New Governance for Sustainable Development in the European Arctic

Annual report 2015
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Two years of focusing on the European Arctic

This annual report reflects work ongoing and reported during the period 1 April 2015 to 31 March 2015, within the Mistra Arctic Sustainable Development (Mistra Arctic) programme. We are pleased to note that deliverables and activities have been performed according to the programme plan as expected.

In October 2015 we visited the case study area Kirkenes in northernmost Norway. During this meeting the term ‘path dependence’ was discussed. Path dependence can mean different things in different contexts. In the Mistra Arctic project, the term is used to explain why developments have gone in different directions; why we ended up where we did, especially when this is somewhere we know we should not be. We realise retrospectively that there are better and more effective solutions, but because of earlier decisions, great effort is now required to change the situation.

From a global perspective, 2015 was the year when mankind eventually saw an international agreement aiming at breaking such destructive path dependences. This was the international agreement on joint efforts to ensure a global future at the COP21 climate conference in Paris. We are pleased to note that Mistra Arctic researchers contributed actively to the scientific debate supporting this agreement.

Another event worth highlighting is the 28 million NOK grant received by Mistra Arctic researchers from KTH and SEI from the financial body Nordforsk for their REXSAC (Resource Extraction and Sustainable Arctic Communities) project, which may be seen as a spin-off project from the Mistra Arctic programme.

To recap, our programme focuses on northernmost Europe, or the European Arctic mainland, defined as the northernmost parts of Norway, Sweden and Finland. The main theme of the programme is governance. We study land use sectors and industries in the area in the past and in the present, as well as elucidating the context for future governance of the region.

Seven different economic or municipal sectors are – and will continue to be – in focus, namely mining, forestry, oil and gas exploration, fishing, reindeer husbandry, the tourism industry and municipal planning. These sectors and the interaction between them are studied in four main study areas, where focal municipalities are the target for both case studies and stakeholder meetings.

This annual report briefly describes the activities within the programme as a whole and our four work packages (WP1-4), and summarises factors including management, joint programme activities, and a short financial report of our second programme year.

Umeå, June 2015

Carina Keskitalo
(scientific manager, MASD)

Peter Sköld
(administrative manager, MASD)
Programme management

The MASD programme is hosted by Arcum, the Arctic Research Centre at Umeå University, and includes multiple partners at Umeå University. Besides Umeå University, the programme partners are: the Division of History of Science and Technology at the Royal Institute of Technology (KTH), the International Peace Research Institute (SIPRI), and Stockholm Environmental Institute (SEI) in Stockholm.

Personnel

Programme management
- Carina Keskitalo, scientific manager.
- Peter Sköld, administrative manager.
- Lena Maria Nilsson, communicator.

Programme Board
- Lars Lustig, County Director, County Administrative Board of Västerbotten, Sweden
- Andrés Jato, Senior Arctic Official, Ministry for Foreign Affairs, Sweden
- Karin Bäckstrand, Professor, Political Science, Lund University, Sweden
- Niila Inga, head of the Sami siida Laevas, Swedish Reindeer Herders Association (Samid Riikaseravi, SSR), Sweden
- Lennart Gustafsson, Chairman, Georange, Malå, Sweden.

Scientific advisory board
- Joan Nymand Larsen, Doctor, Senior Scientist, Stefansson Arctic Institute, Akureyri, Iceland
- Oran Young, Professor, University of California, Santa Barbara, USA
- Peter Schweitzer, Professor, Doctor, Universität Wien, Austria

Programme Director at Mistra
- Johan Edman, Mistra

Meetings and organisation

Programme meetings and organisation
An important part of local and regional stakeholder engagement in the programme is the meetings that are held in our case study areas, combining scientific and stakeholder meetings. The meetings are used for purposes including gathering suggestions from stakeholders on relevant areas of research. Following up on meetings in Pajala and Storuman (Sweden) during our first programme year, meetings were held this year in Kirkenes, Norway, and Kittilä-Kolari, Finland (the latter to be held in April 2016).

During the meeting in Kirkenes, field visits were made to the Sydvaranger Gruve mine in Bjørnevatn close to Kirkenes and to the Border Commis-sary Residence close to the Russian border. Stakeholders representing Sør-Varanger Municipality, Kirkenes Snowhotel, the International Barents Secretariat, Sydvaranger Gruve and reindeer husbandry in the area were invited to attend.

An open public meeting was also held, advertised in local newspapers, and the meeting was also reported on in one local newspaper.

Stakeholder input into research themes
The stakeholder meetings (both invited and open) have so far resulted in a list of themes for research suggested by stakeholders, and which is reviewed by the programme with the aim of...
covering as many fields as possible, as well as reporting back to local stakeholders. At the Kirkenes meeting, the following areas – among others – were discussed:

- Difficulties of managing industrial logistics and multiple land uses
- The role of historical development for determining land use areas within tourism and reindeer herding
- The need for mining developments to strongly consider the period after the mine has closed
- The need to consider northern Europe specifically and describe differences compared to other areas
- A focus on how different industries/activities are connected, not just on individual or sectoral issues. For instance, how early can the mining industry involve other actors, and how can cooperation be developed in connection with large infrastructure developments close to borders? (Barents region as a relevant example of this.)
- A need to discuss the governmental mineral strategies in the case study areas in the light of specific local cases

A document with a summary of all suggestions so far has been reviewed by WP leaders with regard to how suggestions for study and feedback on the programme can be accommodated. Results with regard to local suggestions are also to be reported back to stakeholders by the programme communicator.

Programme-wide publication

While the progress in terms of specific Work Packages is reported further on in the document, the programme is also producing programme-wide publications that are intended to integrate the work in the programme and report on the programme as a whole.

AACA chapter

From the outset, the programme has been involved in the development of the Arctic Council-related Adaptation Actions in the Arctic Barents report, and scientific manager Carina Keskitalo is a coordinating author for Chapter 3 which gives an overview of the social and natural environment of the Barents region. Most of the programme has been involved in writing the chapter (and some programme participants are also involved in other chapters). The report is currently intended to be published later in 2016.

Metadata, research ethics and common fieldwork methodology and coordination

Discussions at programme meetings have resulted in decisions on metadata, which – after the end of the programme – will be reported using a metadata form based on the Excel interview sheet to VR (the authority responsible for metadata compilation in Sweden).

Following discussions on cooperation between WP2 and WP4, a common fieldwork methodology and coordination documents have been developed to be used by these interview-intensive work packages and by the programme as a whole. This fieldwork methodology and coordination, as well as the clarification of principles for communication and feedback to stakeholders, and the practice of stakeholder and open public meetings, are in line with the research ethics principles, which have been discussed and revised at programme meetings (as a regular agenda item).

During 2015, no further revision of any of these documents were required.
Programme book

An integral part of integrating work across the programme, developing cooperation across disciplines and reporting on the programme is the work on a coherent general publication for the programme. To demonstrate the usefulness of largely historical and social sciences research to a wider audience, there has been a focus on explaining natural resource development in Fennoscandia and northern Russia in terms of path dependency.

The concept of path dependency shows how specific institutional logics, for instance how resources can be used, are created and may be difficult to change even as situations change. A focus on path dependency is an integral part of the theoretical framework of the programme (together with a focus on governance), and the programme book argues that a better understanding of path dependency is an how we are able to mitigate and adapt to climate change.

The programme book (provisionally titled “Institutional change or inertia? Understanding societal change and vulnerability in northern Europe in the context of climate change”, ed. E. Carina H. Keskitalo) is currently under review important requirement for better understanding with publishers, with the aim of being finalised at the end of the programme. The provisional chapter structure can be found below, and the book intends both to show the specific situations and differences within the Fennoscandian and Russian northern areas and in particular compared with other ‘Arctic’ areas, and to illustrate existing inertia and change in resource use in these areas.

Outreach

In particular, administrative programme management has been extensively involved in promoting the Mistra Arctic project in a number of national and international contexts. The Mistra Arctic Sustainable Development programme has been put forward as an excellent example of new and innovative Swedish research initiatives within Arctic social sciences. In turn, our network of external colleagues has increased considerably, and the project now has a broader foundation for scientific dialogue. Examples of presentations are found below:

Planning ahead

In the coming years leading up to programme finalisation, the programme has planned to continue stakeholder interaction through meetings potentially in north-west Russia (in autumn 2016, currently being investigated with regard to practical travel possibilities); an upcoming meeting in coordination with the 2017 IASSA conference to be held in Umeå and with potentially broad international as well as regional stakeholder outreach; and a final meeting to be held in Stockholm, focused on national as well as potentially international decision-makers. In coordination with the IASSA meeting, the programme also plans to include a final feedback session from the scientific advisory board, including for instance on the programme book publication.

As both publication and outreach are currently progressing well, the programme will thus shift over time from a regional stakeholder interaction and research commencement phase to an integration phase, focused on more and more scientifically integrated work and on reporting studies back to local, regional and national levels.
Work package 1: The making of the European Arctic – northern resource governance in comparative contexts

To what extent has the European Arctic followed a unique trajectory, compared to other parts of the Arctic? In this work package (WP1), we explore this question. Our focus is how natural resource utilisation has shaped the European Arctic from the 19th century to the present, with a focus on resource governance.

Thus, WP1 provides a foundation for further studies in work packages two and four, by outlining the evolution of resource governance.

Research tasks

In the following we will report the achievements of the above-mentioned researchers in their respective research tasks.

1.1 Energy in the European Arctic

During the period 1 April 2014 – 31 March 2015, the researchers involved have conducted extensive data collection on energy production and usage in the Fennoscandian Arctic. Paul Warde presented his work as well as the general outline of a publication under production during an MASD WP1 workshop in Stockholm on 9 February 2015. The preliminary title of this article is “Importing for extraction: the age of fossil fuels in the economy of Arctic Sweden”. Paul Warde further elaborated on the results at the MASD colloquium at Kirkenes in October 2015.

1.2 Extractive industries

All researchers involved in this extensive research task have started their research. Avango and Roberts, who have the main responsibility for the research on the history of mining governance in the Fennoscandian Arctic, have mapped previous research and identifying documents or printed sources. They have drafted two of the major articles from their work in RT 1.2: 1) Avango & Roberts, “Constructing mineral resources networks and governance in the development of northern Sweden as a mining region”, planned for submission to a peer-reviewed journal in late 2015 and 2) Avango, Roberts & Kunnas, “Changes in institutional conditions for mining in northern...
Fennoscandia, 1850’s-present” – an article planned for submission during 2016. Avango has also started to work on a third article titled “Energy and Swedish colonialism in the Arctic”, planned to be published in early 2016, partly building on research carried out within the project “Sweden and the emergence of global resource colonialism”, funded by the Swedish Research Council (VR).

Sabine Höhler has started her research in RT 1.2 on seabed mining and marine governance, working on an article dealing with the “Blue Growth” strategy of the European Commission, identifying the main actors behind it, their motives, the way they frame their business and how the concept of sustainability is constructed within this strategy. Höhler has also developed proposals for cross-RT and cross-WP publications, and published in two edited books during 2015.

At the European University of St Petersburg, PhD student Vasily Borovoy continues his work on his dissertation on the development of the Russian mining industry at Svalbard and its interaction with Norwegian governance there, focusing on the period 1930-1945. Borovoy has mapped previous research and conducted archival research at the Trust Arktikugol archives – the mining company operating the Russian mines at Svalbard – in Moscow.

At Umeå University, post-doc Sofia Tano and researchers Olle Westerlund, Örjan Pettersson and Olof Stjernström have submitted an article comparing labour incomes in northern municipalities in Sweden during the height of the mining boom. Based on sources in the ASTRID database from the years 2002-2010, the article compares the Kiruna and Gällivare municipalities in the Norrbotten mining district and municipalities in the Skellefteå district. Their preliminary findings show that residents in the mining areas have had a substantial growth in labour income, higher than average, in particular for employees at mining companies and more so in Kiruna as compared to Skellefteå.

1.4 Forestry
Post-doc researcher Jan Kunnas (KTH) has mapped previous research on forestry governance and identified sources. He has also worked out the structure of an article that was presented at the MASD colloquium in Kirkenes in October 2015, preliminarily titled: Kunnas, Jan, “Forest industry and forest governance in northern Fennoscandia” (2015). In addition, Kunnas has worked out proposals for cross-RT and cross-WP articles.

Jan Kunnas will also play an important role for the research in all of the other RTs of the WP1, based on his native speaker language skills in Finish. Kunnas will work particularly closely with Avango and Roberts on a joint article comparing mining governance in Sweden, Norway and Finland (2016).

1.5 Tourism

1.6 Euroarctic energy raw material industries in transitions and stagnation
Urban Wråkberg, Julia Lajus and Ekaterina Kalemeneva have worked on a book chapter based on their research in this RT 1.6, titled: “The resilience of Euroarctic energy and raw material industries to economic transitions and stagnation”. The group has also worked out a plan for producing a cross-WP article together with researchers within WP3, on Arctic-global linkages in the raw materials industry. Wråkberg has published three articles on Russia’s northern industries, the politics of place names and heritage policies in Norway.

1.7 Reindeer husbandry, demography and land use from a historical perspective
Peter Sköld, Per Axelsson and Dean Carson, together with authors outside the MASD programme (see publication list), have submitted three articles related to the research within RT 1.7.

At KTH, Corinna Röver was employed as a PhD student within RT 1.7 on 1 February 2015 and has made impressive progress on her research.

1.3 Marine resources
Julia Lajus and Peder Roberts have developed the framework for an article comparing Norwegian and Russian fisheries governance in the north, with a particular focus on how modelling became a valued component of cross-border governance, expected to be submitted for publication in 2016. In order to create synergies with ongoing research on the history of fisheries in Norway, Lajus and Roberts have recruited historian Dr. Stian Bones from the University of Tromsø who will contribute to the research for this article.
She has presented a tentative research plan for her thesis work at a WP1 workshop at KTH. She presented a thesis plan at the colloquium in Kirkenes in October 2015 and at the higher seminar at KTH in November 2015.

Research products

Here follows a list of research products from WP1. Products marked * are related outcomes.

Conferences, seminars and workshops

All researchers in WP1 have participated in various workshops and conferences over the year. The most significant were the following:

- **ICASS 7 congress at Prince George, Canada, in May 2015** at which most of the researchers in the WP presented their research to the global Arctic social science community.
- **MASD colloquium at Storuman, at which most WP1 researchers participated.**
- **Polardagen, taking place in Stockholm on November 2014**
- **Extractive industries and indigenous peoples, a workshop taking place on 26-27 Nov 2014, with a large number of participants both from within and beyond the Nordic countries.**
- **MASD WP1 workshop in Stockholm, which took place on 9 February 2015 at KTH. At this workshop, all researchers in WP1 presented their research and received feedback.**
- **MASD colloquium in Kirkenes, October 2015.**

Presentations on WP1 research, 1 April-31 March:

- The conference “Missing data (ICCH16)”, taking place in Oulu, Finland, on 9-12 June 2015.
- **MASD colloquium in Kirkenes, October 2015.**

Publications

Published and in press


1. Introduction (Avango, Sköld, Sörlin, + others)
2. Avango, Axelsson, Höhler, Kunnas, Lajus, Nilsson, Roberts, Sörlin, Ward, Wråkberg: the concept of sustainable development in the Fennoscandian north, exploring how industrial, state and municipal actors have used it in different contexts related to the north and why [cross-RT]
3. Warde: Importing for extraction: the age of fossil fuels in the economy of Arctic Sweden [RT 1.1]
4. Avango and Roberts: constructing mineral resources: networks and governance in the development of the Fennoscandian north as a mining region [RT 1.2]
5. Höhler, Sabine. “Breaking the Ice: A European Research Vessel for the Arctic” [RT 1.2]
7. Lajus, Roberts (possibly Stian Bones): Science and politics in the governing of North European fisheries [RT 1.3]
8. Kunnas: Changing valuations, networks and governance of forest utilization in northern Fennoscandia from the 18th century to the present and beyond [RT 1.4]
9. Sörlin & Svensson: Emerging resources in the era of sustainability: the case of the mobility landscape [RT 1.5]
10. Röver: Reindeer herding in a colonized region: multiple pressures and land use conflicts [1.7]
11. Wråkberg, Chuvarayan, Laijus, Kasparayan: The resilience of Euroarctic energy and raw material industries to economic transitions and stagnation [RT 1.6]
12. Axelsson: Reindeer husbandry, demography and land use from a historical perspective [based on RT 1.7]
15. Avango, Roberts, Sköld, Sörlin: Conclusions
Environmental Knowledge and Resource-Based Business in the Age of Empire, *Journal of Business History*.


Borovoy, Vasily, chapter of PhD thesis on the history of Russian coal mining on Spitsbergen in 1913-1931 in the context of Spitsbergen’s changing territorial status.

Borovoy, Vasily (forthcoming), article in Russian, based on above-mentioned written chapters of PhD theses.

Borovoy, Vasily (forthcoming), chapter in a book of WP1 (title to be articulated), covering the history of Russian mining on Spitsbergen in 1913-1945 in relation to the changing territorial status of this archipelago.


Höhler, Sabine (forthcoming), *Marine Governance: European Politics between Resource Utilization and Environmental Protection in the North*.


Kalemeneva, Ekaterina (forthcoming), “We also want a normal life!": the influence of the Soviet mass-housing policy on the northern cities in the 1950s, in Russian.


Kunnas, Jan (forthcoming), *The dangers of a unidirectional path in the face of climate change – lessons from past forest management*.

Roberts, Peder and Julia Lajus (forthcoming), “Path-dependencies in Barents Sea fisheries”.

Roberts, Peder, Julia Lajus and Stan Bones (forthcoming), “Multispecies modelling”.


Röver, Corinna (forthcoming), “Discussing the economization of reindeer husbandry”.


Publications (continues)


Sören, Sverker & Svensson, David (forthcoming), "Importing for extraction: the age of fossil fuels in the economy of Arctic Sweden”, in WP1 book.

Warde, Paul (forthcoming), "Emerging resources in the era of sustainability: the case of the mobility landscape” in WP1 book.


Conferences, seminars and workshops

Arcum/MASD Symposium “The future of small villages” – 3-6 November 2015 (Umeå and Vilhelmina)


Borovoy, Vasily: “Planned economy in the Arctic conditions: Soviet coal mining on Spitsbergen in the 1930s”, paper presented at the conference Natural Resources, Landscape and Climate in History of Russia and Neighbouring Countries, Saint Petersburg, Russia, Nov. 2015.

Kalemeneva, Ekaterina, presentation: “Climate as an enemy and as a resource: Soviet Northern Urbanism” at conference Natural resources, Landscape and Climate in History of Russia and Neighboring countries, HSE Saint Petersburg, Nov. 2015.

Kalemeneva, Ekaterina, presentation "Arctic Utopias: Modernism on the Frozen Edge" at 8th Annual Conference VDNKh, European University at Saint Petersburg, Nov. 2015.


Kalemeneva, Ekaterina, presentation of the current research project at international workshop Exploring Russia’s Environmental History and Natural Resources, Lake Baikal, Ulan-Ude, Irkutks, July 2015.

Kalemeneva, Ekaterina, presentation of the current research project at research seminar Culture of Historical Memory: World War II and Political Regimes of the 20th Century, Berlin, Belifeld, July 2015.

Kalemeneva, Ekaterina, presentation of the current research project at summer school Cities and Science: Urban History and the History of Science in the Study of Early Modern and Modern Europe, CEU, Budapest, June 2015.


Organization of the conference “Natural Resources, Landscape and Climate in History of Russia and Neighbouring Countries”, National Research University Higher School of Economics, Saint Petersburg, 26-28 November 2015, with a session “Spitsbergen and other Arctic places in history” at which Dag Avango and Vasily Borovoy presented their research on the MASD project, and Ekaterina Kalemeneva presented at another session.

Röver, Corinna, “Exploring the concept of historical trauma in the context of forced relocations of reindeer herdiers in Sweden”, presentation at the workshop Longitudinalstudier av Kolonisation och urfolkshälsa, Umeå, Dec. 2015


Sköld, Peter. “Indigenous health in Scandinavia and Brazil”. Presentation at the workshop Under the Same Sun, Umeå, 17 December 2015.

Sköld, Peter. “Climate change is a serious challenge to reindeer herding, Sami culture and Sami health”. Presentation at the session Arctic Lessons at the Climate Meeting COP21, Paris, 5 December 2016.


Sköld, Peter. “Perpetual adaption? The Sami and reindeer husbandry in Sweden in the light of political, environmental and economic changes”. Presentation at the 16th International Congress on Circumpolar Health (ICCH 16), Oulu, Finland, 10 June 2015.


Sköld, Peter. “Extractive industries and indigenous peoples”. Presentation at the International Arctic Science Committee Social & Human WG meeting at the Arctic Science Summit Week, Toyama, Japan, 23 April 2015.

Sköld, Peter. “Missing data in Arctic health research”. Presentation at the International Arctic Science Committee Social & Human WG meeting at the Arctic Science Summit Week, Toyama, Japan, 23 April 2015.

Sköld, Peter. “Early Exploration and Exploitation and their Impact Today on Local Arctic Societies”. Presentation at the ICARP III conference at the Arctic Science Summit Week, Toyama, Japan, 29 April 2015.


Wråkberg, Urban, co-hosted & coordinated 20-22 October, Kirkenes, Mistra Arctic Sustainable Development, 3rd Colloquium.

Wråkberg, Urban, presented at the international conference: “Natural Resources, Landscape and Climate in the History of Russia and Neighbouring Countries”, at the National Research University Higher School of Economics, Saint Petersburg, Russia.
Work Package 2. Governance in the present: existing legislation and policy, and the role of new governance tools within these

This work package focuses research on existing policy and law in the targeted resource sectors, as well as new governance measures and planning efforts and the legal possibilities for extending them. For instance environmental Impact Assessments and potential extension to more strategic and social forms, forest and marine certification (FSC, PEFC, MSC), corporate social responsibility (CSR) measures, and conflicting planning tools, targets and legal frameworks.

Personnel
WP leaders
Carina Keskiitalo and Maria Pettersson

Senior researchers
Carina Keskiitalo, Maria Pettersson, Olof Stjernström, Dmitry Lajus

Junior researchers
Lovisa Solbär (postdoc), PhD students Daria Smagina, Johannes Räftegård

Research tasks
In the following we will report the achievements of the above-mentioned researchers in their respective research tasks.

2.1. Understanding the legal and policy framework (basic studies)

The current legal and policy framework can be seen as the result and manifestation of previous and existing processes of constructing and encasing power over land use (both Type I and Type II governance).

As a basis for all other studies within this WP, research task 2.1 is working on identifying and analysing applicable laws and policies for different types of land use, including forestry, mining, oil and gas extraction, reindeer husbandry, fisheries and tourism, in the countries selected for the case studies.

Work in progress:
- The role of legal principles in the governance of minerals, forests and water in Sweden.
- The variation within Type I governance: Differences between the Swedish Environmental Code, Planning and Building Law in comparison with mining and forestry legislation.
- Forest planning and local municipal planning and participation – a comparative study in the European Arctic.

2.2. Local impacts of resource use legislation: PhD student project

In cooperation with WP4, PhD student Johannes Räftegård has started to work specifically on large-scale resource exploitation in relation to local planning, property rights and other land-use rights, and the effects on other
interests such as forestry, reindeer husbandry and biodiversity.

The theoretical point of departure is the relationship between area-based planning and sector-based planning.

The case studies are focusing on the local planning process in targeted local municipalities in order to analyse how large-scale sector planning activities such as nature-based resource production, national infrastructure and national nature preservation plans relate to local area-based planning and different sectors.

The analyses depart from studies of the legal frameworks, document studies, land-use decisions, environmental impact assessments and local/regional comprehensive plans, and interviews with stakeholders, state authorities and planners. One of the planned papers is to be written together with Lovisa Solbär.

2.3. Environmental Impact Assessment, potential extensions to Social Impact Assessment, and the role of Corporate Social Responsibility: postdoc project

The study focuses on the adjustment of resource projects to the socio-environment at the target locality and the effect of strategic regulation (EIA, spatial planning, corporate self-regulation) in this process. Field studies regarding two Finnish mine localities and one wind farm locality are near to completion.

Two papers are under development: 1) public and self-regulation of a resource development project under planning as regards the re-design of the locality, and 2) the co-existence of the resource development project with existing nature-based businesses with a focus on further elucidation of the notion of packing capacity.

2.4. Novel planning instruments and possibilities to extend environmental assessment?

The assessment of planning tools includes assessment of existing legal conditions for comprehensive planning and risk and vulnerability plans, and aims for land use in other municipal or regional policy documents, including forestry planning, municipal planning, and reindeer husbandry planning, and the impact of certification systems on this.

Planning-focused studies will be undertaken mainly through policy review, potentially including qualitative thematic coding of policy documents and interviews.

Paper under development:

✓ The role of participation in the planning process. To be submitted before the summer.

2.4. Novel planning instruments and possibilities to extend environmental assessment?

a) A legal analysis focusing on the scope of the social and environmental assessment in the licensing processes for different natural resources utilisation, and the potential to:

b) extend the application of Environmental Impact Assessments (EIAs), for instance to include forestry and reindeer husbandry in Sweden;

c) strengthen the implementation of Strategic Environmental Assessments (SEAs), with regard to both plans and programmes and the introduction of new policy;

d) formalise the use of Social Impact Assessments (SIAs), particularly in the context of mining.

This part will proceed through in-depth analysis of the relevant legal sources in each legal system, including legislation and case law, undertaken by Maria Pettersson.

Paper under development (working title):

✓ Social and environmental considerations in the licensing process: the scope for earlier, clearer and broader assessments.

2.5-2.6. Certification

Certification has been particularly important as a form of Type II governance, a private initiative that constitutes an additional influence on state regulation, for renewable resources first developed in forest certification and then extended into marine certification.

For forest certification (2.5), existing, relatively extensive studies of forest certification in Sweden will be extended to investigate aspects including the extent to which forest certification in these cases is supported by other standards such as the ISO system and by companies’ CSR policies. Studies here will utilise policy documents, including company policies, as well as interviews within the implementation chains in forestry with a focus on the identified case study areas.

For marine certification (as implemented by the MSC), the study will examine its impact on fishing in the Arctic Ocean, focused in particular on certified companies that are active in several countries and the implementation of certification practices in Russia and Norway:

How certification bodies (third party independent organisations performing the certifications) assemble teams to work with
different national fisheries and what problems they face during the process;

a) The role of conservation NGOs in the process;

b) Marketing structures for certified seafood;

c) Attitudes of stakeholders who depend on certified resources (in particular, local people) to the MSC process;

d) Involvement of governmental structures in certification and their attitudes to it;

e) Consumer knowledge regarding sustainable seafood;

f) Consideration of oil and gas issues as competing economic sectors; and

g) Changes to fishing and management techniques in places associated with certification.

Studies will mainly be undertaken by Dmitry Lajus with the assistance of PhD student Daria Smagina. Interview studies are ongoing in northern Russia with MSC certified companies, certifiers, NGOs and governmental representatives (federal, regional, local). Two paper drafts exist in cooperation between Lajus, Smagina and Keskitalo.

Cooperation with other WPs

In cooperation with WP4, fieldwork is also being undertaken in Kiruna, Pajala and Luleå.

Interviews and on-site visits are undertaken. Interviews focus on planners, municipal officials, LKAB, other stakeholders, tourism entrepreneurs and reindeer husbandry interests.

a) Exploring the importance of cultural and industrial heritage in the planning process and for regional development (WP4).

b) Understanding and analysing the planning process in urban transformation in mining towns (Kiruna, Malmerget and Pajala) (WP2 and WP4). Themes here include tourism development and industrial heritage (WP4), and urban transformation, globalisation and governance (WP2).

Research products

Here follows a list of research products from WP2.

Publications (including in progress):

- The role of participation in the planning process (Keskitalo, Pettersson, Stjernström; submitted).
- Territorial and sectoral lobbying in relation to northern Sweden (Eklund and Keskitalo). In prep (cooperation with WP3).
- The variation within Type I governance: Differences between the Swedish Environmental Code, Planning and Building Law in comparison with mining and forestry legislation (Stjernström, Pettersson, Keskitalo).
- The good, the bad and the ugly: how to reach best practice and avoid worst practice in mining development. Cases from northern Sweden, Finland and Norway. Planned for Resources Policy? (Keskitalo, Pettersson, Solbär) In prep.
- Participation in forest-relevant planning – a comparative study in Norway, Sweden, Finland and Russia (Stjernström et al.).
- Forest planning and municipal planning – present land use and local development (WP2+WP4) (Stjernström).
- Social and environmental considerations in the licensing process: the scope for earlier, clearer and broader assessments (Pettersson).
- Fisheries certification in Russia: problems and achievements (Lajus, Smagina, Keskitalo; two papers in prep).
- Comparative study of fisheries certification (Lajus et al., in prep).
- Market-based Certification – a scarcity of environmental impact or ‘only’ a scarcity of evidence? A literature review on the environmental impact of the FSC, PEFC and MSC certification schemes (Keskitalo and Hannelene Schilar, potentially for book).
- PhD student project: Municipal planning and natural resource extraction (Johannes Räftegård, four articles, in prep).
- Postdoc project: Two articles in preparation (Lovisa Solbär).

In addition, ideas exist for cooperation papers with WP4 (after initial meetings):

- Ideas on, for instance, material expressions of land use, the role of cultural use in creating valued landscapes.
- Analysis of EIAs in different cases: inclusion of consideration of different sectors, landscape scale.
- The role of globalisation and change in governance over time on different municipal processes.

Related publications and activities


Lajus D: 1) Participation in MSC certification of Bratsk Reservoir Perch Fishery, Vityaz Avto-Delta Salmon Fishery, Narody Severa & Bolsheretsk Salmon Fishery (assessment team member), 2) Four MSC pre-assessments in Russia and Estonia, 3) Consulting for two fisheries to support MSC certifications.

Conferences, seminars and workshops

- Time-geographic description utilised as analytical method, Time-geography Days, Gothenburg, 21-22 May 2015 (Solbär).

Supervision

- Igor Orlovsky (2016) Analysis of bycatch at the gillnet fishery of perch in Irikla reservoir (Orenburg Province).
Work Package 3: The changing global context of the European Arctic

The aim of this WP is to analyse the broader, global context of governance and sustainable development in the European Arctic. Particular attention is devoted to interactions between environmental change, resource demand, the global economy and geopolitical changes.

By using scenario methodology, the WP was envisioned to provide a set of narratives of global change projections that can be used as background for analysing the potential future role of governance.

Personnel

WP leaders
Annika E. Nilsson and Niklas Eklund

Senior researchers

Junior researchers:
Marie Jürisoo, Ekaterina Klimenko, Lize-Marié van der Watt

Research tasks

In the following we will report the achievements of the above-mentioned researchers in their respective research tasks.

3.1 Environmental change and ecosystem services

Foundational work on this theme in WP3 has been carried out in collaboration with WWF in an effort to produce a scoping study on the economics of ecosystem services in the Arctic. Specifically, WP3 has been engaged in the chapter “Governance of Arctic Ecosystem Services” in the report The Economics of Ecosystems and Biodiversity (TEEB) for the Arctic: A Scoping Study (Sommerkorn and Nilsson 2015). Key insights from this work are that an ecosystem services lens clearly shows how and why aspects of ecosystem structures and processes are relevant for society and thus for governance practices, and that attention to ecosystem services in policies and governance practices can serve as a tool for the integration of environmental, economic and social policies. However, this requires a truly interdisciplinary approach that combines ecological, economic, sociocultural and political analyses. It is especially important to find methods that capture ecosystem services that are not part of the formal economy. Moreover, governance here plays a central role as the platform for negotiating the value of ecosystem services and making collective decisions about policies.

Further work in relation to ecosystem services and natural capital includes initial discussions between van der Watt and bio-economy scholar Tiina Häyha at the Stockholm Resilience Centre about a literature review focusing on the potential and limitations of natural capital accounts as a way to incorporate ecosystem services into the formal economy.

WP3 has produced a popular science factsheet on climate change in the Barents region, based on current literature (van der Watt 2015), which was also presented as background material at the workshop on Future Scenarios in Pajala, 9-10 March 2015 (see below). The
factsheet was written as a pedagogical tool, with effort put into explaining concepts such as uncertainty in climate science, forecasts and projections, Arctic amplification, and so on. It focuses on observed environmental changes and impacts.

3.2 Mineral resource flows

WP3 has published an SEI Discussion Brief on “European Arctic Mineral Resources: Geopolitics and Sustainability Dynamics” (Jurisoo and Nilsson 2015). Key insights from this work include the fact that the prices of base minerals that play a critical role for the viability of mining in the European Arctic depend on a range of factors such as impacts of climate change on auxiliary resources in other parts of the world, the social and political climate related to sustainability concerns in other parts of the world and geopolitical considerations by key international players such as China. The discussion brief will be followed up by a journal article where the material is put into a more theoretical context (political economy) and the focus will also be on the discourse of mineral resources. This work will commence in February 2016.

3.3 Energy resource flows

This work will commence in spring 2016 and be coordinated with the planned EU case study.

3.4 Evolving strategies in Arctic security and geopolitics

Publications related to this topic include a journal article, in which Eklund explores the scientific basis for Russian military doctrine and related current Russian debates about military theory (Eklund 2015). Moreover, van der Watt collaborated with Norwegian and Danish colleagues on an essay about the implications and opportunities for scientific research stations to act as pivots between scientific and geopolitical issues, especially in the context of the military history of some Arctic research stations (Goodsite et al. 2015).

Ongoing work includes a journal article on different conceptions of geopolitics (co-authored by Eklund and van der Watt). A draft of this was presented at the programme meeting at Kirkenes. The paper will also be presented at Pax Nordica in Umeå in April 2016, at which time it will also be submitted. The paper provides an overview of the different types of geopolitical engagement in Arctic scholarship. A preliminary key insight is that these different geopolitical schools influence states differently, and rarely engage with one another.

Furthermore, Eklund has started work on a joint article “Military land use and civic contentions in the European high north” together with WP2 researchers Olle Stjernstrom and Orjan Pettersson.

3.5 Key international actors

Publications include a policy paper that analyses the evolving Russian Arctic strategy in the changing international context (Klimenko 2015a) as well as an essay that explores the consequences of the crisis in Ukraine on Arctic security and cooperation (Klimenko 2015b). In addition, WP3 has provided expert comment and policy briefing on the US leadership of the Arctic Council, the latter being published in both English and Russian (Klimenko 2015c). The upcoming Policy Paper “Russian military and security strategy in the Arctic: Still quiet in the High North?” analyses Russia’s security concerns in the Arctic region, the rationale for the military build-up in the region, the links between the Arctic security agenda and the broader relationship between Russia and the Euro-Atlantic community.

The key insights of this work are that the goals of Russia’s Arctic security strategy include ensuring sovereign rights, protecting borders and maritime areas, and providing strategic deterrence against NATO. Moreover, as Russia’s security policy in the Arctic is a part of its broader foreign and security policy, military expansion and the future of security cooperation in the region will be determined to a great extent by the global geopolitical situation. In the light of the crisis in Ukraine, the widening distance between Russia and the other Arctic states is only likely to increase for the foreseeable future.

In addition to publications, Klimenko’s work on Russia has yielded invited presentations at several seminars and workshops, direct meetings with policy makers, and expert media appearances as an expert on Russian policy in the Arctic.

SIPRI’s work is now shifting its focus to a case study on Chinese-Russian cooperation in the Arctic. In 2013 China became a permanent observer in the Arctic Council and simultaneously, due to geopolitical trends and events, China has moved into being perceived as Russia’s strategic partner in the Arctic. With China being the biggest rising power in the world and Russia being an Arctic superpower, Chinese-Russian relations are crucial in determining the future of the Arctic region. This work is scheduled to be completed by early autumn of 2016.

SIPRI will have a workshop devoted to the launch of the SIPRI Book “The New Arctic Governance”, which is the result of the first stage of MSITRA project. The book will be
published in March 2016. The book is edited by Linda Jakobson and Neil Melvin. The contributing authors include Alyson Bailes, Kristofer Bergh, Ekaterina Klimenko, Andrei Zagorski, Linda Jakobson, Seong-Huon Lee and Svein Vigeland Rottem. The book analyses national approaches to security in the Arctic region, Russia’s Arctic governance policies, the North East Asian states’ interests in the Arctic, and the role of the Arctic Council in Arctic governance.

The European Union case study highlighted in the programme plan will be coordinated with task 3.3 Energy resource flows, with work planned for 2016.

In addition to planned activities, a Mistra Arctic Fellowship for Annika Nilsson to visit and collaborate with the German Marshall Fund of the United States will provide an opportunity to pursue a case study focusing on the United States as an Arctic actor. This work will start in the second half of 2016.

3.6 Scenarios as a tool for synthesis

A major emphasis of WP3 has been to develop narrative scenarios of potential futures in the Barents region, which are integrated in the chapter “Future Narratives” in the Barents regional report for the Arctic Council process Adaptation Action for a Changing Arctic (AACA). A major empirical effort has been a workshop on future scenarios in Pajala on 9-10 March 2015, with approximately 35 participants of whom about half are local or regional actors (Nilsson, Carlsen and van der Watt 2015). In collaboration with external partners, WP3 has also been part of similar workshops in Kirovsk, Russia and Bodo, Norway, and with reindeer herding youth at the Gávnnadeapmi 2015. In addition to the chapter for the AACA, the scenario work is expected to result in a journal article. The scenario work is also one of the bases for Annika Nilsson’s engagement as one of the CLAs for the synthesis chapter of the Barents AACA report.

Key insights from the scenario workshops and other parts of the AACA-related work are: 1) The impacts of global development will vary depending on local and regional context relating to current economic structures and the local and regional resource base, 2) Local adaptation challenges are closely linked to global developments not only regarding climate change but also in relation to resource markets, international security, values and norms, and technology development, 3) Participatory scenario workshops provide a method for engaging local and regional actors in the process of producing knowledge about fundamental uncertainties about the future that need to be taken into account in planning and adaptation, and 4) Future work on understanding the potential for adaptation action in the Arctic would benefit from organising interdisciplinary knowledge networks aimed at comparing and improving scenario methodology.

A second MASD scenario workshop is being planned for 4 May 2016 in Luleå. This seeks to connect past and present drivers and draw on elements of path dependency and future studies, and aims to have cross-work package input.

3.6 Other

Sustainable development

The WP has taken part in the preparation of a white paper on sustainability research in the Arctic for ICARP III (International Conference on Arctic Research Planning). This work is expected to eventually form the basis for a journal article. Initial key insights from this work are that the notion of sustainability has an intricate political history with some Arctic peculiarities and also that the focus is starting to shift from sustainability as outcome towards sustainability of process, where social goals can be evaluated and negotiated in ways that ensure both salience and democratic credibility with a wide range of audiences and attention, sometimes conflicting with social goals.

Initial ideas have been discussed for a joint WP3 journal article on the theme “Sustainable development in a changing global context: The European Arctic from a bird’s eyes perspective”.

Concept of stakeholders in science policy in the European Arctic

In this research line, van der Watt investigates how the concept of “stakeholders” is incorporated into Arctic science programme during the boom in funding for Arctic science that began in the 1980s (and continues into the present). It relates to the overall Mistra programme in a self-reflective manner, and also comments on what is specific to the European Arctic, as compared to the North American or Russian Arctic. The first draft of this work was presented at the European Society for Environmental History in June 2015.

Energy cooperation in the Russian Arctic: one year after sanctions

Ekaterina Klimenko is preparing a policy brief on the effects of sanctions on energy
cooperation in the Russian Arctic. In July 2014, the US and the EU introduced sanctions that directly affected Russia’s hydrocarbon development projects in the Arctic. This forced many in Russia to reassess the strategy for development of the Arctic shelf. Some suggested suspending all projects and postponing the development until ‘better times’, while others insisted on developing the Arctic shelf without foreign technology.

**Mistra Arctic Fellowship**

Mistra has offered Annika Nilsson a Mistra Arctic Fellowship in collaboration with the German Marshall of the United States, to be pursued half time over the course of a year, starting on 1 June 2016. In addition to a proposed case study of the United States as an Arctic actor (see 3.5), this will offer unique outreach opportunities for audiences in both the United States and European Union. Details of the activities during the fellowship will be negotiated at the start of 2016.

**Research products**

Here follows a list of research products from WP3.

**Publications**

  In Russian: http://russiancouncil.ru/inner/?id_4=5740#top

**In progress**

- Eklund, N. and van der Watt, L.-M. “Back to the Future: Arctic security through the geopolitical prism.” (Work in progress.)
- Jakobson, Linda and Klimenko, Ekaterina China’s Arctic policy: The role of China in the Arctic region and opportunities of the China-Russia cooperation in the Arctic, SIPRI Insights paper. (Work in progress.)
- Klimenko, Ekaterina, Russia’s military and security strategy in the Arctic: still quiet in the High North? SIPRI Policy Paper. (Work in progress, due to be published in January 2016.)
- Simon Wezeman, Military capabilities in the region: is there evidence for the militarization in the Arctic? SIPRI Background Paper. (Work in progress, due to be published in February 2016.)
- Klimenko, Ekaterina, Energy cooperation in the Russian Arctic: one year after sanctions, Policy Brief for the Russian International Affairs Council (Work in progress, due to be published in summer 2016).
- Nilsson, A.E., Bay-Larsen, I., Carlsen, H. et al. Future narratives: Chapter in Barents region report for Adaptation Action of a Changing Arctic (with Lize-Marié van der Watt as one of the lead authors and Niklas Eklund as contributor). (Work in progress, due to be published in late 2016 or early 2017.)
Presentations

**Group presentations (invited):**

- Eklund, N. “The Russian Bear – Going Polar or Still in the Woods?”
- Klimenko, E. “Russia and the Arctic: challenges to cooperation.”
- Nilsson, A. “Uncertain Futures – Environmental Surprises, Securitization and Arctic Governance.”
- Van der Watt, L.-M. “Climate change, geopolitics and governance: the view from Pajala”
- Attended by approximately 80 people.

**Conference presentations, workshops, seminars (including some that are only indirectly related to MASD):**

- Klimenko, E., “Russia’s energy and shipping routes: possibilities and limitations of cooperation with China”, Workshop “Arctic Nexus in Asia-Nordic relations”, organized by the Danish Agency for Science, Technology and Innovation, Aalborg University, CIRCLA, Obel Foundation, Letterstedtska Föreningen, the Port of Aalborg and UiT The Arctic University of Norway, Aalborg, Denmark, 5-7 November 2014.
- Klimenko, E., “Arctic struggle for regional resources and influence?” “Security, climate change and scarce resources” (Säkerhetspolitik, klimatförändringar och knappra resurser) organised by Folk och Försvar and Luleå Technical University Luleå, Sweden, 12 November 2014.
- Klimenko, E., “Russia’s Arctic strategy and the consequences of the crisis in Ukraine for Russia’s Arctic development”, presentation at course “Where is Russia heading?” (Vad Innebär Rysslands Vägval?) organised by the Swedish Institute of International Affairs (UI), Stockholm, Sweden, 13 November 2014.
- Klimenko, E. spoke at a seminar “Arctic Challenges” on the political, economic and environmental challenges in the Arctic region, and how these will be tackled in 2015, as the U.S. assumes chairmanship of the Arctic Council, organised by UI in collaboration with the U.S. Embassy in Stockholm. The keynote speaker for the event was Admiral Robert J. Papp, Jr., USCG (Ret.), U.S. Special Representative for the Arctic. The event can be watched at http://www.ui.se/play Stockholm, Sweden, 16 January 2015.
- Ekaterina Klimenko was part of the Arctic Summer College 2015 organised by the Ecological Institute Arctic Programme in cooperation with the WWF Global Arctic Programme, the Konrad Adenauer Foundation, the World Policy Institute, the Embassy of Canada, Germany, the International Union for Conservation of Nature (IUCN) and the Arctic Centre of the University of Lapland. Ekaterina Klimenko’s essay Russia’s Military Build-up in the Arctic: Political Rhetoric vs. Reality submitted as part of participation in the College was selected for publication in WPI Arctic in Context.
- Ekaterina Klimenko was invited by the OSCE Network to give a presentation on military security in the Arctic and the role of Russia’s military build-up in the region at the seminar “Människor och säkerhet i Arktis och Barents” on 16 November 2015 in Stockholm. The keynote speaker at the workshop was Swedish Ambassador to the Arctic Krister Bringeus.
- Nilsson, A.E. “Rapid change and resilience: Expanding dimensions of commons governance”. Invited keynote presentation at “From generation to generation – the use of commons in a changing society”. International Association for the Study of the Commons, Umeå.
Nilsson, A.E. "Knowledge and governance in a changing Arctic." Invited keynote presentation at the Final event workshop, Vienna, Austria, 20 May 2014.

Nilsson, A.E. "Scenarios in Mistra Arctic Sustainable Development". Presentation at the Arctic scenarios workshop, Vienna, Austria, 20 May 2014.


van der Watt, L.-M. “Climate change, geopolitics and governance: the view from Pajala”, Presentation at the Umeå Association of International Affairs, Future of the Arctic at Whole Earth? Umeå, Sweden, 27 April 2015

van der Watt, L.-M. “Politics, programmes and people: Contemporary scientific collaboration in the Arctic". Invited presentation at Polar Forum seminar arranged by APECS Sweden (Association of Polar Early Career Scientists) and the Stockholm Association of International Affairs, 6 November 2014.

van der Watt, L.-M. "Science Planning and the ‘Stakeholder Section’ in Arctic Environmental Change Research", as part of a panel "Towards a non-environmental history of the Arctic" at the Arctic Modernities Conference, hosted by the University of Tromsø, Norway’s Arctic University, September 2014.

van der Watt, L.-M. "Directions and Uses of Arctic Research". Panel discussion, University of the Arctic Assembly’s Rector’s Forum, Umeå, Sweden, 20 August 2015.

van der Watt, L.-M. "Stakeholders, the environment and legitimacy in Arctic research". European Society for Environmental History Annual Meeting, Versailles, France, July 2015.

Mediа
- Ekaterina Klimenko interviewed for ”Miljöarbete i Arktis påverkas av krisen i Ukraina”, Västerbottens-Kuriren, 28 April 2015, www.vk.se

Miscellaneous stakeholder outreach
- 14 November 2014, Stockholm, Sweden. A group of students from the Circle of International Relations – a student organisation working at the University of Tartu in Estonia – had a study visit to SIPRI to learn about SIPRI’s research on regional security issues. Ekaterina Klimenko presented SIPRI’s work on the Arctic region conducted within the MASD activities.
- 3 February 2015, Stockholm, Sweden. Ekaterina Klimenko met with the Head of the Political Section of China’s Embassy in Sweden Mr. Zhai Yanping, to discuss the future of Arctic cooperation, the upcoming Chairmanship of the US in the Arctic Council, and the role of Asian states in the Arctic.
- 17 February 2015, Stockholm, Sweden. Ekaterina Klimenko met with Kent Härstedt, member of the Swedish Parliament and Vice President of the OSCE Parliamentary Assembly, to discuss the future of Russia’s energy development and shipping in the Arctic.
- 7 October 2015, Umeå, Sweden. Klimenko Ekaterina delivered a 1.5 hour lecture on the security situation in the Arctic region and the consequences of the effects of the crisis in Ukraine on relations with the Arctic states at the Swedish Defence CBRN Centre. The event was attended by approx. 100 people.
- 8 October 2015, Umeå, Sweden. Niklas Eklund delivered a two-hour lecture (including Q&As) at the annual security conference at Skyddsskolan in Umeå convened by the Northern Military Command (MK Nord) on the topic “Geopolitiska motsägelser i omvärldsförändringen”. The event was attended by approx. 50 people representing security analysts and administrators from the Swedish Police, the Swedish Secret Police, the Swedish Armed Forces, the County Governors’ Offices and several other public organisations across northern Sweden.
Work Package 4. Regional and local governance – creating sustainable development in the European Arctic?

In this work package (WP4), there is a focus on stakeholders. How are global change and the impact of new governance measures perceived by stakeholders in the European Arctic? Is it possible to identify successful approaches to dealing with change among them? Thus, in WP4 work conducted in the other three work packages will be linked to the local level challenges of the present.

WP4 identifies four specific areas for investigation:
1. Local planning and land use conflicts.
2. Impacts and responses within reindeer husbandry.
3. Tourism developments.
4. Industrial extraction sites.

Research tasks

In the following we will report the achievements of the above-mentioned researchers in their respective research tasks.

4.1 Local planning and land use conflicts in the north

This part of the work package aims to study the relationships between global change, geopolitical issues and market-driven factors in the European Arctic and how these affect the local level or the local municipalities. In the initial stage, a number of detailed studies have been planned and fieldwork, mainly interviews in Kiruna and Pajala, has been started. Olof Stjernström has a leading role in the fieldwork process. The transcription work has been completed, and additional interviews will take place in February 2016. The analytical work and writing of articles based on the interviews has started. The fieldwork and the actual research in this part cooperates with all the other work packages. The plans for future publication involves the following suggested papers

a) Planning and land-use challenges in urban transformation – the case of Kiruna and Malmberget (Olof Stjernström). Fieldwork, done, additional interviews are needed. Preliminary text in late 2016.
b) Social resilience and vulnerability in smaller mining operations (Olof Stjernström). In progress.

c) Labour mobility and fly in/fly out in mining municipalities (Orjan Pettersson, Olof Stjernström). This topic has partly already been worked on with in relation to WP1. An article with the title “Labour income effects of residents and the ‘Mining Boom’ in Northern Sweden” has been submitted. Sofia Tano, Orjan Pettersson and Olof Stjernström are responsible for this paper. This paper focuses on labour mobility.

d) The military land use interest in Swedish municipal planning. In progress. Most of the data has been collected and additional interviews are planned to take place in February/March 2016. This paper also relates to WP2 and WP3. (Niklas Eklund, Orjan Pettersson and Olof Stjernström.)

We also intend to develop a study based on both WP1 and WP4, dealing with mega industrial structures and how they impact on future development in natural extraction industries and the tourism sector. Dag Avango and Olof Stjernström are responsible for this study. Work in progress.

Another strong ambition developed by Avango and Stjernström is to write an article based on an analysis of the importance of urban representations and how important events or changes in the past are manifested in the urban landscape. This article focuses on the urban representation of the great strike in the iron ore mines in Kiruna in 1969.

It is also worth mentioning that the research group will continue its efforts to apply for additional funding to develop the analysis of regional development and the consequences of the fly in/fly out concept based on the case of Malmfälten. We received very good evaluations from FORTE but the project did not receive funding in the second round. However, we were encouraged to develop our application and resubmit it again.

4.2 Possibilities for reindeer husbandry to incorporate or manage increasing requirements: the role of path-dependency

Postdoc in WP2 Lovisa Solbär and PhD student in WP2-4 Johannes Räftegård are working together on projects related to how municipal planning can take into account various land use interests, including reindeer husbandry. Cases reviewed include mining and wind power EIAs, and how reindeer husbandry has been taken account of in these with regard to determining location and measures taken to limit impacts.

Johannes Räftegård has been on sick leave for most of 2015, which means that some of the planned activities in this part of the project are somewhat delayed but are still expected to be completed within the time frame of the entire project.

4.3 Tourism developments in a changing north

In the initial stage of this research, task research from the previous MISTRA Arctic Futures programme was finalised. This resulted in an article on labour market impacts of tourism in national parks (Byström & Müller, 2014). The article shows that the assumption that nature protection promotes positive economic development through tourism is not applicable in a northern Swedish context. Hence, it rejects the often suggested positive relationship between nature protection and tourism labour market development. Moreover, a book chapter (Müller 2015) summarises findings from the first stage of the programme.

New fieldwork for this research task was prepared and carried out during autumn 2014 and spring 2015 in Kiruna, Pajala and Jokkmokk, by Dag Avango, Olle Stjernström and Peder Roberts in the form of interviews and documentation of built environments. In this context, Byström interviewed more than 20 tourism stakeholders in order to map their perceptions of the interrelationship of mines and tourism development. Preliminary results indicate that the willingness to develop tourism related to mines is not necessarily dependent on their factual attraction value but rather in relation to the success of the mining development. A manuscript is being finalised for submission to Polar Geography in early 2016, summarising various stakeholders’ perceptions of mining as a tourism resource.

Based on a phone survey among Sami tourism entrepreneurs, Müller and Hopstockus (now at Karlstad University) have analysed how Sami tourism entrepreneurs assess different challenges to their businesses. It is demonstrated that most entrepreneurs have good confidence in their own business skills. Instead, they are concerned about external pressures on land use like wind power farms and forestry, despite the fact that the direct threat to their businesses is, to say the least, marginal. Hence it is concluded that Sami tourism entrepreneurs are highly culturally embedded and see themselves as representatives of the indigenous population. This study is presented in the volume Tourism and Indigeneity: Diversifying or Othering the Arctic? co-edited by Arvid Viken (UIT Arctic University of Norway) and Dieter Müller, and delivered to Channel View Publications for publication.
during 2016. The volume also includes a further discussion on Sami tourism and indigeneity, which was also co-authored by Müller as part of this project.

Work is currently being conducted on two papers preliminarily titled “Governing Sub-Arctic tourism: public stakeholders’ perspectives on tourism development in Swedish Lapland” (Müller & Robertsson) and “On the Location of Tourism: An Outlook from Europe’s Northern Periphery” (Müller & Byström), to be finished during 2016.

Research produced within this work package has also been presented during 2015 at conferences in Estonia, Russia, Hungary and Iceland. Finally, Müller presented work from the programme in a keynote given to the International Conference on Sustainable Tourism and Resilient Communities in Hong Kong.

4.4 Extraction sites as assets for new Arctic futures or abandoned mining landscapes as resources for Arctic futures

The researchers in this project are Dag Avango, Peder Roberts, Urban Wråkberg, Andrian Vlakhov and Eric Paglia. This part of WP4 aims to explore how Arctic communities deal with the legacies of past extraction and why.

In the ongoing fieldwork in Kiruna, Pajala and Svalbard, the project benefits from a related project funded by Nordregio. The project, “Sustainable Communities and the Legacies of Mining in the Nordic Arctic”, has enabled extended fieldwork and fieldwork visits to other places, such as Svalbard and west Greenland, to be carried out.

Fieldwork accomplished in 2015:

- Fieldwork at Barentsburg (Andrian Vlakhov, May 2015)
- Fieldwork in Kiruna and Gällivare (Malmberget and Stora Sjöfallet), June 2015 (interviews and documentation – Avango)
- Fieldwork in Pajala, March 2015 (interviews and documentation – Avango, Byström, Stjernström)
- Fieldwork in Kirkenes (documentation – Avango)
- Fieldwork in Greenland, August 2015 – Quillيات and ilulliisat (interviews and documentation – MASD researchers Avango, Roberts, Röver, Paglia with assistance from Janina Priebé and Hanna Vikström). The expedition was supported by the Swedish Polar Research Secretariat.

Planned fieldwork for 2016:

- Fieldwork in Kiruna, February 2016 (Dag Avango, Olle Stjernström)
- Fieldwork in Svalbard – Longyearbyen, Pyramiden, Barentsburg, Coles Bay and Hiorthamna (August-September 2016)

**Publications**

**Published**


**In press**

- Roberts, Peder and Eric Paglia. ‘Science and National Belonging on Svalbard’, accepted for publication in Social Studies of Science.
Roberts, Peder. ‘Animals as Instruments of Norwegian Political Authority in the Interwar Arctic’ (with Dolly Jørgensen), accepted for publication in Journal for the History of Environment and Society.


Presentations

Avango, Dag “Sustainable Communities and the Legacies of Mining in the Nordic Arctic”, paper presented at the workshop Living legacies: history and the contemporary Nordic Arctic, Ilulissat, Greenland, Aug 2015.

Avango, Dag “Creating sustainable development in the Arctic: abandoned extraction sites as assets for new futures”, paper at the TICCIH congress Industrial Heritage in the Twenty-First Century, New Challenges, Lille, France, September 2015.

Avango, Dag “Constructing the pasts of competing Spitsbergen futures: Russian heritage in action”, invited paper at the conference Natural Resources, Landscape and Climate in History of Russia and Neighbouring Countries, Higher School of Economics, Saint Petersburg, Russia, 26-28 November 2015.


Roberts, Peder. “Industrial Heritage and the Construction of Arctic Futures” (with Dag Avango), Society for the Advancement of Scandinavian Studies annual meeting, Columbus (OH), May 2015.


Outreach

### Annual report, 2015

**Mistra Arctic Sustainable Development**

Please note that the figures below regards 2015, which means 2015-01-01 to 2015-12-31

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<td><strong>Total income</strong></td>
<td>12 004 000</td>
<td>9 027 000</td>
<td>2 196 000</td>
<td>2 006 000</td>
<td>2 641 000</td>
<td>2 632 000</td>
<td>1 501 000</td>
</tr>
<tr>
<td><strong>Expenses</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Salaries</td>
<td>9 108 000</td>
<td>8 490 000</td>
<td>1 275 000</td>
<td>1 393 000</td>
<td>2 572 000</td>
<td>2 617 000</td>
<td>1 436 000</td>
</tr>
<tr>
<td>Travel</td>
<td>932 000</td>
<td>630 000</td>
<td>565 750</td>
<td>494 000</td>
<td>34 500</td>
<td>13 000</td>
<td>32 500</td>
</tr>
<tr>
<td>Other direct expenses</td>
<td>702 000</td>
<td>118 000</td>
<td>355 250</td>
<td>10 000</td>
<td>34 500</td>
<td>2 000</td>
<td>32 500</td>
</tr>
<tr>
<td>Overhead and premises*</td>
<td>1 262 000</td>
<td>899 000</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Purchased services</td>
<td>0</td>
<td>95 000</td>
<td>0</td>
<td>10 000</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total expenses</strong></td>
<td>12 004 000</td>
<td>10 232 000</td>
<td>2 196 000</td>
<td>2 006 000</td>
<td>2 641 000</td>
<td>2 632 000</td>
<td>1 501 000</td>
</tr>
<tr>
<td><strong>BALANCE</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Closing Balance</td>
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<td>0</td>
<td>0</td>
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<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

* Overhead and premises and reserve are not included in the budgets for project management and the work packages, only aggregated in the budget at programme level.

The reserve budget 2015 is 436 000 SEK and the outcome is 61 000 SEK in travel costs