THE NORWEGIAN BARENTS SECRETARIAT

2015 Calotte ACADEMY

RESOURCES AND SECURITY IN THE GLOBALIZED ARCTIC

Final Report

May 31 – June 7, 2015

in Rovaniemi, Salla and Inari, Finland; Apatity and Murmansk, Russia; and Kirkenes, Norway

The Calotte Academy 2015, a travelling symposium - *a preface*

The international annual symposium Calotte Academy (CA) was arranged in May 31 - June 7, 2015 in the Barents Sea area and travelled through the Finnish Lapland and Russia's Kola Peninsula, and via Northeastern corner of Norway, Kirkenes. This year's annual scientific gathering and doctoral school took an explicit focus on issues related to resources and security in the globalized Arctic. The presentations focused on topics ranging from such as mining, indigenous people's rights, alternative conceptualizations of security and the globalized Arctic between rapid resources development and sustainability. Discussions in the symposium sessions approached the overarching themes holistically from many angles and disciplinary approaches and examined at different scales from local to global, as well as through addressing regionally important questions and concerns.

More important than the figures describing the 2015 Academy is the added value which lies in its explicit aim to create an alternative model for conventional academic conferences and other gatherings in which the time allocated for genuine discussion often remains very limited. In the sessions of the Calotte Academy the situation is much opposite, since there is always time enough for open discussion after each presentation. This principle, which makes the CA a sort of academic 'school of dialogue', was again implemented in the 2015 Academy, as well as research, supervision and practice were combined in interrelations between early career scientists and senior researchers, and the interplay between science, politics and activism was implemented. Behind is a need, or new norm, for science and the scientific community to take literally the social relevance of science, and that science is with values and much deals with peoples, societies and the environment. Simply saying to 'take care', instead of having double standards, or the current schizophrenic approach of neoliberalism supported by specific expertise and meritocracy.

The Calotte Academy has been arranged annually since 1991 with an aim to bring together academics and other experts, policy-shapers and other stakeholders as well as students and scholars with different academic backgrounds and in different stages of their academic careers. The Academy also aims to contribute to discussions and debates over regional development through inviting local and regional stakeholders to participate in the sessions with the intention of sharing research results and insights, creating networks and fostering dialogue between the local and national actors and the international scientific community.

It is my great pleasure to tank all the active participants of the 2015 Calotte Academy for their valuable contributions, including their session reports for the Final Report. I also tank the organizers of this year's Academy - Faculty of Social Sciences at the University of Lapland, Sámi Educational Centre of Inari, Department of Sociology, Political Science and Community Planning at University of Tromsø, and Luzin Institute for Economic Studies at Kola Science of Russian Academy of Sciences -, as well as the sponsors - Inari Municipal Business & Development Nordica and Norwegian Barents Secretariat. These institutions and their moral and financial support made it possible to continue the Calotte Academy as a unique travelling symposium and doctoral school, as well as one of the oldest existing international academic activities in the European North. The Sámi Educational Centre and other hosts in Inari have played an important role here, and Inari is the center of the Calotte Academy's operational environment and mental world. Special thanks go to my fellow members of the Academy's Steering Group – Anne-Marie, Gunhild, Hanna, Jussi, Laura and Ludmila – for their valuable contributions in preparations and implementation of the Academy.

Finally, I would like to inform and announce that the Calotte Academy 2015 will be organized in late spring (end of May, or beginning of June) 2016 in Rovaniemi and Inari, Finland; Apatity and Murmansk, Russia; Kirkenes and Neiden, Norway (tentative route). The theme is planned to deal with resilience and sustainable development in globalization, and aimed to be discussed theoretically and in the context of the Arctic / the Barents Sea area.

On behalf of the Steering Group
Lassi Heininen

Organizers and Sponsors

The Calotte Academy 2015 is co-organized by Faculty of Social Sciences at University of Lapland and Sámi Educational Centre of Inari (from Finland); Political Science and Community Planning at University of Tromsø (from Norway); Luzin Institute for Economic Studies at Kola Science of Russian Academy of Sciences, and Karelian Research Center of Russian Academy of Sciences, in cooperation with Northern Research Forum (NRF) and NRF-UArctic joint Thematic Network on Geopolitics and Security.

Calotte Academy 2015 is financially supported by Inari Municipal Business & Development Nordica, and Norwegian Barents Secretariat.

The Calotte Academy 2015 was organized between May 31 - June 7, 2015 in Rovaniemi, Salla and Inari, Finland; in Apatity and Murmansk, Russia; and in Kirkenes, Norway. The theme of the annual travelling symposium was be 'Resources and Security in the Globalized Arctic' with a particular regional focus on the Barents Sea area. The symposium sessions approach the overarching themes through addressing regionally important questions and concerns. The presentations focus on topics such as mining, indigenous people's rights and alternative conceptualizations of security.

Resources and security, as well as geopolitics and energy, have a long history in shaping and impacting the Arctic region. These crucial themes have been extensively discussed in previous Calotte Academies as natural resources and their governance continue to play an important role in Arctic politics and security concerns (see The Final Reports of the Calotte Academy 2012-2014 - www.nrf.is). In addition, a wide range of interconnected issues and developments – climate change, globalization, region-building and devolution of power, large-scale utilization of non-renewable resources, the opening of new sea routes, and local and global environmental concerns, among others – also pose challenges and (security) concerns to Arctic states and nations, their economies and the fragile Arctic environment. These developments also have implications on the manners in which key concepts such as sovereignty, security and geopolitics as well as their referent objects are understood in the regional context and in broader academic debates.

The Calotte Academy 2015 invited both PhD candidates and established researchers with different academic backgrounds to participate and present their research in this year's annual symposium. We warmly welcomed contributions that discuss the annual theme equally from conceptual/theoretical or empirical perspectives; from different angles and within different disciplines, from the perspectives of past(s), present(s) and future(s), as well as at different scales and levels. The invitation was well taken as the following figures clearly show: 38 paper presentations and a few hundreds of comments and questions in ten scientific sessions in six locations in three countries within the North Calotte or the Barents Region. Majority of the participants were early career scientists from the Barents Sea area countries as well as elsewhere from the Nordic countries and Russia, as well as from Central Europe, Canada and the United States. In addition to the working sessions of the Calotte Academy there were short openings addressed with a local flavor in each of the sites. Last but not least, there were several small meetings, such as the brainstorming meetings of TN on Geopolitics and Security, after sessions and on board during the touring symposium while travelling by bus through the North Calotte from Rovaniemi to Salla, onwards to Apatity and Murmansk, and further to Kirkenes, and from Inari back to Rovaniemi.

PROGRAM AND REPORTS FROM SESSIONS

MONDAY 1st of June, University of Lapland, Rovaniemi

- Welcoming words by Ms. Outi Snellman, Head of International Affairs Office of University of Lapland

- Introduction of the participants

- Introduction of the program and procedure of, and division of labor in, the 2015 Calotte Academy by Prof. Lassi Heininen, Chairman of the International Calotte Academy

Session 1: "Resources, Energy and Security"

- Dr. Arthur Mason, UiT - The Arctic University of Norway, USA: "*Installation and Visualization in Arctic Energy Development"*

- PhD candidate Danko Aleksić, The Regional Environmental Centre for Central and Eastern Europe, Szentendre, Hungary: *"Theoretical Aspects Of Resources and Energy Security in a Function Of Assessment of the Future Geopolitical Trends in the Arctic Region*"

- PhD candidate Jussi Huotari, University of Lapland, Finland: "*The Influence of Events to Oil and Gas Investments in the Russian Arctic"*

- Dr. Natalia Loukacheva, University of Northern British Columbia, Canada: *"Arctic Resource Development and Transportable Nuclear Power Plants: Legal and Security Issues"*

Reports from session 1:

(Rapporteur 1: Gerald Zojer, Researcher, Northern Institute for Environmental and Minority Law Arctic Centre, University of Lapland; PhD Candidate, Faculty of Social Sciences, University of Lapland)

The first session was dedicated to different facets of energy and security. **Arthur Mason**'s presentation focused on images of energy events, in particular regarding hydrocarbon resource developments in the Arctic. His presentation pointed out that processes behind decision making in terms of energy projects are increasingly moving from the public into private spheres: discussions are leaving government hearing rooms in favor for energy summits or hotels, and thus shift from a regulated and more transparent environment to a deregulated environment. Conferences regarding oil and gas developments are not public

events, but only a small elite has access to them. However, big energy projects have significant impacts on the society as a whole. One of the few spheres of big hydrocarbon events that remain open to the public are the images with which these events promote themselves. These key images appear on invitations and posters and may also decorate the background of events for example when company managers discuss in round tables settings at conferences. However, such promotional images are often artificial ones, made by artists, and do not necessarily reflect the reality but may in fact be actually meaningless. When looking at footage in booklets, brochures, books and the like, the public only gets to see the experts performing themselves in front of the dream images, while, however, it does not immediately become visible to them what the experts stand for. Consequently, the public remains excluded from knowledge production which significantly contributes to the formation of energy policies.

The Arctic states, though, claim in their national Arctic strategies that the region's hydrocarbon resources are seen as an important aspect for energy security. **Danko Aleksic**'s presentation opened up discussions about security issues; in particular, he was questioning what energy security actually means. He highlighted the importance of understanding security through a comprehensive approach and also reminded the Calotte Academy's participants on the Latin roots of the word 'security', which stands for 'freedom of care', 'carelessness', or 'freedom from danger'. Although in international relations the security discourse shifted only after the second world war from the traditional (military/state centered) to a more comprehensive security concept, it should be noted that a more comprehensive understanding also existed in the past, which was stressed during the discussions. Furthermore, it was stated that in line with the theoretical framework of the Copenhagen School the security concept is socially constructed. Eventually this finding led to the question: Who is the securitizing actor for energy security? Finally it was also brought to attention that when talking about security, also the question of safety should be considered, as these two concepts significantly differ from each other.

(Rapporteur 2: Nikolas Sellheim, Researcher, PhD candidate, Faculty of Law, University of Lapland)

The second part of Session 1 “Resources, energy and security” consisted of 2 presentations. One was given by PhD candidate **Jussi Huotari** who dealt with the ‘Influence of events on oil and gas investments in the Russian Arctic in the 21st century’. In 2013, Huotari asserted, energy investments were all in all around 16 billion US dollars. The International Energy Agency expects these to rise to around 2 trillion US dollars by 2035. While this may be the case, price volatility constitutes an important reason for rather inert Arctic energy investments: for example, the oil price fluctuates between 40 and 100 US dollar per barrel but with oil prices below 120 US dollars per barrel the exploitation of Arctic resources is not viable. This puts Russia as an ‘energy superpower’ in a difficult position, furthermore challenged by gas disputes with former Soviet Union states Ukraine and Belarus. In light of the ongoing sanctions and geopolitical developments, Russia is now diversifying its energy exports, especially with China, India and South Korea. During the discussions it became clear that it is difficult for Russia to replace US and EU investments although also Vietnamese companies are now signing deals with Russian enterprises. Currently, especially technology is affected by reduced cooperation with US and European firms. Interestingly, reductions in investments also destroyed high hopes for the North Calotte when the consortium of Statoil and Total was dismantled. It also remains questionable whether western companies will

reopen cooperation with Russia since putting sanctions in place is a step which is difficult to reverse.

Natalia Loukacheva's contribution dealt with 'Arctic resource development and transportable nuclear power plants: Legal and security issues.' With 400 large nuclear power plants worldwide, that many countries cannot afford, transportable nuclear power plants (TNPP) gain significance as they *inter alia* reduce costs for marine supply routes for fuel, benefit reduced emissions, are flexible and designed to be installed in a fast manner. While this technology saw its first steps in the 1970s, only in recent times it has attracted increased attention. To this end, the first floating NPP, built in Russia, will be ready by late 2016/early 2017 - *Akademik Lomonosov*. Given the mobility of a TNPP, its operation bears significant environmental risks. For example, contamination can easily occur and the risk of accidents cannot be neglected during fuelling, transportation and day-to-day operations. While nuclear safety is covered under international law, the regulatory framework did not take TNPPs into account during its creation and questions of packaging, transportation of nuclear waste or during the operational phase with regard to environmental risks, nuclear safety, physical protection as well as non-proliferation of nuclear material remain. The discussions unveiled several issues. For example, while TNPPs could provide energy security for small Arctic communities for a while, they could at the same time compromise infrastructure development due to their mobile and not fixed operation. At the same time, however, communities would not have to deal with the dismantling of old nuclear power plants. Instead, a TNPP would simply be moved. Although the international regulatory regime for NPPs is highly sophisticated, TNPPs could fall under domestic law, making this a highly contentious issue given that 15 countries are interested in buying this technology. However, the double-standard with regard to the legal regime appears obvious: while civil nuclear power is highly regulated, no regulations for nuclear submarines are in place.

Session 2: "International Cooperation, Arctic Strategies, Science Diplomacy and Security"

- PhD Candidate Jennifer Spence, Carleton University, Canada: *"Mapping the evolving governance space of the Arctic: Exploring political contestation in a region of "peace and cooperation"*

- PhD candidate Michael Brown, Arctic Centre, University of Lapland, USA: *"Strategies for Complexity: A Comparison of the Arctic Strategies of the United States and Finland"*

- Professor Rasmus Gjedssø Bertelsen, UiT - The Arctic University of Norway: "*Chinese Arctic Science Diplomacy"*

- PhD Gleb Yarovoy, Petrozavodsk State University, Russia: "*Russian and Nordic political dichotomies and their implication to cooperation in the Barents regions"*

Reports from session 2:

(Rapporteur 1: Researcher, PhD candidate Márin Rós Tumadottir, University of Lapland, Iceland)

Jennifer Spence presented her topic and the research she has done so far from a public policy and administrative perspective. She started out by stating that the Arctic has become a poster-child of sorts for climate change and the climate change debate. She views the Arctic and the Arctic zone as an interesting governance project and set out to explore who sets the policy agenda and how it is done. Specifically speaking agenda-setting is the first phase in the policy implementation process, a pre-policy policy process of sorts. The factors that need to be taken into account are who are the actors, what are the problems and how do we analyse the field. Jennifer used the Transnational Governance Triangle (Abbott 2011) to begin her analysis. She viewed both state-led, collaborative and private (for example NGO) iniatives. She mapped these "institutions" over a 30 year time period and found that one can see a growth in and between these "institutions" across and between all three sectors and grouped them into a policy domain, a sustainability domain and a social/environmental/economic domain. Jennifer found that there had been a growth in truly multilateral organisations during the time period she was looking at but at the same time registered somewhat of a political contestation in the Arctic governance space as well as a move from a more government centric understanding of the area towards a complex mix of actors, institutions, issues and activities making up Arctic governance at the present. Her focus is on the puzzle these practices create. She found that there was a heavy emphasis of all actor types on the governance norm of "peace and cooperation" and a certain cohesive identity that was not necessarily aligned with the plurality of actors, interests and activities. In closing she asked what are the implications of this governance set-up at present from a power perspective and who is it actually that benefits from the norm of "peace and co-operation"?

Michael Brown started out by iterating that his approach to the Arctic is one of a global mindset. In his presentation he compared the strategy papers for the Arctic of the United States on one hand and Finland on the other and in short found that the Americans are progressively aggressive whereas Finland is attempting to punch above its weight. America does not really view the Arctic as an important part of its international strategy although there was some change with the Obama 2013 strategy paper which called for addressing climate change in the Arctic and the appointment of General Papp as the special representative of the Arctic. So far, however, Papp has been good at "PR" – going around and participating in many Arctic conferences but there is no real money behind him, most of America's budget is assigned to domestic issues (despite Alaska being an Arctic state) . Michael saw no real examples of concrete strategy or pro-active engagement with the Arctic. There has been little concrete action despite the high rhetoric. Finland on the other hand presented a progressive strategy and marks itself as a responsible green actor in the Arctic debate. However, if one looks at reality Finland's stance smells a bit like propaganda. The emphasis on the Finland strategy is on business at cost of environment which is a disconnect from its rhetoric. Michael saw the Finns in the Arctic more as opportunistic and business oriented juxtaposing with the "green" image they want to present. His conclusions were that the Arctic strategy papers were in a way hyped up government rhetoric and did not present anything particularity innovative and that transnational movements and non-government bodies were doing most of the work.

(Rapporteur 2: PhD Candidate Jennifer Spence, School of Public Policy and Administration, Carleton University, Canada)

On behalf of himself and co-author Li Xing, **Rasmus Gjedssø Bertelsen** presented *Chinese Arctic Science Diplomacy.* He argued that China's active participation in the Arctic's scientific community is transforming how the region's stakeholders perceive China's role and interests in the Arctic. He introduced the idea that China's focus on science, as opposed to natural resource development, is an example of soft power that provides an alternative channel for relationship building and creates an opportunity for mutual socialization – where China can better understand the perspectives and interests of stakeholders in the Arctic and China's intentions are also made visible. Rasmus proposed that this case demonstrates the important role of science *for* diplomacy in the region.

Russian and Nordic political dichotomies and their implication to cooperation in the Barents regions was presented by **Gleb Yarovoy**. Through the use of a matrix, he systematically considered current trends in Russia and the Nordic region. In particular, he focused on evidence of increased militarization. Yarovoy then went on to assess the implications of states' militarization when combined with different potential trends in domestic and international policies and institutions in the Barents region. He argued that institutions like the Barents Euro-Arctic Region (BEAR) still offer an important opportunity to maintain an environment of cooperation in the region; however, he concluded that recent events leave the effectiveness of this institution, and the future of soft security, uncertain.

TUESDAY 2nd of June, Town Hall of Salla, June 2, 2015

Session 3: "Human and Social Capital"

- Mayor Erkki Parkkinen, Municipality of Salla: *Introduction to the Municipality of Salla and Eastern Lapland*

- Researcher, PhD Candidate Hanna Lempinen, Arctic Centre, University of Lapland, Finland:*"Social Sustainability "in the middle of nowhere"? A Case Study from Salla, Finland"*

Report from session 3:

(Gleb Yarovoy, Associate Professor, Petrozavodsk State University, Russia)

At the session, two rather different perceptions on the development of remote peripheral municipalities in the Finnish high north have been presented. The session was opened by Mr. **Erkki Parkkinen**, Salla municipality mayor. The mayor colorfully portrayed the region as the birthplace of skiing, underlined all its strong sides and competitive advantages. The mayor draw a rather optimistic picture on the current development of Salla and pointed out many plans for the near, mid- and long-term perspective. Many tourists from Russia (however, less than the last years due to Ukraine crisis and weak rouble), Netherlands, Spain, Germany and even Brazil come to Salla in search of natural wilderness and outdoor adventures;

furthermore, cross-border cooperation with Russia has a key role in terms of Salla's future prospects. The future of municipality is also relates to the joint iniatives, such as ENI 2016+ plans for railway connection to Kandalaksha ("Barents Growth Corridor" project) as a part of North-East passage to Asia for transportation of hydrocarbons and mineral resources. The mayor also indicated that for different reasons Murmansk, not Kirkenes, will be the main port on the European Arctic (on the Northern Sea Route).

PhD candidate **Hanna Lempinen** from the Arctic Centre delivered a paper with the title"Social sustainability "in the middle of nowhere"? A case study from Salla, Finland". Academic's perspective to the municipality looked quite opposite to that of the mayor. A situational map created by the researchers showed various problems and challenges (declining population, problems in forestry, predators, reindeer herding in decline, seasonality of tourism, people abandoned by the state, youth leaving, ageing population), but also some strengths and possibilities for the future. Among other potential developments, locals rely on Russia (visa-free regime), EU investments (railway), Asian interest and the Northern Sea Route. Scenarios drawn up as a result of the case study include both negative (inertia) and positive perspectives. Although the positive scenario possibilities lay outside the community influence (decisions are taken so far away), the most important finding of the report was the feeling of responsibility of the local people and very strong local identity and community feeling. This will keep people living in Salla and keep Salla alive in despite of all possible problems. All in all, the session contributed significantly to the general picture of how diverse the Arctic is, or how different it appears from the academic and the bureaucratic perspectives.

Picture: Gerald Zojer

WEDNESDAY 3rd of June, Luzin institute on economic studies, Kola Science Centre of RAS, Apatity, Russia

Session 4: "Environmental Management"

- PhD Tatiana Alieva, Luzin Institute for Economic Studies, Kola Science Centre of RAS, Russia: *"State Environmental Management in the Arctic Zone of the Russian Federation: Formulation of the Problem"*

- PhD Galina Kharitonova, Luzin Institute for Economic Studies, Kola Science Centre of RAS, Russia: *"Economic Mechanism of Nature Management and Environmental Protection in the Russian Arctic: Present and Future"*

- PhD Ludmila Ivanova, Luzin Institute for Economic Studies, Kola Science Centre of RAS, Russia: *"Reproduction of the Mineral Resource Base of the Russian Federation: Current and Future Forms of Implementation"*

- PhD Hayley Hesseln, University of Saskatchewan, Canada: *"Innovation in the Canadian Forest Sector?"*

Reports from session 4:

(Rapporteur 1: Rasmus Gjedssø Bertelsen, Professor, UiT the Arctic University of Norway, Norway)

Dr **Tatiana Alieva** introduced the topic of environmental problems from large-scale projects in the Russian Arctic. It emphasized how large-scale projects demand environmental protection policies and the importance of demographic information for handling environmental problems. The Russian Arctic is particularly polluted for Russia. Large-scale hydrocarbon projects in Yamal-Nenets stress the environment and people living there. The environmental threat to indigenous people in Yamal-Nenets is through local food (and) contamination. Dr. Alieva discussed carcinogenic risk from environmental pollution to local populations. Finally, she addressed environmental regulation in the Russian Arctic and how local, regional and federal authorities cover different questions. Natural resource users are subject to regional environmental supervision. There is difference between regional and federal environmental control, most extraction projects are subject to federal control. There is a distinction between special competences, general competences, and combined competences for different agencies. The State Commission for the Development of the Arctic, chaired by Rogozin, was introduced. The weak researcher and civil society representation was conspicuous. Dr. Alieva concluded that the necessary tools for effective governance are tools of integrated, coastal spatial planning and a comprehensive plan of territorial and marine spatial development of the Russian Arctic taking into account climate change.

Dr **Galina Kharitonova** gave an environmental economic analysis addressing two questions. The first question was what are effective economic instruments for natural resource management. The second question was how to increase efficiency in natural resource extraction. She presented how the USSR in 1989 experimented with ecological

payments, and how the Russian Federation in 1994 introduced payments for pollution. Between 1997 and 2002, there was legislation for nature management payments. Dr. Kharitonova presented a long list of current environmental regulation. The background for the problem is the Russian Arctic based on natural resources economy. The raw materials extracting companies are the main polluters. The Arctic ecosystem has low environmental capacity, and there is a very large global environmental impact from the Russian Arctic via the ocean. Therefore the most efficient policy instruments are taxes on using natural resources and polluters-pay-principles. There are over 40 different Russian natural resources taxes. The Russian state has ownership of the natural resources, but there are frequent changes to the natural resources taxes. The Russian state is highly dependent on natural resource taxes. 40% of federal revenue is from oil. 70% of revenue in Arkhangelsk is from oil. Dr. Kharitonova concluded that economic management is ineffective and does not encourage saving natural resources and efficient use. There is no recycling of raw materials. Recreation areas are under-utilized. Payments for pollution are too low. The government program for the Arctic is a threat to the Arctic ecosystem. Therefore she recommended a special environmental status for the Arctic, use of best technologies for natural resource use, differentiating raw materials taxes based on quality, and a federal ecological program of division of "Measure on rational nature management and providing of ecological safety in the Arctic".

(Rapporteur 2: Karen Everett, Researcher, PhD candidate, Trent University, Canada)

Dr. **Ivanova**'s presentation provided an overview of the mineral resource sector in Russia, and explained that in the Murmansk region, mineral production accounts for 60% of all of the region's production. She began with a detailed explanation of the federal governance structure of the industry and the division of responsibility between the different state departments, as well as the legal structure. Next, Dr. Ivanova discussed the evolution of the resource sector, noting three key period of development: Pre-revolutionary Russia (1700-1917); the Soviet Period (1981-1991); and the modern period (1992-present) and explained that during the last two periods the expansion of the ability to access the resources has been prioritized. In terms of ownership, the majority of development sites, 75%, are owned by private sector, with the state only owning 10% and the corporate sector 15%. One issue that was raised during the discussion was availability of data regarding the sites and it was noted that information from state surveys is made public, while data from private companies are not publically released. Furthermore, during her presentation Ivanova explained that there are some challenges in the industry as there is not a clear division of responsibility between state and corporate responsibility, and as a consequence, the regions where development are taking place are not benefitting as much as they could. Therefore, Dr. Ivanova argued that both the state and private interests should work together on an equal footing.

Dr. **Hesseln**'s presentation examined issues in the Canadian forest sector. She began with a brief overview of the industry, which included the problematic relationship with the United States over whether the Canadian government subsidizes the industry; high production costs; and trade competition from other countries. These issues were further exacerbated with the 2008 economic crisis which caused the closure of several mills by 2014. As a result, employment in this sector has declined, which has also meant that lumber's contribution to Canada's GDP has declined. Dr. Hesseln argued that part of the problem with the industry is that the forests in Canada are owned by the government (both federal and provincial), which means that forests are not being used to their fullest capacity. More specifically, private company access to the forest is only valid for 25 years, which does not

allow a company time to make good use of the land. She contrasted this structure to those of Finland and Sweden where up to 50% of the forests are privately owned and local residents have a stake in what happens to the trees. Another benefit of private ownership is that there is increased innovation in terms of what the wood can be used for, such as new biofuels and the use of woodchips to help create biodegradable casts. Therefore, Dr. Hesseln asked the question as to whether there are lessons Canada can learn from the foresting practices in Finland and Sweden.

Session 5: "Human and Social Capital II"

- PhD Elena Bashmakova, Luzin Institute for Economic Studies, Kola Science Centre of RAS, Russia: *"Murmansk Region and the Barents Euro-Arctic Region: 20 Years of Cooperation"*

- PhD Larissa Riabova, Luzin Institute for Economic Studies, Kola Science Centre of RAS, Russia: "*Cross-Border Cooperation as a Driver for Development of Small Settlements in the Barents Region: Case of Alakurtti, Murmansk Oblast"*

- PhD candidate Anna Omelay, Luzin Institute for Economic Studies, Kola Science Centre of RAS, Russia: *"The food security monitoring system in the northern region (in case of Murmansk region)"*

- Senior Lecturer, PhD candidate Tuula Sykkö, Lapland University of Applied Sciences, Finland: *"Towards Internationalization Competence - Student Nurses Foreign Language Education in the Barents Region"*

Report from session 5:

(Rapporteur: Researcher, PhD candidate Andrian Vlakhov, European University St. Petersburg, Russia)

The session, held on a rainy summer day in Apatity, one of the most prominent industrial and research centers in the Russian North, had its main focus on the human development in the Arctic and social issues inflicted by human activities in the North. Three of four talks in this session were given by researchers from Kola Science Center (Russian Academy of Sciences) who analyzed various aspects of human-environment interaction, cross-border cooperation and social security in the Arctic regions.

In her talk on Barents Euro-Arctic cooperation, Dr. **Elena Bashmakova** attempted to analyze these cooperation processes (having recently reached their 20th year) on both institutional and grass-roots level. Dr. Bashmakova split her analysis into two temporal parts (1993-2003 and 2003-2013) arguing that though both the cooperation patterns and political framework have changed significantly, the BEAR cooperation has become institutionally established and should continue on all levels. Dr. **Larissa Riabova** also attempted to trace cross-border cooperation patterns in the Barents Region, although focusing more on its local and grass-roots level in the small communities. Her case study from

Alakurtti, a minor settlement in the Murmansk Oblast, approached Alakurtti's economic development and the opportunities provided by cross-border relations in the region. Though the local population still doesn't identify themselves much with the cross-border projects, Riabova expressed her hope for possible economic boost powered by local-level BEAR initiatives.

Another study from the Kola Science Center by PhD candidate **Anna Omelay** presented a food security analysis for the Murmansk Oblast. Omelay described the modern food security monitoring system used in the region and suggested possible transition to a new, three-stage system and integral food security index. She has identified several problematic fields in this regional system and highlighted the importance of local expertise and local data for the analysis. The remaining talk in this session given by PhD candidate **Tuula Sykkö** from Lapland University of Applied Sciences dealt with the internationalization competence in the nursing education in the Barents Region. Sykkö presented her many-staged comparative analysis of Finnish and Russian nursing education system, focusing on its practical aspects which concern building international competence. Two case studies from Finland and Russia were presented, both somewhat pessimistic towards the internationalization competences in question; nevertheless, the presenter expressed her hope for possible changes in the situation.

Summing up, one should note that both the presentations given during the session and the discussions that followed each talk were informative, comprehensive and interesting for the Academy participants. Dealing mostly with the practical aspects of Barents Region everyday life, they provided useful insight into the regional cooperation and created ground for further comparative analysis. Despite the fact that some presenters encountered the language barrier during their talks and discussions, the nature of their research has indicated how easily such barriers can be overcome.

Session 6: "Sustainable / Regional Development"

- Researcher, PhD Candidate, Hanna Lempinen, Arctic Centre, University of Lapland, Finland; *"Indigenous Cultures, Local Lifestyles? Cultural Sustainabilities in the Arctic Strategies of the Arctic Council Member States"*

- Junior Research Fellow Ilya A. Stepanov, National Research University Higher School of Economics, Russia: "*Prospects for the Northern Sea Route (NSR) Development as the Commercial and Strategic Project"*

- Senior researcher, PhD Anastasia Gasnikova, Luzin Institute for Economic Studies, Kola Science Centre, RAS: *"Energy Security Problems of the Arctic Regions of Russia"*

Report from session 6:

(Rapporteur: PhD Hayley Hesseln, College of Agriculture and Bioresources, University of Saskatchewan, Canada)
Session six included three presentations that began with **Hanna Lempinen**, who presented research regarding cultural sustainability. Specifically, she presented research that looked at Arctic strategies and how culture is addressed by such strategies and member states. The

research explored several questions including: Whose cultures are addressed? What is seen to threaten cultures/cultural sustainability? And, why cultures should be sustained, by whom and by what means? The researchers used a case study approach using content analysis to examine each Arctic strategy. Research findings suggest that culture is not explicit and language was generalized and vaguely described. However, they found that most references to "culture" specifically meant "indigenous culture" (traditions, nature, etc.). Additionally, culture was largely threatened by climate and environmental change, industrial development and state/international structures insensitive to indigenous concerns. Finally, sustaining culture could be viewed as an entrepreneurial endeavor that could produce economic benefits, or to enhance traditional knowledge to serve administrations. The means by which this is possible requires integrating values of states and indigenous groups, and could rely on people themselves engaging in cultural practices. Discussion largely focused on the definition of culture, reasons to focus on cultural sustainability, and the tenuous and sometimes contentious relationship between culture and rights, and states' different approaches to dealing with both through official strategy documents.

Ilya Stepanov presented a paper on the economics and politics of the Northern Sea Route (NSR). The study looked at the economic factors that would make the NSR economically efficient and included transportation costs, cargo and cargo type, distance and timing, and end markets. Additionally, he compared costs for the NSR with existing southern routes. While at first glance, based only on a shorter distance fuel cost savings of approximately 40% appear to be desirable. However, when other factors are considered, the route is less desirable. Factors affecting total costs include capital (special capacity/hull form/propulsion systems), transit fees (qualifications, etc.), insurance costs, port dues, and crew costs. Additionally, the type of shipping (container (liner) and bulk shipping) is dependent upon the products being shipped (higher valued versus commodity), which affects the ports of call and schedules, thus affecting fixed and variable costs. Finally, speed and fuel type are factors when evaluating costs in Arctic waters/colder climates. Sensitivity analysis showed that ports of call, vessel types, fuel types, and cargo form a complex picture of economic costs. Discussion focused on additional factors that could influence cost including political alliances (Russia/China for example), risks associated with world security and politics (e.g. Suez Canal), and changes in technology.

Anastasia Gasnikova presented a view of energy security problems of the Arctic regions of Russia and an interpretation of energy security, explained as the uninterrupted availability of energy sources at an affordable price. Energy security has many aspects that vary in the long and short terms including economic development, environmental needs, and change in demand. The Russian definition of energy security focuses on the country's security of its citizens, society, and state, and the economy being free from the threat to reliable supplies of fuel and energy where threats arise from geopolitics, markets, resource sufficiency, etc. Key characteristics are important when evaluating energy security including extreme environmental conditions, limited economic development in northern regions, decentralized energy supply, the inability to deliver energy in remote areas, and the unequal distribution/presence of oil/gas. In summary, the mere presence of oil and gas resources does not translate into energy security. To increase energy security it will be necessary to invest considerably in new technology and to overcome market uncertainty in the long term. This includes increasing the number of transmission lines to increase market competition. Discussion centered on the need for a refurbishment plan and possible approaches to market reform including the development and delivery of energy from renewable sources.

Picture: Gerald Zojer

FRIDAY 5th of June, Norwegian Barents Secretariat, Kirkenes, Norway

Session 7: "The Environment, Military Strategies and Security"

- PhD candidate Marín Rós Tumadóttir, University of Lapland, Iceland: "*Constructing an Arctic "Security Community": Players and Processes"*
- PhD Candidate Barbora Padrtová, Masaryk University, Czech Republic: "*Russian Military Build-up and Aggressive Rhetoric – How it Influences Cooperation in the Arctic"*
- Secretary General, M.Soc.Sc. Anni Lahtinen, Committee of 100 in Finland: "*Beyond the Reach of 'Too Many Keen Eyes': The Problematic of Drones"*
- Professor Lassi Heininen, University of Lapland / TN on Geopolitics and Security, Finland: *"The Nexus of Cause and Effect – Resources, the Environment, Climate Change and Security (incl. the Military)"*

Report from session 7:

(Rapporteur: PhD Hayley Hesseln, College of Agriculture and Bioresources, University of Saskatchewan, Canada)

Marín Rós Tumadóttir started session seven with a theoretical discussion of a "security community" and what that means in a Nordic context. While the idea of a security community – a concept developed by Karl Deutsch – was largely associated with the cold war, the criteria by which it is described can be applied to better understand security in the Arctic today. Fundamental concepts include developing a sense of community strong enough and sufficiently widespread to increase the certainty of peace over a long period of time. Main characteristics include mutual independence, abandonment of the use of force, common political values, and the ability to respond to issues quickly and without resorting to violence.

In conclusion, a security community exhibits a complex interdependence whereby many actors are involved (other than states), there is a hierarchy, and for which force is an *ineffective* instrument of policy. Discussion focused on the level at which security communities could form, the players (global and otherwise), and how or if they co-operate to reduce the possibility of violence. While the concept was developed in relation to the cold war, it is important to recognize the political differences between the two periods.

Barbora Padrtová followed with a presentation that looked at the power of rhetoric in relation to military activity in the Arctic. There have been several violations in air space, increased submarine activities, and new efforts to militarize outposts in Russia. Russia has been investing in military infrastructure at an increasing rate, largely to increase its presence. This contradicts the rhetoric of peace and cooperation. While there is cooperation at lower levels, Russia's government cannot ignore that all coastal states in the Arctic are members of NATO. Furthermore, it is impossible to isolate Arctic issues from other world events. The conflict in Ukraine resulted in cancelled meetings, boycotts and reduced levels of co-operation. Ultimately, the border conflict between Russia/Ukraine will determine the trajectory of the security environment in the Arctic. Russia holds the key to the region's future, in spite of having the most to lose. Discussion focused on militarization as necessary to update infrastructure, that there is nothing new occurring, and that Russia is still cooperating with other countries. Collaboration in the Arctic was believed to be strong and that military build-up was necessary for continued stability and not necessarily conflict. The discussion ended with a question: "How do you design a local system where Russia feels safe about strategic assets in a way that doesn't pose a threat?"

Anni Lahtinen explained the military and civilian uses of drones – unmanned aerial vehicles. While drones can be used for civilian purposes, they are primarily used for military purposes; controlled from the ground for reconnaissance and surveillance, or armed with missiles and bombs. Advantages for use in the Arctic include environmental testing, research, surveillance, and training for example. The Robonic Arctic Test UAV Flight Centre in Finnish Lapland markets itself as a large empty wilderness location with lots of sun and lots of opportunities for cost-effective testing with full support. While the company markets itself as a full-scale facility, it has no civilian contracts. The discussion focused on a wide range of topics from the philosophical and legal ramifications of giving responsibility to robots, to global security and intelligence regarding groups such as ISIS. Issues discussed included the lack of public knowledge about this company and its activities and ownership, airspace rental as a business, and the role of drone use in militarization.

Lassi Heininen discussed the nexus of cause and effect with respect to northern security in five related areas: resources, the environment, climate change, and the military. There are many different features of northern security and lenses through which to view it, as well as definitions and security paradigms. An example is nuclear presence – it was once a military concern, but nuclear safety was also driven by environmental concerns about northern fisheries. Today, climate change is a driver of security and is politicizing environmental actions; for example, the "greening" of the military. Ultimately there are different definitions of security (human, military, environmental), different premises, and different paradigms. If nuclear safety was enough to change the discourse of security in the North, will the discourse again change due to climate change? The discussion centered on climate change, not as an Arctic problem, but the effects it will have on the rest of the world and how military security plays a role. Additionally, questions were raised about militarization of the environment and the reverse: environmentalization of the military. Finally, the issue of whose security was at stake was discussed.

Session 8: "Human and Social Capital III"

- MA Student Nadezhda Nikitina, Northern (Arctic) Federal University, Arkhangelsk, Russia: *"The Components of Psychological Readiness for Shift Work in the Far North"*

- PhD candidate Irina Porokhina, Northern (Arctic) Federal University, Arkhangelsk, Russia: *"Professional Destructions of Shift Workers in the Arctic, Evaluating Different Workplace Safety"*

- MA Student Mariya Tumanova, The Northern Arctic Federal University named after M.V. Lomonosov, Arkhangelsk, Russia: *"Psychological support for shift work in the Far North"*

- Researcher, PhD candidate Laura Olsén, Arctic Centre, University of Lapland: "After one year living in a Sámi community - environmental and social/human security challenges in Finnish Sápmi"

Report from session 8

(Rapporteur: PhD Arthur L. Mason, UiT, Norway)

In her presentation, **Nadezhda Nikitina** discussed the "psychological readiness" of shift work in the Arctic identifying a variety of "natural factors" for far north conditions that fall under such topics as syndrome of polar voltage; push pull migration; shift work on a rotational basis; changes of perception of temporary rhythms in eating habits, lengthy presence in closed premises; and "destructive sexuality". This last phrase attracted a lot of attention during discussion as it was unclear what actually the destructive aspect of sexuality actually referred to. Nikitina also proposed that psychological readiness include a set of psychological knowledges, a motivational objective structure; an ability to adapt of changing working conditions and attention to individual typological features.

Irina Porokhina followed with a discussion of "professional destructions" of shift workers in the Arctic focusing on adverse functional states and professional destructions resulting in reducing efficiencies and errors. This included a typology of concerns related to space-time constraints, informational constraints and social constraints. The sense of security as a psychological condition was aimed at reducing the severity of professional destruction and by identifying among employees who rate their workplace as feeling more safe. Finally, **Mariya Tumanova** discussed psychological support for shift workers in the north who deal with intense physical exertion, extreme climatic conditions, socio-psychological overloads and even visual and information overloads.

Picture: Anna Yarovaya

SATURDAY 6th of June in Sami Cultural Centre Sajos, Inari, Finland

- Director of Sami Educational Center, Liisa: "*Opening words and Introduction into Inari and Sapmi*"

Session 9: "Environmental Management II"

- Researcher, PhD candidate Ilari Nikula, University of Lapland, Finland: *"Better Nature"*
- Researcher, PhD candidate Florian Vidal, Paris Descartes University, France: "*Environment Security: a Strategic Issue for the Barents Region"*
- Researcher, PhD candidate Gerald Zojer, Arctic Centre, University of Lapland, Finland: "*Arctic Environmental Governance as a Venue for Socio-Economic Power Struggles"*

Report from session 9:

(Rapporteur: Laura Olsén, Researcher, PhD candidate, Arctic Centre, University of Lapland, Finland:

The beginning of the last day of the Calotte Academy 2015 and the morning session consisted of three presentations. **Ilari Nikula** started the day with a strong statement that the ecological crisis does not exist. Nikula discussed about the biopolitics of the ecological crisis, and claimed that it is only a tool used by neoliberal governance for social control and governing of population. These ideas spring from Foucault's philosophy that emphasize the connection between the power and truth. Truth is seen more as a political matter, and Nikula wants to problematize political truth about the ecological crisis. At the moment dominant narratives in international politics are the negative effects of climate change, which supports neoliberal

marketing system. However, according to Nikula the history shows that there are no limits to humankind, and environmental and natural resources should be seen as in a dynamic relation with humankind. This presentation provoked a vivid conversation about the values and the nature of science and the "scientific truth". Objectivity and politicization of the results collected by natural scientist was brought up and evoked different kind of opinions.

The second speaker of the session was **Florian Vidal** who contributed the Academy with his presentation "Environment security: a strategic issue for the Barents region". Vidal used multidisciplinary approach to the topic and historical timeframe as a guideline in his presentation. In the past nuclear legacy and the nuclear waste were the dominant narratives in the environment security conversation in the Barents region. Local socio-ecological system was seen as doomed. Vidal claims that at the present times there are three different kinds of Arctics; extreme, stretch and workable. While the number of different kind actors is increasing in the Barents region it is bringing also more technical co-operation, and it has a decentralizing effect to the state-centric governance in the region. In the future the dialogue and co-operation between different actors is likely to enhance, and empowering processes and harmonizing the situation are the key issues in the region.

The third contributor of the session 9 was **Gerald Zojer** who gave a presentation on "Arctic environmental governance as a venue for socio-economic power struggles". Zojer sees that the focus of the Arctic states'/actors' politics has lately shifted from environmental protection to economic development. As his case-study, Zojer used hydrocarbon development in the Arctic. Arctic Council and the Arctic states mention in their strategies that the hydrocarbon development should be supported in the Arctic. Nevertheless there is always also a down side of the current situation since most of the positive effects of this kind of development travel to the south and the negative ones are staying in the North. However, according to Zojer fossil resources can still be seen as the "motor" of the development in the region, and environmental governance is a venue for socio-economic power-struggles.

Session 10: "Sustainable / Regional Development II"

- Researcher, PhD candidate Karen Everett, Trent University, Canada: *"National Security Policies and the Consequences for Yukon Exports"*

- Researcher, PhD candidate Nikolas Sellheim, Faculty of Law, University of Lapland, Germany: *"Morality dictates. Of a European moral standard pertaining to the seal resource"*

- Researcher, PhD candidate Andrian Vlakhov, European University at St. Petersburg, Russia: *"Coal mining and Russian Svalbard Policy: Ways of Achieving Sustainability"*

- Project manager Ilya Drozdov, Non-profit Partnership "Centre for Problems of the North, Arctic and Cross-border Cooperation" (North-Centre), KRC, RAS Russia: *"No More "Leviathans" in the Northern Peripheral Regions: an Idea how to Assess Conflict Threats Pressing Sustainable Development"*

Picture: Gleb Yarovoy

Report from session 10:

(Rapporteur Michael Brown, Fullbright Stipendiat, Arctic Centre, University of Lapland)

Karen Everett started off the session by articulating that, in the case of Yukon-Alaska trade, the US-Canada border is a huge issue and that this drastically hinders the success of Yukon based exports. This is unfortunate because Alaska makes up a key target for Yukon exports for a couple of reasons, one among them being that the goods in the Yukon have a real market in Alaska, and the second is that Alaska has much needed port infrastructure to export Yukon-based commodities. Essentially, the issue is that Yukon businesses, especially small and medium enterprises, have to pay more due to this border, and change can only really begin to take place through the development of cross border networks.

In his presentation, **Nikolas Sellheim** outlined that seals are a resource that has grown a whole industry off the coast of Newfoundland, and the much-mentioned EU import ban gutted that very industry. He argued that in a legally moral sense, this doesn't make much sense, as it only reduces the number of seals killed, where other animal welfare laws affect changes in method in response to direct issues, and relate mostly to farmed animals. It's a uniquely emotional and moral standpoint from the EU and singles out a single animal as somehow protected from killing not based on any conservation data. In a discussion session, Sellheim revealed that despite the negative effects of the policy on Newfoundland hunters and processors, it doesn't seem to matter much to relations to overturn.

Andrian Vlakhov's presentation gave a summary of his experiences in Barentsburg, a town of some 450 mostly male coal miners, and examined the reason for its existence given that it exists to fuel itself off its own coal. It's a classic example of a town caught between competing interests. The miners want to keep the town occupied for their own traditions, the government of Russia wants to keep it open as a flag-bearing outpost, and the company wants to shut it down to ensure profitability. The result is a town kept alive for political reasons while the Norwegian Svalbard towns are kept alive through an actively diversified economy. Finally, **Ilya Drozdov**'s talk was focused on how to prevent stakeholder conflict in the north. These conflicts can drive violence, which isn't much of an issue now,

though they can still undermine communities in the north. He asked the question "How can new technologies affect communities and our research?" and proposed that conflict databases are a way of helping with stakeholder involvement.

Picture: Karen Everett

List of Abstracts (in alphabetical order)

Danko Aleksić, M.Sc., MA.
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Theoretical Aspects Of Resources- And Energy Security In A Function Of Assessment Of The Future Geopolitical Trends In The Arctic Region

Functioning of modern societies depends on resources primarily characterized by exhaustibility and non-renewability, whereas needs rapidly grow simultaneously with depleting of its reserves. That makes resources, especially sovereignty and control over them, a *par excellence* political and security issues in decades to come. Stocks of fossil fuels (as the widest used resources) are geographically irregularly located. In addition, majority of world's states are dependent on importing this type of fuels whereas the number of exporting countries is very small. That makes this type of resources an important factor of geopolitical aspirations. The main purpose of this paper is to provide a theoretical framework for analyzing resources/energy issues in the security context. It gives an insight into the energy security concept, its theoretical aspects, development and importance it has in a modern world faced with numerous and various security threats and challenges. Furthermore, the paper examines the concept of sovereignty in the context of energy security and governance over natural resources. Sovereignty and control over resources deposits is among crucial reasons for increasing interest in the Arctic. Based on a defined theoretical framework, as well as analysis of present constellation in the Arctic region, the paper will contain a predictive part that will discuss possible developments in relations between the Arctic nations. The Arctic region includes both USA and Russia, Canada, Denmark (NATO and EU member) and Norway (NATO member, but not the EU member). The Arctic Council also includes Iceland (NATO member, but not the EU member), Finland (neutral, the EU member) and Sweden (neutral, the EU member). Consequently, various geopolitical interests and positions are intersected in the Arctic region, which makes it a fertile ground for struggles and conflict, but opens many possibilities for cooperation as well.

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State environmental management in the Arctic zone of the Russian Federation: formulation of the problem

Ensuring environmental safety in terms of the planned large-scale involvement in the commercialization of natural resources in the Russian Arctic requires efficient management of the environment in the Arctic Zone of the Russian Federation.

State management in the narrow sense means administration, i.e. activities of the executive bodies of state power. Thus state environmental management in the narrow sense means activities of the executive authorities of the Russian Federation and regions, as well as local self-government on the delegated powers in a concrete field, aimed at preserving and restoring the natural environment, rational use and reproduction of natural resources, avoiding negative effects of economic and other activities on the environment and elimination of their consequences.

Currently, in our opinion, the main problems of the state environmental management in the Russian Arctic are as follows:

1. Lack of an overall efficient system of governmental management of socio-economic development of the Arctic Zone of the Russian Federation. On February 3, 2015 the President of the Russian Federation signed a decree establishing a new government structure - the Commission for Management and Development of the Arctic. It is expected that the Commission would be a single responsibility centre for implementation of the Arctic policy, will help to better coordinate activities of ministries and departments, Russian regions and businesses.

2. Various statuses of regions of the federation, included of the land borders of the Arctic Zone of the Russian Federation is one of the reasons for both the low level of interregional cooperation of Arctic regions and cooperation between federal and regional levels of government on their territories, including in the field of environmental protection.

3. In the context of the planned increase of anthropogenic load on the environment of the Arctic with its low assimilative capacity seems appropriate to introduce a special regime of nature management in the Arctic zone of the Russian Federation.

Ecological zoning of Arctic territories and water areas should be used as one of the instruments of state environmental management in the Arctic Zone of the Russian Federation. Results of ecological zoning should be taken into consideration when making management decisions in the field of territorial development, environmental safety, environmental protection and rational use of natural resources in the Russian Arctic.

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Murmansk Region and the Barents Euro-Arctic Region: 20 Years of Cooperation

Cooperation development within the Barents Euro-Arctic Region from its inception until present was analyzed with the emphasis on the Murmansk region. Theoretical bases of creating trans-regional formations on the basis of studying the processes of creation and development of "Euro-regions" in the European Union are examined, and a comparative evaluation of differences in development of regional integration in Russia and European countries is made. Two decades of BEAR activities are identified and described with evaluation of impact of the integration on development of the Murmansk region. The main directions of cooperation within Barents Programs and implementation of some projects and measures in the region are presented.

The basic achievements and difficulties that arose during formation and development of integration processes in the North of Russia and Scandinavia are revealed. The main results of cooperation within the BEAR at each stage are summed up. There are

noted positive trends in development of cooperation in the humane field, in development of contacts among population of the region, in formation of a common information space in development of cross-border communications, and in solving environmental problems. At the same time it was found that progress in economic development, marine activities, the fishing industry, and incoming tourism are less significant. It is stated that processes of the 20-year co-operation within the Barents Euro-Arctic region have formed a new cultural, economic and geopolitical environment in the North of Russia and Europe, and created important prerequisites for development in the future. The Barents region is gaining international importance, due to the growth of general interest in the Arctic, its natural resources, transport positions in light of the possible climate warming. This is fully applied to the Murmansk region, as one of the most industrialized regions of the Arctic, as the sea gate of Russia in the Arctic, and as a region with significant natural resources, innovation, investment and human potential. An attempt is made to consider the contours of integration processes in the BEAR under new, extremely complex geopolitical conditions prevailing in the world at the present stage.

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LI Xing,
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Mette Højris Gregersen,
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Chinese Arctic Science Diplomacy

This paper will look at the use of soft power policy in China's Arctic policy through the case of science diplomacy. The paper will look at how China uses soft power in general and science diplomacy in particular to reach goals in Arctic affairs of access, participation and recognition as a legitimate stakeholder. We will look at top science as a marker of great power status. The paper will look at how China enters the Arctic through science, how China creates an image as a legitimate Arctic stakeholder through science, how China builds relations with Arctic nations and wider through science. Likewise, the paper will look at how Arctic nations works with Chinese Arctic science to accommodate and integrate China in the Arctic.

The paper inserts itself in the general International Relations debate on the rise and accommodation of China in the international system. The Arctic is a useful sub-region to study this rise and accommodation as the Arctic is dominated by status quo powers from the West and Russia. The case of science diplomacy gives the opportunity to explore a broader power concept in power transition and to explore transnational instruments in the management of the rise and accommodation of a new power.

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Strategies for Complexity: A Comparison of the Arctic Strategies of the United States and Finland

The Arctic States are comprised of nations that range widely in size, influence, interests, and strategies for the Arctic. With the stakes of a warming Arctic becoming clearer and more urgent, it is necessary to evaluate the governance schemes being put into play in the region, which is often considered a governance laboratory. This article will compare the Arctic strategies of the United States and Finland. These two countries are quite different in terms of their situation and the attention and resources that they are putting into Arctic governance but are set to be the next two chairs of the Arctic Council. One, a superpower that is historically timid of multilateral engagement and innovation in governance schemes and until recently an Arctic laggard, and the other a small country that has historically relied on innovative governance initiatives and international institutions to legitimize its position on the world stage. This comparison allows analysis of the two poles of Arctic players, the coastal resource superpower and the small state with no Arctic coast or significant hydrocarbon resources, and pose the general question of, are these strategies examples of appropriate governance for the Arctic and also for the complex nature of the problems facing it, like extra-Arctic induced Climate Change? This paper begins with an analysis of the state of Arctic relations and challenges, a historical background of each state and the rationale/development of their respective strategies, and finally, uses the article "Governments for the Future - Building the Strategically Agile State" from the Finnish Innovation Fund as a framework to compare their attributes in a way that holds them up to the complex challenges facing the Arctic.

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No more "Leviathans" in the Northern peripheral regions: an idea how to assess conflict threats pressing sustainable development

International institutions provide a strong basis for research and cooperation in terms of development and security in the arctic and subarctic regions. But when it comes to natural resources dialogue, attitude and vision of security differs from country to country. Strict division of soft and hard security is especially typical for this sphere and for Russian context. Development of resources is often considered to be the element of "national" security and driven by the commercial interests. However, the author argues that exploration of resources should also be discussed in terms of soft security as it affects interests of local communities. For example, some of the indigenous peoples are left alone to deal with the environmental and social damages resulting from development projects located on their lands. The abilities of international institutions to deal with such challenges are still limited.

The article presents the idea how to improve cooperation of different actors in resolution of local contradictions and conflicts; and discusses the "limits" of international organizations, that prevent them from dealing with local issues in the most efficient way.

The core idea is that this cooperation can be improved by merge of traditional cooperation approach, proposed by international organizations, with new ones based on innovative tailor-made solutions in creation of conducive environment for multi-actor communication and expertise outsourcing. The system is supposed to be an online communication platform for target groups and expert community. This is to allow to address real-life issues of regional socio-economic development and minimize the limits such as "time", "location", "audience" that "general" approaches usually have. Thus, the suggested system is an ongoing expert cooperation network for development of solutions to prevent and manage conflicts and disputes concerning exploration of natural resources in the Northern peripheral regions.

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National Security Policies and the Consequences for Yukon Exports

The mining sector in Yukon, Canada has experienced difficulties for over a decade. As debates carry on over the future of the industry, the effects of national security policies and practices on the ability to export goods from the territory need to be considered. Currently, small and medium sized enterprises (SMEs) are more numerous in the local economy and have been affected by the post-9/11 security agenda that often trumps the needs of trade. For example there are no marine ports in Yukon and all products slated for overseas must cross into the United States to ship from Skagway, Alaska. Although Canada-US border management programs have been designed with the intent of facilitating cross-border trade flows, research has shown this does not always happen. Instead, new regulations have resulted in increased costs at the border. Additionally, national policies often overlook unique regional needs, such as those in Yukon. As such, this paper begins with an overview of the security-trade dynamic between Canada and the United States to provide context. Next, a preliminary analysis of federal level policies and practices, including *Beyond the Border,* the current border management policy, and the Canadian and American northern strategies indicates that these policies fail to address the needs and concerns along the shared northern border. Finally, this paper concludes with recommendations to improve the export situation in Yukon. Resolving the export problems faced by SMEs will be important for the exporting potential of the resource sector.

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Energy security problems of the Arctic regions of Russia

Energy security is a condition of the defence of the country (region), its citizens, society, state and economy from threats to reliable fuel and energy supply. Main threats to energy security of the Arctic regions of Russia are the lack of electricity transmission lines, poorly diversified fuel supply, difficulties of delivering fuel.

Some Arctic regions are rich in oil or gas (Komi Republic, Nenets Autonomous Okrug, regions of Western Siberia, Arctic shelf). However, it does not guarantee high level of energy security. The situation is possible when oil and gas are exported, leaving aside the local consumers. Hopes for gasification with gas of shelf deposits are not well-founded because the development of shelf deposits requires much investments and technology. Another problem is delivering fuel to remote areas that are difficult of access. Development of local energy resources (including alternative renewable energy resources) is one of a measure to solve this problem.

Electricity market is impossible on the most territory of the Arctic regions. Electricity prices are regulated by the state on the territories where energy supply is decentralized. Some regional energy systems are technologically isolated from the Unified Energy System (UES) of Russia (Chukotka Autonomous Okrug, Taymyrsky Dolgano-Nenetsky District, western and central districts of Sakha (Yakutia) Republic). Some other regional energy systems have the insufficient connections with the UES (Arkhangelsk Oblast, Komi Republic, Murmansk Oblast, Republic of Karelia). Electricity prices in all technologically isolated energy systems and in some energy systems with insufficient connections are regulated by the state. Under existing conditions, the regulation of electricity prices is one of necessary measures to provide energy security of the Arctic regions.

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"The Nexus of Cause and Effect – Resources, the Environment, Climate Change and Security (incl. the Military"

In the Cold War period one of the special features of Arctic security was the nexus of security and the environment due to severe nuclear risks and environmental degradation by the military. Followed from this, as well as due to 'environmental awakening', environmental protection of the Arctic ecosystem became the main policy objective and area of functional international cooperation in the post-Cold War Arctic (disarmament was not. however, started). At the early-21st century, the nexus of climate change, (human) security and the utilization of (energy) resources started to dominate the discourse of Arctic geopolitics and security, as well as state policies. In 2010s, the globalized Arctic is effected by the nexus of all these phenomena. This paper will first, examine and discuss on the two nexuses. Second, it will define and analyze causes and effects behind the nexuses, as well as their interrelations.

Based on this it will draw up a holistic picture on the nexus of resources, the environment, climate change, (human) security and the military. Finally, the paper will discuss, even speculate, whether 'human security' or 'environmental modification' will be seen as a solution.

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Innovation in the Canadian Forest Sector?

What happened to Canada's forest economy? The sharp decline of this once-prominent industry reflects the vulnerabilities of a 21st century resource-based economy and the challenges being experienced by forestry workers, forest companies, forest dependant communities, and the broader Canadian resource economy. Forestry, for over a century the cornerstone of the Canadian economy, is suffering from a multitude of pressures, from the US housing and mortgage crisis that began in 2008, increasing competition from low-cost producers, and environmental concerns related to increasing wildfire severity and insect infestation brought about by climate change. Headlines of mill closures, layoffs, and a bleak outlook remain prevalent in Canada's media seven years after the financial crisis in the US brought the Canadian forest industry to its knees.

Forests played a central role in the westward expansion, settlement and economic development of Canada, providing the resources to build the nation. According to Natural Resources Canada, the country is second only to the U.S. as the largest exporter of primary forest products worldwide. Domestically, the forest sector is within the top five in terms of contributions to net trade. So what are the factors that are keeping the Canadian forest economy depressed? This research examines the forest industry's recovery in Canada and potential barriers to innovation brought about by public land ownership, increasing regulatory pressures, out-dated tenure agreements, and increasing demand on the resource for non-timber forest products.

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The influence of events to oil and gas investments in the Russian Arctic

This presentation examines development of the fossil fuel exploration and exploitation in 2007 – 2014 in the Russian Arctic. During the chosen time frame several events, such as the Russian expedition and flag planting underneath the North Pole, as well as, settlement of border dispute between Norway and Russia took place. Further, circumpolar petroleum resources achieved more attention in global energy system as discussion on energy security sparked, due to the high world market price of oil and increase in demand. On the one hand the high market price underlined the status of energy as a high politics issue. On the other hand, it showed how complex and complicated concept 'energy security' is. Furthermore,

different interpretation of the concept influences how events and their meaning are understood. Thus, consequences of the events have been both supporting and slowing down petroleum activities in the Arctic. The aim of the presentation is to analyze how events have influenced to investment decisions?

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Reproduction of the mineral resource base of the Russian Federation: current and future forms of implementation

Mineral resources complex (MRC) is the basis of Russia's economy. By reserves, production and exports of a number of minerals, primarily from the Russian Arctic region, the country occupies a leading position in the world. Murmansk region is one of the most developed mining areas of Russia. On the basis of proven deposits mining and processing companies operate, being major employers for a number of towns and settlements, which are home to a third of the region's population. The mining and metallurgical sector provides over 60% of regional industrial production.

It should be noted that today's successful performance of mining companies is largely the result of activities of geological prospecting over the past decades, including the Soviet period. Under the planned economy geological prospecting was focused on expanded reproduction of mineral resources base of the country.

During the transition to the market economy, the main provisions of geological prospecting strategies were secured in the law "On Subsoil". Governmental expenditures on reproduction of the mineral resource base were financed by allocations for reproduction. Later such allocations were incorporated in mining tax that had a negative impact on situation with geological prospecting.

Currently subsoil users often exhibit a lack of interest in investing in geological prospecting. In addition, the high degree of monopolization at the mineral market prevents entry of new companies that would be interested in opening new mineral deposits. Also the problem is the governmental underfunding of early stages of geological prospecting. In order to change the situation in the industry there should be applied the most effective "combined" approach using public-private partnership. In this case governmental financial resources should be focused on promising areas with simultaneous encouraging private investments in geological prospecting.

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Economic Mechanism of Nature Management and Environmental Protection in the Russian Arctic: Present and Future

Economic mechanism of nature management and environmental protection implements the principle of paid use of natural resources and assimilative capacity of a territory. The institute of "paid nature management and environmental protection" was introduced into the Russian practice of management in 1994 as a supplement to the administrative management methods. The introduction of paid nature management in the 1990s helped to preserve environmental activities of businesses in the northern regions of the federation from crisis reduction. Also revenues from resource and environmental taxes became the main source of funding for regional programs on environmental protection and rational use of natural resources.

The fee for use of natural resources by economic entities or resource taxes is twofold: on the one hand, it is the rent to the owner of natural resources, which is still the state. On the other hand, these taxes include environmental component, because they stimulate rational use of natural resources. The current system of rent taxes is differentiated by types of natural resources. Revenues from taxes for use of natural resources are distributed among the federal and regional budgets.

The current system of payments for placement of production wastes in the environment or environmental taxes is compensation payments for pollution of nature within the national environmental quality standards, which are included in production cost, and penalties for exceeding the standards. Environmental taxes to some extent take into account regional differences. Revenues from payments for negative environmental impacts are distributed among federal, regional and municipal budgets. The paper gives an assessment of efficiency of the paid nature management in the Arctic regions.

Payments for negative impact on the environment are based on the system of environmental regulation and incentives, major reform of which the federal regulator began in 2014. The paper is expected to outline the key areas of the reform and the expected benefits from its implementation to ensure environmental safety in the Russian Arctic zone.

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Beyond the reach of too many keen eyes: The problematic of drones

Drones, also called as unmanned aerial vehicle (UAV), are used and tested in the Arctic region among other places in the world. Drones are used in the Arctic mostly environmental researchers, but the interest of oil and gas companies are increasing. Drones offer advantages in a remote region but are problematic as they cause damage to the environment, especially because of the loud noise. This concerns drones used both civil and military causes.

Arctic region is used for drone testing with an interesting way of marketing. For example The Robonic Arctic Test UAV Flight Centre is located in Kemijärvi, Finland and it is established to support development, test and evaluation, and operational training for ground launched targets and tactical UAV's. It advertises the flight center in a way that raises more questions than answers about the security and what is actually been tested: "Finnish Lapland is the largest remaining wilderness in Europe. Being sparsely inhabited makes the area a truly attractive choice for any company that wishes to test its equipment beyond the reach of many keen eyes".

At the moment, the air space over the Arctic region is controlled by Finland among seven other nations: the US, Canada, Russia, Denmark, Norway, Iceland and Sweden. The regulations varies between the countries. It seems that in the name of scientific research in the Arctic there is a door open also for military use and arms industry in the region beyond the reach of many keen eyes.

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Indigenous cultures, local lifestyles? Cultural sustainabilities in the Arctic strategies of the Arctic Council member states

On the contrary to the mainstream political and academic debates, the cultural dimensions of sustainability and sustainable development have been prominent in the political cooperation in the Arctic region already for decades under the auspices of the Arctic Council and its predecessor, the AEPS. This presentation takes an explicit focus on the contemporary articulations and understandings of the cultural components of sustainability in the context of the Arctic region through an empirical analysis of the Arctic strategies of the eight Arctic Council member states – Finland, Sweden, Norway, Russia, Kingdom of Denmark, Iceland, Canada, and the United States.

Our data-based analysis of the eight Arctic strategies draws attention to four key themes structuring the discussion on culture in the context of the contemporary Arctic. An explicit focus is taken to 1) whose culture(s) are addressed; 2) which factors or developments are seen to form a threat to the sustainability of these cultures; 3) the reasons why these cultures should be sustained and maintained; and 4) by whom and by using which means and mechanisms. The empirical analysis reveals a significant bias towards focusing on indigenous cultures and their sustainability as well as the instrumental role assigned to culture as potentially bringing administrative, economic and reputational gains for the Arctic states. Meanwhile, for non-indigenous residents, there is no culture to be sustained, but new lifestyles brought on by large-scale economic development to be welcomed and embraced instead.

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Arctic Resource Development and Transportable Nuclear Power Plants: Legal and Security Issues

The tremendous amount of energy resources in the Arctic, climate change and increasing extractive industries' activities serve as driving force for further oil and gas exploration. The increased accessibility of the region to resource development encourages investments in advanced technologies and finding new solutions for energy production. One innovative idea is the usage of transportable nuclear power units. My presentation shall look at the possibility of using such units in the Arctic as a source of energy production and shall assess legal and security issues associated with such development. Is this a solution for future energy supply to remote Northern and other communities? What are the key environmental, legal and security concerns and implications of such development for the Artic and globally?

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Installation and visualization in Arctic energy development

This paper analyzes promotional images associated with energy events as ethnographic objects in their own right. I examine how the sensory experience of promotional imagery with its fantasy display contributes to the rational presentation of energy planning, with its emphasis on accountability through expert knowledge provisioning. Promotional images fall under the rubric of impression management where an ideal of believability mediates between objects of manufacture and their desire. I frame these images as an illusion of finality, which I connect to a broader argument about the rise of an energy salon—a shift that appears to involve an increased prominence of visual attention and management in how energy expertise is produced, performed, and circulated.

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The components of psychological readiness for shift work in the Far North

Interest to the Arctic is growing worldwide in recent years. Arctic Shelf - is one of the most important geo-strategic objectives of the various states.
A complex of natural factors of the Far North has a strong negative effect on the physical and mental condition of the person; in connection with this the vital ability in such conditions is extreme. To achieve a successful activity in these conditions and to minimize the negative impact of adverse environmental factors, there is a need to establish special conditions on the part of the employer as well as of the employee.

The shift personnel, showing a subject position, tries to create the internal conditions for successful activity without any psychological or physiological losses. This becomes possible owing to the conscious development of psychological readiness for shift work in unfavourable conditions.

The psychological readiness is determined by personal-typological qualities, psychological stability, strong-will and physical conditioning, i.e. willingness to adapt to the adverse effects of the environment and further to implement self-regulation of employee's private activity.

Psychological readiness includes:

- A set of psychological knowledge;
- Motivational-objective structure;
- The operational unit;
- Individually-typological features of the person;
- The ability to adapt to changing working conditions without reducing the operating efficiency.

Willingness to work in extreme conditions is closely related to the human ability to adapt, the increase in labor efficiency and the optimization of interpersonal interaction. The study and the formation of it are worthwhile for the optimization and development of shift work in order to apply it further effectively.

The study of willingness to shift work in the North is a relevant, practically significant issue and requires a further research in this field and the creation of an improved detailed model.

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Better nature

Today, global ecological prescriptions are called for in order to make humanity more sustainable. But thus far, the prescriptions, that the prevalent understanding of nature and its crisis demand, have been complicit with and supportive of the growth of neoliberal systems of governance and depoliticized instruments of power. The strive for sustainability has increased the penetration of neoliberal markets and neoliberal ideas of organizing the social. For example, the concept of 'ecosystem services' signals a privatization and commodification of nature. The depoliticizing effects, in turn, reduce the sphere of democratic political deliberation and debate as issues are centralized under technocratic management and consensual policy-making of global institutions. In this process fundamental ideological disputes and disagreements are denied, as the current presentation of the ecological crisis as global transcends all social differences. What makes these trends possible is that during the last decades the concept of nature has been produced as finite, vulnerable, as a single, confined global entity, and in need of careful management. The conception of finiteness of nature allows the economic rationalities to reach now also into nature all around us. Global framing, which, in turn, is a historically novel assertion, introduces a need to police the whole world. The paper builds on Michel Foucault's understanding of power and governing of populations. The intention of the paper is to show the need for and outline an alternative view on the concept of nature, human-nature interrelation and natural resources that would hold a more preferable potential.

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After one year living in a Sámi community - environmental and social/human security challenges in Finnish Sápmi

This presentation will discuss on the first year of my journey in discovering Sámi people's perspective to environmental and social/human security in Sápmi. It will discuss on how Sámi people see environmental and social/human security and how it differs from the general view, or does it? After living a year in Inari - one of the biggest Sámi villages in Finland, and studying Sámi language and culture, it is time to turn these experiences into a research. Emphasis of this presentation is on reflecting regional security situation in Finnish Sápmi, based on my observations and on several conversations with local people.

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The food security monitoring system in the northern region (in case of Murmansk region)

Country's food security is a very important part of national security, because it affects such an important aspect as a human right to adequate consumption of quality food products at any moment. From this rule depends on the health of the nation. Food security exists both the federal and the regional level in Russia. Special attention in the regulation of regional food security issues should be given to the northern regions, because the population of these regions are more susceptible to risks and threats due to unfavorable conditions for food production in the region.

Therefore, realization of an effective regional agricultural policy taking into account the specific features of the Murmansk region is necessary for timely overcoming the influence of negative factors and risks to the regional food security.

Legislative framework in the field of agrarian policy of the Murmansk region provides various measures of state support of agricultural production in the region, adaptation to new economic conditions, etc. But legislative framework is incomplete and requires serious improvement. One of the important issues in the legislative framework is the absence of regulation of food security through its constant monitoring.

Thus, the food security monitoring system is developed. This will ensure that regional government with the necessary information about the current situation and trends in regional food system and take effective management decisions to ensure food security of the Murmansk region.

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Russian Military Build-up and Aggressive Rhetoric – How it Influences Cooperation in the Arctic

Russian military activities in the Far North has significantly increased in recent years. Combined with political assertiveness the intensified presence of the Russian naval and air forces has drawn much of the international attention. In strategic context, the Arctic military capabilities and their modernization play a crucial role for Russia to maintain current favorable status quo and deter potential challengers. While the increase of military presence is often perceived as game changer of regional military balance, the majority of advertised military programmes are launched to modernize of current capabilities and replacing decommissioned weapon systems. It means, in best case, they slower the gradual downsizing of armed forces. The icebreaker fleet is an exclusive example of the continuously shrinking capabilities, which will not be possible to keep at current level even by already declared modernization. Altogether, these changes have little or nothing to do with power projection outside of Russian territory. Most of them are supporting border patrolling and protecting of national territories that are becoming more accessible. Therefore, Kremlin´s strong announcements about large acquisition of military capabilities are misleading and have little prospect of being completely realized (mainly for financial reasons). The Russian shortfalls in transparency about long-term military ambition could also have a negative impact on region´s security and at the end on Moscow´s strategic position as well. Russia´s unclear and insufficient sources about the current status of their armed forces, modernization plans could lead to serious concerns of other Arctic states. If their concerns will reach critical level, the reaction would be further securitization of the region, in the atmosphere which lacks confidence-building measures. Thus, the cooperation among Arctic states is at stake and might be negatively influenced.

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Professional destructions of shift workers in the Arctic, evaluating different workplace safety

Regions of the Arctic and the Far North, which occupy 67% of the territory of Russia, concentrate 90% of recoverable hydrocarbon resources of the continental shelf of the country. Arctic refers to extreme and uncomfortable territory, where living is associated with a strong strain of adaptive systems of the body and health risks. Climatic conditions in the Arctic are characterized by low winter temperatures (-50 degrees), large diurnal temperature (25 degrees), strong winds (up to 14-16 m / s), frequent blizzards in winter and rain in summer. Usually applied shift method of work organization in these conditions. This is professional activities outside the place of residence of workers when it can not be provided daily return them to the place of permanent residence. Professional activities in shifts accompanied by the influence of space-time, social, informational constraints that can be attributed to extreme activities. In these circumstances, the shift specialists develop adverse functional statuses and professional destructions, the presence of which reduces efficiency,

leads to errors, accidents and ill health. As a psychological condition, aimed at reducing the severity of professional destruction, in our opinion, can be attributed sense of security, as it contributes to the feeling of comfort, reduce stress and anxiety. The study involved 70 builders of trunk pipelines, working in shifts in Arctic conditions (duration of the shift-in 52 days) between the ages of 23 to 59 (mean 34,9 ± 8,1). Methods: a questionnaire survey, observation, psychological testing, discriminant analysis step by step. The study is aimed at identifying the professional destructions of shift workers, variously evaluating workplace safety in the Arctic.

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Cross-border cooperation as a driver for development of small settlements in the Barents Region: case of Alakurtti, Murmansk Oblast'

The paper presents the results of a case study that explores how a small peripheral settlement can generate local development through cross-border cooperation and reduce the negative effects of its small size, remoteness and limited economic basis. Case study of experiences from Alakurtti, a small remote on the border settlement in Murmansk Oblast', will be reported. The study was conducted within the ARCSUS (*Arctic Urban Sustainability in the High North*) project.

Alakurtti, located on the border with Finland, used to be a military settlement of the Russian Ministry of Defense. The place has got on the edge of collapse in the course of the market reforms and after intensive demilitarization of this territory on the Russian side of the border in the early 2000-es. Few years ago, the community began the attempts to get back on development track through cooperation with Lapland, especially with Salla municipality, in Finland and Norbotten in Sweden. Several co-operational projects including those on tourism and agriculture have been initiated, and some of them are underway today.

The focus on the aspects of cross-border cooperation promoting local development will be made, and key factors of success will be analyzed. It will be questioned, whether the latest revival of the military base in Alakurtti can challenge newly appeared trends towards self-reliance based on diversified local economy. Considering recent complications of the political situation in the world, importance of continuing cross-border cooperation at the local level for regional security building in the Barents Region will be discussed.

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Morality dictates. Of a European moral standard pertaining to the seal resource

What constitutes a resource? Do laws, people and nations have the same approaches towards the definition of a resource? This latter question can be answered negatively and best be exemplified by the hunt of seals as carried out in Newfoundland. While for Newfoundlanders – both aboriginal and settlers – the seal has always constituted a resource that has contributed to their sustenance in subsistence, commercial and mixed terms, especially internationally the seal is discursively considered a group of species that is to be preserved. It is thus a moral opposition towards the hunt outside the region where it is conducted which steers global acceptance of its conduct. Consequently, the commercial seal hunt has faced significant opposition through campaigns and public opinion. Based on this opposition the European Union (EU) adopted a regime in 2009, effectively shutting down the EU market for commercial seal products. This ban appears to be based on a European moral standard relating to the welfare of animals and the EU has successfully defended this claim under World Trade Organization (WTO).

However, does a European moral standard exist or is opposition towards seal hunting merely an opinion without deeper moral contexts? This paper tackles these questions and discusses the problems relating to drawing moral conclusions based on 'public opinion' and responses to a possible accompanying 'moral standard'. The paper delves into the legal dimension of a 'European morality' and discusses in how far moral concerns have been dealt with under the WTO and before EU Courts. Differences in morality pertaining to a resource, in this case the seal, with direct repercussions for the utilisation of the seal therefore signify the interplay of resource, human security and a globalised Arctic.

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Mapping the evolving governance space of the Arctic: Exploring political contestation in a region of "peace and cooperation"

The circumpolar north has become a poster child for the symptoms of climate change and global environmental degradation – a laboratory for studying the speed, magnitude and impact of changes to a region's human and natural systems. But who is setting the environmental agenda for the Arctic? And where do they sit in the region's governance systems? This paper is premised on the assumption that the governance landscape is evolving and state authority, as the central building block, is not sufficient to establish a comprehensive understanding of the dynamics that are shaping the region's institutional framework. Actors at all levels are now navigating an increasingly complex governance environment. To establish a more complete governance picture, a key contribution of this paper is to map the relationships that exist between states, business and civil society in the region's environmental institutions over a 30 year period using Abbott and Snidal's (2009) Transnational Governance Triangle as a frame. This serves as a foundation to explore the salience of political contestation in the evolution of the institutions that support sustainable development and environmental governance of the Arctic. This paper concludes that the value and importance of political contestation is observed in the region with the growing reliance on multi-actor institutions; however, questions remain regarding whether less

powerful actors have gained access to the governance process at the expense of real influence over policy outcomes.

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Prospects for the Northern Sea Route (NSR) Development as the Commercial and Strategic Project

In political and economic debate of the last decade the Northern Sea Route (NSR) has gained a lot of attention and is considered to be a promising initiative of the coming decades. On the one hand, officials of many countries have announced intentions to participate in its development. On the other hand, numerous studies aimed at measuring the economic viability of the NSR navigation indicate that the route has limited potential and is suitable only for a relatively small segment of shipping. This study is dedicated to solve this contradiction focusing on two different rationales of the NSR use: 1) current economic feasibility which is defined by the level of transportation costs in comparison to alternative transport routes; 2) long-term prospects of the NSR development determined by long-term trends and strategic interests of various countries.
It is revealed that the NSR is commercially viable only for transportation of some types of cargo – primarily for bulk cargos in warmer months from and to ports located not far from the NSR. In the long term the effectiveness of the NSR can increase under certain conditions such as further ice melting in the Arctic, development of Russian Arctic regions and, in particular, development of the infrastructure along the NSR, possibility of including the international maritime transport into greenhouse gas emissions regime, and increasing political and other risks along the traditional trade routes between Europe and Asia. On the contrary, the slowdown in Asia-European trade and the suspension of a number of oil & gas projects on the Russian Arctic shelf worsen to some extent the NSR position.

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*Towards Internationalisation Competence - Student Nurses Foreign Language Education in the Barents Region **

Nursing education has undergone changes in Finland and in the Russian Federation over the past years; e g the nursing education curriculum was devised in Finland by the national committee (2001, 2003-2005) and likewise in the Russian Federation (2002) to meet the

needs of the 21st century working world. Along with competency-based curriculum development, foreign language skills have also been recognised as a facet of professional expertise in nursing. In addition, an understanding of the cultural issues connected with the foreign language is essential in nursing and health care education as a result of the increase in internationalisation, travel and mobility. The likelihood of communicating and caring for people from cultures other than one's own has become increasingly probable for health care personnel in Finland as well as in the Russian Federation.

In Finland, students enrolled in all degree programmes must gain such foreign language competence as decreed by legislation (1129/2014; 256/95, 334/2003). Although the foreign language in is not explicitly identified, in the nursing degree this language is English. In the Russian Federation, nursing students study one foreign language as a requirement of their nursing curriculum, and in the field of nursing studies this language is English. A nursing student must pass his/her English exams in order to graduate as a registered nurse (Ministry of Education, Standard for Registered Nurse 0406, 2002).

This paper discusses the foreign language education for the international competence of student nurses in Finland and in the Russian Federation based on the data from three colleges.

*The colleges described in this study come from the Barents region: Kemi-Tornio University of Applied Sciences, Murmansk Medical College, Kola Medical College.

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Social sustainability "in the middle of nowhere"? A case study from Salla, Finland

Social sustainability is an understudied and complex research topic in general as well as in the context of the Arctic. While the sustainability debate in general is dominated by environmental and economic sustainability concerns, existing literature on social sustainability in the context of the north focuses predominantly on the challenges faced by indigenous peoples. In our case study, we complement these debates through discussing social sustainability from a northern, non-indigenous viewpoint in the case study context of Salla, Finland. The small municipality located by the Finnish-Russian border is today characterized by depopulation, unemployment and declining services; however, several planned Arctic megaprojects could turn the bleak future prospects of the municipality around. In our study, we map and grasp the wide range of concerns and developments in the interplay of which the local perspectives to and understandings of social sustainability and sustainable communities are formed amidst the rapid changes and high hopes.

For the purposes of this study, we collected background data from literature, media and official statistics and in addition conducted 10 semi-structured interviews among local actors and experts, municipal politicians, representatives of different livelihoods, border authorities and long-time community actives. A situational analysis (Clarke 2003, Clarke 2005) of the interview materials traces the core of social sustainability to the strong local identity and the

faith the people have in their resilience, despite the uncertainty of future developments and the limited opportunities to influence them.

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Constructing an Arctic "Security Community": players and processes

In my presentation I am going to discuss the concept of a security community and how it can be applied to the Arctic context with particular emphasis on how the role of resource conservation, management and development have been pivotal factors in the creation of an Arctic security community as well as touching on how the Arctic has emerged as a "zone of peace" during the past two decades.

In basic terms a security community refers to a region in which the use of violence as a means to an end has become unthinkable and clearly resonates well with the Nordic peace theory of Clive Archer. The term however was first used by the political scientist Karl Deutch in 1957 in his analysis of the North Atlantic Area. I intend to apply the concept and theory behind it in my presentation and its relevance today in the Circumpolar North or Arctic region.

Deutch defined a security community as "a group of people... that have come to the agreement on at least this one point: that common social problems must and can be resolved by processes of 'peaceful' change".

The concept of a security community is not yet prominent within the dominant International Relations (IR) literature but has in recent years gained ground amongst Constructivist IR scholars that have added the role of shared identities, meanings, values (norms) and multilateral direct interactions as well as reciprocal long term interests.

Arguably, the most important long term interests of the Arctic region centre around the role of resources and resources politics (protection, management and development) and I will draw on the Arctic resources discourses and development to illustrate how the Arctic region has become the leading security community of the modern world.

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Psychological support for shift work in the Far North

Oil and gas are valuable raw material in the present conditions of the world economy. Long-distance commute work is widespread method of work organization and this kind of work is essential method for the provision of labor force for the extractive industries in the Arctic.

Professional work in the Arctic is characterized by intense physical exertion in extreme climatic conditions. Moreover, information and visuals and socio-psychological overloads affect the state of specialists. All this reduces efficiency specialists working in shift work and it is dangerous in a group of insulation. Therefore, higher demands are made for the activities of

all systems of the body shift workers. Particularly, this applies for the work of psychic and psychological systems. It is very important to realize psychological support to shift worker for successful adaptation to extreme conditions.

The ability to self-regulation is an important factor in the implementation of psychological support. Methods of self-regulation influence on the functional state of the body and health shift workers. It is important to explore ways of self-regulation for develop specific recommendations on the formation program of psychological support of shift work in the Far North.

Analysis of scientific literature allowed to create hypothetical model of psychological support specialists working long-distance commute work. This model provides practical advice for solving health protection and promotion, psychological technologies of preventive, maintenance and correction of professional consciousness of professionals. This model will compensate for the inconvenience shift work, improve the emotional state, allow to optimize the adaptation of professionals, improve labor productivity.

Psychological support gives a high level of labor productivity for all period of long-distance commute work, it optimizes psychological climate in groups and saves time adaptation worker in extreme conditions.

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Environment security: a strategic issue for the Barents region

Environment issues are critical and significant for the security of the Barents area and the perspective of its development. Past, present and future conditions might undermine or overcome the economic projects mainly related to oil and gas in the High North. Environment resilience is at stake as resources loom to be exploited by companies active in the energy sector.

- **The nuclear issue : a millstone for the Barents region**

For several decades, the Barents region has to manage nuclear waste (including radioactive dumps), inherited from the Soviet era. Indeed, neighboring countries of the Russian Federation such as Norway dedicate financial and material means to enhance the safety of the area. Based on the current trend of economic development in the Arctic, nuclear issue may become a critical one.

- **Private companies as key players for the development and use of local resources**

As private companies aim to expand business projects in the Barents region, environment security implies a new sight for them. It is worth noting that safety requirements raise concern regarding the hostile and fragile conditions in the area. Therefore, companies hold a key liability to develop the region in a cautious way.

- **How could Oil & Gas projects cope environment security standard?**

Several O&G projects in the Barents region involve big energy companies among them Statoil and Rosneft. These key players may face pressure concerning the conditions of their projects regarding security aspects. NGOs and Northern local authorities may ask for legal framework to oblige O&G companies to hold their commitments. The ambitious project to establish in the Barents region a new energy nexus for the European continent require high safety standard for a sustainable development.

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Coal mining and Russian Svalbard policy: ways of achieving sustainability

Svalbard, the Norwegian Arctic archipelago, possesses unique status in the international relations. Being discovered in late 16th century by Dutchmen, the archipelago fell under Norwegian sovereignty in the 1920s, while all the signatory states were granted the right to maintain economic activities there. During the 20th century, only Norway and the Soviet Union have been maintaining significant presence in Svalbard, the archipelago being of strategic importance for both countries during the Cold War period. Nowadays, only one Russian mining town, Barentsburg, is still active, while Norway has three.
The paths that two countries had chosen for developing their towns are as different as they could be. Norwegians have turned in the early 1990s to the tourism development and have successfully diversified the economy to achieve long-term resilience goals. The Russians have been clinging to the old framework used during the Soviet times, which implies large state grants for maintaining the town and direct governance from Moscow, all to keep the Russian presence in the Western Barents Sea. As a result, the town has been gradually declining for two decades, having only recently started to develop other areas like tourism and research.
Barentsburg is now on the verge of great changes, which is reinforced by complex international situation and new Russian Arctic strategy implying the active development of the circumpolar settlements. I argue that there are windows of opportunities that would allow the town to achieve sustainability, but these windows should be used with regard to the specific features of the settlement. Basing on own anthropological fieldwork of 2014, I describe the current steps undertaken by the company to achieve changes and thus argue that the sustainable framework for Barentsburg should comprise of profound measures in all fields (societal, cultural, governmental) including changes in environmental policy and business approach.

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Russian and Nordic political dichotomies and their implication to cooperation in the Barents regions

The paper analyses the current controversial developments in different fields of European Arctic policies and institutions, i.e. the creation of the Russian Commission for Arctic

development and continuation of CBC programmes with a clear emphasis on socio-economic development supplemented by latent militarization of the (Russian) Arctic (Russian dichotomy); and a general support of continuing cooperation with Russia in Arctic issues contested by the idea of enhanced Nordic military cooperation and rapprochement of Finland and Sweden with NATO (Nordic dichotomy).

Further, based on the interplay of two dichotomies, four scenarios of Russia – Norden relations are drawn, which emphasize the role of the BEAR as either tribune for different kind of political rhetoric (anti-Russian or anti-Western) or the instrument for social and economic development.

Finally, by using the good old ideas of desecuritization, the author calls for maintaining of cooperative relations between national and subnational actors in the European Arctic (or BEAR).

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Arctic environmental governance as a venue for socio-economic power struggles

The perception of the intergovernmental cooperation of the Arctic states (AEPS/Arctic Council) is often referred to or interpreted as a cooperation that is mainly based on an environmental agenda, with the aim to reduce the impacts of pollution and environmental degradation in the Arctic. However, what often is left out in discussions about environmental governance is the interplay between the global and the local as it is related to power. Environmental politics, nonetheless, is also an issue of the relationship between society and nature: Nature and built environment are not socially neutral, but societal power relations are encoded in nature and in built environments, since various interest groups differ in their respective societal relationships with nature; a characteristic that also has been used to distinct the traditional knowledge of many Arctic inhabitants to that of the "Western" society. However, due to the embedded societal relationship with nature, every form of politics has an environmental dimension, and environmental politics simultaneously incorporates socio-economic interests. Thus, environmental governance has a socio-economic agenda and constitutes a sphere where power struggles are carried out, and where various groups with different interests are struggling for the generalization of the societal relationship with nature that is inherent to their interests. This paper aims to elaborate the impacts of power struggles on various levels within Arctic environmental governance, and to show how the interplay between global and local is embedded in Arctic governance. The paper follows the hypothesis that current Arctic environmental governance is rather about the economic management of natural resources in order to maintain prevailing power relations than on attaining local ecological democracy.

About the Calotte Academy

The Calotte Academy is an annual traveling symposium in Europe's North Calotte region and an international academic forum in the Arctic, designed first, to promote interdisciplinary discourse and the interplay between senior and young researchers, and post-graduate students; and second, to foster academic and policy-oriented dialogue among members of the research community, as well as a wide range of other northern stakeholders, such as policy-makers, civil servants, community leaders and planners. It is a "school of dialogue" and participatory by nature with an idea to share knowledge and experiences with communities. During its 25 years the Academy has built partnerships between researchers and community members, and does community-based research as well as develops research models for community-based research.

The Calotte Academy is also an interdisciplinary brainstorming meeting to bring researchers and other experts from different fields, regions and countries together for to discover innovations and new methods, and produce international research projects as well as plans and applications.

In each session of the 2015 Academy - in Rovaniemi Salla and Inari, Finland, in Kirkenes, Norway, and in Apatity, Russia - the overarching theme "Resources and Security in the Globalized Arctic" was discussed holistically from many angles and disciplinary approaches, and from the perspectives of past(s), present(s) and future(s), as well as from global, Arctic and local context in the European North. This has also been done at the three previous Calotte Academies: in May 28 – June 4, 2012 in Kiruna and Abisko, Sweden, Tromsø, Norway and Inari, Finland under the theme "Water – globally and in North Calotte"; in May 16-23, 2013 in Rovaniemi and Inari, Finland, Tromsø, Norway and Kiruna, Sweden under the theme "Resource Geopolitics – Energy Security"; and in June 1-8, 2014 in Rovaniemi and Inari, Finland, Kirkenes, Norway, and Murmansk and Apatity, Russia under the theme "Resource Geopolitics – Sovereignty" (See Final Reports of Calotte Academy 2012, 2103 and 2014)

Arranged for the first time in 1991, the Calotte Academy is an international platform for policy-oriented dialogue and dissemination of research. As a traveling symposium with an emphasis on both expertise and dialogue it is a post-modern academic stage and workshop that fosters interdisciplinary, knowledge(s), and dialogue-building, and implements the interplay between science and politics. Since 2002 the Academy has served as a sub-forum for Open Assemblies of the Northern Research Forum. And since 2010 it has also functioned as the main annual forum for the discussions and research planning of the Thematic Network (TN) on Geopolitics and Security, as well as an annual doctoral summer school for PhD candidates.

Calotte Academy Steering Group

The Calotte Academy project will be led by Professor Lassi Heininen, Faculty of Social Sciences at University of Lapland (e-mail: lassi.heininen@ulapland.fi); tel. +358-40-4844 215) and coordinated by PhD candidate Jussi Huotari (e-mail: jussi.a.huotari@helsinki.fi; tel. +358-50-5975 292). The Steering Group of the Calotte Academy consists, in addition of Heininen and Huotari, Professor Gunhild Hoogensen-Gjørv, Department of Sociology, Political Science and Community Planning at University of Tromsø (e-mail: gunhild.hoogensen.gjorv@uit.no); tel. +47-7764 4000); Senior Researcher Ludmila Ivanova, Luzin Institute for Economic Studies at Kola Science of RAS, Russia; M.A. Anne-Marie Kalla, Municipality of Inari, Finland; PhD candidate Laura Olsén at Arctic Centre, University of Lapland (e-mail: laura.olsen@ulapland.fi); and Researcher and PhD candidate Hanna Lempinen (e-mail: hanna.lempinen@ulapland.fi), Faculty of Social Sciences at Lapland University, Finland.

About TN on Geopolitics and Security

The Thematic Network (TN) on Geopolitics and Security, established in 2009, is a joint network by the University of the Arctic and the Northern Research Forum (NRF). Its aim is to combine the two focus areas – Studies on Geopolitics, and Security Studies -, and based on that to draw up a holistic picture on Arctic geopolitics and security of the entire North, as well as to identify and analyze major changes of them (see: TN at www.nrf.is). Among research themes are "Changes in Arctic geopolitics"; "National Arctic strategies and policies"; "Military strategies and national security policies of the Arctic states"; "Environmental and human security in the Arctic"; "Who are subjects of security?";"The Nexus of the Environment, Resource Extraction, National policies, and Global Economy", "The Arctic Paradox". Another aim is to implement 'interdisciplinarity' and the interplay between research and teaching, as well as the discussion between early-career scientists and senior scholars, and to promote the interplay between science and politics, as well as between scientific and local/traditional knowledge(s).

About the Arctic Yearbook

The Arctic Yearbook is intended to be the preeminent repository of critical analysis on the Arctic region, with a mandate to inform observers about the state of Arctic geopolitics and security. It is an international and interdisciplinary peer-reviewed publication, published online at [www.arcticyearbook.com] to ensure wide distribution and accessibility to a variety of stakeholders and observers.

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Arctic Yearbook 2012: *"Arctic Policies and Strategies"*
Arctic Yearbook 2013: *"The Arctic of the Regions vs. the Globalized Arctic"*
Arctic Yearbook 2014: "*Human Capital in the North"*
Arctic Yearbook 2015: *"Governance and Governing"*

globalarctic

About the *GlobalArctic* Project

The *GlobalArctic* Project (www.globalarctic.org) is an international framework of institutions with interest and expertise on the globalized Arctic from the Nordic region and from outside the region. It also builds on a long history of activities, among them Calotte Academy, Northern Research Forum, TN on Geopolitics and Security, and Arctic Yearbook. The originality of this proposal is its global dimension whereby 40 organizations worldwide are actively involved in the project.

The project considers the Arctic region in the 2010s to have become part and parcel of global political, economic, technological and environmental, as well as societal, change. Correspondingly, what happens in the Arctic has significant implications worldwide - the region is seen here as a potentially interesting laboratory / workshop of the Anthropocene. Following from this, the context of an emerging research project, which is described in the Matrix at the website, is twofold: The 1st stage, the *'Global > Arctic'*, is to (re)define globalization and its multi-functional effects, as well as impacts of rapid climate change, as drivers of change in the Arctic. The second stage is the *'Arctic > Global'* identifies and explores the global implications and drivers of the globalized Arctic affecting the rest of the globe, as well as the role the Arctic plays in world politics and the global economy. Since the 'Anthropocene' is already at play in the Arctic it is needed to find ways out of the old structures. and implement resilience and build new more sustainable policies and structures. The "Building Arctic Resilience, AReC" proposal, by the *GlobalArctic* Project, aims at building these kinds of resilient Arctic institutions.

An Announcement and Tentative Call

Calotte Academy 2016

Resilience related to Sustainable Development in Globalization

in Finland, Russia and Norway
Late spring of 2016

The Calotte Academy 2016 will be organized in the late spring 2016 in Rovaniemi and Inari, Finland; Apatity and Murmansk, Russia; Kirkenes and Neiden, Norway.

The theme of the Academy 2016 is planned to be *'Resilience related to Sustainable Development in Globalization'* (tentative). "Sustainable development", though it is widely used and discussed, has been politicized and interpreted as synonymous with economic growth. Correspondingly, "resilience" is interpreted more flexibly and innovatively, and it is understood to indicate long-term capacity of a system to adapt and deal with changes.

In the Arctic region there have recently been rapid changes and 'grand challenges' to resist and be cope with. Thus, resilience is much needed, when trying to solve those challenges and build regional sustainable development in the Arctic. The Academy will discuss on resilience and sustainable development in the context of the globalized Arctic theoretically and holistically from many angles and disciplinary approaches; from the perspectives of past(s), present(s) and future(s); and from global, international, Arctic and local context in the Barents Sea area. In addition, resilience will be defined and reconceptualised.

The international travelling symposium, Calotte Academy, organized since 1991, is one of the two main annual gatherings of the *UArctic-NRF Thematic Network on Geopolitics and Security*, as well as a sub-forum for the *Northern Research Forum* (NRF). It is also an annual doctoral summer school for PhD candidates from the Arctic states, as well as from the observer countries of the Arctic Council. (see Final Reports of the Calotte Academy in 2012-2015 – www.nrf.is). Furthermore, the 2016 Academy will also act as a biennial forum for the discussion of "*Building Arctic Resilience, AReC*" research proposal based on the *GlobalArctic* Project (see: www.globalarctic.org), an international framework of institutions with expertise on the globalized Arctic.

This is an announcement and a tentative call for established researchers and early-career scientists, particularly PhD candidates, of different disciplines to participate and present in the Calotte Academy 2016. The first Call will be announced in October 2015 at the 3rd Arctic Circle Assembly and the *GlobalArctic* and *NRF* websites.

For more information on the theme and procedure of the Calotte Academy please, contact with Prof. Lassi Heininen, Faculty of Social Sciences at University of Lapland (e-mail: lassi.heininen@ulapland.fi); tel. +358-40-4844 215); or Prof. Gunhild Hoogensen-Gjørv, Department of Sociology, Political Science and Community Planning at UiT–The Arctic University of Norway (e-mail: gunhild.hoogensen.gjorv@uit.no); tel. +47-7764 4000); or Senior Researcher Ludmila Ivanova, Institute of Economic Studies at the Kola Science Center of the Russian Academy of Sciences (e-mail: ludmila_ivanova@mail.ru); or Prof. Matthias Finger, Ecole Polytechnique Fédérale Lausanne (EPFL), Lausanne (e-mail: matthias.finger@epfl.ch).

Map 1: The route and the sites of the Calotte Academy 2015