongst representatives from my own culture. This does not accentuate such ethical and moral dilemmas that might come up when doing fieldwork with representatives of other cultures and most likely in a foreign environment. However, some of my research roles and positions have raised some ethical aspects especially in the interview context.

In general, the AAA's ethical code has given me the basic norms to follow in my ethnographic endeavour, although the code has its limitations concerning everyday ethics. The AAA guideline has been constructed around the questions of informed consent, anonymity, confidentiality, rights, dignity, welfare, harm and privacy when talking about the ethical relations with the informants.

6.5. Interaction between Researcher and Informant

In all scientific fields researchers must take into account in their ethical considerations how they will obtain the relevant information and, at the same time, protect the informant. One of the guiding principles in protecting the informant is *anonymity*. In the ethical code of the AAA it has been recognised that there always exists possible risks that threaten the full anonymity of the informant although researchers try their best to avoid this. Informants should be informed about these limitations. The small size of the sample (less than 20 interviews) also poses some problems for anonymity if all the demographic factors are revealed. The small size of my research sample can result in someone recognising the informant from the text. This challenges the researcher to write the results in such a way that it becomes less likely that someone will recognise the informants (see, Kuula 2007). However, during my research process I needed to limit the full anonymity of some informants because of university procedures, which I informed them of and to which they reacted positively.

In general, the question of anonymity is normally taken as a self-evident norm in research ethics. However, one of my informants was interested in staying anonymous although the research deals with intimate spheres of his life. For a few other informants, the question of anonymity also was not so important. In December 2008, when I attended a conference on 'Oral History and Ethics' in Helsinki, many of the participants also made remarks that their interviewees did not require anonymity. Is this is a new tendency amongst human research and does it tell us something about a sort of cultural change in Western societies? The media is nowadays saturated with reality television programmes in which some people are ready to reveal sometimes their most intimate, private and sensitive issues to the audience. Has this phenomenon perhaps affected people's thinking on privacy and its boundaries?

However, I have decided to sustain the anonymity of all informants. This is because of the possible consequences of a public outing. In this situation, I have put more effort in the protection of my informants' current lives. In practice, during interview situations informants normally referred to other people by name, which is natural when telling stories and passing information on to the researcher. Especially in my case, when intimate relationships are in focus, 'the others' are a relevant part of the informants' stories. Therefore, the informants' anonymity also protects the anonymity of these 'others'. The question of the consequences of telling in this sense plays not only a role for the informants, but also for 'the others', who do not have an actual voice in my research. They cannot influence the stories that have been constructed by the informants and me as a researcher or defend their actions. These others have not given consent for this research. In this case, I have chosen to use my power as researcher over the will of some of my informants.

Some of my informants have hinted at other individuals who might be suitable for this research although the research topic is sensitive. Full anonymity is therefore impossible for these other people. It is obvious that the people who know each other are able to recognise each other's stories. So, I would argue, that the importance and boundaries of anonymity are dependent upon the person. In my case, for many of the informants the question of anonymity and privacy has been important also within a small-scale social sphere, amongst colleagues, friends and relatives.

Some of my informants themselves brought up the aspect of defilement as a possible consequence of speaking publicly about their intimate relationships. Therefore, the experience of dignity and confidence during the whole research process should be transparent and felt by the informant clearly from the side of the researcher. Also, making the whole research process more approachable in general to the informant has been important to me. Only a few of the informants have had some idea of what researchers are actually doing and how the research process goes on. Since the fear of defilement as a result of revealing their lived experiences has been concrete for some informants; a better understanding of the research process and ethics has lightened that fear. The purpose of the research data is not to stigmatise Finnish men because of their sexual lives.

In my research, confidentially would have had a new meaning in a situation whereby the informant revealed, for example, that he had bought sex from a minor in Russia, which is a criminal act according to both Russian law and Finnish law, even when abroad. However, during my research process none of my informants revealed such an act. According to recommendations of National Advisory Board on Research Ethics (2009), the researcher is obliged to reveal to the police ongoing or planned crimes. Therefore, if my informants had revealed that they were using minors I would have a legal obligation to tell to police about it. This illegal activity would have meant the breaking of research confidentiality.

Before and during the research process it is also relevant to think about the questions or topics of conversation/interviews. What can the researcher actually ask of informants? What is ethical when research is dealing with sensitive issues? What will it mean if the researcher uncovers information about illegal activities? When revealing sensitive issues in your life you put yourself in a vulnerable situation. Guillemin and Gilliam (2004) have argued that the most harm caused to participants during research happens in interactive situations with the researcher. When going into interview situations that have been mostly scheduled in advance with the informants I have kept in my mind how I would feel in such a situation if the roles were reversed. What would be comfortable and what would not? What are really the things that make an interview situation a pleasant experience? To what extent can the researcher be provocative in the context of sensitive research topics?

In every interview situation I have tried to put the informant in a position from which he can decide the limits to each revelation. This has happened partially by encouraging informants to tell stories about their life at certain stages. This feeling of comfort was, however, challenged in one interview when the informant suddenly started to cry. I was surprised by this reaction and asked if he wanted to pause or stop the entire interview process. Then I dragged out from my bag a package of handkerchiefs and gave it to him. I recognised that I had posed a stressful question when highlighting a contradiction in his story. However, this informant only wanted a short break and then continued. I thought afterwards that this reaction was also a surprise to the informant himself. Such 'ethically important moments'⁴⁵ in the interview process can come suddenly, without notice. The researcher holds great responsibility to navigate these situations in such a way that they do not cause further harm to the informants. In practice, the act of crying meant that I softened my voice and showed empathy. And yet I did not turn off the tape recorder immediately as I should have. It was a beginner's mistake. I would say that in research interviews the possible harm caused to the informant is sometimes quite difficult to predict. That makes the researcher's ethical responses and considerations even more important.

This above-mentioned situation made me reflect even more consciously about the ethics that I am actually practising in research encounters with my informants. How do I face my informants? Does my gender play a role in my ethical considerations? The different formal ethical principles and guidelines can give some directions to ethical considerations, but can be at the same time too rigid to follow in ethically important moments. I have found feminist ethics as a home for my 'research ethics in practice', although my informants are males. Feminist ethics highlight especially the ethical way of being (the ethical position), reciprocity and responsibility in relations with others in everyday practices. Feminist ethics gives space also to the intuition and feelings during ethically important moments (see, e.g. Gillian

⁴⁵ Guillemin and Gilliam (2004: 262) speak about 'ethical important moments' when they refer to the everyday ethics of the research process. Shaw (2008: 401) also speaks about 'ethical moments' when he refers to ethical questions that arise during the research process.

1982; Tronto 1993; Slote 2007). Feminist ethics is not about principles – it is more about practices (Tronto 1993: 126). One of the problems of ethics is how the boundaries of care are constructed and some cases the carer adopts the values of the cared (Shrage 1994: 21). In my study I meet humans, not 'Finnish sex tourists in Russia'. I have not taken my informants values and points of view as my own values and points of view. If the informants have asked me some opinion during the interviews I have expressed my own opinion, although it might have differed. However, that has happened rarely and my informants have been keen to tell their story without questioning opinions from me.

In general my researcher roles and positions have caused some ethical concerns for me during the interviews. Some interview situations were gendered and sexualised by the informants to my surprise. I decided not to stop this since it served as material in the context of my research. I consider that this data from the interview interactions also gives my informants some self-understanding of their gender and masculinities.

6.6. Interpretation and the Question of Ethics

Informants should have the possibility to review and reflect upon the transcriptions of their interviews. It could happen that in the interview situation an informant tells the researcher things that he might afterwards regret. In such a case, the informant has the possibility to deny the use of such material. Also, I as a researcher have a responsibility to consider if the material is not suitable for analysis. However, not all the informants have been interested in reading the transcriptions; only some have taken the opportunity to examine them. Likewise, few of the informants have been interested in reading my interpretation of their stories. I want to give them this possibility so that they would have an active role and consent in the finalisation of this study. This active consent also gives the informants the possibility of withdrawing their consent at this phase of the research. However, this is not only an act of reciprocity, but it means that the interpretation is partially constructed together in a dialogue. There is still a possibility that the informants will be disappointed somehow by the final interpretation (see, e.g. Kortelainen 2008). Since some of the informants are not interested in giving their opinions at this stage of the research process, their power to influence the final outcome is lessened. Also, the risk of a disappointing interpretation is greater for them.

I also have discussed with the informants what will happen to the data after the research project. So far, the agreement has been that the collected data is not used for other research use. It will be destroyed after the project, according to Finnish personal data protection law (see, e.g. Kuula 2007). This law allows one to destroy, archive or make the data anonymous. Arja Kuula (2007: 42) argues that making qualitative data anonymous does not make much sense. For archiving there must be an official licence from the National Archives Service. The knowledge of how the data is preserved and what happens to it after the research process is one part of the confidential relationship between the researcher and informant. Also, it is important for the informant to know who has possible access to this data besides the researcher during the research process. For my informants I have explained that some other researchers might be interested to read through the empirical material in order to see and evaluate how the interpretation has been constructed. For such occasions I have promised to take the names away as much as possible from the transcriptions.

After finishing my research I will ask once again if the informants want to have a copy of the research publication. Some of them have already announced an interest in this. Since I am writing about Finnish men and their lived and told experiences of intimate relationships in Northwest Russia, I consider it ethical to write the PhD study in a language that all my informants can understand. However, university politics in Finland prefers the use of publishing in English. Therefore, the publication in English will be a slight disappointment for a few of my informants who do not know English. That distances once again the research process from the informants. However, they have been motivated to continue in this research, although not all of them can read the results without the help of others. The other 'ethical language' for publication would be Russian, because the lived and told experiences and relationships have mostly taken place there. The purpose of this work is to continue academic discussion on subjectivities, masculinities and sexualities that are many times constructed through narrow and labelling categories. For my informants the interpretation of narratives could open up a path for a better self-understanding.

6.7. Reflection (instead of a Conclusion)

Research ethics is much discussed nowadays. During the research process I have been searching through the basic ethical guidelines from the AAA 'Code of Ethics' for my work. This guideline has been, however, too narrow for changing everyday situations in the research process. Therefore, reflexivity has become a tool used to think about the ethically 'important moments' that I have been able to recognise in my research process. Partially, and without my full understanding, I have already followed the ideas outlined in feminist ethics in my everyday research practices from the beginning. These ethical considerations before the actual research process started would have required some sort of consideration of research ethics in the research plan. Reflexivity as a tool to ponder ethical and moral dilemmas in the research process also can reveal something about our social world. However,

the ethical considerations of research making already should be more visible in university lectures and seminars when students begin to practice research making (see also, the National Advisory Board on Research Ethics 2009). The ethical and moral choices that we make during the research process are important and the ethical competence of the researcher affects these choices.

In Finland the National Advisory Board on Research Ethics (2009) has now recommended that some research settings be pre-evaluated in the humanities. Also, in some research settings the researcher, sponsor, partners or research subject is asking to be pre-evaluated. The universities and research organisations that are following these recommendations should themselves organise this evaluation process. The universities can find some regional collaboration with research organisations and vocational or educational institutions. I consider this a good development in research ethics. However, this recommendation covers only research work that is done after the first degree. Is that enough?

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7. Spatial Distribution of Microorganisms in the Polar Regions

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7.1. Introduction

Biogeography is the study of the distribution of biodiversity over space and time (Hubbel 2001). How biodiversity scales with space is a central question of modern ecology because patterns in the spatial distribution of organisms provide important information about mechanisms that regulate the diversity of life and the complexity of ecosystems (Levin 1992).

The motivation for understanding microbial biogeography extends beyond drawing and interpreting a map of microbial diversity (Martiny et al. 2006). It gives insight into patterns of changing community composition across a landscape and can offer valuable clues to the relative influence of dispersal limitation, environmental heterogeneity and environmental and evolutionary change in shaping the structure of ecological communities (Dolan 2005).

Prokaryotic microorganisms play an essential role in earth system processes. They are ubiquitous, possess enormous metabolic and physiological versatility and are essential to virtually all biogeochemical cycling processes. Although small, they are abundant. Their phylogenetic and physiological diversity is considerably greater than that of animals and plants and their interactions with other life forms are correspondingly more complex (Torsvik et al. 2002). Despite all that, very little is known about microbial biogeography and spatial diversification, as well as the evolution forces that control their distribution (Ramette and Tiedje 2007). The topic of microbial biogeography is generally absent from recent books on microbial diversity (e.g. Ogunsseitan 2005), as are microorganisms from ecological publications on biogeography (e.g. Hubbel 2001). This is mainly due to the lack of adequate methods for capturing microbial biodiversity and perhaps also to some extent due to the long lasting assertion that there is no interesting microbial biogeography (Dolan 2005). The relevant literature describing microbial spatial diversity is highly scattered, often vague, and burdened with numerous flaws and misidentification (Foissner 2006).

Beijerinck (1913) proposed, and later developed by Baas-Becking (1934), that 'everything is everywhere'; many scientists believe that free-living microorganisms are more or less ubiquitous and, thus, species of a microorganism can be found living wherever a habitat is suitable (Finlay 2002). The ability of microbes to potentially colonise the whole planet is attributed to their small size and high dispersal rates (Wilkinson 2001). According to this theory, microorganisms do not form geographically isolated populations and seldom (if ever) speciate via allopatry (Fenchel and Finlay 2004). Species richness of microorganisms therefore ought to be very low as well as local versus global diversity ratios, thereupon opposite to the trends known for macroorganisms (Finlay 2002). The above-mentioned studies have been strongly criticised by Foissner (2006) and Weisse (2006), for instance, who argue that these findings are flawed because they are based on the use of techniques inadequate for identification of microbes in species and strongly underestimated counts for global diversity.

The notion that microorganisms do display biogeographical patterns is supported by a growing body of evidence indicating that many microorganisms including Archea (e.g. Oline et al. 2006), bacteria (e.g. Glaeser and Overmann 2004), cyanobacteria (e.g. Papke et al. 2003), microfungi (e.g. Green et al. 2004) and protists (e.g. Katz et al. 2005) are not randomly distributed across landscapes. Hence, as proposed by Baas-Becking (1934) the environment selects and is at least partly responsible for spatial variation in microbial diversity (de Wit and Bouvier 2006). The argument for global distribution of microbes due to their minute size and astronomical numbers is therefore somewhat disputable. For examples, mosses, ferns and microfungi, whose main dispersal forms - spores are of the same size and abundance as larger microorganisms, often occupy distinct areas and even exhibit pronounced endemism (Foissner 2006). There is also little doubt that many freshwater and marine algae do have biogeographies, e.g. marine dinoflagelates show endemism in the strict sense of the word as they are only restricted to a particular region, despite the potential continuity of all oceans (Pollingher 1987).

Understanding the ecology of microorganisms is arguably one of the most compelling intellectual challenges facing contemporary ecology. Although worthy for its intellectual merits alone, developing such an understanding is essential to meet many of the major challenges facing human society today, such as the management of natural ecosystems and the mitigation of climate change (Horner-Devine and Bohannan 2006). Identifying the patterns of microbial biogeography is, however, much more challenging than studying the biogeography of animals and higher plants. Microorganisms are indistinct and with current methods it is impossible to assess the whole community composition in a given environment. Therefore undersampling is a pivotal problem causing misidentification and underestimation of microbial diversity (Foissner 2006). Finding patterns of microbial biogeography also is hampered heavily by the fact that almost 150

years after the publication of Darwin's classic, The Origin of Species, it is not clear what a species is. There are over twenty competing species concepts available in the literature (Weisse 2006), from which the idea of ecotypes (Cohan 2002) is most consistent with the ecological and evolutionary species concepts. Ecotypes are populations of organisms occupying the same ecological niche that also form genetically divergent clusters (Cohan 2002). The lack of sufficient techniques for identification of microorganisms into ecotypes is the cardinal problem that the science of microbial biogeography is dealing with. Although 16S phylogeny is arguably excellent for classification of prokaryotes from the domain level down to the family or genus levels, it lacks resolution below that level (Staley 2006). While patterns of spatial variation might not be obvious on a 16S level (Fierer and Jackson 2006), they may be manifested when higher resolution genetic markers are used (Papke et al. 2003). Therefore, the detection of microbial biogeography strongly depends on the taxonomic resolution of the analysis method and, thus declaring that microbial species are cosmopolitan (Finlay 2002), might be equivalent to stating that a genus or family of birds is cosmopolitan (Martiny et al. 2006).

The present day distribution patterns of animals and higher plants reflect the relative influence of contemporary environmental factors and the legacies of historical events (e.g. geographical isolation of two populations; Martiny et al. 2006) and are generated via a combination of speciation, adaptation and extinction (Ramette and Tiedje 2007). To determine whether microorganisms follow similar distribution patterns as multicellular organisms is a question for further extensive research. So far only limited numbers of studies have tested the effect of the environment and the historical contingencies on the present day distribution of certain microbial groups (Martiny et al. 2006). Though the results of these studies are often diverse, certain patterns of microbial distribution can be identified (Martiny et al. 2006). The effect of contemporary environmental factors has been shown to significantly influence biodiversity at a small spatial scale (Horner-Devine et al. 2004), while the distribution over tens of thousands of kilometres has correlated with the effect of geographical isolation (Papke et al. 2003). The joint effect of both contemporary environmental factors and geographical isolation (as known from macroorganisms) seems to influence the distribution of microbes on an intermediate scale of dozens to thousands of kilometres (Green et al. 2004; Yannarell and Triplett 2005).

Therefore, the question ought not to be if microorganisms are randomly distributed over space, but rather whether there is a spatial scale, a degree of sampling effort and a level of taxonomic resolution at which microorganisms have distribution patterns similar to those known from higher plants and animals (Green and Bohannan 2006), i.e. whether they reflect the relative influence of contemporary environmental factors and the legacies of historical events (Martiny et al. 2006).

7.2. Antarctica: an ideal site to study microbial biogeography

Antarctica, as the only region dominated by microorganisms, offers unique opportunities for studies on microbial distribution in the absence of any confounding effects associated with higher plants and animals (Vincent 1999). Since the separation of Antarctica from Gondwanaland more then 100 million years ago, the Antarctic region has been more isolated than other parts of the world. It also differs aerobiologically from elsewhere: local dispersal processes favouring local species are more efficient in Antarctica than long range dispersal (Marshall and Chalmers 1997). Hence, if microbial endemism exists, then it is most likely to be discovered here (Vincent 1999). Also, unlike anywhere else, Antarctica is the last place on Earth fairly untouched by human activities. Consequently, we can study microbial distribution in its natural state undisturbed by massive world-wide air and ocean transport, shipping and construction of artificial canals that is causing outstanding, though unknown, changes in the biogeographical distribution of both micro- and macroorganisms (Foissner 2006).

The location of the Arctic and Antarctic regions represent the most extreme geographic separation possible on Earth, yet these two high latitude environments share similar selection pressures and as such offer a unique opportunity to investigate patterns of global distribution of microorganisms. It can be assumed that the circumpolar Arctic is, in terms of biological transport, much more accessible than the Antarctic.

An improved understanding of microbial biogeography and the evolutionary origins of Antarctic microbiota will also be an essential step towards harnessing the genetic resources of this region for human needs and towards ensuring the long term integrity and protection of Antarctic ecosystems. The need for this information has been heightened by the increased level of human activities and impacts in Antarctica and by the observation that the polar regions are currently subjected to unpredicted rates of change caused by ozone depletion, rapid climate shifts and the long range transport of contaminants (Vincent 1999). Antarctic microbial communities are likely to be changing rapidly, but we still lack the fundamental knowledge to assess their current biodiversity and uniqueness, and the magnitude and implication of any change.

7.3. Cyanobacteria: ideal model organisms for the study of microbial biogeography

Cyanobacteria, also known as blue-green algae, are amongst the most widespread, morphologically

distinct and abundant prokaryotes known (Whitton 1992). Because of their ability to withstand freezedrying and rapid growth under favourable conditions (Šabacká and Elster 2006), cyanobacteria are dominant components of many Antarctic, as well as Arctic environments, where they often produce macroscopically visible biomass in the form of mats or crusts (Friedmann 1993). They play an important role as the only primary producers of desert areas of continental Antarctica. Cyanobacterial mats, often found in Arctic and Antarctic fresh water ecosystems, exemplify functionally integrated, self-sustaining, laminated microbial consortial systems. They contain the essential biocomplexity for carrying out lifesustaining processes under the most extreme environmental conditions that still harbour life (Paerl et al. 2000). The ability of some cyanobacteria to fix atmospheric N₂, a physiological trait shared only with some other prokaryotes, confers a distinct advantage over eukaryotic microalgae under Nlimited conditions (Fogg 1982). Production of photoprotective accessory carotenoids and other pigments enables cyanobacterial bloom or mat taxa to persist near the highly illuminated surfaces of either planktonic or benthic systems (Paerl et al. 1983; Garcia-Pichel 1994).

7.4. The McMurdo Dry Valleys

The McMurdo Dry Valleys of Antarctica (MCM), located on the western coast of McMurdo Sound, comprise the largest (~ 4800 km²) ice-free area on the Antarctic continent. They are considered to be the driest and coldest deserts on Earth (Fountain et al. 1999). These ice-free areas of Antarctica display a sharp contrast to most other ecosystems in the world, which exist under far more moderate environmental conditions. The landscape of the MCM is dominated by bare soils, perennially frozen lakes, ephemeral streams and glaciers, all of which are subject to low temperatures, limited precipitation and salt accumulation. Thus, the Dry Valleys represent a region where life approaches its environmental limits. The MCM, unlike most other ecosystems, are dominated by microorganisms, mosses, lichens, and relatively few groups of invertebrates; higher forms of life are virtually nonexistent (Priscu et al. 1998). The McMurdo Dry Valleys have been intensely studied since 1993 as part of the US National Science Foundation (NSF) funded Long Term Ecological Research (LTER). The overall objectives of the McMurdo LTER are to understand the influence of physical and biological constraints on the structure and function of dry valley ecosystems and to understand the modifying effects of material transport on these ecosystems.

The layers of biological complexity in the McMurdo Dry Valleys on both macro- and microorganism scales are relatively few and thus the power with which the functioning of biological processes can be understood is very high. Moreover, the MCM ecosystem is poised near a significant threshold; any small change in climate can lead to major ecosystem responses (Doran et al. 2002). These responses are important because they provide a sensitive barometer of environmental changes and represent a signal with significant global consequences.

Wind (aeolian) dispersal is believed to be the main process redistributing microorganisms and associated organic matter amongst landscape units throughout the MCM (Moorhead et al. 1999). If so, it may overprint diversity caused by the contemporary differential growth and therefore we ought to see a random distribution of cyanobacteria across different MCM habitats, as well as geographically separated localities. Freeze-dried cyanobacterial mats found in stream and lake ice surfaces are especially susceptible to ready airborne transfer (Moorhead and Priscu 1998). Studies of lake-ice microbial assemblages (Priscu et al. 1998; Gordon et al. 2000) and cryoconites, dark coloured sediments on glacier surfaces inhabited by a high variety of microbial assemblages (Christner et al. 2003), have shown that the stream mats might seed these environments with biological material (Priscu and Christner 2004). Aerosolised microorganisms can travel large distances on atmospheric currents, often in a viable, but dormant state (Priscu and Christner 2004). Colonisation success of cyanobacteria depends upon the following factors: survival of propagules during transfer, the physiological and biogeochemical capacities of propagules during transfer and after deposition, as well as the establishment of a reproducing population sustainable over subsequent years (Ellis-Evans and Walton 1990).

The aim of my PhD research is to study spatial distribution of cyanobacteria in an Antarctic polar desert ecosystem in order to test the overreaching hypotheses that the distribution of cyanobacteria reflects the influence of contemporary environmental variation and the legacies of historical events.

To test the null hypothesis that due to prevailing strong katabatic winds cyanobacteria are randomly distributed across the MCM landscape, samples of virtually all potential cyanobacterial habitats from glaciers, lakes, streams and soils of Taylor Valley (the major and most-studied valley in the MCM) were collected together with airborne material from aeolian traps that have been installed throughout the valley. To look at the role of historical contingencies in the distribution of cyanobacteria, samples of similar habitats from other valleys isolated from Taylor Valley by high mountain barriers were collected as well.

In all samples the physical and chemical properties of each environment together with basic stoichiometry (C:N:P ratios) have been evaluated and used as an indicator of the physiological state of the organisms within each habitat. Additionally to the study of the airborne material, acoustic wind erosion flux sensors and data from nine meteorological stations are being used to determine the timing, direction and magnitude of particle movement throughout the valleys and the role of wind as a dispersal agent of cyanobacterial assemblages throughout the MCM. Cyanobacterial diversity is being analysed in collected samples using several different scales of taxonomical resolution ranging from phenotypical fingerprinting to the use of height resolution genetic markers.

In the future, data obtained with sequences of cyanobacteria from other parts of Antarctica, the Arctic, as well as other regions, will address the question of whether cyanobacterial taxa from the MCM are unique for the region or more widely distributed. Further, the discovered distribution patterns of cyanobacteria across the MCM will be compared with the results of ongoing research on distribution patterns and dispersal abilities of nematodes, small worm-shaped invertebrates, inhabiting various MCM habitats (Nkem et al. 2006). Comparison of spatial scale distribution patterns of cyanobacteria and nematodes within a similar system (MCM) will help us understand if the factors that regulate the diversity of microorganisms (cyanobacteria) are fundamentally different from that of macroorganisms - nematodes (Martiny et al. 2006).

7.5. Conclusion

The patterns and mechanisms of microbial distribution is one of the most important questions in modern ecological research. It can offer valuable clues to relative influence of dispersal limitation, heterogeneity, and environmental and evolutionary change in shaping the structure of ecological communities. The goal of this study is to test the overreaching hypotheses that the spatial distribution of microorganisms is not random as often believed but rather reflects the influence of contemporary environmental variation and the legacies of historical events. The low diversity ecosystems of an Antarctic desert will allow us to answer this question in a unique way since the layers of biological complexity are relatively few there and thus the power with which the functioning of biological processes can be understood is very high. The need for this information has been heightened by the increased level of human activities in the region that has been subjected to unpredicted rates of changes.

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8. Political Discourse and Consensus-Decision-making amongst the Deh Cho Dene: First Nation Politics in the Northwest Territories, Canada

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8.1. Introduction

This paper considers how political actors and their rhetoric are received in Deh Cho Dene political society. The Deh Cho Dene are settled in ten communities across the Northwest Territories in the circumpolar Canadian North. This area is abundant in non-renewable resources such as oil, gas and precious minerals and contains the Mackenzie Valley watershed. The Deh Cho Dene are one of the North American indigenous groups that comprise the Athabaskan-speaking family of peoples. The population is currently 3500 in an area of 70,000 square kilometres. There are three official languages in the region, which are indigenous Slavey, French and English. Slavey is the first official language in the region, which is used alongside English in political meetings and negotiation sessions.

In this paper, I explore how some opportunities are variously open or restricted in Deh Cho social and political development. These political discussions are examined to show how decisions are evaluated and processed by individuals and the collective as a whole. Attention is also given to cultural perceptions, exploring how they shape the political viewpoints that constrain discussion and political resources. Deh Cho Dene consensus decision-making, which includes the integration of Euro-Canadian political procedures and concepts, will be the focus to examine how a cultural style of discussion and the act of decision-making affects political outcomes. In this context I examine how Deh Cho Dene political actors shape the political environment by use of language. In this case, language is presented as a product that communicates the intention of implicit rules.

In this paper, I take excerpts from my ethnographic field notes to explore Deh Cho Dene political practices and to identify how language may influence important decisions. The field work was carried out over a period of several years (1999-2002) in the ten communities of the Deh Cho region. The research goals focused on an examination of the different forms of cultural categories and notions of ethnic identity that are used in Deh Cho Dene politics to influence political change. This required a gentle ethnographic approach and largely qualitative methods such as participant observation, ethnographic interviews and questionnaires (Mullings-Brown Moore 2005). This paper explores how Deh Cho Dene use political language to resolve political differences to create consensus among themselves. Power has many definitions, but for the purpose of this discussion it is the catalyst that employs political resources, which is identified as the actor's knowledge and capabilities. In this situation, power is associated with circumstances in which an actor's resources are used for political negotiation. The use of resources is linked to an approach to political timing and environment. Weber's (1978) and Goehler's (2000) treatments of power is used to examine the social interactions amongst political actors to gain insight into how they sustain or effect political change. Basso's (1970) and Tedlock's (1983) works are used to explore how extra-linguistic gestures affect the messages that speakers aim to present and the impact on the political process. This gives us an idea of how actors tailor their language to push their resources in

particular situations and how they limit their resources by understanding the constraints that situations contain.

8.2. Power and the Decision-Making Process

The spoken word is important in the Deh Cho Dene community and is treated seriously. In Deh Cho Dene society the power of political language is constructed from the principles of customary values, which are the moral values taken from Deh Cho Dene law: the traditional code of conduct taken from the ancient legend of Yamoria and cultural practices in which honesty and sharing have an important role. According to a Canadian Royal Commission Report (1996: 115), in most First Nation (indigenous) communities, government and political life have always been closely connected to the family, the land and a strong sense of spirituality. First Nations generally view government as an integral part of communal practices that make up a way of life. In the book Denendeh: A Dene Celebration, Mel Watkins explains that "the leaders have been given special responsibilities by the Dene to lead, not to assume dictatorial powers. It is the responsibility of leaders to have dialogue and debate issues, concerns, and laws with the people before formal decisions are made. It is also the responsibility for our leaders of the Dene to take positions on issues and concerns important to our people. Leaders must speak for themselves unless the people have a collective agreement on any given subject" (Dene Nation 1984: 15). The political leaders' obligation to the public in Deh Cho Dene politics illustrates the central role that customary values have in institutionalised government politics. Erasmus draws attention to the importance of representing the people's interests and the collective agreements that have taken place among community members. Erasmus' comment on the customary procedures in

Deh Cho Dene politics clarifies the political relationships that are grounded in Deh Cho Dene culture and values. The concept of consensus decision-making as used in this paper was outlined by Dennis Nelner (the former Grand Chief's assistant) and Herb Norwegian (the former assistant negotiator), according to whom it is employed through all sections of society, being accepted as an authoritative practice by some members of society. This is different to other indigenous political decision-making practices, such as those of the Finnish Saami who conduct elections to the Saami parliament every four years to choose their political representatives (Sámediggi 2008). The Deh Cho Dene elder's role of reinforcing cultural practices and voicing knowledge about the process is explained in the interview with Dennis Nelner and Herb Norwegian below.

It was mid-morning in May 2001 at the beginning of the week at the Deh Cho First Nation regional office. There was a busy atmosphere and Herb Norwegian and Dennis Nelner were talking about the implementation of a Deh Cho Dene regional government. They talked about the future for tax and investment for the Deh Cho community; I pulled up a chair and began to listen. They smiled at me and teased me about my constant questions and there was a lot of laughter amongst the three of us. I then asked them the question again that I was tired of asking because, although I felt that I had worked out the stages of negotiation, their answer was needed to clarify my conclusions. The Deh Cho Dene political decision-making process is traditional consensus decision-making, which involves the agreement of all members of the community. In the political arena the Deh Cho Dene audience's opinions are taken into consideration in addition to the vote of the political leaders. The political meetings are extremely important in the formation of political strategies and they are also significant for the negotiation process, which takes place with the

Federal Government and Government of the Northwest Territories. The most important meeting takes place once a year in Kakisa, where elections and key political decisions are made. Similarities can be seen with the Saami in the Nordic states, where key decisions are made in their respective Saami parliaments. This time was different as Herb and Dennis agreed to answer my question. How does consensus decision-making function as part of the political process?

Herb Norwegian: A decision is not complete until the elders consent.

Dennis Nelner: A line of respect that comes with age and experience. Robert's Rules of Order⁴⁶ is not used to the full; its basic form is used as the chairman courtesy, stuff like corporate business methods; Robert's Rule of Order is used. You've got to strike a balance.

HN: Political stuff is reached through consensus. At council meetings and public meetings, everybody has a chance to say something about a certain topic; you have to voice your opinions. Traditional Dene decision-making is based on spiritual, political, economic and social elements. To make a full decision is when people come together; they aren't forced together, they figure out the time when it is appropriate. The full protocol is feeding the fire and asking for guidance. The people we are affecting on the decision to be made present and the topic to be presented to family and friends. The topic is discussed and the action plan is put together. After the decisions have been made, there is the closing prayer. If it is a major decision, there is a feast and drum dance and the elders speak at these occasions. The decision is a long and drawn out process. A total difference to a notice on the board at the Northern⁴⁷,

two-hour meetings, a vote and decision and disperse home.

This compressed description of the formal institutionalised decision-making processes demonstrates the complexity of Deh Cho Dene politics. It draws attention to the use of consensus practices, which permeates all levels of the community. The notion of consensus consists of the common values and principles of the community, which is associated with Deh Cho Dene political identity. Political identity is maintained through the symbolic fulfilment of customary practices. Goehler (2000: 48) discusses the common space of action in which intransitive power enables individuals to act on the basis of the same common conception and principles of order. In this instance, intransitive power refers to the continuance of values that are prized by the community, and the restrictions of values that are not. Elder Leo Norwegian echoes this in his description of the procedures in consensus decision-making. He reveals how the uniqueness of Deh Cho Dene decision-making revolves around the common goal of the negotiators: "This involves many days of discussion, which includes people sleeping on the problem until it is solved." His nephew Herb Norwegian, the former assistant negotiator, endorses this in his reference to people choosing to discuss issues that justify consensus decisions: "To make a full decision is when people come together; they aren't forced together, they figure out the time when it is appropriate". Both examples give some insight into the challenges of achieving a shared agreement. They also show how customary political practices are used as a source of cultural continuation and reinforcement. This reflects how social relationships are established in

⁴⁶ Herb Norwegian, Dennis Nelner, Leo Norwegian are informants from research conducted in the Deh Cho territory, Canada, in 2002.

⁴⁷ Henry Martyn Robert created Robert's Rules of Order in 1876. It is a set of guidelines for official meetings

and parliamentary procedure. In the Deh Cho territory this rule is used in conjunction with traditional Deh Cho Dene political practices.

part on the basis of cultural identity and powerful collective process, and illustrates the extent to which cultural political identity accentuates the interests of the negotiating group. However, the quality in political practice to increase self-expression and structure in Deh Cho Dene politics includes the integration of other cultural political practices.

In my interview Herb Norwegian and Dennis Nelner identify the advantages of integrating Euro-Canadian political practices in the decision-making process. For example, Robert's Rules of Order is used to structure Deh Cho Dene meetings and to bridge some cultural gaps that divide Euro-Canadian and Deh Cho Dene negotiation. Yet, Herb Norwegian and Dennis Nelner took care to stress the thoughtfulness and impact of Deh Cho Dene consensus decision-making when compared with Euro-Canadian styles. These features of the political process mask some of the complexities of Deh Cho Dene decision-making. I learned of these complexities while in the field, and understood that the discourse and decision-making experienced in the political assembly were less apparent to outside political actors. For example, some members' decisions were influenced by their loyalty to other leaders, and often arguments were based on their strategies to sway the discussion before consensus was agreed upon. I was sensitive to the fact that, to a large degree, customary discourse practices and underlying internal political relationships were frequently left in the background. Some of the varied interests that arose in consensus debates fell dormant when the final decision was reached but would resurface again at later meetings.

It seemed that *the principle of consensus decisionmaking* is an important part of Deh Cho Dene political practices, which involve community members discussing and agreeing on issues that involve them. The practice of consensus decisionmaking draws on a range of knowledge and past experiences from community members and leaders. The emphasis placed on Deh Cho Dene collective representation illustrated the extent to which consensus discussions are a significant part of the political process. The community's role in the political assembly was presented as one of guidance, through verbal dissatisfaction or approval, when necessary. Implicit understanding and the collective voice are used to express knowledge, beliefs and principles and, in this context, power belongs to the Deh Cho Dene collective group. The speech act is valid when political interactions have occurred through a positive or negative response from the participants. In this instance, communicative interaction is fundamental in influencing social relationships and the justification to implement meaningful situations. This is particularly important in the use of political resources by actors to shift the balance of power in the political forum.

8.3. The Mobility of Power in Political Relationships

In Constitution and Use of Power, Goehler (2000) describes transitive power as domination over others, and intransitive power as collective political action. Goehler portrays transitive power as a relationship in which individual A has power over individual B. In this situation, individual B's actions are restricted in favour of individual A's; therefore individual B modifies his behaviour to suit the desires of individual A. This does not render individual B powerless, as counter-power must exist in order for the dominant power to be present. The relationship between power and counter-power takes a reciprocal form, in which both sides exercise relative power. One example of this, Goehler suggests, is the separation of powers, which is established in the Canadian Constitution. In his description of intransitive power he provides a different perspective, which refers to the will of the community or the power of the community's actions.

Intransitive power is the social and political strength of a social unit, which exists through the common practices of the actors. This kind of power requires organisation, when relationships have developed over extended periods of time, in some cases from one generation to the next. This establishes a framework of social interaction, which is often institutionalised and maintained through the authority of shared values and principles of order. In Deh Cho Dene ideology, 'grassroots' politics, also known as the collective power of the community, traditionally has the final decision over community leaders. This practice is the basis of the political meeting and is most visible in the process of consensus decision-making. This is when the community is consulted and issues are fully discussed before the final agreement is made, which is often based upon the community members wishes. The Deh Cho Process or political strategy is known as an 'open process' in which community members have open access to information. The practice of an open process is used in the political meetings, where community members are asked to cast a vote by a show of hands before the decision is put on the table for political actors to make the final decision. It seemed that the community powers to overrule decisions were particularly important when ethical decisions had taken priority over standard political decisions.

In Deh Cho Dene politics, customary practices are used to reflect the political concerns of the community, which is viewed as traditional power. In *Economy and Society*, Weber's (1978 [1922]) writings classify three types of legitimate power; legal, traditional and charismatic. Legal authority is based on beliefs in the legality of enacted rules and the rights of those elevated to authority under them. Traditional authority rests on an established belief in the sanctity of immemorial traditions and the legitimacy of those exercising authority under them (Hechter and Horne, 2003). Charismatic authority is

established on devotion to the sacredness, valour and exceptional characteristics of an individual and on the normative patterns revealed by an individual (Weber 1978 [1922]: 215). For Weber the validity of traditional authority was based on the belief in the sacredness of inherited traditions. This quality gives traditional authority the claim to exercise power on a rationale that relates to the actors' beliefs or reasons for their existence, which is demonstrated in the actors' role in society. Weber's theory is important, as he is concerned with carrying out one's will in a social relationship despite resistance. This is particularly significant in analysing the use of the concept 'tradition' in Deh Cho Dene politics. However, it is vital to emphasise the differences, which are based on consensus and the rationality of traditional values.

Weber and Goehler are important guides to understanding Deh Cho Dene relationships and social interactions in the political forum. Weber's theory of traditional authority makes it possible to explore the community's relationships and social interactions with the elders in particular the respect that the elders receive from the community and the community's expectations of the elders' authority in the political process. The elders are important figures in Deh Cho Dene politics and consist of men and women over fifty years old who are known to have led an honest and productive life, which gives them this status. The majority of elders are seen to have wisdom that has occurred following a high-quality and seasoned life experience, in addition to having an excellent understanding of and relationship with the land. The extent of understanding of the land in addition to political experience varies amongst the elders and affects the status given to their importance as elders. The elder's role involves consultation, in which political issues and strategies are discussed with political actors and members of the community. Although uncommon, their role as councillor is sometimes extended to giving advice on personal

issues. Although the elders' authority is less than observed in Western concepts of traditional authority, their status is bound by the rules of Deh Cho Dene customs. Goehler's theory of transitive power can be used to analyse an individual's challenge to authority in the political arena; in particular, how they use political resources to manoeuvre power to benefit their own political agendas. Conversely, his theory of intransitive power enables us to reflect on Deh Cho Dene consensus decision-making and how power can be shifted in the political forum through the mobilisation of the collective group.

The concepts of transitive and intransitive power relationships are important for understanding authority. Intransitive power manifests itself in consensus practices, in which authority is maintained through the power of the community. Transitive power is seen in the maintenance of authority through the achievements of individual interests and political struggles, which establish themselves in political society. Although Weber's theory of traditional authority is inappropriate for analysing the structure of democratic society, it has advantages in exploring relationships in smaller communities. A particular area that can be analysed is the relationship between community leaders and the political public. Traditional authority as understood by Weber is based on the authority of individuals who are granted the divine right to exercise power (Weber 1978 [1922]). There is a difference between this perspective and Deh Cho Dene culture, which is based on equality and relative social unity, in which authority is traditionally based on wisdom, life experience and good moral behaviour. In Deh Cho Dene culture authority is granted to people who are recognised as having good principles, which is reflected in the quality of their lifestyle as opposed to obtaining authority through birth rites, gender division or bureaucratic authority. In his writing on traditional authority, Weber focuses on the

dependency relationship between the rulers and subordinates. However, as the ideology of the rule of law is central in all areas of democratic society, the political agenda for community ethical equality and utilitarian experiences are the points of interest. Furthermore, it is important to note that the democratic process is affected by various factors such as media, economy, as well as home and foreign affairs. However, in this case, Weber's theory of traditional authority is used to understand how established customary practice rests on the sacredness of traditional principles in the community.

In the act of discursive interaction and political decision-making, speakers make claims and the audience responds to them negatively or positively. Acts of political discourse and decision-making are based on social interaction and relationships, where communication is shared through reasoning and mutual ideas in order to reach a legitimate agreement. Goehler's transitive power discusses the subordination of one person's will to another. The concept demonstrates how power may be implemented directly through behaviour and discourse in both institutionalised and noninstitutionalised settings. Power may be used to control and regulate approaches to political practices, which are reflected in political discourse. Goehler's transitive power can be representative of the continuity of social and cultural patterns of political behaviour that result in expected outcomes, which are familiar to the political actors. Political representation through reasoning, on the other hand, can be illustrated through intellectual contributions to the political process. In this instance the standardisation of political practices is challenged and new ideas may be formed.

Power may be implemented indirectly when subordinate groups expect acts of power and behave accordingly in response. Both Goehler and Weber assume that discourse and social interaction share a set of common beliefs that is linked to the implementation of power. Weber argues that power is pliable where the relationship appeals to tradition. In this situation political struggles are found within a framework of subordination. Authority rests on the divine right to rule, which shapes the basic political principles. This is important in reinforcing group identity and stratification. Similarities are found in Goehler's transitive theory, which is concerned with the subordination of one person's will to another through social interaction. However, intransitive power provides contrasts, with its focus on consensus through community accord and political success. In this context social unity is experienced through the symbolic representation of shared values. This commonality creates a political identity based on political language, customary practice, values and principles that emerge as a common point of reference. Both Weber's and Goehler's theories provide frameworks that describe how key actors are able to significantly impact the political process through social influence. They also provide some insight into how social relationships play an active role in interpreting and affecting the decisionmaking process.

8.4. Multi-layered Language and Deh Cho Dene Politics

During my fieldwork I learned that language barriers sometimes emerged between the Deh Cho Dene generations in the political community. The Deh Cho Dene's first language is Slavey, also commonly known as *Dene tha*', a language spoken by about 2500 Athapaskan aboriginal people in northern Canada. The Deh Cho Dene also speak French as the second most common language used by the older generation (over 50 years old) and English as the third language, which is the language customary used for politics, business and commerce and by the younger generation (under 50 years old). The ability to speak Slavey in addition to the English language is very important in politics in the way that political notions are articulated in political discussions. Cruikshank (1998) draws attention to this in her writing on the Tlingit First Nation in the Yukon Territory. She explains that, in addition to authorising territorial divisions, language is sometimes invoked to draw attention to generational boundaries. One distinction, made with increasing frequency, is between those who are said to 'have their language' and those who do not (Cruikshank 1998: 14). She describes how government-driven programmes and education policies were designed to suppress indigenous languages and to replace them with the English language. Similarly, some elders in the Deh Cho Dene community who speak English as their first language as a result of government emersion programmes in residential schools are considered to have been deprived of their language and culture. The impact of their knowledge is revealed through oral narratives in the political forum, as their experiences of education policies enrich the political process. Other language distinctions are found amongst the younger generation, who use English as their common language of discussion in the social and political community. Significantly, the skills of bilingual individuals who are fluent in both English and Slavey are respected and acknowledged in the community, particularly those of leaders who are considered to be a political asset.

In my experience of attending political meetings it seemed that the use of Deh Cho Dene political language was complex, as the same rhetoric could have different meanings for different listeners. Tedlock (1983) explains how ordinary words can be changed by patterns of stress, for example pauses, stops, pitches and tones. He argues how the nature of language can be given more authority with the use or non-use of stress in speech. This indicates that the interpretation of language is concerned with the speakers' intentions as well as referring to the listener's custody of and relationship with the discourse. Tedlock (1983) explains how words can change according to the place and time, audience, and what the speaker does, what he already knows and what he may have been asked (Tedlock 1983: 236). For this discussion, it is essential to recognise that the political venue is important for political actors as they can anticipate behaviour and contribute to the political process. I understood that the relationships associated with the political assembly are complex underneath the surface. In the political environment various loyalties and identities are actively implemented in addition to sustaining the political mainstream. Political identity is formed through difference, where actors judge political discourse to reinforce or transform their concept of political particularity. In this instance, I shall argue that language represents the reasons for meaningful and social existence. In my analysis, I will illustrate how the actors' authority, successful public speaking and judgements create the uniqueness of the political process. In this context, knowledge and political discourse is used to achieve power. Thus, the impact of language corresponds to the interests of the speakers' aspirations.

Luhmann (1979) describes power as a symbolically generalised medium of communication. He also argues that the power of communication accompanied by symbolism affects the credibility and performance of the communicators. In this instance, I recognise symbolism as the underlying expression in language, which determines the type of communication. Basso's (1970) exploration of the acts of silence and why they are encouraged and considered appropriate in Apache political society gives insight into the production of culturally acceptable behaviour. Although silence may have the same function in many different societies, it has different meanings according to cultural practices. I understood that in the Deh Cho Dene political community, acts of silence from key political actors

are actively interpreted and have a significant impact on the audience and the decision-making process. In addition, while key actors had an important impact in the political process, the elders' narratives and interactions with the group were even more effective. Significantly, the elders had the power to influence key actors and their acts of silence.

Silence was also culturally significant as an indicator of important moments in social and political events. For instance silence was an indicator that Christian prayers would take place at the beginning and end of every meeting. This was considered an important moment of the political day. Basso's (1970) work on acts of silence suggests how silence might sometimes command more power than the spoken word in the political forum, in particular, how its function is determined by other people and interpreted in the social context. For example, silence from all members of the political forum after a powerful speech has the capacity to change the political direction. Hymes (1972) describes the communicative event as a situation where the individual understands the various communications, codes, channels and expressions to use, in addition to people and the types of situational circumstance. In the present context, the power of silence is dependent on how the actors' extralinguistic features (also known as facial expressions and body language) can shape conditions for change. Hymes' ethnography of communication emphasises how knowledge and cultural behaviour play a powerful role in effecting change or maintaining the status quo. For instance, silence can be used as a strategy of power to enable stronger actors to be effective in politics, and render others less effective. This course of action opens opportunities for some political actors, and constrains others. This function highlights the individual's awareness of power relations and the subconscious social constructions of the political relationship.

8.5. Language and Decision-Making

In political assemblies the Deh Cho Dene political community often uses elders' narratives and speeches for guidance. In the sessions I attended, the political actors considered the elders' words carefully and the decisions were not finalised until the elders had reviewed them. The Deh Cho Dene decision-making process is based on consensus customary practices. Further below, examples of extended political discourse are presented to illustrate my argument that Deh Cho Dene consensus decision-making is not based purely on unanimous decisions. Furthermore, I shall suggest that the notion of consensus decision-making is used in political discussions as protection against antagonism in order to reach an amicable final agreement. In the decision-making process, power is defined as the actor's ability to influence and to achieve a political goal. According to Arts (2000), goal achievement may be positive or negative. In the case of positive goal achievement, actor A, whose influence we want to assess, accomplishes something. By negative goal achievement we mean the prevention of something (Arts 2000: 136). Goehler's transitive power describes how authority is maintained through political struggles and individual interest. Hubert (1989) describes how resources are important in influencing the decision-making process.⁴⁸ It is important to highlight that his analysis does not accommodate the complex decision-making experienced in negotiation. However, from the literature, it is possible to appreciate that extralinguistic behaviour is a powerful resource in the political forum. The uses of expression, tones and silence are fundamental elements that are capable of affecting the political process. This demonstrates how language is interpreted on many different levels, in addition to the multiple layers that can influence political change.

Goehler (2000) argues that consensus is a tool used to prevent the representation of some interests by exercising the power of non decision-making. This illustrates how consensus style decision-making can be employed to obstruct or exclude decisions being made on issues that are important to some political actors. He suggests that decision-making consists of six steps: 1) The perception of an issue over which a choice has to be made; 2) The identification of a number of possibilities with regard to the issue; 3) The admission of the issue and attendant possibilities to the decision-making process; 4) The comparative assessment of these options; 5) The adoption of one of the possibilities as the one chosen; 6) The implementation of that choice. He explains that each stage is important because each has the potential to change the final outcome. Goehler's analysis is unlike Hubert's who measures the success of the decision-making process by the actor's willingness to invest his resources.

Goehler's analysis can be applied to decisions that end in compromise and sub-decisions, when more than one actor is involved in a multi-layered decision-making process. Weber's (1978 [1922]) theory of traditional authority addresses the role of customary practices in the decision-making process. In contrast with Hubert (1989) and Goehler (2000), Weber defines power as intention, which is based on the will for realisation, even against the resistance of others. In this case, power is seen as an unambiguous concept of domination, which defines the foundations on which power rests (Clegg 1989: 73). While it is important to acknowledge that both Deh Cho Dene culture and Euro-Canadian culture

⁴⁸ He describes a simplistic form of decision-making in which actor A causes actor B to agree with his achievements. Actor A's chances are increased if: A really intended to change B (intention), A has access to B (access), the time between A's attempt and B's change is short (time lag), B's policy change is in A's interest (goal achievement) and B remained the same individual during the decision-making process (personnel).

are contaminated with other cultural influences, both have explicit political practices that are peculiar to their culture. Weber (1978) focuses on the structure of dominance, which is concerned with the authorisation of action because of its rule-guided nature. Although this cannot be strictly applied to the use of customary practices in the political assembly, I am inclined to argue that traditional practices are elevated in Deh Cho Dene political society. It seemed that the concept of consensus decision-making was employed through all sections of society and accepted as an authoritative practice by some members of society. Equally, I understood that the role of the elders in the decision-making process is to reinforce cultural practices and voice their knowledge about the political process to the political experience. The role of the elders is explained in the interview with Dennis Nelner and Herb Norwegian at the beginning of this paper.

The accomplishment of power does not allow political actors to act of their own free will. As discussed earlier, power may be acquired through the use of resources to affect political interaction and relationships. Goehler's (2000) model of transitive power explores how resource can be used in internal political struggles to achieve individual interests. Similarly, Weber (1978 [1922]) explains how traditional authority is largely undisputed and given opportunities to implement power in the line of duty. In some Deh Cho Dene discussions the differences between the generations are utilised as a political resource to constrain some members in the political assembly. In this instance cultural differences are used as the resource to gain some influence over the elders' authority. Elder Norwegian expresses some noticeable changes in various Deh Cho Dene political leaders' discussion:

As elders and young leaders we're both looking at the same thing, but at different angles. You know, every time we get to a point we try to say something, they [younger leaders] jump to white society more than anything else. And they don't seem to grip into what it is. I don't think in their mind they really want to know, when they're getting into a point where they got problems. Then, all the time how do they do it? And then from there they go again eh. In the old days you're born with it [customary practices]; from the time you're born until you become a man, you hear that every day, everybody knows the system; everything is working like a clock.

The interview statement shows how some elders perceive their role as the strength and support in Deh Cho Dene politics as being undermined by some political leaders. Elder Norwegian describes the various leaders' lack of understanding of customary practices and their preference for Euro-Canadian styles of discussion and problem solving. An analysis of this interview points to some of the constraints and opportunities in acquiring power. Elder Norwegian's discussion suggests that these leaders often favour a multicultural approach over the traditional one. As a result, their awareness of Euro-Canadian practices influences their political discussion and the decision-making process. The use of a multicultural approach in Deh Cho Dene politics opens opportunities for some leaders to restrict and channel discussions for their own political advantage. However, even though the traditional role of the elders is slightly destabilised, Elder Norwegian reinforces the elders' authority through historical recollection, which underpins the elders' power in Deh Cho Dene politics: "In the old days you're born with it; from the time you're born until you become a man, you hear that every day, everybody knows the system; everything is working like a clock". The interview demonstrates how Elder Norwegian uses historical narrative to entrench the value of customary practices and to emphasise the cultural elements in Deh Cho Dene politics. This illustrates the extent of which the elders' authority is upheld by others' perceptions of their knowledge and

wisdom. This is supported earlier in Herb Norwegian and Dennis Nelner's interview on consensus decision-making, where they state that decisions are not complete without the elders' consent.

In relation to acquired power in Deh Cho Dene politics, the knowledge and wisdom of the elders is an important resource that has actively established itself as the foundation of common principles and values. However, although the elders retain the respect of most leaders, the influences of the dominant polity have prompted new attitudes and demands from the various leaders. One example is the political pressure for industrial employment, education and training to create an effective workforce in the community. I understood these types of conscious demands for the communities to be a consequence of the multicultural experience from Euro-Canadian society.

8.6. Conclusion

The Deh Cho Dene leaders' and elders' implementation of customary practices in Deh Cho Dene politics have exposed exchanges and reaction that contribute to the political process. At the centre of the interchanges is power, which is discovered to employ political actors' resources to enable them to promote their political agendas. An important feature of this political process is the emphasis on cultural identity and its value in Deh Cho Dene politics. The paper gives insight into the social relationships and conditions of political meetings, in a focused discussion on discourse and extra-linguistic communication and how it influences political decisions and social relations. The distinction between Deh Cho Dene and Euro-Canadian political practices was examined to demonstrate the integration of two cultures in the political process. This demonstrated the political values that individuals had for political practices and the

political discourse that implemented these functions. In the context of the political process, collective interest and individual power struggles illustrate the value of power as a political resource. Silence is a powerful political method of changing the course of the political process. The analysis of these extralinguistic gestures such as silence and the intonation of selected words provided some insight into how discourse is affected in Deh Cho Dene politics. This enables an understanding of how customary notions and practices determine the varied political discourse of political actors. This emphasises the importance of cultural understanding as part of the process of recreating the social environment. This paper explored the Deh Cho Dene political language, which gives us a deeper understanding of the Deh Cho Dene political process.

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9. The Socio-Economic Development of Murmansk Oblast: Tendencies, Problems and Prospects

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9.1. Introduction

This article is based on the results of a study carried out by the authors while completing research contracted between the regional government and the Kola Science Centre. The research focussed on formulating a Draft Strategy for the socio-economic development of Murmansk Oblast (region or province) for the period up to 2025 (Draft Strategy 2009). An analysis of the tendencies and main problems of the region's socio-economic development was an important part of this work, as it provided a basis for shaping the long-term goals for regional development. The time frame for the situation analysis was the period 2000–2007, a time when the negative signs of the current world financial crisis were not yet observed in Russia.

The theoretical basis for the Draft Strategy was formed by a set of concepts and was greatly shaped by those of sustainable development, regional competitiveness and, partly, by the concept of soft security with the focus mainly on the aspect of risks. Thus, the situation analysis referred to these concepts as well. All statistical data used in this article are from the official year books of statistics of the Federal Service of State Statistics of Russia (Rosstat) and its territorial division in Murmansk Oblast (Murmanskstat).

9.2. Main Economic Sectors of the Region: situation and trends

The economic bases for the development of Murmansk region traditionally consisted of industrial production, including such main branches as the mining-metallurgical and mining-chemical industries, as well as several processing industries. During the period of 2000–2007 the real growth in different branches of the sector was quite modest and averaged 13.4 %, including that in the mining industry (9.8 %) and in the processing industry (22.3 %).

In spite of the fact that real growth rates of industrial production in the region were lower than the Russian average (see Figure 1), leading industrial enterprises of the region significantly increased their profits. In 2007 the total sum of the balanced profits exceeded the level of 2000 by more than three times (from RUR 12 to 40.7 billion⁴⁹). This was achieved mainly because of the favourable situation in world prices for exported goods and especially for nonferrous metals, the total share of which in exports from the region was approximately 60%. A favourable financial situation in the main industries, in turn, has provided stability in revenues for the regional consolidated budget and financing of social programmes in the region.



Figure 9.1. Dynamics of real value of industrial production, growth as % of 2000 level

⁴⁹ That is the equivalent of \$1.6 billion, using the average 2007 exchange rate of RUR 25.55 = USD 1.
95

One of the key economic sectors of the region is the electric energy sector. It consists of 17 hydro, 2 thermal and 1 nuclear power stations as well as their network infrastructure. The potential annual production of electricity of all the region's power stations exceeds 20 billion kWh. They fulfil demands for electric power in the Murmansk region and also meet about 40% of the demand in the Republic of Karelia. Part of this electric energy production is exported to Finland and Norway. However, about 25% of the regional energy complex capacities remain unused because of the lack of development of the network infrastructure for distribution of electric power both for export and in the region.

In the transport sector the greatest volume of cargo transportation is carried by the railways (more than 60% of the total amount moved by all means of transport). In 2007 it reached 27.9 million tonnes, which is an increase of 12.7% since 2000. The volume of transportation by sea has grown noticeably in this period reaching 7.7 million tonnes (134.3% of the 2000 level). In contrast, motor transport substantially decreased in volume. It dropped from 12 million tonnes in 2007 to 8.5 million tonnes in 2007. Passenger transportation considerably reduced for all means of transport except aviation. The reduction in the total number of passengers since 2000 was almost three-fold, whereas the number of air passengers doubled.

The fishing industry is another important sector of the economic specialisation of the region that has not yet reached a stable position in terms of fishing volumes and enterprise finances, despite some positive changes in fishery legislation. The total volume of fish caught (together with other sea products) amounted to 550 thousand tonnes in 2007, which was a decrease of 9% since 2000. At the same time the physical volume of commodity fish food products grew by 21.3% (from 418 to 507 thousand tonnes). Since 2005 agricultural production in the region, after a long period of depression, is characterised by growth. For the last three years the average annual growth rate in agriculture exceeded 7%. Improvements in agricultural production were promoted through supporting measures by the federal and regional governments.

Besides the traditional economic sectors and industries there are noticeable signs of development in relatively new economic activities in the region. Namely, different forms of small businesses (amongst these are new private firms providing services), the tourist industry and organisations in the regional innovation system are especially important from the point of view of diversification of the regional economy and minimisation of unemployment. At the same time, despite the efforts of the regional government to support such new sectors of the economy, their rate of development has been relatively small when taking into account the existing potential and modern requirements, for example, in the neighbouring region of the Nordic countries.

9.3. Living Standards and Quality of Life: major tendencies

Despite certain difficulties in overcoming negative tendencies inherited from the dramatic period of the 1990s, since the 2000s the Murmansk region demonstrated mainly positive dynamics in living standards and life quality of its population.

In 2000–2007 real per capita incomes of the population have increased by 1.5 times (in the Russian Federation by 2.1 times). Since 2005, after the stagnation in growth of incomes observed in 2000–2004, a noticeable rise in real per capita incomes took place. Income growth rates were about 10% annually and almost equal to growth rates in Russia as a whole (see Figure 2).



Figure 9.2. Dynamics of the real per capita incomes of the population, growth as % of 2000 level

Per capita income in 2007 was RUR 15,159 a month, which was 21% above the national average. In 2007 the regional subsistence minimum was RUR 5676 per month. The average income per capita was 2.7 times higher than the subsistence minimum. The average monthly real wages increased for 2000-2007 by 1.9 times (in the RF – by 2.5 times). In 2007 the average monthly nominal wage was RUR 18,581, which was 37% higher than the Russian average. The average size of pensions in 2007 had reached RUR 5062, which was 103% of the regional subsistence minimum for pensioners. However, purchasing powers during the period 2000-2007 remained below the country's average, due to the costs of living in the region, which was 1.5 times higher than those in the country overall.

Later, the problem of poverty of the population became less acute. In 2007 the regional target programme 'Overcoming poverty in Murmansk *Oblast*' for 2007–2010 began as a continuation of the regional 'Plan of measures to combat poverty' that was in operation in 2006–2008. The share of the population with incomes under the subsistence minimum⁵⁰ during the period of 2000–2007 decreased almost by 40% (from 24.9% in 2000 to 15.6% in 2007). According to sociological surveys⁵¹, the number of people considering themselves as poor decreased from 51% in 2002 to 37% in 2007. The regional government secures the regular increase in the size of the minimal wage, which is established by tripartite annual agreements between the government of the region, the Regional Council of Trade Unions and the Union of Industrialists.

The tendency to improve the conditions of the labour market continued during the entire period analysed. Indicators of general and officially registered records of unemployment continued to decrease. In comparison with 2000 the level of general unemployment decreased twice and in 2007 it was 6.5%. This is slightly higher than the national average and is below the critical value of 8–10% accepted globally for indicating socio-economic progress from a sustainable development point of view. At the end of 2007 the number of people employed in the regional economy was 444,000 (99.6% of the 2000 level).

The educational level of the population, which is one of the main parameters of the quality of human potential, is high. The total share of the population having higher⁵², incomplete higher and secondary vocational education⁵³ according to the census of 2002 exceeds the average level in Russia (48% compared to 46.2% across the RF). The share of the population having a higher education is 15.5%, almost reaching the national average (16%). It very much corresponds to the levels achieved in some countries of Northern Europe (Murmansk County and Northern Norway 2008).

⁵⁰ An official indicator of the poverty level in the Russian Federation.

⁵¹ Sociological data for the Draft Strategy were received from yearly surveys carried out by the IES in the Murmansk region since 2002. For more information see footnote 8.

⁵² 5-6 years of education at the university or other higher educational institution.

⁵³ 3-4 years of education in professional colleges.97

Provision of social infrastructure in the region – we refer to physical objects of social infrastructure like schools, hospitals and other objects for social services – is at a good level. The majority of municipalities of the Murmansk region are provided with a basic set of social infrastructure objects at levels that correspond to those achieved in less remote regions of Russia. An exception is the situation in rural settlements where about 8% of the population of the region live and where social infrastructure coverage is usually worse than that of urban settlements.

In numerous ratings of the Russian regions in terms of living standards and the quality of life, the Murmansk region is usually placed in the second quartile (in the 2nd group amongst the total four groups of regions) and normally is referred to as a member of the 'median group of regions'⁵⁴. For example, according to the rating of the Institute of Independent Social Policy (Moscow) by the Human Development Index, in 2004 the Murmansk region held 28th place out of 79, having moved up from 42nd place in 2002 (Human Development 2007).

In terms of average life expectancy (one of the main indicators of life quality), the region has been lagging behind the Russian average since 2003. In 2007 the average life expectancy was 66.7 years (in the Russian Federation – 67.5). Since 2003 life expectancy in the region started to grow, however, it is still very low by both national and international standards. There are signs of stabilisation, which are observed in the demographic situation. The situation is characterised by decreasing death rates, a slight growth of birth rates and declining migration outflow. To a degree such improvements took place due to the introduction of the national priority project 'Zdorov'e' ('Health'). The tendency for reduction of the population size in the region

continues, however, while positive tendencies in natural reproduction have appeared. A growth in the birth rate has been observed since 2003. In 2007, the birth rate grew by 5.1% in comparison to 2006 and reached 10.3 per 1000 of the population (11.3 in the RF; with a growth rate of 8.7%). Since 2004 a decrease in the death rates has appeared. In 2007, the death rate was 11.7 per 1000 people (14.6 in the RF). However the lower death rates in the region in comparison to those in Russia are explained by a relatively 'young' average age of the population in the Murmansk region while the death rates of the healthy proportion of the population, especially for men, exceed the national average. The migration outflow is slowly declining, amounting to approximately five thousand people annually over the last five years. By the end of 2007 the size of the population living in the region was 850.9 thousand people.

Thus, the most noticeable results of the socioeconomic development of the Murmansk region by the beginning of 2008 have been the stabilisation of production activity in the basic sectors of the regional economy and an improvement of the social situation. The growth of revenues in the regional budget and the increase of real incomes of the population took place. Amongst the basic positive tendencies were a decrease in unemployment rates and the reduction of poverty, as well as a decrease in the death rate, an increase in birth rates and a growth in life expectancy.

9.4. Main problems in the socioeconomic development of the Murmansk region

In the process of our work on the Draft Strategy, the most acute social, ecological and economic problems in the Murmansk region were revealed as the basis of the comprehensive analysis of the socio-economic situation in the region. Such analysis included not

⁵⁴ The ratings normally refer to such criteria as average wages, income per capita, provision of hospital beds etc.

only a statistically based detection of trends in regional socio-economic development, but also an examination of internal and external factors in regional development based on combining both 'objective'⁵⁵ and 'subjective'⁵⁶ estimates of the situation in the region. This also involved the use of results from the inter-regional, cross-national and cross-country comparisons. On this broad basis the following social, ecological and economic problems specific for the Murmansk region were identified.

9.4.1. Insufficient level of human potential development and low quality of life

Data from sociological surveys and experts' opinions defined this group of problems as one of the most acute in the region. Statistically, these problems are identified by a number of different indicators that show a lower level of human potential development and people's quality of life in the region in comparison with the national average and levels achieved in developed countries.

In this group, one of the distinctive problems for the region, as well as for many northern regions of Russia, is the poverty of the population. Despite noticeable achievements in overcoming poverty, its official level in the region still exceeds the national average – 15.6% of the population against 13.4% in the RF in 2007. In 2007, the Murmansk region had the highest poverty level amongst the regions of the North-West Federal District of the Russian Federation. This is quite high, taking into consideration that the critical value of this parameter accepted for the indication of socio-economic progress from a sustainable development perspective is 10%. The share of people considering themselves as poor is quite high – the sociological data of 2007 showed that it was 37% of respondents.

One of the major indicators of life quality is the health level of the population. In the Murmansk region most of the actual health problems are the high disease incidence rates and the high death rates attributed to all leading classes of death causes. The disease incidence rates are above the national average (818.1 cases per 1000 inhabitants, against 763.9 in the RF in 2007). The high death rate of the population is connected to three groups of causes: blood circulation diseases; accidents, poisonings and traumas; and cancer. During the period 2000-2007 there was an increase in diseases of these kinds observed with the rate of growth of the latter exceeding the national average by 2.7 times. A particular alarming signal was given by the high death rate within the healthy population of people⁵⁷, especially men, pointing at a low level of health in the healthy population. In 2007 the share of people who died at an able-bodied age accounted for 42% of all deaths. The death rate amongst able-bodied males is approximately 4 times higher than that of females⁵⁸.

Another major parameter of human potential development is the educational level of the population. As it was pointed out above, in the Murmansk region this is higher than the national average and corresponds to the levels achieved in some countries of Northern Europe (Murmansk County and Northern Norway 2008). However,

⁵⁵ Based on statistical data.

⁵⁶ Data received from the sociological surveys and qualitative interviews with experts. Sociological surveys based on questionnaire methodology have been conducted by the IES KSC RAS in the towns and villages of the Murmansk region in 2002-2007 – 6 surveys with representative samples of 1500 people. Qualitative interviews have been made with experts at the regional administration, regional parliament, municipal administrations, institutions of the Kola Science Centre, etc.

⁵⁷ This group includes females at the age of 16-54 years and males at the age of 16-59 years.

⁵⁸ This paragraph is partly based on materials prepared for the Draft Strategy by E. Toropushina (PhD) of the IES KSC RAS.

during the last few years there has been a slowing down tendency in these growth rates within the regional population. According to the last census of 2002, the share of the population having vocational training⁵⁹ in the Murmansk region exceeded the Russian average by 3.9%, while in 1989 this share exceeded the national average by 20.8%. A decrease in the growth rates of education in the population carries the risk of losing the educational advantages achieved earlier by the Murmansk region in respect to the professional education of its population. In the future, if such negative trends are maintained, this may negatively affect the competitiveness of the region and its socio-economic development.

The living standards of the population in the Murmansk region, in spite of their substantial improvement over 2004-2007, do not correspond fully to the region's status as a highly economically developed region of the Russian Far North, in addition to its status as a region placed in the group of the top ten regions of the RF by level of GRP per capita. Growth rates of real personal incomes and wages in 2000-2007 lagged behind the national average: the annual growth of real incomes for this period was 6.1%, against the national average of 11.1%; real wages grew by 9.2% annually against the Russian average of 14.2%. This showed a reduction in the average income/wage ratio between the northern Murmansk region and the nation as a whole. The average wage in the Murmansk region is about 1.4 times higher compared to average wages in Russia as a whole⁶⁰. However, Murmansk price levels are about 50% higher than the national average, so real incomes and wages expressed in terms of purchasing power are lower compared to the national level (in 2007 - by 19% and 12% respectively). This makes one think that the material advantages of living in the North are lost for many groups of the

population, including economically active groups. According to sociological surveys, low living standards are the most acute problem for the population in the region: about 35% of respondents in a survey of 2007 place it at the top of the list of the ten most acute problems in the region.

One of the especially vulnerable social groups with low living standards and life quality is the indigenous population of the region. Representatives of several northern peoples live in the Murmansk region: Kola Saami, Izhma-Komi, Nenets, Evenki, Mansi. These groups altogether account for more than 3 thousand people, which totals about 0.3% of the regional population. In the Murmansk region, only Kola Saami have official indigenous status. According to the census of 2002 their number was 1769 persons. To improve the socio-economic situation of the Kola Saami a number of measures have been carried out by the regional government. For example, a regional 'Programme of social and economic development of the numerically smallnumbered indigenous people for 2006-2008' has been developed and implemented with a total budget of about RUR 130 million. However, many problems still remain unsolved, such as the high death rates, low birth rates, high poverty and mass unemployment (about 65% of the healthy population of Saami are unemployed), and the dislocation of the Saami from their traditional ethnocultural and ethno-economic activities (i.e. reindeer husbandry, fishing)⁶¹.

One of the most important indicators of quality of life is the indicator of average life expectancy of the population. In the Murmansk region this indicator has been lagging behind the national average since 2003 and is very low in comparison to levels achieved by developed countries. In 2007 it

⁵⁹ All kinds of professional education.

⁶⁰ In 2007 the ratio was 1.37.

⁶¹ This paragraph is partly based on materials prepared for the Draft Strategy by S. Vinogradova (PhD), Barents Centre of the Humanities, KSC RAS.

was 66.7 years (in the Russian Federation, 67.5), 11.4 years below the critical value of 76.7 years accepted in global practice. A disturbing signal is given by the fact that the population of the region underestimates the importance of the problem of low life expectancy according to sociological surveys. This problem is usually placed by the majority of respondents one place before the last in the list of the ten most acute problems in the region⁶².

Not well-managed poverty and unsatisfactory living standards certainly carry risks to human security. The major risk is associated with the formation of a large stratum of people who have very narrow opportunities to improve health and education for themselves and their children. This may lead to a decrease in the health and educational levels for a substantial part of the regional population. Poverty and low living standards lead to a high demand on the public health services and the social security system, as well as to a deficit in the qualified labour force, an increase in the number of social anomalies and a growth of social tensions in society. If not fought, poverty together with decreasing health and education levels may decrease the competitiveness of the regional economy both nationally and globally and reduce opportunities for regional development.

9.4.2. Complex demographic situation

In spite of positive tendencies over the last few years, the demographic situation in the region is still characterised by a number of serious problems. During the 2000–2007 period the population of the region decreased by more than 90,000 due to migration and natural losses. A major cause in the reduction in the population was the migration outflow (68,100 people). Over the last few years this migration loss has decreased and stabilised at the level of about 5000 people per year. However this can still be considered as quite an intensive migratory outflow of the population.

In spite of the fact that by 2006 an appreciable decrease in natural losses took place, the process of depopulation⁶³ continued⁶⁴. The main problem has been the high death rate amongst the population. Though the general death rate in the region is traditionally lower than the national average, the ageadjusted death rates (indexes taking into account the influence of the 'younger' age structure of the population in the Murmansk region) exceed the corresponding death rates in Russia as a whole for the total population, as well as for the male and female population. The infant death rate is above the national average (9.8 per 1000 live births compared to 9.4 in Russia as a whole in 2007) and is higher than its critical value of 6 per 1000 live births. The main reason for depopulation is not the low birth rate, but the high death rate, and the latter is the problem that is a priority to solve. The high death rate of the male population of working age and the high infant death rate most strongly influence the life expectancy indicator in the Murmansk region and thus these problems have a special urgency. The problem of low birth rates is also a factor for the region: in 2007 the total fertility rate was 1.2 children per woman, which is below the national average of 1.3 and is far below the replacement rate of 2.15.

Obviously, demographic problems will persist for the foreseeable future. However, it is absolutely necessary to develop and determinedly implement solutions for the most pressing of them. The

⁶² The reasons for such attitudes should be the subject of special study. As a hypothesis we would suggest that the majority of the population in Russia does not strategically plan their lives according to health and does not choose lifestyles in accordance with health considerations.

⁶³ A negative natural increase of the population.

⁶⁴ The following paragraph is partly based on materials prepared for the Draft Strategy by V. Toichkina, IES KSC RAS.

consequence could be that it will be impossible to secure the long-term development of the region, since demographic factors play a key role in shaping regional development and are responsible for ensuring broadly defined human security.

9.4.3. Decreasing accessibility to and quality of some social services

During the analysed period of 2000-2007, the population's access to some kinds of social services in the region decreased. The share of personal payments in the total financing of public health services has increased, and the share of paid services in the total amount of health and educational services (especially that of higher education) has grown. The population estimates the level of accessibility to public health services as low: according to a sociological survey of 2007, only 29.5% respondents in the Murmansk region are satisfied with the level of accessibility to medical services. About 60% of respondents are satisfied with the quality of public health services. In some municipalities the number of doctors and nurses, as well as hospital beds, are lower than necessary; getting some kinds of specialised medical care is complicated or impossible. It is only the quality of educational services that the population estimates as high - more than 80% of respondents in 2007 were satisfied with the quality of the education system in the Murmansk region.

In terms of housing and communal services, the quality of available housing stock is worsening, while the existing levels of capital repairs and new housing construction are far from levels needed. A sociological survey of 2007 demonstrates that 48% of respondents are not satisfied with housing maintenance and the quality of communal services (i.e. waste management, water supply, sewage systems, etc.). Prices for private flats are so high on the housing markets that buying a flat is impossible for a significant part of the population. In the sphere of social security, the basic problems are the extremely low amounts of social benefits, making up less than 10% of the subsistence minimum. These are seen in the lack of places in care institutions for elderly people and the disabled; the insufficient scope and coverage of medical, social, and long-term care services for the elderly; limited physical access for the disabled to transport means and objects of social infrastructure due to lack of specialist equipment, such as ladders, lifts and municipal transportation .

A decrease in the availability and quality of social services certainly carries risks to both human and environmental security. Eroded communal utilities and bad waste management carry the risk of emergency situations and even ecological catastrophes. Low accessibility and quality of public health and social security services may lead to a deterioration of the health of the population and a reduction in life expectancy. These put the region under threat from a reduction in the quality of its human potential both in the short and long terms. Unsolved, these problems will cause other problems in the social sphere, in the realm of economics, environment and politics.⁶⁵

9.4.4. Unfavourable and extreme ecological situation in the region

The main sources of environmental pollution in the Murmansk region are the enterprises of the mining industry, ferrous and non-ferrous metallurgy, transport and municipal services. Territories around non-ferrous metallurgy production sites, including the cities located in their vicinity (e.g. Monchegorsk, Nikel'), are areas of extreme ecological instability, with pollution levels exceeding the allowed norms for air, water and soil contamination.

⁶⁵ This paragraph is based on materials prepared for the Draft Strategy by E. Korchak (PhD), IES KSC RAS. 102

Despite that emissions of harmful substances in the atmosphere from stationary sources (i.e. industrial enterprises) decreased by 20% over the last 8-10 years, air pollution from mobile sources (such as transport) grew by over 35%. The general ecological situation with water is satisfactory (Draft Strategy 2009; Report 2008); however, while the amount of polluted sewage going through purification installations is as much as 81.5% of the total, the amount of sewage purified to the normative level is only 5.4%. Topical is the problem of utilisation of used oil products, solid and mercury containing wastes. Waste disposal is organised partly without taking into consideration ecological, sanitary and fire-prevention rules. The waters of Kola Bay and the coastal areas are subject to a serious ecological load, first of all connected to growing volumes of sea cargo traffic (including oil products) as well as to numerous sunken transport boats. The main risks connected to ecological problems are the worsening of the health of the population and an additional budgetary expense at all levels.

9.4.5. Low diversification level of the region's economy

One of the specific features of the economic structure of the Murmansk region is the domination of large (often town forming) enterprises based on the exploitation of natural resources, producing raw materials and semi-processed products for the national and world markets. Almost all such enterprises today are part of larger corporations and holdings at the national or international scale. The centres of decision-making (and frequently the centres of profit accumulation) of these large business structures are outside the Murmansk region, creating an economy dependent upon the policies of corporations and financial holdings. Besides, production prices of such companies strongly depend on raw material prices in the world market. The weak diversification of the economy risks

development instability, decreasing budget revenues and growth in unemployment, all already evident during the current world financial and economic crisis.

9.4.6. Innovative enterprise activity is insufficient, not corresponding to modern requirements

Such a problem is typical for the majority of regions in Russia. However, in Murmansk this is combined with a high innovative potential, which is insufficiently realised. The share of innovative products in the total amount of goods shipped to the region is extremely low – according to statistical data it was 0.3% in 2006, whereas a similar indicator for Russia was 4.5%. The share of enterprises, which are carrying out technological innovation in 2007 in the region was 6.4% (in Russia, 8.5%).

9.4.7. Low efficiency in the use of the natural resource potential of the region

Taking into account Murmansk region's specialisation, the problem of the efficient use of natural resources is of key importance for its economy. The present level of rationality in the use of extracted natural raw materials is in many cases insufficient. Many useful components of extracted ores, including rare metals and other elements are now wasted. The situation is aggravated by the deterioration of conditions for the extraction of natural resources due to deposit exhaustion that lowers the competitiveness of enterprises and limits economic growth. A set of specified factors caused, perhaps, a major influence on slowing down the growth rates of industrial production and GRP as a whole (see Figure 3), which falls behind the Russian average.



Figure 9.3. Dynamics of real (deflated) Gross Domestic Product of Russia and Murmansk Oblast, 1996=100%

The problem of low efficiency in natural resource use can risk falling enterprise incomes, which eventually result in negative social consequences.

9.4.8. Slow growth rates in labour productivity and investments in the generation of capital

As analysis has shown, the average annual growth of labour productivity measured by GRP production per employee for the period of 2000-2006 in the region did not exceed 1%, whereas the similar level in the country on average was 5.7%. Such a low growth rate of labour productivity in the Murmansk region is explained, on one hand, by objective factors: specificity of the structure of the region's economy and harsh natural climatic conditions. On the other hand, the problem is closely connected to the low investment activity in many sectors of the region's economy. For the last few years the relative level of investments into fixed capital was 13-16% of the GRP in the region, while the similar indicator for Russia as a whole exceeded 20%; this compares to 23–25% globally for regions with a growing economy. The lack of investments in the renovation of fixed capital (especially in machinery and other industrial equipment) is the reason for low industrial productivity.

Nowadays preparations for the implementation of several large-scale investment projects in the mining

industry, transport infrastructure and oil and gas offshore fields are going on. Despite the prospects of increasing regional investments, the necessity of increased investment in renovating existing enterprises and infrastructure remains.

In addition it should be stressed that the importance of investments is not only for fixed capital, but also, and even with a higher priority, for human capital, for example an increase in education and professions, as well as in the protection of worker health. At present the reason for such prioritisation is obvious, but in the Murmansk region it is even more urgent since there are signs of a relative (compared to the Russian average level) decrease in such investments. One example is the situation in working places in the major economic industries of the region, which do not correspond to sanitary and hygienic norms (41.6% in the mining industry, 46.2% in the manufacturing industry in 2006). Hence, the absence of adequate investments in human and fixed capital creates the risk of not overcoming the slowing down of labour productivity and consequently a loss of competitiveness in the region's economy.

9.4.9. Insufficiently developed institutional environment of the socio-economic system

At present in the Murmansk region the basic institutions of regional development, such as the regional legislative base, the system of executive, representative and judicial authorities, the mass media network, public organisations and other formal and informal institutions have been created and are functioning. At the same time, the level of their development, especially in institutions of civil society, which provide various forms of participation in decision-making to the wider public and is a means of increasing the efficiency of the state and municipal management, is insufficient. The coordinated network of specialised organisations are called 'regional institutions of development' in the narrow sense of the concept, i.e. directly focused on the tasks of socio-economic development in the region, which has not been created. Existing institutions, which could be regarded as the initial part of such a network, are represented mainly by a small number of organisations oriented to support small business and innovations.

The problems listed above served as the basis for the determination of priority goals in the Draft Strategy for the socio-economic development of the Murmansk region for the period up to 2025, as well as for shaping the system of measures to achieve the goals. Human potential development based on an increase in living standards and quality of life is suggested by the authors of the Draft Strategy as the major strategic priority for the region's development in the long-term.

9.5. Goals and tasks for future long-term development

In the Draft Strategy, the system of goals and tasks for the future long-term development of the region has been formulated. One of the main principles for the determination of the goals and objectives was ambition; our major assumption was that being ambitious in the goals is important for reaching worthwhile achievements.

The general strategic goal was determined as the "increase of human potential and life quality of the population in the Murmansk region on the basis of innovative, balanced social, economic and ecologically safe development securing its status as a competitive region, a reliance centre for Russia in the Russian European North and in the Arctic, where life quality of the population corresponds to the levels achieved by the countries of Northern Europe" (Draft Strategy 2009: 33). The major criterion for the achievement of the general strategic goal was defined as the "average life expectancy at birth of the population in the region will be 75–77 years by 2025" (Draft Strategy 2009: 33).

Three priorities for the socio-economic development of the Murmansk region in a long-term prospect were suggested: 1) development of human potential, increase in the quality of life for the population; 2)increase in the competitiveness of the region's economy; 3) establishing effective institutions of regional development. In accordance with the strategic goal and chosen priorities, the following list of objectives, sub-objectives and criteria for their achievement by 2025 was developed.

9.5.1. Preservation and development of human potential, increase in living standards and life quality of the population

This includes:

- overcoming poverty, a reduction of the poverty level by a factor of 3 to the level of a 5–6% share of the population with incomes below the subsistence minimum, and finally a total elimination of economic poverty;
- increase in the level of health, promotion of healthy lifestyles to the population; reduction of levels of prevalence of main risk factors, including high blood pressure, use of alcohol, smoking, drugs, by 2–4 times;
- strengthening of the regional advantage in educational levels in comparison to the national average; increase the share of the population having a professional education to 70%;
- preservation of economic advantages of living in the region for the population; reaching an average monthly salary level equal to 5–6 times the subsistence minimums.

9.5.2. Improvement of the demographic situation in the region

There are many factors involved in this:

- decrease the death rate, especially amongst the younger population (not by less than 30%);
- 105

reduction of the infant death rate by a factor of 2; increase average life expectancy at birth by no less than 8 years; growth of birth rates and achievement of a natural growth rate;

• overcoming migration loss and maintaining a stable population by 2025 at a level of 830–850 thousand people.

9.5.3. Improvement of the environmental situation in the region

This is deemed as critical:

• reduction of emissions of harmful substances into the atmosphere by 30%; increase of the share of population living in places with favourable ecological situations, up to 95% on the basis of the diminishing of contaminated areas.

9.5.4. Increase in quality and availability of social services offered to the population

This poses many challenges:

- provision of high quality and availability of social services, including healthcare, education, housing and communal services, social security, culture and sports; growth in the share of the population satisfied by the quality and availability of social services to 70–80% of respondents;
- increase the level of governmental spending on health care in the Murmansk region up to 7–8% of GRP;
- reaching an average provision of 30–40m2 living space per person.

9.5.5. Increase the competitiveness of the region's economy, its diversification, formation of industrial clusters:

There is much potential here:

- development of new competition for the regional branches of industry and transport, gas and oil processing, pipeline transport and others;
- formation of industrial and business clusters in the spheres of transport and logistics, mining

industry, oil and gas processing, fishing, tourist industry;

- growth in the number of small and medium-sized enterprises, increase in the share of constantly employed people in small and medium-sized enterprises to 25% of the total number of employees in the region, development of small innovative enterprises;
- strengthening of the regional agro-industrial system and local food production, increase in the level of food self-sufficiency.

9.5.6. Increase the efficiency of regional natural resource potential use on the basis of the introduction of technological innovations providing a comprehensive processing of the extracted raw materials and ecological safety of production

This area has been neglected:

- growth in the share of industrial enterprises using technological innovations to 40–50% of their total number;
- increase the share of innovative products in the total volume of output to 30–40%;
- growth in the energy efficiency of the region's economy, decrease of energy intensity of GRP by 30%;

9.5.7. Increase of labour productivity, growth of investments in human capital and extended reproduction of capital assets on new technical and technological bases

The future depends on achieving the following:

- attaining annual average growth rate of labour productivity over 8% (measured by GRP per employee);
- decrease the share of employees working in harmful and dangerous conditions (not meeting state norms), by no less than 2-fold;
- increase the share of capital investments in the GRP to 23–25%.
- 106

9.5.8. Improving and increasing the efficiency of the regional development institutions

Support is needed at all levels:

- increase the efficiency of activities at regional and municipal levels;
- strengthening of existing regional development institutions and the creation of new ones: a Foundation of Strategic Development in the Murmansk region, an Agency of Development of industrial clusters and an Agency of Development of Investment activity;
- development of institutions of civil society and different forms of public participation in regional decision-making processes.

The Draft Strategy contains a system of measures, mechanisms and policy instruments addressed mainly at the regional government and is aimed at achieving the defined goals and realisation of priorities and tasks of development. Two stages of the Draft Strategy implementation were determined: 2009-2013 and 2014-2025. Specifically, for the first stage (2009-2013) it is necessary to combine measures to achieve the strategic development goals with measures combating the global economic crisis. The latter, which is conditioned by the consequences of the global financial crisis, includes a set of measures connected first of all to the optimisation of budget spending, and mitigation of negative displays in social and economic spheres, especially on the labour market. During the first stage of the Strategy implementation, alongside the anti-crisis measures, the necessary conditions and mechanisms for the innovative acceleration of the region's development should be created. It is assumed that existing investment projects will continue and new ones will start. The most important are: 1) modernisation of existing and construction of the several new mining enterprises; 2) development of the Murmansk transport hub; 3) development of the Shtokman gas field; 4) new projects for the electricity and heat

energy systems. Although the time-table for the completion of some of the projects might be postponed because of the effects of the crisis, most of them should be completed by 2025.

The second stage (2014–2025) will be characterised by a synergy of previous measures and projects, strengthening the innovative factors in the development of the economy resulting in an increase of human potential and quality of life for the region's population.

9.6. The role of Barents regional cooperation in Murmansk's future development

The Murmansk region is a border territory and since January 1993 has been part of the Barents Euro-Arctic Region (BEAR). Entering the BEAR gave additional potentialities to the region through strengthening mutually beneficial co-operation with the adjacent territories. Within Barents Euro-Arctic Region co-operation, the Murmansk region carries out bilateral and multilateral interactions in economy, trade, science and technology, environment, infrastructure, education and cultural exchanges, tourism, as well as the realisation of projects aimed at improving the conditions for the indigenous populations of the North. While Russia chaired the BEAR (2007-2009), much attention was paid to the realisation of multilateral projects on the elimination of ecological 'hot spots'66. Additionally, the 'clean production' programme was undertaken within which industrial and communal enterprises were transferred to modern ecological standards.

The BEAR economy's structure to a large extent is of a coincidental nature that, along with co-

⁶⁶ Today in the region there are about 50 'hot spots'. It is planned to carry out small but really needed projects, as well as bigger undertakings aimed at the rehabilitation of contaminated territories on Franz Josef Land.
operation, results in quite stiff competition. This especially concerns the fishing industry, transport and tourist services. Within the BEAR, the Murmansk region possesses the most significant human and natural resources and industrial potential, which determines a growing interest in cooperation with the Nordic countries and Europe in many economic and humanitarian fields. Four sectors can be identified that will attract special attention within BEAR co-operation in the future. First, it is direct co-operation amongst people – a traditional priority of Barents co-operation. Secondly, the realisation of the programme 'Barentscult' is an important project for cultural development within the region. Thirdly, realisation of projects connected to problems of the indigenous peoples⁶⁷. Fourthly, the potential oil industry from the Barents Sea fields is one of the main sectors that will influence all Barents co-operation in the longterm. During the few last years the share of Russia's participation in funding projects within the BEAR has increased. This trend demonstrates that Barents co-operation is becoming more balanced, creating a favourable economic and social climate for its further development, as well as for the future development of the Murmansk region.

9.7. Conclusion

The socio-economic situation in the Murmansk region by the end of 2008 – before the first negative signs of the world financial crisis were observed in the region – was stable enough and was characterised by a set of positive tendencies. For the period 2000– 2007 the growth of gross regional product was about 14%, the incomes of the population grew steadily, and positive dynamics of indices characterising the quality of life of the population were observed. Such conditions could be regarded as an appreciable achievement taking into account the losses that the region experienced during the previous dramatic period of deep political and socio-economic transformations of the 1990s in Russia.

At the same time, a number of social, economic and ecological problems still exist in the region. Most important amongst them is the poor quality of life of the population, which is reflected in low life expectancy and a high level of poverty; low quality of social services; low diversification level of the region's economy; low efficiency use of the natural resource potential of the region and unfavourable environmental situation. In the recently developed Draft Strategy for the socio-economic development of the Murmansk region for the period up to 2025, a set of measures to overcome these problems and to achieve the goals of socio-economic development have been suggested. Barents co-operation becomes more balanced, creating a favourable economic and social climate for its further development and is seen as an important factor in the future development of Murmansk.

If the Draft Strategy is adopted, human security in a broad sense may become the focus for future development in the region. Human potential development based on an increase of living standards and quality of life of the population is suggested in the Draft Strategy as the major strategic priority in the region's development in the long-term. It should be stressed that by the end of 2009, the Draft Strategy still had the status of a research report, but not a governmental document. It is quite possible that the regional government will develop and adopt an alternative Strategy. However, we believe that any new approach must preserve the main idea of the suggested Draft Strategy - that of prioritising human development- since such an alternative for the Murmansk region does not exist.

⁶⁷ Privatisation of reindeer herding on the Kola Peninsula can be given as an example of numerous projects oriented towards the direct intensification of indigenous economic activities.

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10. Academic Writing about Arctic Tourism: Othering of the North

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10.1. Introduction

In the theory of hegemony – of dominance and subordination - Gramsci is a central scholar (cf. Urbinati 1998). His thought emerged from analyses of the 'Southern Question' in Italy, about the political and cultural differences between north and south, and his standpoint that the south should be covered by general national policies and not be treated as a special case. The southern question was to him "a national question insofar as it was a question of political and cultural hegemony. Its solution required the construction of a new relationship between the intellectuals and the 'people-nation', between consciousness and being" (Urbinati 1998: 373). In this there also is recognition of the intellectuals' vital role in the constitution of perceptions and production of the human fabric. This is part of the overarching frame for this paper; the role of intellectuals or academics in the constitution of platforms for understanding, meaning and politics concerning northern tourism. The northern tourism issue is part of a global 'Northern Question' – how the North should be understood, how and by whom the prevailing northern knowledge is produced, and how and by whom the north shall be governed. Due to the global energy and climate change situation, this is a more vital question than ever; the resource gaze is facing north.

For Gramsci intellectuals worked with universal theories. Thus, in his view, they could in fact solve the problems of hegemony that he saw. However, there is today a growing awareness of how, within academic writing and theory, similar hegemonic structures exist as in politics and culture. For instance in geography there has been an encompassing debate concerning these issues and particularly about the Anglo-American dominance in the discipline (Gregson et al. 2003; Kitchen 2005). A similar hegemony is also registered in the field of tourism geography. Gibson (2008: 413) shows that more than 80 per cent of the articles in so-called international journals have authors originating from Anglophone countries. Concerning academic tourism literature in general, there is no similar account, but there are reasons to believe that there is a similar pattern. This paper will not deal with this topic in general, but will discuss and illustrate the effects of an Anglo-American hegemony, particularly with examples from academic writing about Arctic tourism. This part will point at problems such as inaccuracy and over-generalisation. Towards the end some possible implications and solutions will be discussed.

10.2. Academic hegemony

Polar tourism can easily be defined as tourism to and within the 'polar regions'. Basically there are two such regions; the Antarctic and the Arctic. However, as has been discussed in other places, there is no clear definition of the 'polar regions' or of the 'Arctic'. As Grenier (2007: 58) emphasises, each academic discipline tends to have its own ways of delimitating the 'polar', but the most common one is to treat the polar circles as the lines that demarcate the polar regions. This means that within the Arctic there are modern towns such as Rovaniemi and Tromsø, hightech sites as Thule and Longyearbyen, indigenous peoples and non-indigenous peoples and so on. From a tourist market point of view these regions also can be seen as destinations (Snyder 2007a). However, the Arctic is not one destination, as the

different parts of the area will not be visited on one single tour. It is a huge area covering parts of Canada, Alaska, Russia, Greenland and Scandinavia.

Academic hegemony concerns the relationship between knowledge and power. As Foucault and others have shown this relation is as much about how power constitutes knowledge as the more traditional opposite. In the discussion about hegemony the fact that power directs knowledge production is particularly central. The power system within international academia is such that what matters is not only what is written and by whom it is written, but from where the authors and articles originate, and particularly in what journals or books things are published. The system of journal publishing is controlled by power. Gregson et al. (2003: 8) use the term 'writing spaces', which are "hierarchies of power, which position some journals as mattering rather more than others... capturing, controlling and regulating the international (read theoretical and/or conceptual) high ground, its cutting edges". They also refer to rhetoric putting the UK and US in the centre, seeing non-UK/US geographies as the knowledge about the European 'Other'. Theory and concepts are produced in the centres; what is produced elsewhere are illustrative cases or empirical evidence, or looked upon as deviancies from these general theories. Although, the general theories often are established on the basis of empirical studies made in the centres or national studies in a particular country, they tend not to be reckoned as case studies in the same way as studies made outside the UK/US domain. Referring to areas outside, Gregson et al. (2003: 12) claim that "[c]ontemporary Europe figures as an extensive case-study area", or as Aalbers and Rossi (2010: 4) mention, as "irrelevant or incorrect", and have to introduce "the reader to the geographical 'context' (ibid.). Such attitudes have an ethnocentric flavour. Flyvbjerg (2006) argues that there scarcely exists anything but case-studies, since most studies are restricted to a particular location (a

given place, region or country). Consequently, case studies are the very origin of many theories which are today reckoned as generic knowledge. Yet, and still, within the Anglo-American domain, "... geographies of other people and places become marked as Other - exotic, transgressive, extraordinary, and by no means representative ... ", according to Berg and Kearns (1998: 129). This is a system that places both the researchers of the centre and from outside within a hierarchical system. Quoting Gregsen et al. (2003), Kitchen (2005: 6) notes that "many non-Anglo-American geographers are caught between their own national traditions and Anglo-American work, a position that implicitly acknowledges and reproduces a peripheral identity". One of the consequences of this, Kitchen (2005: 6) remarks, is that the theoretical production "casts much of the world's geography into silence". There is a socially constructed centre-periphery dimension within academia reflecting a hegemonic structure. Illustrations can be found in many fields.

A Finnish-British study from the field of organisation theory illustrates the hegemonic process. This is a study in which Finnish and British researchers are working to produce a paper together. The article shows how the Finnish researcher becomes marginalised during the research and publication process. As the authors themselves see it, the first draft (only authored by the Finnish member) was given referee comments that "marginalised the Finnish experience to the status of 'different', a potentially interesting and/or deviant case vis-à-vis an unstated 'normal' case" (Meriläinen et al. 2008: 590). When the research team presented the findings at a conference, the British teammates substituted the Finnish interview material with British, without really changing the content. In writing about this process in the aftermath, the Finnish member of the author team describes this as a process of othering. The reason for replacing Finnish with British data was obviously to make it

stand out as more general and valid. Another reason was the fact that the British researchers were unable to read the Finnish material, due to lack of language skills. The case probably also shows that data from an unfamiliar context is not seen as reliable as data from a known environment.

One reason for the Anglo-American hegemony in academia is in fact related to language. The first point about this is that if you do not write in English, you will not be published, or you will be read only by a few. Writing in one's native language means a limited audience, and in many fields – for instance in tourism - there may well not be any journals that exist or publishing traditions. And since it is like this, less and less is written in native languages. The second point is that to be recognised and merited you have to publish internationally, which means in English. Thus, you have to compete with native-speaking authors, which means with authors devoted to theory and 'real' empirical evidence. And language is tied to culture; cultures of understanding and writing that all in all represent barriers for non-English scholars in their publishing efforts. This is also part of the explanation of why so few non-Anglophone writers publish in the so-called international journals.

The above characteristics of academia may be parts of the explanation of why only a few articles and books that address issues related to tourism in the Arctic can be found. The journals are based in the UK or US and normally far from the polar regions; very few articles are normally written about these regions. And the academics in the regions are outsiders to this academia and, as Gregson et al. (2003) point out, tend to adapt to the Anglo-American writing traditions. To be accepted here you should write about the 'major' or normal issues as is conceived of in these circles. If you focus on the Arctic, you *are* deviant. Thus, there is even a risk that those doing so are those who do not succeed in coping with the core issues. However, concerning tourism writing there may have been a change in recent years. Since the year 2000 an Anglophone, but Nordic based journal has been published, within which it is said be easier for writers from this region to be accepted (Müller 2009).

In the discussion about hegemony in academia, those not being mainstream Anglo-American – be it theory cases – are treated as something different, deviant or other. This is the process of othering (Fabian 1983), a process to which tourism is subject (Islam 1996; Jordan 1995; Mathisen 2004; Olsen 2006). There are lots of examples. One is how indigenous cultures are represented. To create a picture of indigenous peoples and minorities as different, often combining it with a flavour of inferiority (as primitive), has for long been common. Tourism research can be seen as a product of these traditions.

10.3. The rhetoric of the Arctic

A point of departure for this paper is that there exists an Arctic tourism that is possible to identify as different from tourism in other areas. Certainly, the Arctic has its particular locality giving the area a kind of identity. For most people it is a remote location, but in a world that is said to be compressed into one place, it is as much a mental construct as a reality these days. However, the low temperatures, the snow, the dark and the light, and phenomena such as northern lights and midnight sun are facts and the Arctic's uniqueness refers to some extreme physical characteristics. However, the Arctic is huge, also in a north-south perspective. Thus, whereas in December it is totally dark in the middle of the day on Svalbard, you have three to five hours of light on the Scandinavian Arctic mainland. Thus, the Arctic is not a coherent unity concerning these dimensions.

There is no doubt about the otherness of the Arctic. Whether this otherness should be handled as points on scales or as different qualities is a big question. To state a difference is rather neutral, to range differences on scales is often a matter of judgement (cf. Heller 1999). There are several dimensions according to which the Arctic is characterised and represents an extreme:

Remote	<>	Close
Cold	<>	Warm
Marginal	<>	Core
Periphery	<>	Central
Polar	<>	Non-polar
Wilderness	<>	Civilisation
Undeveloped	<>	Developed
Rural	<>	Urban

There is a whole semiosphere related to the terms and the way the dimensions are organised. First, it is not incidental which terms are put left or right on the scale: most people would put centre or core to the left, periphery and margin at the right, centre first, periphery second. Next, some terms refer to normality (centre, urban, developed); periphery is defined in relation to centre or core, not the opposite. The terms are in fact not neutral, but relate to a series of connotations and meanings, often filled with power relations. For example the periphery is closely related to marginality (Hall 2007: 21) in many ways. Hall and Boyd (2005: 6) also claim that tourism in the periphery basically is nature based tourism, and "[n]aturalness, sometimes also termed primitiveness..." and so on. This is no neutral definition; it is a centre-based description of the peripheral otherness. And often the periphery is perceived as a burden and a problem. Thus, many of the dimensions are 'thick' descriptions filled with knowledge, but also with myths, prejudices and stereotypes. In the following, the ways some of these terms are used in the tourism literature are presented.

10.4. Academic myth making about the periphery

Hall (2007), a well known tourism scholar, sums up the conception of tourism in peripheral areas: tends to be far from market, lacks political control, has migration outflows, has a lack of innovation, state interventions, less information. Such statements may contend some kind of 'truth', but are generalisations on the edge of nonsense. Concerning these variables listed by Hall there are obvious variations and other perspectives to maintain. The distance to the market is not necessary a problem; in tourism it is in fact a selling point, and from a sustainability perspective it prevents problems. Most places are a lot more accessible to Western markets than, for example, Australia and New Zealand. There might be a lack of political control, but not necessarily less than in other regions. For instance, Svalbard in many ways is the most governed, monitored and controlled area of Norway. There is a net outbound migration in the Arctic, but many northern places, like Alta, Tromsø and Rovaniemi have growth. Innovations vary, but a book called Innovations in the northern periphery (Aarsether and Baerenholdt 2005) was published a few years ago - the book was written and produced in the Arctic (Tromsø) and is about innovations in the Arctic areas of Scandinavia. State interventions occur all over, also in the periphery. And if the periphery is less informed, this is certainly not true for all people living there. Longyearbyen (with about 2000 inhabitants) on Svalbard, for instance, is probably one of the towns on earth with the highest average educational level. All in all, such characteristics, referred to but not all acclaimed by Hall (2007), tell about a lack of knowledge, ignorance, or at the best a tendency to overgeneralise amongst some academics.

The term 'periphery' is contested and for example discussed in a book called *Mobility and Place* (Bærenholdt and Granås 2008), something created

in the 'less informed periphery' with the subtitle Enacting Northern European Peripheries, emphasising its 'deviant' origin. The publisher is Anglo-American. The book's aim is to contribute "with more critical considerations of the notion of the periphery and the centre periphery dichotomy" (Bærenholdt and Granås 2008: 4). In one of the chapters Paulgaard (2008) shows how young people reject the centreperiphery dimension, ranking their companions according to scales of fashions known amongst young people everywhere. There are certainly also other groups of people that reject the significance of peripheral status and this article may be interpreted as a similar example. There certainly are differences that relate to place and distances, and local cultures and customs still adapt to local circumstances. But in other ways the periphery is often powerful, for instance, the most popular pop hit in Norway in 2008 was made by a group of youngsters coming from a small Saami community close to the Russian border. Additionally, many other pop hits, also internationally acknowledged, are created by artists from Tromsø. And distances are not as they used to be. A tourist host in the core of the Saami area puts this in perspective; he used to start his presentation for tourists by saying that Maze, where he lives, in the middle of the Saami region, is in a central place, three hours from Oslo and 10 hours from New York. Similarly an academic author living in Tromsø, already in the 1970s, wrote a book she called It is Oslo that is Remote (Det er Oslo som ligger avsides; Skard 1974). Remoteness is primarily a matter of mind, and in this way distances still exist. Therefore, the periphery continues to be othered, and particularly by those living in the centre. Paulgaard (2008: 52) makes the following statement concerning the stamping of North as a periphery: "At a symbolic level, the hegemonic understanding of the northern periphery functions as an encounter with difference. And the North becomes fundamentally different, a negation of civilised life in

more central areas." There is also a similar rhetoric related to 'polar'. Polar refers to an opposition. Although it refers to the opposite pole, it is probably often seen as the opposition to the centre or the normal. A pole is an outpost somehow. Thus, is it right to talk of the polar periphery or should it rather be the Arctic or northern *areas* or *territories*?

10.5. Academic ignorance of Arctic realities – tourism examples

There are several books about polar tourism. In one of the first, *Polar Tourism* (Hall and Johnston eds. 1995), the problems of the Anglo-American academic hegemony were avoided, partly due to the involvement of researchers from the areas in question. There are lots of valid journal articles written about the topic. However, there are also examples that demonstrate the problems discussed above. Some of these will be illustrated below.

The fact that the delimitation of the Arctic or polar regions varies is posing problems also for tourism writings. In a recent book called Prospects for Polar Tourism, Snyder and Stonehouse (2007) suggest a presentation of polar tourism. In one of the chapters Snyder (2007b) looks at the economic significance of Arctic tourism. This presentation gives an odd impression. One of the problems relates to how he compares regions with countries. Concerning Canada, the focus is on the north; concerning the US, Alaska is chosen; and for Russia there is also a northern delimitation. For Sweden the Saami and some major northern tourist attractions are presented. In terms of Norway, Finland and Iceland, the entire countries are included. Seen from the centre all Nordic countries are probably northern, but they are not Arctic. Less than 10% of Norwegians live in polar areas and most of their southern compatriots have no knowledge of or identity related to these areas. For Norway, Snyder (2007b: 112) gives some figures for development in

which he obviously is confusing millions and billions (can both be abbreviated as 'mill.' in Norwegian). He states that a little less than two million euros (NOK 14 million) were invested in tourism per year between 1997 and 2004. It is definitely wrong; a figure of little less than two billion is more accurate. Concerning Arctic tourism, only Swedish attractions are mentioned, and not the major successes that are to be found elsewhere; in north Norway with its summer tourism to Lofoten and the North Cape, in Finnish Lapland with its significant winter and Santa Claus tourism, and in recent years the developments on Svalbard. The impression this presentation gives, written by one of the editors, is unusual, first and foremost indicating that it is based on a lack of knowledge of its empirical base, the Arctic.

The reason for such odd presentations may be the fact that much writing about Arctic tourism seems to be based on knowledge about tourism in Antarctica. But someone is not necessarily an expert on Arctic tourism if they know about Antarctica. Whereas Antarctica has no (indigenous) inhabitants, there are 4-5 million people living in the Arctic, both individuals identified as indigenous and others, and the others constitute the majority. Furthermore, the Arctic contains modern and complex towns (with up to several hundred thousand inhabitants) and communities within which tourism take place. Correctly then, unlike Antarctica, there is a traditional population in the Arctic, which makes challenges for the tourism industry quite different to those faced by the Antarctic, and comparisons and knowledge transfer almost impossible. The presentations of Arctic tourism referred to above are superficial, inaccurate and give misleading generalisations. Another writer about Arctic tourism is Peter Mason. He states that unlike Antarctica, there are indigenous people in the Arctic (Mason 2007), which to him makes a big difference. This is right, but he ignores ethnic Russians, Finns and Norwegians. Talking about the Russian Arctic,

Snyder (2007c) says that the area includes 44 distinct indigenous ethnic groups. Then he goes on writing about them as 'they', treating them as one group. Similar generalisations also can be found in a book about peripheral areas in which Hall (2007: 25-26) claims that 'peripheries tend to' and goes on with the characteristics discussed in an earlier section. In another context, Hall and Boyd (2005: 10) talk about a "lack of success of tourism development in peripheral areas". This also is a general statement. There certainly are places in the peripheral Arctic without success in tourism, as in many central areas. But there are also many success stories namely Iceland, Svalbard, North Cape, Lofoten, Jukkasjärvi's ice hotel, Finnish Lapland with its Santa Claus and ski tourism. Are these cases not included because their success does not tie them to the periphery? Is the word 'unsuccessful' one of the connotations of the term? And what is really successful tourist development? There is for instance a big difference between north Norway and north Finland in this respect. In north Norway the major success story is about tourism as a minor industry that, together with other industries such as fisheries, agriculture, reindeer herding, mining, shipbuilding, oil and gas production, university training and research and service production, constitute a society almost without unemployment. The point is that tourism is neither needed nor wanted as a major industrial activity in north Norway. People from outside registering a modest growth will possibly interpret it as a failure.

The majority of literature about Arctic tourism indicates that those being familiar with Anglo-American publishers are defining the problems and challenges in the area. Somehow these people have received the power to define which knowledge is mediated. The Stonehouse and Snyder (2007) book shows a limited interest in using evidence that is produced inside Arctic communities. Such books have a flavour of neo-colonialism. The problem with this is that such descriptions sustain stereotypical perceptions, power relations filled with suppression, and form part of a political system that treats the resources in Arctic areas as international and national, and not as local or regional. This is a rhetoric legitimising intrusion; exploitation as has been done for centuries, more or less acclaimed by academics.

10.6. Concluding remarks; academic reification of northern otherness

The inaccurate and othering writing about Arctic tourism is primarily a result of the general hegemony of Anglo-Americans within tourism academic writing. People originating from Arctic areas do not write and publish much about their area; the tendency is that that these researchers tend to avoid the stigma of Arctic orientation and write in 'general' terms, trying not to highlight their northern empirical basis. Thus, there is an empty space concerning Arctic tourism. Some of those individuals, but not all, filling this space demonstrate arrogance in their writing by not really checking out the realities or "without even citing any literature in the language of the 'host' country" (Aalbers and Rossi 2010: 5). There are also lots of examples of self-references in the literature about Arctic tourism. Mason, for instance, refers to himself concerning evidence for the environmental impacts of tourism in the Arctic (Mason 2005: 182). He also states that as tourism has expanded in the Arctic a bastardised, inauthentic pseudo-culture has emerged (!). Does this mean a modern culture? Would he prefer that these areas remained unchanged, maybe as cultural 'zoos' for tourists from the centres of the world? The problems shown about some of the writing about Arctic tourism also may be an example of the importance of contextual knowledge; many of the faults would not have emerged, if the writers were properly informed about their empirical area.

The result of such presentations is the confirmation of myths and cementation of the semiosphere of a North that is different. What are the consequences of this type of othering? Is it not just good promotion? Maybe so, but there are also some problems associated with it. First, this is not how research should be, as academic accounts should be as correct as possible. Parts of the Snyder presentation of Arctic tourism resembles a bit of Marco Polo's accounts in the 13th century, reporting about Africans with horns and long noses (Islam 1996). Although such accounts will not survive these days the book probably occupies a scarce writing space for Arctic tourism. And research and academic writing constitute the knowledge base for students and future employees in the tourism sector. The university sector has a responsibility to provide these people with information that is as correct as possible. Knowledge is the base on which a future tourism industry should be based. But because the knowledge provided - as is discussed here - often is strange, the most important thing is to make future employees critical and reflexive, able to judge the value of the information with which they are confronted.

Secondly, the writing practice referred to adds to reifying processes. Reifying suggests that a prevailing opinion is taken for granted and looked upon as fact, correct, autonomous, impersonal, objective and so on (cf. Thomason 1982: 88). The term also refers to culture conceived of as fixed structures that more or less give directions for people's lives (Keesing 1994). There is, for instance, a strong public opinion about the North as less modern and civilised. Scholars claim this is wrong, that alternative modernities exist (Olsen 2008), and that the modern North is different from that of the south. But this is neither accepted by the public or by academics. One of the reasons for this is that there is no reciprocal academic writing, but a writing hegemony as pointed out in this article; the south or the centre dominating writing in general and also about the North. And the

result seems to be reifying or essentialising processes, with a production of documentaries that give direction on how the outer world treats this part of the world. The North even takes part in these processes, often appreciating being regarded as the 'Other'. There is an aestetisation and exotisation going on in which tourism is a significant contributor that depoliticises essentialisation according to Kirshenblatt-Gimblett (1998: 76). The hegemonic processes are not easy to stop.

Are there any solutions? Aalbers and Rossi (2010) argue for establishing alternative publishing channels, and see a growing post-national European academic tradition, opposed to the Anglo-American one, as a step forward. In parallel there is a growing northern academic writing practice, through which authorised accounts are not written by the Other, though there probably still lacks publication channels. Aalbers and Rossi (2010: 20) also see signs of what they call "a neo-Kantian cosmopolitan project aiming at a decentred and situated universialism" and a more critical stand on the world's order in academia. This may be the most important way out of the problems discussed in this article, a more comprehensive reflexivity amongst researchers and writers within the Arctic, but also within Anglo-American academia and particularly amongst editors and publishers. However, it is not only a question of reflexivity, it also has to do with morals and responsibility - well known topics within academia - but obviously not easy to practice.

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11. Programme: Barents Region scientific excursion, 8–17 August 2008

Friday, 8 August

Departure from Rovaniemi (FI). Arrival in Kilpisjärvi (FI). Accommodation at the Kilpisjärvi Hiking Centre. Introduction by staff and students. Free evening.

Saturday, 9 August

Departure from Kilpisjärvi. Arrival at the University of Tromsø (NO). Lectures by hosts. Visit to the university museum. Departure from Tromsø. Arrival in Langfjord (NO) and accommodation at campsite.

Sunday, 10 August

Departure from Langfjord.
Arrival in Alta (NO).
Visit Alta Museum – UNESCO heritage site.
Arrival at Finnmark University College. Lecture by host.
Departure from Alta.
Arrival in Sevettijärvi (FI). Accommodation at Porotila Toini Sanila.
Lecture about Skolt Saami culture by host.

Monday, 11 August

Departure from Sevettijärvi. Arrival at the Barents Institute, Kirkenes (NO). Presentation by host. Departure from Kirkenes. Border crossing at Storskog (NO)/Borisoglebsk (RU). Arrival in Murmansk (RU). Accommodation at Hotel Moriak. Free time. **Tuesday, 12 August** City tour and visit to the Murmansk Regional Museum. Cruise of Murmansk Fjord. Free day.

Wednesday, 13 August

Departure from Murmansk. Arrival in Lovozero (RU). Accommodation at Hotel Covas.

Student presentations.

Evening Programme and dinner at Centre for National Cultures with Saami and Komi cultural associations.

Thursday, 14 August

Student presentations. Visit to the 'Tundra' Reindeer-Herding Collective Farm and Slaughter House. Free time.

Friday, 15 August

Departure from Lovozero.
Arrival in Poliarnye Zory (RU).
Visit to Nuclear Power Station's Visitor Centre. Presentation by hosts.
Departure from Polyarnye Zory.
Arrival in Apatity (RU). Accommodation at Hotel Izovella.

Saturday, 16 August

Visit to the Institute for Economic Studies, Kola Science Centre. Presentations by hosts. Free time. Departure to Kirovsk (RU) for farewell dinner. Return to Apatity.

Sunday, 17 August

Departure from Apatity. Stopover in Kandalaksha (RU). Border crossing at Salla (RU)/ Salla (FI). Arrival in Rovaniemi. End of the excursion.

12. List of Participants

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13. Photo Album



Kilpisjärvi, Finland. Sunset from Sanna Fell. ©Paul Fryer



Tromsø University Museum, Norway. Inside a Saami 'goahti' (turf hut). ©Emilie Beaudon



Alta Museum, Norway. Visit to the UNESCO World Heritage Rock Art Centre. ©Paul Fryer



Alta, Norway. Rock carvings. ©Paul Fryer



Sevettijärvi, Finland. Early morning visitor at Sanila Reindeer farm. ©Paul Fryer



Kirkenes, Norway. Meeting at the Barents Institute. ©Paul Fryer



Near Nikel', Russia. Mining and smelter complex. ©Paul Fryer



Murmansk, Russia. Student presentation during fjord cruise. ©Paul Fryer



Lovozero, Russia. View of the 'capital' of Russian Sápmi. ©Paul Fryer



Lovozero, Russia. A lesson in Saami archery at the district Cultural Centre. ©Paul Fryer



Lovozero, Russia. Visit to the local reindeer slaughterhouse. ©Paul Fryer



Lovozero, Russia. Student presentations held in the Saami Mission church hall. ©Emilie Beaudon



Poliarnye Zori, Russia. Visit to the Information Centre of the Kola Nuclear Power Plant. ©Paul Fryer



Apatity, Russia. Lecture by the Institute for Economic Studies, Kola Science Centre. ©Paul Fryer



In August 2008, the first scientific excursion of the BANG network (Barents Arctic Network of Graduate Schools) was held at the 'Top of Europe', bringing together doctoral students and senior scientists from 7 countries – both in the North and beyond – for a 10-day intensive programme that visited the northern regions of Finland, Norway and Russia. The theme of this excursion – Encountering the Changing Barents – addressed a multitude of issues that the Barents region is facing from social questions to economic challenges, and from land use to climate change.

During this excursion participants began to view the North not only from their own disciplinary perspective, nor from within the confines of national world-views, but more holistically; to understand the North as a larger concept that has for centuries defied narrow labelling. While preconceptions, policies and programmes have often been applied to the region from national capitals in the 'South', the Arctic region has adapted dynamically to each challenge thrust upon it. But in today's ever-increasingly globalised and changing world, will this resilience continue?

This multi-disciplinary volume of the Arctic Centre Reports contains a selection of the doctoral students' papers that were presented and discussed during the excursion, as well as of those of several 'northern experts' who gave presentations during the course. This volume is of interest to researchers working in Arctic ethnography, economics, environment and ecology, glaciology, politics, sociology, geography and tourism.

