Calotte Academy 2012

Water – globally and in North Calotte

28th of May – 4th of June 2012

Rovaniemi and Inari, Finland; Kiruna and Abisko, Sweden; and Tromsø, Norway

Final Report

August 2012

The Calotte Academy 2012 took place in May 28 – June 4, 2012 in Rovaniemi and Inari, Finland, in Kiruna, Sweden and Tromsø, Norway. It consisted of 26 presentations and a few hundreds of questions and comments in seven sessions in the three destinations of the Academy.

The presentations and discussions were implemented by an international group of scholars, (a few) policy-makers, and PhD students - from Austria, Canada, Finland, France, Germany, Iceland, Mexico, Poland, Russia, Sweden and UK – who travelled through the route from Rovaniemi to Kiruna, further to Tromsø and Inari (and back to Rovaniemi), and had their presentations in the four sites. The main rule was that more than half of the 45 minutes per presentation should be allocated for an open discussion, as it also happened.

The main theme of the 2012 Calotte Academy was "Water – globally and in North Calotte". The theme was inspired by the fact that (fresh) water is the most important resource for human beings and non-human beings alike, and a precondition for life, and health and well-being. During the 2012 Academy '*Water'* was discussed on one hand from global and local context in the European North, and on the other hand, holistically from many angles and disciplinary approaches.

This is the Final Report of the Calotte Academy 2012 put together and finalized by Dr. Lassi Heininen, the Chair and M.A. Jussi Huotari, the Coordinator of the Calotte Academy Organizing Committee.

Detailed Program and Schedule

Sunday 27th of May in Rovaniemi

(Venue: Rovaniemi City Hall, Hallituskatu 7)

At 18:00 - 19:30 Welcome reception at the City Hall hosted by the City of Rovaniemi

- *Emilie Beaudon and Tomi Knuutila, University of Lapland*: "Svalbard Orchestra"

Monday 28th of May in Rovaniemi

(Venue: University of Lapland main campus)

At 9:00 Transportation from Guesthouse Borealis to the University of Lapland

At 09:30 - 12:00: Session 1 Lecture hall (LS 5): "Water globally and as a universal thing" (Moderator: Lassi Heininen)

Opening of the 2012 Calotte Academy, Lassi Heininen

Joyce Valdovinos, Université Sorbonne, Paris: "Building water governance: The role of French multinationals in the global water sector"

Abstract:

The management of urban water supply and sanitation services is a primary concern for local authorities. Although public operators manage 90% of water services around the world, the private sector has become an important actor in the provision of water services. While the traditional debate on the benefits and disadvantages of public versus private water services management has been focused on the analysis of two different perspectives – water as a common good and water as a merchandise –, new studies characterized by a more holistic perspective have recently emerged.

Within this context, this paper analyzes the involvement of the private sector in the provision of water services through a multi-scale networks perspective. My work addresses two main research questions: what implications does the emergence of private multinationals in water services management have for the construction of a model of water governance? How have water public-private partnerships (PPPs) evolved in the last twenty years?

In order to do this, I will study the history, development, and commercial strategies of the two largest private water companies worldwide, the French firms Veolia Water and Suez Environment. Over time, these firms have extended their activities to different "environmental services," including the water, energy, transportation, and waste sectors. Concerning their international presence, the group Veolia operates in 77 countries and has expanded across Eastern, Western and Northern Europe, China, as well as across all of North America, seeking to generate its revenues in countries reflecting relatively stable political, legal, and economic profiles. In the case of Suez Environnement, operating currently in 44 countries, the company has reconceived its implantation strategy after a number of failed experiences in Latin America (such as in Buenos Aires, Argentina, as well as in La Paz and El Alto, Bolivia) and is now looking to develop a new commercial strategy.

This paper finds that the internationalization of both companies is strongly linked to the evolution of how water PPPs have been portrayed by private operators and certain international financing institutions, such as the World Bank and the International Monetary Fund (IMF). Indeed, while in the 1980s and 1990s, the PPP model was seen as the "magic solution" to improve water services through the delegation of the provision of a public service from public authorities to a private operator, the promotion of a new revisited model of PPPs has emerged.

Gerald Zojer, University of Vienna: "De-democratization of the control over natural resources: The commercialization of the European water market"

Abstract:

Water has historically been seen as a private good, where the scarcity was rather due to technical difficulties than to its inaccessibility. Only since the second half of the 20th century, water became – due to its social (re-)construction - a natural resource as such. Scarcity of water is thus a modern phenomenon, based on a question of distribution, which incorporates a dependency of social balances of power. As can be seen on the example of the policy of introducing a competitive market within the European Union, the European water market is undergoing a shift from being part of public services towards its incorporation into global market forces, leading to a de-democratization.

Water is perceived as too important for a straight liberalization of the market (as it was seen with the electricity or communication infrastructure within the European Union). Therefore the European Parliament refused to completely open the market for water supply. Nevertheless, neoliberal approaches also reached the water market, but rater through implementing commercialization into state. The transformation was instead enforced through a number of institutional and discursive displacements. Through the adjudication of the European Court of Justice, market mechanisms were introduced in (former) communal services, either through privatization or by changing state or municipally governed structures into (still publicly owned) private corporations, following market logics.

Even though in many areas within the European Union the demand for water is decreasing (thus corroding its scarcity), the increasing implementation of market mechanisms is artificially maintaining a water scarcity in order to gain profit instead of providing services for the public. Through the implementation of market logics a de-democratization was achieved, leading to a loss of transparency (for the public as well as for decision makers) and to a loss of participation possibilities for the public.

Report on Session 1 in Rovaniemi 28th of May: "Water globally and as a universal thing" *By Joyce Valdovinos*

Main Findings

- 'Water' was analyzed from a broad perspective during the opening session of the Calotte Academy 2012. The first two presentations addressed the importance of distinguishing between water resources and water services as well as the implications of the perception of water as a public or a private good. Indeed, while water resources are often portrayed as common property goods, i.e. characterized by non-exclusivity and rival consumption, water services involve economic costs to cover investments in infrastructure technology and personnel, making water a good of limited access.

- This difference might be an influential aspect when deciding the management model for providing water services. Around 90% of water services worldwide are provided by local public authorities on the basis that the state is responsible for guaranteeing collective public access to water. The management of the other 10% of water

services is partially or totally delegated to other actors such as local communities or private companies through privatization or public-private partnerships (PPPs).

- The involvement of the private sector in the provision of water services is strongly linked to the evolution of how water PPPs have been portrayed by private operators and certain international organizations, such as the World Bank and the International Monetary Fund (IMF). Indeed, the two largest private water companies worldwide, the French firms Veolia Water and Suez Environnement, have extended their activities on a global scale not only in the water sector but also in the waste, energy and transportation sectors.

- The European market represents the most important geographic area for both companies. Although water services have traditionally been seen as services of general interest in most European countries, the Lisbon strategy of 2000 and the European Commission Green Paper of 2003 advocate liberalizing the European water market.

- Even though the European water market has not been liberalized, market mechanisms such as the cost recovery principle and the decline of municipal water budgets have had a gradual yet structural effect on state institutions involved in governing water services.

- The European Union context highlights the difficulty of imposing a unique model of water services management such as privatization or PPPs to a large number of local contexts. Although water PPPs can be beneficial at the local level, it is essential that public authorities retain the control of water services management and maintain a close supervision over private operators' activities. In addition, they must stay attentive to the performance of the contract, and the successful establishment of a transparent communication strategy with the population.

- Even though there is growing pressure on the private sector to develop a strategy of corporate social responsibility (CSR), private water firms seek to construct legitimacy as key urban players in the eyes of local authorities rather than into the public eye.

- Considering that the provision of public services has been traditionally seen as one of the main responsibilities of the state, the activities of these private companies entails important changes in the roles played by different actors. Furthermore, a multi-level governance approach becomes essential for understanding water governance through the identification of all the actors involved in water services management as well as their networks.

<u>Ideas for potential research questions and projects:</u>
1. Abstract submission to the Arctic Year Book 2013 "The Arctic in the eye of Transnational Corporations: research, natural resources exploitation and new environmental services";

2. Strengthening the thematic axe on Transnational Corporations (TNCs) with a more in-depth study on the activities of water companies and a cross-comparative analysis of the strategies deployed by emerging and "traditional" firms in the Arctic;

The idea is to explore the evolution of the interests of TNCs in the Arctic. Indeed, besides the "traditional" private firms that have been operating in the Arctic region – mainly in the exploitation of natural resources as well as in trade and long-distance transport of goods and resources – emerging private companies, which generally operate in other fields, have started perceiving the Arctic as a strategic region and a research laboratory. That fact that the two largest French water companies, Veolia and Suez, are funding research initiatives in the Arctic with other institutions is indicative of this trend.

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At 12:00 - 13:15 Lunch (on own)

At 13:15 - 15:30: Session 2 Lecture hall (LS 5): "Water as a factor of regional development"

(Moderator: Lassi Heininen)

Joël Plouffe, UQAM: "The French 'Maritime Destiny': the Arctic Ocean as an Emerging Strategic Zone for France"

Abstract:

France has nourished its proximity to the Arctic space and place through science and other related northern research intrests or polar experiences. Some consider that "for millennia, Arctica was a myth, an affair for poets, explorers, some phantoms, and some tale writers, nothing more" (M. Rocard, 2011, Stockholm). Moreover, historical figures and their narratives have shaped the « romantic » relationship(s) between France and the Arctic: one can argue that, until recently, this connection had remained apolitical and distant from any high level political audiences. This paper looks at France and the Arctic during the Sarkozy presidency. From a North American perspective, it tries to explore representation(s) of Arctic spaces and places in today's French foreign policy making. It attempts to argue that an emerging discourse based on an enlarged interest with the maritime space of the Arctic zone offers new dimensions to "Grandeur" thinking in contemporary French foreign policy making. This seems to correspond to the broader maritime/coastal power identity and status of France.

Timo Koivurova, Arctic Centre: "Why was there a need to amend the frontier river treaty between Finland and Sweden?"

Abstract:

This presentation will look into the driving forces that had the effect of abolishing the old Frontier Rivers Treaty between Finland and Sweden, which had been considered a pioneering river convention in many respects. The presentation will analyze some of these drivers, and analyze what type of river regime we now have covering the border river basin between Finland and Sweden. It is also important to ponder what was lost/gained in the process.

Session highlights: France as a Maritime power

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At 15:45 - 16:30 Joint Brainstorming meeting of the TN on Geopolitics and Security and Rovaniemi "Think tank" project, LS 5

At 16:40 Departure from the University of Lapland Campus to Kemijoki Oy (by bus)

At 17:00 - 20:00 Session 3 (and dinner) at Kemijoki Oy: "Hydropower and regulation power" (Hostess: Leena Roiko, Kemijoki Oy)

Timo Torvinen, Kemijoki Oy, "The Kemijoki Group in Brief – Importance of hydro-power, particularly regulation power"

Abstract:

Kemijoki Oy is the most important producer of hydropower and related services in Finland. The Company owns 20 hydropower plants, 16 of which are located in the River Kemijoki system, two on River Lieksanjoki and two on River Kymijoki. In addition, the Company regulates the Lokka and Porttipahta reservoirs, Lake Kemijärvi and Lake Olkkajärvi. The electricity produced at the power plants is sold at cost price to the Company's hydropower shareholders.

Kemijoki Oy is the parent company of the Group. The principal subsidiaries are engaged in electricity grid operations and in the sales of services and products related to hydropower technology.

The hydropower plants of Kemijoki Oy produced 4,365 GWh of electricity: the power plants in the River Kemijoki system, on River Kymijoki and on River Lieksanjoki produced a total of 4,051, 197 and 117 GWh, respectively. The turnover of the Kemijoki Group was EUR 41.1 million, and the balance sheet total was EUR 459.5 million. The total share capital of Kemijoki Oy was EUR 41.3 million. The Group employed an average of 261 persons during the year 2011.

Hanna Lempinen, University of Lapland: "Green-washing the invisible? Verbal and visual argumentation of hydro power in renewable energy advertising"

Abstract:

Since 1998, Finnish consumers have been able to choose their own electricity provider. This has led to increasing competition between electricity companies. Pressure to compete over clients has manifested itself both in the form of "product development" – e.g. a variety of green energy alternatives ranging from 100 % wind to 100 hydro % - as well as intensified advertising and campaigning.

Growing environmental and climate awareness as well as policy commitments on state and EU level have encouraged and increased the demand of renewable energy. In the Finnish context, hydro power is the most important renewable energy source – it constitutes a nearly 60 percent share of Finnish renewable energy production. Despite the importance as an energy source as well as in terms of low CO2 energy production, (especially visual) representations of hydro power production are rare in the advertisement materials of electricity providers.

This paper examines the role and representations of hydro power in the advertising and communication materials of electricity providers. How is the most important renewable energy source, hydro power, presented in renewable energy advertising ? What are the visual and verbal discourses and strategies of advertising hydro power and how do the visual and verbal contradict and counteract? What are the verbal symbols and visual icons of renewable energy (production) in energy advertising and communication?

The conclusions discuss the functions and meanings of the relative invisibility of hydro power in the advertisement materials as well as the strategy of replacing direct visuals of hydro power production by images of untouched water nature.

Report on Session 3 at Kemijoki Oy 28th of May: "Hydropower and regulation power" *By Hanna Lempinen*

Calotte Academy 2012 also discussed themes related to hydropower, which can interpreted to be controversial, from several viewpoints. The position of hydropower can be best described as controversial: On one hand, it provides a domestic and emission-free mode of electricity generation especially beneficial in terms of regulation power and flood control. On the other hand, growing environmental awareness and local hydropower-related conflicts have drawn attention to the environmental implications of hydropower and dam construction both in the Nordic countries and in the Global South. Hydropower construction and related damming have upstream and downstream impacts on ecosystems, communities and livelihoods.

In the Nordic countries, dams used to be seen as symbols of prosperity. However, due to environmental conflicts related to hydropower construction, they have lost their symbolic status and have become relatively invisible also in renewable energy advertising. Changes in attitudes towards hydropower are also reflected in the Finnish legislation; without changes in legislation, e.g. the protected status of Ounasjoki and Torne rivers as well as Natura2000 site in Kemihaara, significant additional hydropower construction is not possible. Situation can be seen as similar in other Northern countries with significant history in hydropower development; as a result of this, hydropower industries have turned their attention to the Global South, where dams are actively being constructed in connection to development aid programmes and contracts.

Ideas for potential research questions and projects:
Hydropower-related policies and debates provide a fruitful platform for future research. Potential themes and research topics include e.g. comparisons between national hydropower-related legislation, policies and practices as well as comparative case studies of hydropower related conflicts in different local and national contexts. Hydropower and/or renewable energy in the context of energy advertising represent another under-investigated field of research. However, most fruitful insights could be provided by research focusing on the activities of Northern hydropower industry in the Global South as well as the interconnections of (hydropower) industry and development aid policies.

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At 20:00 Departure to Kiruna, Sweden

Tuesday 29th of May in Kiruna

(Venue: Malmfältens Folkhögskola Campingvägen 3, Kiruna)

At 09:30 – 10:00: Welcoming words and Summary of Rovaniemi seminar

- *Annika E. Nilsson*, *Stockholm Environmental Institute*, *SEI*: Assessing Arctic Futures. Voices, Resources and Governance

At 10:00 - 12:00: Session 4: Workshop with PhD presentations (Moderator: Lassi Heininen)

Audur H. Ingolfsdottir, University of Lapland & University of Iceland: Environmental Changes and Security. What Motivates Policy Shapers?

Abstract:

Climate change is causing various changes in the Arctic region, including changes in the water cycle. Those changes can impact the daily life of people living in the region in various ways. The presentation will draw on material from a qualitative study conducted in Iceland, where the values and beliefs of individuals shaping climate policy will be examined. Special emphasis will be placed on exploring the links between environmental changes caused by climate change and human security. What motivates those that try to influence climate policy at the local, national and international level? Is climate change perceived as a threat or are other issues of bigger concern?

Michael Laiho, University of Lapland: "Telling it how it is: Arctic sea ice in the EU's climate discourse – science and industry in policy making"

Abstract:

This paper is chiefly inspired by growing concerns from scientists all over the world who claim that the ice in the Arctic Ocean is rapidly diminishing, beyond the point of repair. While the EU acts as a strong global actor in pushing international climate change policy to produce results in the long-run, climate scientists are presenting new findings which suggest that the Arctic sea ice could potentially disappear in a matter of only a few years. As well as exploring the political significance of the scientific narrative, my aim is also to look at the impact of climate change from an industrial perspective in order to show a possible conflict of interests between the two seemingly opposing groups. My personal research in EU-Arctic policy making is complimented by the Calotte Academy's 2012 theme titled, 'Water – globally and locally in North Calotte,' as my Ph.D. thesis sets out to identify a range of actors in the EU's climate change discourse. By assessing the conservation of the Arctic sea ice from the perspective of two conflicting interest groups one has the potential to gain insight into policy making dynamics when looking at the impact of knowledge (scientific and economic). The hypothesis presented in this paper is that the EU's climate change strategy aims to represent the concerns of scientific and industrial groups coherently. On the other hand, it is my argument that by aiming at a 'middle ground,' EU policy makers fall short of addressing the problem of climate change properly.

Gustav Petursson, University of Lapland: "An Arctic state within a security community: the relationship of Iceland and NATO after 2006"

Abstract:

In the autumn of 2006 the U.S. closed its naval base in Keflavik and withdrew all of its military personnel from Iceland. Subsequently, Iceland assumed responsibility for various NATO tasks previously carried out by

the U.S. in Iceland; such as operating the Icelandic Air Defence System; serving as a host and user nation for NATO facilities in Iceland as well as running the BICES information system.

The purpose of this study is to analyse how Iceland responded to this changed security environment. Not only was the country without any military presence for the first time since 1951; but these new tasks placed a burden of responsibility that had previously not been associated with NATO membership. The theoretical premise assumes that Iceland is a unified rational actor in search of military security; low transaction costs as well as being influenced by a shared identity with other NATO members. On this view, the actions of Iceland after the U.S. departure can be understood as means to an end of meeting aforesaid assumed premises.

At 12:00 – 13:00 Lunch

At 13:00 – 13.45 LKAB and the city transformation. Folkets Hus

At 14:30 - 18:00: Session 5: "Water and decision making" (Moderator: Annika E. Nilsson)

Andreas von Uexkull, SAO for Sweden: "Swedish chairmanship of the Arctic Council: Sweden and the North Calotte" (via internet)

Georgia Destouni, "Changing water in the Arctic"

Abstract:

Water is the most important resource for human beings and non-human beings alike, and a precondition for life, and health and well-being. It is also inspired by how water is in a changing state from solid (ice or snow) to liquid (water) which exposes a range of issues for Arctic futures, for resilience, adaptation, transformation – in all, human and environmental security. Furthermore, although water is a renewable natural resource, there is a scarcity of fresh water in many, if not even most, parts of the globe due to population pressures, environmental degradation and climate change(s). Finally, as a consequence of all this, water is strategic resource causing competition and conflicts, and as seen as an attractive product for commercialization by private companies.

- *Birgitta Evengård,* "Climate change and water security"
- *Charlotta Jannok,* "Water and local decision making in Kiruna municipality"
- Panel discussion about water and decision making in a changing Arctic, including remarks from LKAB Environmental Manager Anders Lundqvist. Moderated by *Annika E. Nilsson*

Report on Session 5 in Kiruna 29th of May: "Water and decision-making"
By Nikolas Sellheim, Andreas Raspotnik, Gerald Zojer

There is not only one Arctic. There is not only one future. Arctic Futures is an assessment of different scenarios for different regions in the North – commonly referred to as the 'Arctic', more precisely however it should be referred to as the 'Arctics'. It is moreover important to note that a division of past, present and future is not the underlying paradigm of 'Arctic futures', but that the futures start in the present which has begun in the past. It is therefore in the eye of the beholder to draw conclusions on a future of a certain Arctic.

This becomes apparent in the impact of the iron ore mine in Kiruna. For the city and the mining companies, the mine is the lifeline – contributing to a "sustainable" way of living in the area. In order to ensure this, even large parts of the city are moved due to ongoing erosion of the town's ground, caused by the mine, which literally swallows the land. According to representatives of the mining companies, the ecosystem is not adversely affected by the mining activities – even fishing in wastewater lakes appears to be possible. The same scenario is perceived differently by the municipality's environmental advisor who sees the mine as a threat to water security for Kiruna, an additional factor to the several polluted lakes in the region. The expansion of the mine and the moving of the city aggravate the problem of insecure water supply for Kiruna. Currently the municipality of Kiruna significantly lacks an encompassing system of surface monitoring – only 2% of the municipality's water area is sufficiently monitored. In general the question of clean drinking water covers the entire (European) Arctic and could turn into an essential problem in the near future.

Ideas for potential research questions and projects:
While ultimately ecosystem services are in the centre of any future assessment, it is the resilience of ecosystems, which should become the core of research on the future of the Arctics. Inferences can be drawn from the ability to withstand shock of an Arctic ecosystem. A tipping point is thus the crucial means to measure resilience. This concept should be even further extended to social tipping points and the resilience of livelihoods, which in the Arctic context has not been extensively done.

This is particularly interesting in the context of marine mammal utilization: when was the system of acceptance of marine mammal extraction shifted to a societal refusal of such? And can it be turned back? And if not, is there a means to create a new normative and therefore stable societal structure in regards to the public perception of marine mammal hunting? How resilient are societies and cultures in an Arctic that is based on an activity not accepted by a global public? In order to answer these questions, it is important to identify suitable parameters and to develop new models, which can help to analyze the relationships of influential factors and their potential impacts. Actor Network Theory can be of elementary importance in this context to make power relations, lobbying and political affiliations visible and to understand the complex paradigms underlying *inter alia* the shaping of policy and public morale.

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Wednesday 30th of May in Kiruna

(Venue: Malmfältens Folkhögskola Campingvägen 3, Kiruna)

8:30 - 11:30: Session 6: "Understanding water resources in a rapidly changing Arctic"

(Moderator: Annika E. Nilsson)

Roundtable discussion on the strengths and weaknesses of different analytical perspectives:

- Actor-Network Theory: Dag Avango
- Resilience and tipping points: Annika E. Nilsson
- Modelling: Georgia Destouni
- Health of humans and animals in a changed landscape: Birgitta Evengård

Discussion focusing on the following questions:

- What are the key questions you ask?
- How can your perspective guide decision making?
- What are the particular strengths?
- What are specific weaknesses and blind spot?
- Which analytical perspective can be combined? How?
- Conclusion and next steps

Session Highlights: Lack of Monitoring, multiple actors and voices in the region, need for new 'stages' where actors can meet

Report on Session 6 in Kiruna, May 30th 2012: "Understanding water resources in a rapidly changing Arctic" *By Nikolas Sellheim, Andreas Raspotnik, Gerald Zojer*

A word to describe how to approach understanding the Arctic:

- prioritization (as change is inevitable); scenario analysis (as basis for prioritization); reality checks – measuring, monitoring--- understand and quantify change
- surveillance of change, indicators
- how to apply, regional application
- complexity, interplay, supranational, local, regional
- careful of given assumptions
- Local - global interactions
- Commonality. Common vs. different values
- Responsibility. Local global regional
- Governance (structure able to deal with both local and global problems)
- interlinkages between various systems. Political, natural, legal etc
- Participation in decision making processes, development of decisonmaking mechanisms
- Interests. Local and national, and individuals, companies. Land use.
- Interplay between multiple actors
- Communication of ideas, diffusion
- Governance, multidisciplinarity
- Human mindsets. Understand the processes that underlie human interactions
- Transdisciplinarity. Constructs, human made boxes
- Implementation of worked out ideas
- Explain historical change – why does change occur
- Need for new stage for transdisciplinarity: Think-talk-study-rethink

Dag Avango: Actor Network Theory (ANT): The role of agency in Arctic Futures

- How actors constructs visions of Arctic futures
- Who has the right to construct the future and why

Decrease sea ice → increased access to natural resources. Dag questions such deterministic narratives, e.g. climate determinism.

Resources are social constructions

Arctic Future themes: Voices, resources, governance

- Voice – defines, articulate
- Resources – constructs, defined
- Governance – structures, contexts

Example: Voices --- Actors:

- a place can be articulated as: transport route, tourist destination, wildlife reserve, source of coal
- By building actor networks made their voices heard (within a specific governance structure)

ANT

- how actors build networks
- both a theory and a method

Potential limits of ANT:

- ANT can miss some larger phenomena, contexts, trends.
- ANT should not stand on its own.
- Hard core ANTs: No reality outside what network builders construct. Dag disagrees with this point of view. Other societal conditions matter as well.

Questions:
Lassi: What about interests? Aren't they relevant here, too? Dag: Actors represent interests.
Birgitta: What about lobbyists? Dag: they are part of Actor Networks.
Joyce: How do you define networks? How do you measure the influence of actors?
Dag on ANT: It depends on your research question, what do you want to know. He uses it to explain how projects come into reality. Follow the network builders through the process. Who they enroll, and with what arguments.
Delimiting network: see from following network builders, what they recruit (actors and actants) into the networks. It is a qualitative approach (hard to measure influence of actors). Look at final outcomes.

Annika Nilsson: Resilience and tipping points
Resilience thinking and tipping points: Withstanding shocks in social and ecological systems.

Resilience: Bringing this kind of thinking in, dealing with potential shocks.

Tipping points (in social and ecological systems)

Regime shifts in Arctic governance: from Cold War to region building (1990s). What now?

Agency and structure: Process of connecting networks. Actors enrolling other networks, e.g. Arctic network, European network.

Georgia Destouni: Modeling
(numerical) Modeling (+ monitoring) is a tool to give best possible picture of what reality really is regardless of various social constructions

Modeling descriptions not a complete picture of reality but sufficient to put limits on possible social constructs by actors

Modeling provides:

- historic development of change
- data to project what future may look like
- scenario projections (different than predictions)
- predictions: weather forecasts a few days ahead
- projections: e.g. IPCC scenarios. Constrained by physical reality (physical, chemical, biological, etc)

Governance institutions must keep up monitoring as a societal activity, long term. Make data accessible to everyone.

Example of Al Gore associating Aral Sea tragedy with climate change (not true). Dangerous - we need realistic explanations!

European Union Water Resources Directive. Pristine state of water resources a myth: does not/can not exist. Misleading goal of environmental governance, risks doing nothing. It is about prioritization, choices – assessing which waters can be brought back to good condition.

Birgitta Evengård: Health of humans and animals in a changed landscape
WHO 2008: connecting climate change and health issues. Recent development!

Surveillance: National registries. European CDC rely largely on national data on infectious diseases. Reports based on these registries, quality of these is questionable.

What indicators should be surveyed? Today's are crude e.g. maternal and child mortality. Changes will occur locally and regionally – if you want to catch them, a new reporting system is necessary.

Arab spring and malnutrition. Previous examples of e.g. Chinese emperors who lost power in short periods. Skyrocketing wheat prices, fire in Russia. Fire result of climate change? Governance can be drastically affected by changes in food and water security.
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Annika: provision of basic needs. Nexus: food security – political upheaval – market prices – energy market (biofuels) – ruined harvests (due to climate change?)

Normative aspect: human rights (to water, food). Cultural preferences, consumption patterns and food security.

Dag returning to ANT: 'environment' exists beyond definition of certain actors. Natural scientists are the most credible spokesmen. Thus ANT not strictly social constructivist – environment can be a powerful actor. What is socially constructed is that certain aspects of the environment are a *resource*.

There are potentially 'good' and 'bad' guys who are doing the defining, and there are clashes of interests. ANT analyzes how they build their argumentation, translate, realize their projects and future visions.

Annika: can ANT be extended to deal with normative issues?

- Dissonance between what scientists say and what societal goals are?
- Can't exclude power relations and maintaining power of current elite.

Dag: how can we be normative? Arctic Futures and voices: all voices should be heard – that is implicit in the project. Future visions that are bad are those that solely represent the future vision of single or few actors.

Notion of inevitability e.g. melting sea ice will lead to resource exploitation is based on a deterministic thinking, promoted by certain actors. There are other actors out that can or do formulate other futures. ANT analyzes how/why certain actors construct dominant discourses.

Michael: 'Alternaity': We have a choice. Transformation.

Lassi: In politics nothing is determined – there is always an alternative.

Time is a problem: Need for scenario analysis to make explicit range of scenarios to support long-term decision making.

Adaptation – buzzword in Arctic Council these days.

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At 12:00 - 13:30 Lunch

At 13:30 - 16:00 Brainstorming session of TN on Geopolitics and Security, and joint projects

Session highlights: Openness in the planning stage. To link research projects with platforms of open discussion, and other way around.

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At 16:00- Dinner and Free time (on own)

Thursday 31st of May

08:00 - 09:30 Travel from Kiruna to Abisko

09:30 - 13:00 Visit to Abisko Scientific Research Station (Host: Christer Jonasson) and lunch

13:00 - 17:30 Travel from Abisko to Tromsø

Report on visit to Abisko Research station in Abisko, 31st of May *By Adam Stepien*

Thanks to joint efforts of Calotte Academy organizers and Annika Nilson's group, we had a possibility to visit research station in Abisko, in Swedish Lapland. The tour included the station itself as well as Stordalen mire research site. From the point of view of Calotte Academy 2012 theme, the most relevant information were those on the changes in mire landscapes and fluctuations in GHG emissions from mires, as the climate is warming and permafrost thawing. Feedback effects, minuscule in the case of Stordalen, may prove crucial when the processes observed at the banks of Tornetrask, develop on the global scale of sub-Arctic and Arctic.

Meeting the scientists working in the station brought about issues of social (and community) responsibility of science, the complex interrelation between science and policy-making, as well as challenges of science communication. Scientists from Abisko not only aim for greater funding for research, but attempt to influence the decision-makers in Stockholm and internationally. On the local scale, education programmes for school pupils are in place and young scientists are prepared to communicate their research and results to the public, in order to facilitate social impacts of their work. Therefore, the visit to the station corresponded very well with the discussion with municipality and LKAB staff the day before.

At 18:30 – 19:30 Session IPY GAPS Reaching Out (joining IPY GAPS conference in Tromsø) (Host Gunhild Hoogenson)

Building upon the research front-line:

- Current initiatives by GAPS and related project participants (research proposals, interest in collaboration, ways forward)
- *Annika E. Nilsson, SEI*: "Understanding water resources in a rapidly changing Arctic"
- *Lassi Heininen University of Lapland,* "Calotte Academy "

Friday 1st of June in Tromsø

(Venue: Universtiy of Tromsø, Main Campus)

9:00 – 11:00: Session 7: IPY GAPS and Calotte Academy – With the High North Academy

Welcome and introductory words by Gunhild Hoogensen-Gjörv, Uni. Tromsø

Lassi Heininen, University of Lapland: "Strategic importance of water in Arctic geopolitics and Northern security"

Abstract:

Water is not only the most important resource for human as well as non-human beings, and a precondition of life, it is also unique being in a changing state from solid to liquid. This is especially the case in the Arctic, where water is annually changing from snow / ice to water, and again from water to ice. Taking into consideration this water has played, and plays, an important role in Arctic geopolitics and Northern security: In the 16th century England and Holland were not able to sail through the Northeast Passage due to sea ice, but stayed for whaling and fishing in rich Northern seas. Since the first mapping by the 'white man' the most used external image of the Arctic is white indicating 'snow' and 'ice'. In the Cold War the technology models of (classical) geopolitics imagined the 'militarization' of the Arctic (Ocean), and soon the strategic nuclear submarine under sea ice became the metaphor of the revenge strike by nuclear weapons. In the post-Cold War period 'thinning sea ice' and 'melting glaciers' became the symbols of climate change by threatening the environment and even state sovereignty. At the 21st century, on the one hand, a new ocean has been discovered due to, and through, the geographical/geopolitical imagination that sees (would like to see) the Arctic Ocean without the multi-year sea ice. And on the other hand, fresh water is becoming a / the strategic resource of the entire North due to its huge (fresh) water reserves comparing a scarcity of that in many other areas. Particularly so, because off-shore exploitation is too expensive and risky, and energy security (in the global scale) has become too much 'politized', and even dangerous for stability of the international community.

Jussi Huotari, University of Lapland: "The Arctic of transnationals"

Abstract:

Economic activities in the Arctic play an increasingly important role in the world economy, as this economy is based large-scale resources exploitation (i.e. oil, gas and mineral resources), as well as on trade and thus long-distance transport of resources and goods (e.g. shipping). In other words, the Arctic has become part and parcel of economic globalization. And such economic globalization is typically driven by transnational corporations (TNCs).

Many of these TNCs' operating in the Arctic region are actually government-backed or even government owned, as the fields they are operating are of strategic importance to governments and nation-states. Actually, the biggest oil and gas firms operating in the Arctic region are State-Owned Enterprises (SOEs), such as Gazprom and Rosneft of Russia and Statoil of Norway. This presentation will look at the TNCs and SOEs operating in oil and gas sectories in the European part of the Russian arctic.

*Annika E. Nilsson, SEI: "*Assessing Arctic Futures: A conceptual framework for understanding the role of voices, resources and governance"

Abstract:

The Arctic sea ice minimum of 2007 has been followed by speculations about new opportunities for resource prospecting, new shipping passage ways, and the extinction of the very symbol of Arctic wildlife – the polar bear. Although climate change is often seen as the hegemonic driver of change in the Arctic, commercial and political interests from a range of actors are equally important. Moreover, climate change and global resource pressures are factors shaping human agency rather than determinants that eliminate it. This presentation will discuss the need to develop new tools for understanding and assessing Arctic futures, including the role of the growing number of (frequently contradictory) voices that influence on the production of Arctic futures. It will present the Mistra-funded research project – Assessing Arctic Futures: Voices, Resources and Governance – which aims to understand how claims of different stakeholders in the region have influenced the Arctic in the past and how resources are 'created' in interplay between voices and governance regimes. The conceptual framework emphasizes the constructed nature of resources, as entities that possess value in relation to social, political, and economic networks. It draws inspiration from both actor-network theory and regime theory in order to illuminate power relations and the shifting status of voices in the Arctic. We also draw inspiration from resilience theory, especially as related to the behavior of complex social-ecological systems, in order to better understand the dynamics of rapid changes and regime shifts in the Arctic political landscape. The presentation is based on collaborative discussions in the project as a whole, including inspiration and input from Dan Avango, Peder Roberts, Sverker Sörlin, Nina Wormbs and Julia Lajus.

Report on Session 7 in Tromsø, 1st of June: "IPY GAPS and Calotte Academy with the High North Academy" *By Margrét Cela and Joël Plouffe*

Discussion Summary:

The 7th session started with a discussion on various representations of Arctic water(s) as a geopolitical discourse. Lassi Heininen demonstrated how water has always been linked to narratives of Arctic Geopolitics. For years sea ice has played a major strategic role for security and also an obstacle for navigation in the North. Today, these representations are changing while the unfrozen Arctic presents new conditions that are still part of a securitization process. The discourse today has new dimensions where Arctic water can be looked as something to protect from industrial activities, but is also seen as part of a big picture of "economic opportunities" in the North (navigation, fishing, shipping, tourism). Nevertheless, Heininen pointed out that while major changes are occurring in the North, as a consequence of climate change, water is not mentioned in the Arctic strategies / policies of most the Arctic states, since only Finland, Norway and Sweden explicitly discuss on

(fresh) water security. This is considered as a major gap. This presentation provided a longer discussion on the role of the state in the protection of Arctic waters, the meaning of security when dealing with melting ice and new maritime conditions, and how industry and the state perceive the evolving Arctic maritime space in line with their own interests.

The second and third presentations focused mostly on how various actors project visions of what the Arctic is becoming and how these constructed images somewhat define northern narratives (Arctic change and potential). First, Jussi Huotari explained how transnational corporations (TNC) are framing the northern water spaces as some kind of future Eldorado for extractive activities, meaning that discovered natural resources could or will soon be exploited for world markets/demand. Although this framing sounds appealing, Huotari explained how extracting oil and gas from Arctic waters is a very difficult, expensive and costly endeavor. Questions and concerns on the responsibilities of the TNC's in these far away zones were raised during the discussion period. Participants asked how these powerful and influential TNC's relate with local actors and issues, how they interact with the state, and if and how they exercise influence in circumpolar institutions, like the Arctic Council for example. Last, Annika E. Nilsson wrapped up the morning session with a presentation on Arctic futures and international relations theory. She asserted that a huge gap existed in IR theory to explain Arctic phenomena and issues, and that new conceptual frameworks and theoretical approaches like the Actor Network Theory could serve as new tools to analyze the Arctic. This type of approach focuses on how actors and network operate/interact to construct visions, and how they create or deconstruct governance structures. This paper was presented as a Mistra-funded research project – Assessing Arctic Futures: Voices, Resources and Governance, that seeks to understand the rapid changes and regime shifts in the Arctic political landscape.

<u>Highlights/ideas for potential research questions (brought by the discussions):</u>

- Water has always been part of the Arctic security narrative, but in different ways and forms.
- Natural resources – like water for example – are constructed for overlapping reasons in historical contexts.
- Water (security) is not included (as a reference) in the strategies of most of the Arctic states.
- Neither it has been a big issue on the agenda of the Arctic Council
- Melting sea ice is often framed as melting boundaries, therefore suggesting potential tensions.
- The role of the state is growing in the Arctic (transformation of identities, of responsibilities, or capabilities). The question debated here is what exactly should be the role as a legitimate and effective actor.
- Water is an obstacle and an opportunity.
- TNC's operate without much public knowledge on their activities, decisions, and goals.
- Arctic futures or visions are constructed through a process of actors, structures and motives.
- What is self-interest is not evident: it is created in a context of constraints.
- Arctic cooperation secures governance infrastructure.
- State, TNC's and SOE have always operated in Arctic waters: this is not new.

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At 11:00 – 12:00: Lunch

12:00 – 14:30: Session 8: With the Fram Centre (Moderator: Joël Plouffe)

Sèbastien Duyck, Arctic Centre: "Managing fisheries in a changing climate"

Abstract:

Considering the transboundary and migratory nature of many fish stocks, the importance of regional cooperation for fisheries management is particularly acute. Many regional fisheries management organizations (RFMOs) have hence been created in order to facilitate international management of fisheries, including several in the Arctic. Climate change however profoundly impacts marine living resources, in particular in the Arctic where the physical changes resulting from anthropogenic climate change occur at an increase pace.

This paper will consider whether the current Arctic RFMOs operate adequately in the context of significant changes in the resources that they manage. Firstly, the impact of climate change on the various fisheries managed at the regional level will be presented, as well as the challenges that these changes might lead for the current regimes of fisheries management. Secondly, the paper will introduce the operation mode and procedures of each of the RFMOs concerned as well as discuss the degree of flexibility and responsiveness that these processes can deliver in order to accommodate changing circumstances.

The paper will conclude on the assessment that the current regional fisheries management organizations existing in the Arctic would need some further development in order to fulfilling their tasks in the most effective manner and in a context of evolving resources. Concrete proposals will also be offered on how such enhanced regional management could be shaped.

Piotr Graczyk, Uni. Warsaw: "The Arctic Council – an emerging actor in Arctic shipping regulation?"

Abstract:

A number of prospects and concerns emerge as the Arctic Ocean ice cap recedes. One of the most significant issues, along with access to potential natural resources, fisheries management or environmental threats, is increasing availability of Arctic sea routes for navigation during the summer months. It has generated an interest in development of shipping, raising a question of possibly insufficient regulation and infrastructure of navigation in such special conditions. By carrying out and releasing the Arctic Marine Shipping Assessment (AMSA), and particularly, by developing and signing the first legally-binding agreement on search and rescue in the Arctic (one of the AMSA Report recommendations), the Arctic Council (AC) has assumed a more ambitious role in Arctic shipping governance than hitherto played.

The implementation of AMSA recommendations is carried out at national, Arctic regional and international levels. Within the AC the entire process is monitored by the PAME working group (WG), which is also responsible for follow up upon some of recommendations. Others are consigned to EPPR and CAFF WGs and domestic actions. Arctic states declare their commitment to the AC's assessments in their official statements; however an important practical indicator of their factual relation to the Council's recommendations is their performance in follow-up activities. PAME's reports on implementation are based on information delivered by the governments. Although a number of actions have been carried out or are on their way here, they may not provide the full picture of implementation process.

This presentation reviews individual views and actions of the Arctic states on the AC's recommendations pertaining to shipping in the Northern waters. An overall goal is to investigate the actual ability of the AC to influence actions of the Member states, which seems to be particularly successful in the case of AMSA recommendations.

Igor Shevchuk, Karelian Research Centre of the Russian Academy of Sciences: "AQUAREL concept: Cross-sectoral approach in innovative utilization of aquatic bioresources"

Abstract:

How often do we raise the issues of the non-governmental sector and, say, innovative solutions in the energy sector within one discussion? Is it appropriate to line up a coal terminal and an NGO? Is it possible to combine heavy load on the water ecosystem with reservoir treatment measures? In general, can one combine the things that often appear incompatible?

There is no universal and definitive answer to those questions, but one can try to pick solutions that help identify the strengths of various processes and gain "added value" through their interactions.

Analysing the experience of interactions among sectors, the author has come to the opinion that application of alternative approaches, especially in "sensitive" spheres such as water protection, intensive utilization of natural resources, nature conservation in areas with heavy industrial pollution, etc., can resolve many pressing problems without compromising the interests of counterparts in the conflict. On the contrary, if properly applied, those techniques can generate a positive multiplier effect.

A practical example of such an interactions design is the idea underlying the AQUAREL project. In this project, water polluters, such as the coal terminal and trout farms, have joined together with scientific and consulting organizations in a consortium to work out unique technologies that would not only recycle the fish industry wastes and process the specially cultivated algae into biofuel and energy, but simultaneously also treat the waterbodies exposed to the heavy environmental load.

Apart from being a practical output of inter-sectoral interactions, this project has originated from the more general idea of linking together transport development, logistics, and energy and nature conservation issues to form an integrated mechanism promoting sustainable development of northern regions. Cooperation within the Northern Dimension Institute and its thematic networks could be a propitious environment for implementation of such initiatives.

It is good to realize that the ideas of combining the efforts of various sectors more and more often come up in the minds of many. One mustn't miss the moment, and undertake to generate the conditions favorable for new, interesting and innovative projects at the contact point of disciplines, opinions and approaches, as well as cultures.

Astrid E.J. Ogilvie, *Senior Research Fellow*, *Leader CICERO Tromsø*:

"Using Water Wisely: The Thousand-Year Settlement Around Lake Mývatn, Iceland"

Abstract:

This presentation will focus on the Mývatn district in northeastern Iceland. The area takes its name from the lake known as *Mývatn* (literally "midge water"). This is a large shallow lake of about 37 sq. km. with about 50 islands and islets in the lake. The surrounding landscape is shaped by volcanism, and lake Mývatn itself was created c. 2000 years ago by a volcanic eruption that poured large volumes of lava over the district. The lake and its outflowing river, the Laxá, are renowned as a breeding and moulting ground for a large number of species of duck and other water birds. Lake Mývatn and the Laxá river were protected by law in 1974, and in 1978 placed on the RAMSAR list of wetlands of international importance (http://www.ramsar.org/). The area seems to have been one of the first to be settled in Iceland's *landnám* or early settlement period. This began around AD 871. Most of the male settlers came from Norway, but about 80% of the original female settlers were from the northern British Isles. They came to a pristine landscape, uninfluenced by humans. The settlers brought from their homelands a subsistence economy based on livestock farming with supplemental coastal fishing. The Mývatn area is unique in that, while domestic stock always provided the core of subsistence, significant supplements were provided by fresh-water fish (Arctic char and trout) as well as by the import from the coast of preserved marine fish, sea birds (alcids) and some sea mammals (seal and porpoise). The changing amounts of fresh-water fish, found in archaeological deposits at different sites appear to reflect changes in water quality probably correlated with changes in groundcover and erosion levels. In addition to

this, while large quantities of duck-egg shell are regularly recovered from the archaeological sites, bird bone is very rare. This mirrors the present local management strategy of a cull of eggs, but a ban on hunting adult ducks. Research suggests that this sustainable collection strategy (yielding up to 10,000 eggs per year) has been in place for the past thousand years - an impressive record of locally-managed sustainable resource use. A case, in effect, of using a water-related source wisely.

Report on Session 8 in Tromsø, 1st of June: "IPY GAPS and Calotte Academy with the High North Academy" *By Margrét Cela and Joël Plouffe*

Discussion Summary:

The 8th session provided a somewhat different perspective of the water issues then the previous sessions of the Calotte Academy. The focus of the first two presentations by Piotr Graczyk and Sébastien Duyck was more geopolitical dealing with global matters relating to the management of seas, on the one hand regarding shipping and on the other hand regarding fisheries management. The presentations introduced forthcoming challenges and opportunities and how the management system as we know it is somewhat limited when it comes to dealing with the management. This raised questions of where we are going and whether we can expect a larger role by the five Arctic coastal states for an example regarding fisheries management.

The third presentation of the session, by Dr. Astrid E.J. Ogilvie had a more local approach to it, using lake Mývatn as an example of a quite unique and thoroughly researched area, under many different disciplines. Along somewhat the same line, although taking a broader perspective Igor Shevchuk discussed the importance of cooperation between different sectors when it comes to sensitive spheres such as water protection. This further underlined what had previously become evident in the Kiruna sessions, the importance of getting people from different sectors together to discuss their common concerns. All in all, this session identified common problems, areas that need further investigation and geopolitical issues that need to be dealt with both on a local and global level.

Highlights/ideas for potential research questions (brought by the discussions):

- Polar shipping regime is not static: in constant progress, nested in global arrangements.
- Global arrangements in the Arctic: 8 conventions + UNCLOS.
- Weakest part of the polar shipping regime is its voluntary dimension.
- States behave differently in different institutions and forums.
- There are four fishing regimes in the Arctic (Iceland-Greenland; Newfoundland; Barents; Bering), six other RFMO's already cover the Arctic.
- Not sure who is responsible for assessing Arctic fisheries, to assemble information with database.

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Dinner and free time (on own)

Saturday 2nd of June

10:00 – 20:00 Travelling from Tromsø to Inari

20:00 - Sauna and picnic in Inari

Sunday 3rd of June in Inari

At 14:00 - 18:00 Visit at Sámi Museum SIIDA

16:00 – 17:00 *Veikko Guttorm, Member of Finnish Sami Parliament*

Report on Meeting with Veikko Guttorm *By Adam Stepien*

The Calotte Academy participants met in Siida museum in Inari with Veikko Guttorm, a member of the Finnish Sami Parliament and a fisherman from Tana river. He discussed the importance of water for the Sami culture as well as the most topical Sami issues in the Finnish part of Sápmi – mining, language education and new economic developments, including tourism. Especially the question of Sami language education in the areas outside of the Sami Homeland area - which concerns 75% of Sami children - was deliberated.

The importance of water, as part of natural environment, for culture, identity and even ethnicity turned out to be topical. Just as blood for the organism, the water is an indispensible part of the environment and, thus, for every social element dependent on the environment. Just as was the case with Tanja Joona's presentation during Calotte Academy 2011, the connection between the high politics influencing a local setting and micro-politics playing out within a locality was emphasized. Therefore, the main outcome of the meeting appears to be the insight how much the micro-politics and local livelihood and lifestyles depend on abstract political decisions, how important is overcoming of taken-for-granted ideas and "there is no other way" assumptions, how much depends on the existence of political will and full understanding of the repercussions of political action and inaction. Consequently, protecting the water resources and water as a part of a landscape is of significance not only when considered at the level of "national interest", but is of crucial value for people in their localities, dependent on their natural and social environment, which, in the end, means each and every of human person. The local and national policy-making should be therefore in a constant dialogue and feedback.

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18:00 - Dinner and free time (on own)

Monday 4th of June in Inari

(Venue: Sámi Cultural Centre Sajos, Solju parliament hall)

At 9:30-12:15 Session 9: "Water regionally – the case study of North Calotte"
(Moderator: Lassi Heininen)

Opening of the Inari session

Matti Hepola, Lapland Centre for Economic Development, Transport and the Environment:
"Northern transboundary water agreements in a changing international water law"

Abstract:

The province of Finnish Lapland has its shortest land border with Northern Ostrobothnia, its neighbor to the south. Its international borders with Norway, Sweden and Russia are longer and made up largely of Frontier Rivers forming parts of watercourses that cross the borders in many locations. Accordingly, questions relating to the use of international waters are crucial in Lapland and the North Calotte.

International water law is typically understood as encompassing the norms and legal principles which regulate the relations between states with regard to watercourses and other water resources, as well as their use. The development of international water law is based on case-law, academic codification and agreements on the use of waters. Initially, such agreements were regional in scope, but global water agreements have now been concluded as well. The role of organizations in codifying international water law has been significant. My presentation will examine the contribution of the International Law Association (ILA) in particular.

The ILA has contributed to the development of international water law primarily through two published codifications: the Helsinki Rules of 1966 and the Berlin Rules of 2004. In my presentation, I compare the development of international water law from three perspectives: the concept of international water area in the Berlin Rules, participatory rights, and the integrated management of catchment areas.

The water agreements concluded by Finland that have special reference to Lapland are the Agreement Concerning the Regulation of Lake Inari (1949), the Agreement between Finland and Norway on a Finnish-Norwegian Transboundary Water Commission (1980), and the Finnish-Swedish Frontier Rivers Agreement (2010). These instruments constitute a very interesting continuum temporally when one compares them in light of the development of international water law from the Helsinki Rules to the Berlin Rules.

My presentation compares the watercourse agreements relating to Lapland in light of how well these instruments and their application in practice implement modern international water law. The key issue that emerges here is that of integrated management at catchment-basin level, in other words, international cooperation in deciding on the use of a catchment area. Also crucial in this context is how water agreements are applied in practice, that is, the application of soft law in international water law. What I focus on in particular is the taking into account of participatory rights in cooperation regarding transboundary watercourses.

Adam Stepien, Arctic Centre: "Building dams in North Calotte and in the Global South: an unlikely interrelation"

Abstract:

Dams are one of the most complex and in the same time widespread, developments connected with fresh water resources. They offer continued supply of fairly clean electricity. On the other hand, dams affect lives of

people both up-stream and downstream, effecting in resettlement, limiting access to fresh water, transforming the ecosystem as well as causing major safety risk in the case of construction failure.

Nordic states are eager dam builders, not only in the Nordic countries, where most rivers has been dammed, but also in the Global South via Nordic aid agencies as well as engineering and construction companies. The North Calotte region had been over decades a scene of both major dam developments as well as place where dams caused controversies or violent protests. These include constructions in Jokkmokk and Gallivare area or Vindel project in Sweden, Alta conflict in Norway, or Vuotso controversy in Finland.

Due to numerous problems, the high days of dam building in the North are over. Currently there is sense of caution and awareness of challenges connected with dam building, which hinders further developments. One would assume that experiences from the North would discourage Nordic aid agencies from supporting similar projects in the Global South. However, the impact of Northern experience appears to often have an exactly opposite result. Nordic industry not being able to build dams in the North is often pushing Nordic aid agencies to fund projects in the Global South, as the projects are typically a tied-aid ventures. The discouragement, if any, comes rather from difficulties faced by the projects in the South rather than from Northern experiences. Such projects as Pangani dam in Tanzania or Pangue site in Chile will be discussed in this context.

Nikolas Sellheim, University of Lapland: "Fur and loathing in Europe – The European Union and the seal hunt"

Abstract:

In August 2010 the European Union's ban on the placing of seal products on the EU internal market came into force, triggering strong anti-European sentiments in seal hunting communities in the Arctic in which seals have played an integral part of the annual income and social constructs for generations. The research looks at the reasons behind the imposing of the seal ban in the EU and depicts the European stereotypes in regards to seal hunting methods and hunting people(s), exemplified by the 2010 instrument. Yet, it is the commercial sealers in Canada who are at the centre of the research and which problems they face due to the seal product ban and the normative shift in perceiving the seal and the seal hunt internationally: while it was the seal that made communities in Labrador and Newfoundland grow, it is now the seal that contributes to their economic and reputational decline. The role of water and the question of marine resource management is elementary in this context while it is the power of discourse that ultimately governs the waters around Newfoundland and Labrador. Yet, how can a marine ecosystem be efficiently managed when the world calls for unresented protection of one element of the ecosystem – i.e. the harp seal? What is the role of science vs. emotion in the context of marine and seal management in Atlantic Canada? And finally, who steers the discourse?

At 12:15-13:30 Lunch

At 13:30-17:00: Session 10: " Fisheries, shipping and searching in Northern Seas"
(Moderator: Lassi Heininen)

Margret Cela, University Lapland: "Fishery Policy in Iceland: Past, Present, Future"

Abstract:

Fisheries have always played a large role in the Icelandic society and been central in the Icelandic economy as fish has always been the main product for exports. The fishery policy has, however, also been one of the most debated policies over the recent decades, particularly regarding the privatization of the industry and quota system that has been in place since early 1990s. Furthermore, it has been a cause for international disputes,

both in the past and present. The Cod Wars between Iceland and the UK set its mark on Icelandic foreign policy from the early 1950s until the late 1970s. More recently Mackerel has become the bone of contention causing a dispute between Iceland, the Faroe Islands and the European Union. Further, the fishery policy has been the cause for heated debates in the parliament, Alþingi, for the past years as the policy is being revised. At the same time it is expected to be one of the most challenging chapters in the accession negotiations with the European Union, since both Iceland and the European Union are revising their fisheries policies. This paper will give an overview of Icelandic fishery policies in the past, present and future, taking into accounts the present political challenges, as well as future ones e.g. those resulting from the effects of climate change.

Andreas Raspotnik, University of Cologne: "The Future of Arctic Shipping Along the Transpolar Sea Route"

Abstract:

Arctic sea ice is melting rapidly, and within the next decade polar warming may transform the High North from an inaccessible frozen desert into a seasonally navigable ocean. The debate over Arctic shipping routes routinely revolves around the Northwest Passage (NWP) and the Northern Sea Route (NSR), but neglects to make mention of the Transpolar Sea Route (TSR). In the 20th century the use of Polar routes revolutionized international air travel. In similar fashion, the TSR bears the potential to transform the international commercial shipping industry in the 21st century. The author will discuss the potential of the TSR as a future corridor of commercial shipping and conduct a comprehensive analysis of the climatic, legal, economic, and geopolitical context. The article will examine the feasibility of the TSR with respect to the continued decline of Arctic sea ice and analyze the economic potential of the route and its compatibility with existing trade patterns. The author will also discuss the TSR's special status as the only Arctic shipping route outside of national territorial jurisdiction. Special emphasis will be given to China's emerging interest in Arctic shipping and its growing economic relationship with Iceland, which stands to gain massively if it were to develop into a transpolar shipping hub. This multi-faceted and interdisciplinary study aims to outline and elaborate on a range of key issues and challenges related to the future of the TSR.

Report on Session 10 in Inari, 4th of June: "Fisheries, shipping and searching in Northern seas" *By Gustav Petursson*

The topic of this session was fisheries and shipping in Northern Seas: Margrét Cela about *the fisheries policy in Iceland: past, present and future*, as well as by Andreas Raspotnik about *the future of Arctic shipping along the Transpolar Sea Route*.

Among the issues that were drawn out in Margrét's presentation and in the ensuing discussion, was that Icelandic fisheries policy has in the past been characterised by external disputes – i.e. the so called Cod Wars in the 1950s and 1970s; as well as internal disputes with regard to the implementation of various systems of fisheries management. Although the Icelandic fishing industry invests in fishing outside of Iceland, there are serious restrictions when it comes to foreigners investing in the Icelandic fishing sector. Yet again, the fishing policy is causing tension with other neighbouring countries as Iceland is disputing with other countries about quotas from the migratory mackerel stock in the North-Atlantic. Fisheries will most likely be the toughest issue for Iceland to negotiate in the EU negotiations. It may possibly be so contentious as to keep Iceland out of the Union as people will vote against joining in a referendum.

Andreas Raspotnik discussed the potentials involved with Arctic shipping. The most discussed benefits include a lower transaction cost for the shipment of goods, as well as increasing the strategic importance of the High North. This analysis often overlooks the fact that there is a complete lack of infrastructure in the Arctic area. This also puts the spotlight on Iceland as China is showing interest in the country.

A number of questions that were raised during this session include:

- How certain are the climate predictions?
- How sufficient is the legal framework?
- How likely is it that Iceland will develop into an Arctic transport hub?
- Will China's economic and geopolitical interests become a driver of Arctic shipping development?
- What about the role of other non-Arctic actors, such as Singapore?

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At 17:30- Travel from Inari to Rovaniemi

About the Calotte Academy

The Calotte Academy is an annual, international travelling symposium for a dialogue among members of the research community and PhD and graduate students, and a wide range of other experts and northern stakeholders, such as policy-makers, civil servants, community leaders and planners.

The Calotte Academy is structured so that there will be on one hand, academic sessions with scientific presentations in each location, and on the other hand, public sessions with expert presentations in one or two locations. An international group of researchers, other experts and PhD and graduate students from Europe, North America and Russia travel together in the sites of the Academy. These sites are (in most cases) located in the Barents region (North Finland, North Norway, North Sweden and the Murmansk Region in Russia). For more detailed information see for example, the Final Report of the Calotte Academy 2011 at the NRF website (www.nrf.is).

The Calotte Academy will be again organized in 2013, most probably in (the first half of) May, in Finland, Norway and Sweden. The main theme of the 2013 Academy is (tentatively) discussed to be "Energy" understood by a broad way.

Organizers

The 2012 Calotte Academy is co-organized by Faculty of Social Sciences at University of Lapland, Thule Institute at University of Oulu, and Sámi Educational Centre of Inari (from Finland); Department of Sociology, Political Science and Community Planning at University of Tromsø (from Norway) and Stockholm Environmental Institute (from Sweden) in cooperation with Lapland Regional Council, Kemijoki Oy, Rovaniemi Think tank, Northern Research Forum and the NRF-UArctic joint Thematic Network on Geopolitics and Security.

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On more practical matters:

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