



Globalization and climate change challenges the Arctic communities adaptability and increases vulnerability

Hendriksen, Kåre

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**Circumpolar Perspectives
in Global Dialogue:
Social Sciences beyond the International
Polar Year**



ABSTRACTS



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Adams, Barbara L. (University of Alaska Fairbanks); **Kaden, Ute** (University of Alaska Fairbanks): *Teacher Mentoring to Improve Quality Formal Schooling in Rural, Remote and Indigenous Communities in Arctic Alaska*

Teaching in the remote locations of Alaska, USA, can be very challenging professionally and personally. Although many attributes of our villages are similar to other places—such as rural amenities, remote locations, and Indigenous populations—these Arctic villages become much more unique as they struggle to mitigate all of these factors together, particularly in education. The first couple of years in the classroom typically contain their own struggles faced by most teachers, despite the strengths of their teacher preparation program; with the majority of new teachers coming from outside of Alaska, these compounding struggles grow and become entrenched. Thus we instituted a statewide mentoring program.

This paper focuses on the results of seven years of online survey data of first- and second-year teachers (early career teachers, ECTs) in Arctic Alaska receiving mentoring from the Alaska Statewide Mentor Project (ASMP). Comparisons of results will be presented based on groups of teachers who are located in rural-on-the-road-system schools versus rural-remote schools, and those with predominantly Alaska Native populations versus predominantly Caucasian populations. The online survey gathers teachers' perceptions of how the mentoring intervention has affected their teaching practice, personal lives, and their ability to teach and live in these communities, and transfer their professional development to their students' academic success. These perceptions are triangulated with mentor and principal perceptions as obtained on similar online surveys, and are centered among results of a quantitative study comparing student achievement between mentored ECTs and their veteran counterparts.

June 23-24, session 09.01: Schooling in the Arctic

Agranat, Tatiana (Institute of Linguistics, Russian Academy of Sciences, Moscow): *Natural Language as an Object of the Cinema*

I will demonstrate and comment some fragments of my future film “The Votic People: the Past and Thoughts”. I shoot my video materials during several expeditions to the Votes, who remain now in some villages on the south beach of Gulf of Finland of Baltic Sea. The aim of my expeditions was studying the Votic language. One of the main linguistic tasks now is the documentation of endangered languages and recently linguists very often successfully use video camera in their field work as a technical instrument to accomplish this task. However the purpose of a language is “to serve” the life, so it is impossible to separate the language and the life from each other and sometimes the language documentation looks static and even a little artificial. My idea was to shoot not ethnographic cinema but for the first time to shoot a language, strange as it may seem. Therefore the conception of my film is to shoot the Votic language in its natural existence.

June 25, session 08.19: Arctic View: Reality & Visuality

Alexandrova, Elena A. (Herzen State Pedagogical University of Russia, Institute of Northern Nations); **Hovelsrud, Grete K.** (Center for International Climate and Environmental Research, Oslo (CICERO)): *Future vulnerability and adaptive strategies in Kola Saami communities*

The main problem of Kola Saami is preservation and development of their national culture, language and traditional activities, such as reindeer-herding, fishing and hunting. Studies shows that social and economic problems of indigenous people will become more complicated. Ecological situation becomes worse in Kola Peninsula due to further development of industry and exploration of mineral resources. Further increase of spring and summer temperatures lead to disturbance of reindeer nourishment, decrease of reindeer weight and livestock and their deceases. Warmer autumn and winter lead to delay of the slaughter. Extended northward migration of predators will threaten reindeer-herding. Number of reindeers will decrease because of their shooting by poachers, stealing and irrational slaughtering. Further development of tourism in Kola region threatens Saami reindeer-herding and fishing development.

The following adaptive strategies are proposed for the near future:

1. Creation of “Saami Knowledge Center”.
2. Implementation of environmentally-friendly new technologies.
3. Agreements between industrial enterprises and indigenous communities for conservation of pastures.
4. Extension of the net of National parks.
5. Development of transport infrastructure and technical means.
6. Organization of «Reindeer police».
7. Implementation of modern methods for increasing number of reindeers.
8. Creation of the federal program “Conservation of reindeer herding and traditional crafts in the Murmansk region” for 2011-2016.

June 22-23, session 03.57: Community Adaptation and Vulnerability in the Arctic Regions (CAVIAR): Lessons and directions for future research

Alice, Ilana (Labrador Institute of Memorial University); **Bell, Trevor** (Memorial University of Newfoundland); **Wolf, Johanna** (Labrador Institute); **Borlase, Harry** (Memorial University of Newfoundland): *The Freedom to Get up and Go: Exploring the values that guide adaptation decisions amongst Inuit and Inuit-Métis communities in Labrador, Canada*

Just as in other Arctic regions, Inuit communities on the Labrador Coast are heavily affected by the many and varied effects of climate change. For the Inuit, as with many other indigenous groups, people maintain deep and significant connections with the land, water, ice and animals for a wide range of cultural, recreational and practical reasons. Numerous studies have identified key vulnerabilities within Arctic Inuit communities to increasing variability and warming due to climate change. Little attention has been paid, however, to the adaptation decisions Inuit are already making, and specifically to the values that drive these decisions. This research looks at adaptation decisions in one Inuit community in Nunatsiavut, and one Inuit-Métis community on the south coast of Labrador.

Preliminary results from the two months of interview-based research indicate that the most significant effects of increased seasonal variability concern the ability of individuals to leave the communities in winter to travel on the land. Within both communities, the narrative of ‘freedom’ was very often used in relation to spending time on the land, on the water or sea, and at the cabin. We explore the multiple meanings of this freedom narrative and the values embedded within it. Given the similarities and differences between these communities, the common experience and expression of this freedom raises important questions about the role of freedom in local adaptation decisions.

June 23, session 01.33: Narratives of vulnerability, resilience and adaptation among circumpolar communities in the era of climate change

Ampleman, Luc (Nordic Information Centre - Jagiellonian University, Poland): *Arctic mobility and transportation Planning: Are the social sciences co-piloting or in the back seat?*

Transportation is one of the most technical, material and concrete aspects of mobility. Over the past 15 years, states concerned by the development of the Arctic have increased the number of public policies, initiatives and strategic planning efforts to improve the mobility of circumpolar stakeholders in the Arctic. So far a large part of the geopolitical analysis regarding transport in the Arctic has focused on the dramatic dimension and international conflicts between national entities (mainly about Arctic sovereignty and military security, access to resources, environmental impact) and little on the real transportation needs and issues of the several Arctic subregions. However, there have been significant initiatives by the local Far North stakeholders to advance the political agenda on transportation issues at the regional scale (small boat safety, improvement of snowmobile trails, medical evacuation, etc.) The aim of this paper is firstly to take stock on key social issues related to transportation in the Arctic; secondly, to report how these issues differ from other regions; and thirdly, to identify what efforts can be undertaken in the social science fields to better understand social issues related not only to mobility, but more specifically to transport development in the Arctic in order to support policy making and transportation planning.

June 22, session 04.01: Mobility and Immobility in the Circumpolar North

Ampleman, Luc (Nordic Information Centre - Jagiellonian University, Poland): *Transport planning on the dashboard of Arctic governance: The case of Nord-du-Québec*

Transportation planning involves many stakeholders not only at different levels of governance, but also in different sectors (engineering, public safety, environment, justice, finance, social sectors, municipal affairs, etc.). Although we have witnessed in recent years a multiplication of initiatives in order to increase public and local stakeholders’ participation, public transport policies are still the private hunting ground of policymakers at the national level. Local actors (often representing municipalities or regional councils) are repeatedly limited to an advisory role. In the Arctic regions, this approach is necessarily defective. Firstly because a majority of policy-makers do not know the reality of transport in the Arctic (several have never set foot in the Far North nor have they met Natives: this is perhaps a problem of distance and transportation costs), but also because the issues are different and the governance system is already distinct and does not comply with “southern” standards. The paper will point out how the ministère des Transports in Québec (MTQ) has had to adapt its transport planning method, public policies and interventions in the last decade to fit the changes in terms of governance in this region. The paper mentions what could be considered successes regarding this adaptation and what the challenges are for the future.

June 25, session 05.28: Governing changes in the North

Anthony, Raymond (University of Alaska Anchorage): *Moral knowledge and Sustainability: Inupiaq subsistence constructs in dialogue with American Pragmatism a ala Agrarianism*

The environmental philosophies of agrarianism and the Inupiat of Seward Peninsula, Alaska, have much to offer discourses involving mindful responses to our environmental challenges. They expand the ways in which we problematize climate issues and offer examples of how to inculcate deeper commitments to biological cum moral equilibrium and to promote interconnectedness of all life and place health. Agrarianism and the “ecosophy” of the Inupiat of Seward Peninsula, offer examples of “focal practices” which are essential for environmental education. These practices suggest an integrative environmental ethic that includes appropriate interactions with the land and sea alongside other elements that reflect aspirations to be a good person and to fulfill one's role as a member of one's community. The Inupiat of Seward Peninsula and agrarians offer us important moral knowledge about how to live in balance with the natural world. This knowledge, in the first instance, is conveyed by elders, historical epistemologists and moral philosophers of a sort, through narrative, a form of moral testimony. In the second instance, this variant of pragmatism looks to democratic citizenship values to dismantle the metaphysics of dichotomies and promote thoughtful interactions with nature that diminishes harm and encourages growth in a sustainable way. Key virtues that are reflected in “focal practices” central to these perspectives will be discussed. They include humility, gratitude, self-reliance, attentiveness, responsibility, and responsiveness. These virtues challenge the dominant reductive streak in contemporary environmental ethics and inform how we should respond to the “habits” of overconsumption and undervaluing of interdependent relationships.

June 24-25, Session 03.63: ASI – Arctic Social Indicators

Antomarchi, Véronique (Centre d'Étude et de Recherche sur les Littératures et les Oralités du Monde (CERLOM-INALCO), France): *The creation of the Pingualuit National Park in Nunavik (North Quebec), a lever for touristic exploitation?*

The recent creation of the Pingualuit National Park in Nunavik in Arctic Canada appears as a lever for the touristic exploitation of this huge territory. The official argument that such National Parks help economic development masks both their geopolitical importance and their role for Inuit identity. The analysis of the marketing strategy this destination reveals contradictions. The Inuit language is used in the transmission centre attached to the Park which can be interpreted as a great opening to Inuit culture. However, local Inuit's wish to use the centre to show visitors the reality of Inuit life and culture, conflicts with the government's intention to put the accent on nature. The result appears as a compromise: the centre presents the Park as piece of sacred nature. Another reason to suspect that the use of Inuit language and culture might be an alibi hiding other objectives, is the fact that Nunavik is almost absent from the offer of French tour operators; none at all feature the Pingualuit Park. Since it's opening in 2007, the numbers of visitors is extremely small.

One explanation for the creation of protected areas is that they are a geostrategic tool. They allow Quebec to assert its power and to guarantee the visibility of its sovereignty over its Far North and over indigenous populations who play an active role in the process. Another hypothesis is that the important policy of creation of national parks serves Quebec as a tool to catch up on an international scale on protected areas. Indeed, the difficulty of creating new parks in Quebec pushes the government towards this protective policy in Nunavik, where no problems of expropriation arise. It is a huge territory that allows Quebec to create itself a reputation of a country respectful of its environment and enhance the percentage of protected areas, actually evaluated at 3%, to reach 8%.

June 22, session 07.52: «Patrimonialisation» of Arctic Aboriginals' Territories. Promoting cultural heritage within protected areas

Apostle, Richard (Sociology and Social Anthropology, Dalhousie University): *Closed-Containment Aquaculture in the Industrial North*

This paper explores the development of a new type of aquaculture which is beginning to occupy a modest economic niche in contemporary food production. Just as open-cage production attracted considerable social science attention in the 1990s, closed-containment production is now being evaluated as a preferred alternative. Close-containment has been viewed as an approach which may, to some degree, address problems associated with the first wave of industrial aquaculture: disease, genetic modification, food waste and social externalities. While closed containment has some proximate benefits, the financial demands and energy requirements of this new system have restricted development to species which are suited to the new technologies, and command high enough market prices to justify their growth. Using information collected at four major, but different sites in Nova Scotia, this paper attempts to provide some initial comparative insights on an important new trend in contemporary aquaculture.

June 24, session 02.58: Human Aspects of Fisheries in the Arctic Coastal Regions

Argounova-Low, Tanya (Department of Anthropology, University of Aberdeen): *Roads and Long-Distance Driving in Sakha (Yakutia)*

Roads have always been a significant element of social life in the North. This paper highlights the significance of roads and movement in the increasingly mobile and fluid North. Using material from Sakha (Yakutia) I analyse the transformative effect of roads in the region related to industrial and economic development. I investigate the concept of road through performance of driving, road experience and various practices of long-distance drivers and other road-users. This paper builds the relationship between roads and concepts of perception, time, and narrative and through the prism of these relationships addresses the phenomenon of roads.

June 22, session 04.01: Mobility and Immobility in the Circumpolar North

Arnarsson, Sigmar (Northern Research Forum); **Oddsdóttir, Embla Eir** (Northern Research Forum); **Heininen, Lassi** (University of Lapland/ Northern Research Forum): *The Northern Research Forum - Activities and Opportunities*

The Northern Research Forum (NRF) provides an international platform for an effective dialogue between members of the research community and a wide range of stakeholders including researchers, educators, politicians, business leaders, civil servants, community leaders, NGO representatives, and resource users and managers. The Forum facilitates research on issues and problems relevant to the contemporary Northern agenda and believed to have global significance. The main mission of the NRF is to address the critical issues and highlight the opportunities which face people living in the regions of the Circumpolar North.

As its main activity and product, the NRF convenes an Open Assembly every second year, rotating among the different northern countries in order to address northern issues. The 6th Open Assembly of the Northern Research Forum, entitled Our Ice Dependent World, will take place 4th – 7th of September in Norway. The main theme of this Open Assembly is the significance of ice and its importance in the Circumpolar North.

One of the main objectives of the NRF is to promote Young Researchers by inviting them to present their particular research projects and findings in NRF Open Assemblies. The aim is to engage Young Researchers in dialogue with senior scientists and other professionals and experts as well as representatives of various stakeholder groups and the public. This is accomplished by funding the participation of young researchers studying northern issues or doing arctic research.

Among other activities of the NRF are the NRF Theme Project Groups that were launched at the 5th NRF Open. The theme project groups began their work in the autumn of 2009, focusing respectively on Legal Issues, Economies in the North, Energy Issues, Northern Sea Routes and Climate Change. Expertise in the groups comes from academia, political activity, administration, business and civil society.

June 24-25, Poster Sessions

Arnarsson, Sigmar (The University of Akureyri Research Centre); **Valtýsson, Hreiðar Þór** (University of Akureyri): *The mapping of distribution and estimation of the potential values of fisheries in the Arctic and adjacent seas*

The ocean is among the most important resource in the Arctic region. The Arctic region has also been in the spotlight due to global climate change. In this project we will map the amount and value of fisheries resources of the Arctic regions. The amount landed is usually well monitored and stock assessment is available for the most valuable fish stocks. However the value of the fisheries is more difficult to get information on. Annually the Directorate of Fisheries in Iceland publishes a value indicator for most commercial fish and invertebrate stocks around Iceland. This value indicator is based on cod equivalents, i.e. cod is always = 1, but the value of the other species are relative to cod. This cod equivalent coefficient can be used to establish relative value of the catches around the Arctic and evaluate possible changes in the value of the catch if species composition will change due to global climate change.

June 24, session 02.58: Human Aspects of Fisheries in the Arctic Coastal Regions

Árnason, Arnar (University of Aberdeen): *Death, suicide, sacrifice: On the limits of the political and the regeneration of the world*

Portrayed as a wasteland in some popular representations, ‘the North’ is sometimes designated as a space of death. For example, suicide is frequently cited as a major issue facing societies in the north. Considered a problem of epidemic proportions amongst young people in particular, suicide is, in the literature, linked to lack of employment and education

opportunities, a growing generation gap and social isolation. Focusing on ethnographic material from Iceland I draw on scholarship in the anthropology of death to scrutinise the distinction between suicide and sacrifice. The purpose of this investigation is to examine the extent and the limit of the command the state, in particular in its neo-liberal formation, has over life and the body. Thus the question will be raised whether death, sometimes in the form of suicide, can be regarded as an act of resistance, as a denial of the legitimacy of the state and its inherent violence, a sacrifice for the regeneration of the world.

June 22-23, session 07.49: Practice Power North

Artemiev, Aleksandr (Yakutsk Shaman's Association, Northeastern Federal University, Russia); **Stammler, Florian** (Arctic Centre, University of Lapland): *Unifying the intellectual and the spiritual in the North as a new state of mind*

This presentation overcomes the divide between nature and culture, and scientific and spiritual knowledge by interpreting northernness as new spiritual awareness. The unification of spiritual and intellectual knowledges results in a new imagination of the environment, the earth and human life. Both ways of knowing are linked by the supernatural dimension that is connected to the universe of humanity among northern peoples, and among new shamans to the magnetic field of the earth. Accordingly, the North hosts a strong energy field with the North Pole at its top. Water in the form of ice and permafrost can be seen as a sort of library of human agency in the North, where the earth stores information about the behaviour of its beings, in line with Cruikshank's work on Glaciers (2005). Incomers have noted that the North through its cold climate functions as an amplifier of human weaknesses: the North selects its people: weak ones get sick and die, or move away. The strong ones remain. People in the Arctic therefore have from this spiritual point of view a different inner setup from 'southerners'. This corresponds to the view of humans as parts of a living earth that take over the traits of character of the place that they live in. Northernness as new awareness of the supernatural link between humans and the environment is explored along such lines in this presentation by a practicing Sakha (Yakut) shaman and an anthropologist that discovered the overlap of physical, metaphysical, intellectual and mental journeys.

June 24-26, Session 07.32: Imagining the Supernatural North

Avango, Dag (Royal Institute of Technology, Stockholm): *Heritage in action – historical remains in polar conflicts*

Over the last centuries, governments and entrepreneurs have competed for control over natural resources and political influence in the Polar Areas. This struggle has taken place through diplomacy, but also through activities such as scientific research and resource utilization. Today, the historical remains of these activities are often protected as cultural heritage and become visitor sites for the expanding polar tourism industry.

The starting point for this presentation is that these historical remains play a role in current international struggles for control over polar areas, through historical narratives which different actors ascribe to them. The objective is to analyze the role of historical remains of science and resource exploitation in the struggle over contested polar areas, by focusing on two regions in the South Atlantic – South Georgia and the Antarctic Peninsula. Which actors have formulated historical narratives about cultural remains in those regions, how and why? How has the political rivalry between Great Britain, Argentina and Chile effected interpretations of the historical remains? What has been the role of historical remains of polar science and industry, in the struggle for influence over these regions?

The productions of historical narratives are analyzed as strategies to enroll historical places as actants to actor networks. I will show that these actants have had different purposes, defending national prestige, creating a sense connectedness to distant polar places, and increasing influence over territories and natural resources.

June 22-23, session 10.22: Claims on Sites and Knowledge in Cold Regions. Material and Immaterial Constructs of Nature, Nations and Industry

Avard, Ellen (Department of Geography, Université Laval): *Greenhouses in Nunavik: Building Community Capacity through Food Production*

Considering the difficulties associated with obtaining fresh fruits and vegetables in the North, as well as numerous social problems, this study examined whether the construction of agricultural greenhouses in Nunavik (the Inuit territory of the province of Québec, Canada) could be an acceptable way to address these issues, while at the same time integrating sustainable development initiatives into traditional social structures.

The research hypothesis was that it is possible that greenhouse projects, adopted and supported by key community

stakeholders, can diversify diets and contribute to the development of the community capacity of the target populations.

To gain a solid understanding of the perceptions held by Nunavummiut regarding a possible greenhouse project, a series of 31 structured interviews were conducted with residents of Kuujjuaq. A series of 36 semi-directed interviews were also conducted with leaders, administrators and professionals working at both the local and regional levels.

Results show that fruits and vegetables play an important role in the diets of the residents of Kuujjuaq and also indicate that there is significant interest on behalf of the population for a greenhouse project. As well, results indicate that greenhouse initiatives (elaborated in Kuujjuaq as well as in other villages) could concretely assist the sustainable development of arctic communities through the local appropriation of factors of production and distribution of fresh produce, through better access to a variety of good quality fruits and vegetables and finally, through the creation of local employment and training opportunities as well as social reintegration programs.

June 22, session 02.31: The Best Possible Northern Economy? Rethinking the Viability of Inuit Community in Canada

Babushkina, Dina (University of Helsinki/ University of Tampere): *Simulating a Myth: "Russian Hyperborea"*

I propose to review the phenomenon of "Russian Hyperborea" currently discussed in popular scientific literature.

Since the 1990s there appeared a number of publications (e.g. Demin: "Hyperborea – the Morning of Civilization" 1997, "The Hyperborean Rus" 2002; Klimov: "Hyperborea" 2010) placing Hyperboreans on the Wight Sea and connecting them culturally and genetically to present-day Russians. Based upon the discoveries of several expeditions, these sources claim that the Hyperboreans reached the most advanced stage of development in art (stone monuments), architecture (large structures; pyramids), science (observatory; nuclear weapons), religion (labyrinths; sacred thrones). It is claimed that the people from North spread their influence all over the world. This makes the hypothetical "Russian Hyperborea" the cradle of Western (and, possibly, Eastern) Civilization. Similar themes appear in different internet sources, including web-portals promoting tourist routes in the "Hyperborean North".

Not judging the historical authenticity of these claims, I want to show that these ideas create contemporary hyperborean mythology. Popular ways in which these ideas are being represented make them function not as a scientifically reliable theory but rather as myth-like narrative or myth-simulator. I am interested in the content and form of these narratives. I employ the theories of Barthes, Lyotard and Lotman.

June 24-26, Session 07.32: Imagining the Supernatural North

Baker, Betsy (Vermont Law School): *Where is the legal authority over sea ice?: Examining international law and practice*

Eroding coast lines and rapidly diminishing sea ice have legal repercussions for federal, state and some local authorities' jurisdictions over marine areas. Is "the existence of land the source of authority over the ocean," (D. Caron) or over sea ice? What are the (legal) sources of authority over the ice? Should baselines be ambulatory or fixed? What does the Law of the Sea Convention say about both situations: the legal status of sea ice and of changing coastlines and the baselines they support? This paper will examine these and related questions, drawing primarily on sources of international law and practice but looking also to comparative studies in various Arctic States.

June 24, session 01.27: The Human Dimensions of Change to Arctic Sea Ice

Baker, James (University of British Columbia): *International Order in the Oceans: Territoriality, Security and the Political Construction of National and International Jurisdiction at Sea*

One of the most recent geopolitical issues to register on the international political agenda - the Arctic - is almost exclusively concerned with the governance of the ocean. Indeed, the presence of hydrocarbon resources in the Arctic Ocean, as well as seas further afield, has meant that the Arctic region and oceans more generally have been viewed as potential sites of instability and conflict now more than ever. Over the past few decades, the changing nature of global resource extraction at sea inspired efforts to bring them under national and international control. Understanding the forces that may lead to stability or instability in this ocean property rights regime is, therefore, a critical task and one that has been given little attention in Political Science.

Indeed, territorial conflict and boundaries on land have been studied comprehensively, but the oceans have been largely

neglected in this endeavour. The legal and political regime at sea - as well as our intuitive understanding of the ocean - would appear to be markedly different to land; and, although territory on land has been a perpetual source of conflict throughout history, ocean boundaries have been remarkably stable. This paper will seek to present theoretical perspectives and preliminary findings that will help to account for the contemporary stability of jurisdiction over resources at sea. This research will, therefore, contribute to our understanding of what kind of political space the ocean is and the forces that shape conflict and stability there generally, and in the Arctic in particular.

June 25-26, session 05.35: The Political Organization of Arctic Space

Bali, Archana (Resilience and Adaptation Program, University of Alaska Fairbanks); **Kofinas, Gary** (University of Alaska Fairbanks): *CARMA's Voices of the Caribou People Project – Ongoing legacy of the Indigenous Caribou users*

“Voices of the Caribou-People” project is video-based effort to document knowledge and observations of caribou-user communities about various social-ecological changes taking place around them during IPY (2007-2008), and their perceptions of impacts, and responses to those changes. Being conducted in partnership with the communities, it aims to portray the caribou-people and their changing world, as they view it. It is funded by CircumArctic Rangifer Monitoring and Assessment Network (CARMA) as part of their IPY research on human-rangifer systems and seeks to present indigenous perspectives in scientific research. Six communities across North America have participated in the project so far, and more communities from North America, Russia and Greenland willing to participate. Since its starting in 2008, 97 people have been interviewed. People have talked about cultural, spiritual and nutritional dependence on caribou, observations of changes and concerns about sustainable future, and about issues ranging from impacts of oil & gas exploration, mining activities, non-local hunting, high energy costs to impacts of climate related variabilities. These interviews are available in public domain via Internet. Important characteristic of this project is the commitment to tell their stories in their own voices. Participants found videography a useful tool for several reasons. Elders felt videography to be preserving the communities’ legacy and repository of traditional ways, in changing times. Leaders reckon visual images as a powerful medium to reach out to policy makers and greater public. In addition, these often isolated communities looked at this project as means to connecting with other indigenous communities.

June 22-23, session 10.22: Claims on Sites and Knowledge in Cold Regions. Material and Immaterial Constructs of Nature, Nations and Industry

Ballester Rodríguez, Mateo (Faculty of Political Science and Sociology, Complutense University in Madrid): *Nordic Europe as supernatural and barbarian in 16th and 17th century Spain's discourse of otherness*

For 16th and 17th century Spaniards, northern countries and regions like England, The Netherlands and the German territories were still a known and recognisable world. Their peoples were perceived as sharing in broad terms the same reality as the Spanish one. Further north things changed. Scandinavia, Iceland and the Nordic regions were perceived as a "terra incognita", a place still unknown and unexplored, and this gave wings to imagination. The most amazing and supernatural phenomena could plausibly be placed here: werewolves, witches and sorcerers who could fly or change shape, animals which sprang from wood pieces, fed themselves out of air, etc.

Two texts are particularly relevant to understand the idea that Spaniards had by that time of the Nordic regions. Antonio de Torquemada's "Jardin de flores curiosas" ("Garden of odd flowers", 1570) is a six chapters' compilation of mysterious phenomena all around the world. The last two chapters were exclusively dedicated to the Nordic regions and the supernatural and even demonic things that happened there. The book exaggerates the already fantastic descriptions of Olaus Magnus, and locates in these regions some of the biblical prophecies of the coming of the Antichrist.

In 1617 Miguel de Cervantes last and posthumous work was published, "Persiles y Segismunda. Historia Septentrional" (1619 in English: "The Travels of Persiles and Sigismunda. A Northern History"). While the characters of the book travel in the Nordic regions, supernatural phenomena abound among their inhabitants, which are characterised as barbaric, uncivilised, and far away from the Christian core, both geographically (Rome) and spiritually.

What may be a Spanish variant of the theme is that some of the peoples of the European Nordic regions are depicted according to the descriptions given by travellers, explorers and conquerors of the indigenous peoples from the New World.

June 24-26, Session 07.32: Imagining the Supernatural North

Banfield, Laura (McMaster University, Health Sciences Library/ University of Oulu); **Jardine, Cindy** (Centre for Health Promotion Studies, University of Alberta): *Giant Mine: Stakeholder Capacity in Community Consultation*

Understanding available information and being able to ask appropriate questions is critical to understanding the potential impact of mining remediation processes on human and environmental health. For community stakeholders, this contributes to a greater ability to engage in community consultations and decision making. However, community consultation in this context represents a series of complex issues and stages for everyone involved. Stakeholders possess different levels of knowledge and understanding regarding the scientific, technical, social and cultural contexts of information which inform the consultation process. Using a case study of the Giant Mine Remediation Plan, this session will examine findings from a series of interviews with community stakeholders and project proponents regarding the impact of access to, and communication of, information on the community consultation process. Giant Mine is a former gold mining operation located on the shores of Great Slave Lake, 5 kilometers north of Yellowknife and near the Dene communities of N'dilo and Dettah, in the Northwest Territories, Canada. The remediation of Giant Mine is of great concern to these communities, due to its proximity and the presence of both surface and subsurface contaminants. In particular, there are 237 000 tonnes of arsenic trioxide dust stored underground in sealed chambers. The processes by which the arsenic and other contaminants will be stabilized or disposed of have been detailed through a series of highly technical lengthy reports, community consultations, and scoping sessions. However, even with the availability of such information, the consultation process has been fraught with concerns from various parties.

June 22-23, session 06.40: Best practices for community engagement in health promotion research and population health practice - lessons from the North

Barraclough, Eleanor Rosamund (University of Cambridge): *From Erik the Red to Trolls in the Wilderness: The Development of Supernatural Greenland in Saga Literature*

The Norse-Greenlandic settlements represented the furthest north-westerly reaches of the medieval Scandinavian diaspora. In terms of the country's depiction in saga literature, as Vésteinn Olason has observed, 'outside Iceland it is particularly the remote northern regions, Finnmark and Greenland, which seem to be the refuge for forces beyond the framework of conventional nature'. If the sagas are ranked roughly according to their probable time of composition and/or development, a pattern emerges, whereby the oldest sagas provide the most realistic and socially detailed accounts of the country, while in later texts, ferocious shipwrecks, harsh living conditions, eerie plagues and supernatural happenings are key themes. In these younger texts, the importance accorded to the country's human population dwindles then disappears altogether, replaced by an uncanny society of trolls and giants.

My paper will examine this movement from relative literary realism to supernatural instability, examining what such a shift reveals about the changing place of Greenland in the Norse world over the centuries. I will argue that this development is not only due to changing fashions in literary genres: it also reflects the country's changing social, political and meteorological conditions. As the climate deteriorated, the settlements diminished and international trading slowed, Greenland's place in the wider Norse diaspora shifted until cultural familiarity was replaced by supernatural exoticism and distant isolation. I will conclude by considering the extent to which cultural memories and oral traditions emanating from Norse-Greenland (and their later absence) may have shaped the portrait of Greenland that emerges from the sagas.

June 24-26, Session 07.32: Imagining the Supernatural North

Bay-Larsen, Ingrid (Nordland Research Institute, Bodø); **Sandersen, Håkan** (Nordland University College, Bodø); **Isaeva, Ludmila** Institute for Ecological Problems of the North, Kola Science Centre, Apatity, Russia); **Petrov, Viktor** (Institute for Ecological Problems of the North, Kola Science Centre, Apatity, Russia): *Governance and Stakeholder Involvement in Protected Areas Management in Northern Norway and Northwest Russia*

This paper investigates two cases of protected area management in different socio-ecological and institutional contexts. With the use of case studies from Northern Norway and Northwest Russia, this article explores how the quite different institutional, socio-ecological characteristics of the two regions respond to international and national/federal drivers (or lack of these) towards participatory conservation planning and management. Semi-structured qualitative interviews have been undertaken among stakeholders and governmental agencies in both countries. Results show that nature protection in the bordering regions of Northern Norway and Northwest Russia is dominated by top-down oriented institutions. Yet, the structure and presence/activity of these institutions display a widely different institutional setting on the ground. This seems also to be the case for the positions, roles and way of participation of local stakeholders. Whereas the Russian stakeholder involvement appears in an institutional vacuum, Norwegian local interests are promoted on the basis of formalized rights among local citizens. The local participation in connection to Russian conservation planning is in many cases positive towards area protection to get control over industry and 'wild tourism', and of vital importance for initiating, investigating and

accomplishing area protection. In Norway, stakeholders in many cases position themselves against area protection in order to maintain their land use and recreational activities on private land. Analyses of the interaction between governing and governed structures points to the socio-ecological context (e.g. traditions for land use, demographic patterns) as of vital importance for local stakeholder positioning and participation in the two countries.

June 24-25, session 03.63: ASI – Arctic Social Indicators

Bekkerov, Petr (Head of the Union of Itelmen Families); **Churikova, Victoria** (Novosibirsk State University): *Current situation with indigenous peoples' employment, life and free time in Kamchatka*

It is well known that indigenous peoples of Kamchatka, like many others in the North, live not in the traditional villages and other similar sites, but mostly in the cities and towns and have ordinary occupations and lifestyle. But at the same time we may register some positive changes. In 2010 the number of family communities grew 3.8 times to compare this number with 2007. And it means that more and more representatives of indigenous communities use federal support to have traditional lifestyle and economic activity. And this support is very serious. For example, to upgrade the souvenir workshop of the Elizovo community union "Suaacu-Ai" it is supposed to provide them with 4 mln 320.000 roubles for 2010-2012 and to develop ethno-cultural centre "Pimchakh" – more than 6 mln. It's a very positive tendency. It means that people are employed, especially in summer, and the number of working places is about 3330 people. What is more important – they are employed in traditional fishing, in the sea or on the rivers of Kamchatka.

In winter people carve figures of sea or land animals, birds and sell their products to the tourist industry of Kamchatka. People use computers with internet connection more and more. The new tendency is to sell fish products via internet. Also people travel abroad, but still it's a small number of people.

June 24-25, Session 03.63: ASI – Arctic Social Indicators

Bergelson, Mira (Lomonosov Moscow State University); **Kibrik, Andrei A.** (Institute of Linguistics, Russian Academy of Sciences): *Cultural resistance as manifested through language: the Niniichik community case*

There are several pockets in modern Alaska where direct descendants of the 19th century Russians, employees of the Russian American Company, still reside and preserve their cultural and linguistic heritage. One of them is the village of Niniichik in the Kenai Peninsula. In this paper we report the results of our research on the origins, development and functioning of the Alaskan Russian dialect and discuss the interconnections between language preservation, cultural vitality (cultural resistance) and other factors determining the way various cultural groups and local communities evolved in Alaska. This Arctic and Sub-Arctic region demonstrates many models of cultural resistance.

Alaskan Russian is a remnant dialect spoken by the descendants of Russian settlers of Alaska who came there mostly as representatives of the Russian-American Company and for years were mixing with the native population of the area. In the 19th century children born to mixed Russian-Native American marriages were known as "Creoles". Russians and Creoles, Orthodox Christians as they were, managed to keep their religious and cultural values for generations, which in its turn created motivations to maintain the culture and language of their ancestors even under the unfavorable conditions of the English language environment.

The unique character of this cultural group is primarily due to the fact that it has developed and existed in full isolation from the main body of the Russian language and culture.

The sociolinguistic situation in Niniichik is quite special and has few analogues in North America. This study has significant consequences for cultural anthropology, since the very fact of the survival of Alaskan Russian until now is due to the cultural and religious self-identification. Further still, this study provides data for the typology of cultural resistance of various ethnic groups in Alaska. Among the factors to be taken into account are: location, the size of the group, time and intensity of the mass contact with the dominant culture, economic and climatic factors, and cultural 'tenacity' in keeping traditional behavioral patterns.

June 22, Session 07.21: Living in the Arctic: a Creative Providence for the Global Challenge & Session 07.29: Arctic Creative: Building Arctic Futures through culture, innovation, and creativity

Berger, Paul (Lakehead University); **Inootik, Karen** (Nunavut Arctic College); **Kadjuk, Jennifer** (Nunavut Arctic College); **Jones, Rebecca** (Nunavut Arctic College); **Aknavigak, Terry** (Nunavut Arctic College); **Angohiatok, Doris** (Nunavut Arctic College); **Pauloosie, Emma** (Nunavut Arctic College): *Collaborative Teacher Recruitment Research in Nunavut*

Nunavut needs many more Inuit teachers. In this paper we describe preliminary findings from collaborative research in 2010/2011 in which six third year students from the Nunavut Teacher Education Program interviewed over one hundred high school students in eight Nunavut communities. We searched for what draws Inuit youth to teaching and what barriers they face, while we concurrently aimed to raise awareness of teaching as a rewarding career option. We will comment on the appropriateness of our collaborative methodology for reaching these goals, describe some of the key findings, and recommend changes that might help attract more Inuit to teaching in Nunavut.

June 23-24, session 09.01: Schooling in the Arctic

Berman, Matthew (Institute of Social and Economic Research, University of Alaska Anchorage); **Howe, Lance** (Institute of Social and Economic Research, University of Alaska Anchorage): *Comparing migration decisions of Inuit people in arctic Canada and Alaska*

Inuit people share a common linguistic and cultural background, and practice similar livelihoods across Arctic North America. Modernization paths have diverged somewhat, however, guided by nations with separate policies for education, community development, and settlement of land claims. Mobility decisions represent a window through which one may view the effects of the different national modernization approaches on community dynamics and individual well-being. Availability of individual interview records from the Survey of Living Conditions in the Arctic (SLiCA), the Canada Aboriginal Peoples Survey and the U.S. Census provide an unprecedented opportunity to explore Inuit mobility choices at the individual and household level. Equations predicting community-to-community and region-to-region migration decisions compare determinants of desired and actual migration between Canada and Alaska. Results suggest that educational attainment and indigenous language retention play a prominent role in migration decisions in both countries. Past relocation and regional development policies explain some of the differences across countries in migration patterns observed today. The implied path-dependence of community dynamics carries implications for the future of arctic indigenous communities.

June 22, session 04.01: Mobility and Immobility in the Circumpolar North

Berman, Matthew (Institute of Social and Economic Research, University of Alaska Anchorage): *A system model to aid implementation of the arctic social observation system*

The 2010 Arctic Social Indicators (ASI) report developed a set of consensus measures across the six domains of well-being identified in the Arctic Human Development Report. The report identified goals for the observation system, including availability of separate data for indigenous and non-indigenous populations at a small regional level on at least a five-year reporting period. Uneven development among places within each region suggests a need to monitor indicators at the community level. However, data for the full suite of indicators are often unavailable on a recurring basis for some communities and regions.

System models estimated from a discontinuous observation system have acquired a prominent role in analyzing and predicting weather and climate change, but are rare in the social sciences. An observation-based system model can provide a useful tool to assist observing system design, by synthesizing understanding of the main external drivers of a system as well as links between drivers and outcomes. This paper reports on a prototype arctic social system model that blends observations and simulations of basic outcome indicators from the six social domains identified by the ASI report. The model includes a compact set of intermediate indicators consistent with what is known and can be reasonably hypothesized about the relationship of environmental change to social change in arctic communities. It identifies and quantifies external drivers of social change, such as global market forces, government policies, and climate change, while simulating dynamics of communities and regions as seen through key system processes. The initial prototype version models dynamics of arctic Alaska. The goal is to extend the model to the entire Circumpolar Arctic.

June 24-25, Session 03.63: ASI – Arctic Social Indicators

Berry, Dawn Alexandra (University of Oxford): *Star Spangled Ice Rock: Cryolite, the Aluminum Industry and the American Occupation of Greenland During WWII*

On April 9, 1940 Germany invaded Denmark. Instantly the fate of Greenland, a Danish colony, was thrust into limbo. Greenland's location and mineral resources made it strategically and economically significant; however, conflicting international interests made any action relating to it problematic.

The North American aluminum industry had particularly self-interested concerns. In 1940 Ivigtut, Greenland was home to the world's only working mine and known major commercial deposit of natural cryolite, a mineral essential to the aluminum smelting process. The Danish had been in control of cryolite mining and refining since its initial commercial development and

a German occupied Denmark posed a major threat to the global cryolite supply.

Through a convoluted series of international negotiations and misunderstandings in June 1940 an American force was protecting the mine. By April 1941 a controversial official agreement had been signed between the officially neutral Americans and the Danish government in exile for the island's defense.

The American occupation prompted a boom in Greenlandic industry and infrastructure. In the latter half of the 20th century, however, cryolite supplies and the industry's interest in Greenland dwindled. By the mid-1980s Ivigtut was abandoned. Alcoa has recently announced its intention to build a new hydropower plant and smelter in Greenland which could employ 10% of the population.

This paper will discuss the ways in which cryolite and the aluminum industry influenced the genesis and legacy of the American occupation of Greenland and lessons that can be gleaned from the past for contemporary Greenlandic industry and society.

June 22-23, session 10.22: Claims on Sites and Knowledge in Cold Regions. Material and Immaterial Constructs of Nature, Nations and Industry

Bertelsen, Rasmus G. (United Nations University-Institute of Advanced Studies): *Climate change, self-government and security policy: the Faroe Islands, Greenland and Iceland*

This research addresses the interaction between climate change and political, structural and natural conditions for Faroese, Greenlandic and Icelandic society historically, currently and in the future to formulate and implement broad security policies (exercise of sovereignty, home land security, search and rescue, environmental protection, maritime safety, etc.).

The Faroe Islands, Greenland and Iceland are important cases of state-building and self-government in the Arctic. All three share a history as overseas autonomies of the Kingdom of Denmark. Iceland gained full independence in the late 1800s and first half of the 1900s. This process has inspired the Faroe Islands and Greenland. One policy area where Iceland has had to overcome challenges from its small population and Arctic natural conditions is security policy, where a successful policy design and implementation is an important part of successful independence. The Faroe Islands and Greenland are overseas autonomies of the Kingdom of Denmark with gradually expanding self-government also covering security policy questions. The Faroe Islands and Greenland must successfully overcome their challenges as Arctic microstates to develop their self-government and perhaps gain full independence.

A future challenge for these societies is climate change, which is according to the Arctic Climate Impact Assessment (2004/2005) 'very likely' to facilitate energy exploration and trans-Arctic shipping. Such developments increase local security policy demands concerning monitoring, search and rescue, environmental protection, maritime safety, etc., and possibilities for self-government through new economic opportunities, but also pose challenges to traditional life.

June 23, session 05.53: Polar Law, Human Rights and Social Sciences

Bibaud, Julie (Université du Québec en Outaouais); **Martin, Thibault** (Université du Québec en Outaouais): *Aboriginals' Territory Preservation Projects, Cultural Heritage and Territorial Appropriation*

Since the 1990s, "heritagisation" of the territories of Nunavik (northern Quebec) is increasing. Several national parks projects - which are also protected areas - are taking place to protect natural and cultural sites that are representative of Québec's landscapes and biodiversity, to promote local communities culture while offering economic development opportunities.

Involved in planning and management of these parks, Nunavik communities benefit from these opportunities to develop initiatives to promote a cultural heritage rooted in the territory: valorisation of culturally significant landscapes and local knowledge, creation of museums as well as place names projects, etc.

Beyond the issues associated with tourism and economic development, these actions could be also seen as a part of a reconfiguration process of local territoriality in response to the creation of these new spaces.

To understand what is happening upfront of these actions, the public consultation is a key moment in the social construction of the relationship with the new space created. Interventions during the public hearing processes permit not only identifying areas of convergences and divergences, pro's and con's but also to explore the social representations that are at the heart of the mechanism of social appropriation.

Through the example of Tursujuq National Park, we'll see how various local representations of the territory covered by the

park and local solutions proposed to address issues reflecting a desire to take ownership and invest it in a culturally significant way.

June 22, session 07.52: «Patrimonialisation» of Arctic Aboriginals' Territories. Promoting cultural heritage within protected areas

Bjørst, Lill Rastad (University of Copenhagen): *Climate testimonies and climate crises narratives: Inuit delegated to talk on behalf of the climate*

This essay challenges the use of climate testimonies in the international climate change debate. What is drawn upon in these personal experiences with the environment and how is it useful in a public, political or scientific context? An argument put forward in this article is that dominant climate crises narratives have framed the Greenlandic case in a certain way which consequently freezes arguments and possible agency. But at the same time as there is global framing of climate change and specific position in this narrative for 'local witnesses' there is room for an alternative empowerment and ways of engaging in and talking about global and local natures.

The empirical data analysed in this essay will focus on Greenlanders invited to the COP15 parallel event Climateforum09 in Copenhagen, December 2009 and their experiences with the venue and the dilemmas they confronted as both local and global witnesses. The overall argument is formed by Bruno Latours notions of being sceptical to the spokespersons (human or non-human) when it comes to politics of nature whether it is Inuit, NGOs, politicians, scientist est.

Keywords: Climate change, Greenland, environment, global, local, COP15

Blangy, Sylvie (Université du Québec à Montréal); **Avaala, Vera** (Baker Lake, Nunavut); **Hachey, Kiah** (Carleton University); **McGinley, Robin** (Cree Outfitting Tourism Association, Canada); **Labba, Britt-Marie** (Min Eallin, Övre Soppero, Sweden): *How collaborative research can improve community engagement in research projects: Tourism development in Eeyou Istchee, the Cree territory in Québec and Impact of mining on in Qamani'tuaq, Nunavut.*

Eeyou Istchee is the traditional territory and homeland of the Cree of northern Quebec. Situated in the James Bay area. The Cree Outfitting and Tourism Association (COTA) was established by the James Bay and Northern Quebec Agreement (JBNQA) in 1975, COTA's mission is to implement a vision for a world-class sustainable tourism industry. Community engagement in tourism has remained limited and few market-ready tours have been developed, despite considerable investment. A research partnership was built between a researcher and COTA. The researcher's goals were to test, adapt participatory research methodologies to Aboriginal contexts and look at ways to engage communities in tourism projects through collaborative research processes. For COTA the goal was to position Eeyou Istchee as a Cree tourism destination for external markets. Three participatory workshops of 3 days each were organized over the course of one year. With a group of 20 community tourism officers, we co-designed theme routes and packages, and assessed the market readiness of existing and potential packages. The process was seen as a way to learn how to design projects in a collaborative way. We used the approach and techniques developed by Chevalier and developed a tool kit specific to aboriginal tourism destination management. The routes are Cree trails used in the past and today for trading (fur), travelling (family visits), and healing purposes (with a focus on youth). They link the five coastal and four inland communities of the Cree homeland. This approach has since being used in other Inuit and Saami communities. We are describing how we built on the collaborative approach developed with the Cree to address the concerns of the Inuit of Baker Lake and how we linked the Caribou Inuit with the Saami reindeer herders of Northern Sweden and we partner with the private sector.

June 26, session: 02.65: Collaborative scenario building regarding mining, tourism, climate change and local livelihoods in the Arctic and sub-Arctic regions

Blangy, Sylvie (Université du Québec à Montréal); **Labba, Britt-Marie** (Min Eallin, Övre Soppero, Sweden); **Labba, Niklas** (Sámi Cultural Center, Tromsø); **Nutti, Nils Tornbjorn** (Nutti Sámi Siida, Jukkasjärvi, Sweden): *Aboriginal Ecotourism in the Arctic: a collaborative research project between the caribou Inuit and the Saami reindeer herders.*

Inuit and Sami communities are facing major environmental and economic changes due to global warming, mineral exploration, hydroelectric development, timber harvesting. Facing these challenges, the communities have similar concerns; sustain their traditional lifestyle, generate new jobs for the young ones, preserve the knowledge of the elders, regain and recapture their own culture and language.

The project aims at understanding how Aboriginal tourism can contribute to the well being of northern communities, preserve and enhance their traditional cultures, sustain their natural resources, and help community members face the challenges of

climate change and economic dependency. It is based on the hypothesis that northern communities in different geographic regions face comparable challenges and that a comparative analysis between such communities provides new insights on the possible ways to face them. For this, we are working in partnership with 2 communities, the Inuit Inland Caribou from Baker Lake in Nunavut and the Sami Reindeer Herder of Övre Soppero of Northern Sweden that share a traditional livelihood based on the same species Rangifer tarandus and similar challenges despite the differences in their ecological and socio economic context.

Collaborative research and social action tools developed by Chevalier (www.sas2.net) are being used to bridge scientific and community based knowledge, to explore future scenarios and models and nurture an Arctic aboriginal ecotourism network of practitioners. The project is promoting direct collaborations and exchanges between Inuit and Sami communities and produces new strategies for Aboriginal tourism development based on lessons learned from the stakeholders' collective experiences and new aboriginal research techniques and methodologies.

June 25, session 02.56: Tourism, People and Protected Areas in Polar Wilderness

Blangy, Sylvie (Université du Québec à Montréal); **Mitchell, Scott** (Carleton University); **Doubleday, Nancy** (McMaster University): *Indigenous Ecotourism: Connecting communities through participatory, integrated, open source, Web-based technologies and mapping*

Aboriginal tourism is developing all over the world. In a previous study, 183 case studies from 60 different countries were selected and compiled in a book [Blangy 2006]. We report on a project to connect the communities represented in that guidebook so that they could exchange information and the many lessons that were learned, as well as to promote them as tourist destinations. To accomplish this, with the help and guidance of a web programmer, a website was created (www.aboriginal-ecotourism.org) using a Content Management System called SPIP (spip.net) as its core engine, and incorporating a variety of integrated technologies. Google Maps™ was used to provide a visual connection for readers interested in the geographic placement of the communities. A web-based survey was developed in order to produce dynamic statistical data that could be interpreted in order to assess trends amongst the communities and translate the information provided in the narratives into statistical data. The map was combined with the survey to produce a visual guide for displaying similarities and differences between the many locations. The integrated discussion forums allow the contributors to add their thoughts and comments under a specific article. This development was possible because of a continuous dialogue between the researcher and the web programmer while working towards the end goal, which is to fully utilize the information provided in the guidebook with research purposes in mind and in a collaborative approach.

June 22-23, session 10.20: Data Management and Knowledge Stewardship: Perspectives and Practice from Communities and Researchers

Bockstoce, John R. (New Bedford Whaling Museum): *The maritime fur trade of the Western Arctic in the early twentieth century*

In 1899 the Nome gold rush created a town that grew to 20,000 persons in the first decade of the twentieth century. This great influx included a number of general merchandize store owners who also outfitted small vessels to engage in coastal trade. Ocean-going ships from Seattle and other ports began supplying Nome's merchants with foodstuffs, fuel, hardware, general merchandize, tobacco, and alcohol, and many other commodities. Some of these goods stocked a fleet of boats that sailed on fur trading voyages to the Alaskan coast, to western arctic Canada, and to the coast of Chukotka. These voyages, some of which lasted two years or more, contributed to profound changes in the lifeways of the Native inhabitants. In western and northern Alaska and in the western Canadian Arctic, for example, the Native population --much of which had hitherto been concentrated in several communities to work in the commercial whaling industry-- dispersed throughout the region to engage in trapping in response to a rise in the price of furs. This paper was inspired by the pioneering ethnohistorical research of Tiger Burch.

June 23, session 07.47: In the Footsteps of the Giants – Honoring Ernest S. (Tiger) Burch, Jr., 1938–2010

Borlase, Harry (Memorial University of Newfoundland); **Bell, Trevor** (Memorial University of Newfoundland); **Wolf, Johanna** (Labrador Institute): *Preparing for uncertainty: comparing the role of local governments in adaptation planning*

In the wake of increased environmental change, including climate change, adaptation planning has become a pressing issue for municipalities across the Arctic. A primary response by local governments to adverse effects caused by climate change has been through the development and implementation of adaptation strategies. These documents outline a variety of measures for dealing with current changes and give glimpses for future responses based on expected changes. They contain important

insights into how localities are preparing for social and economic change in the context of larger environmental change. The ways in which these strategies have been developed are unique and provide insight into the role of stakeholder representation, the science community and private companies in the planning process.

To date, there has been little research into comparing strategies in the Arctic. This presentation will present some of the different local strategies from a variety of the Arctic states, and consider how they differ in terms of content and process. It will also consider how the work of CAVIAR and other science consortium has helped in identifying effects and proposing adaptation plans. The study uses a policy process approach for identifying stakeholder involvement, as well as meta-policy observations for creating a context for looking at the documents' priorities and limitations. One of the primary findings has been the difference to which local governments have acted either independently (ex. Canada), or as part of a regional/national movement towards adaptation planning (ex. Finland). Such differences illustrate how adaptation planning is evolving, as well as certain limitations/opportunities on governments to prepare and respond accordingly.

June 25, session 05.28: Governing changes in the North

Borowitz, Michelle (University of Alberta): *Northern River Development: Hydroelectric Dams in the Mackenzie River Basin*

People from all societies and cultures have diverse and prolific ideas, values and uses for what is water. Such widespread features of water create universalities, shared reliance, and diverse interests that span boundaries, beliefs, and time. While some people receive sacred powers from the spirit of water, others will engineer its secular and practical powers by controlling water's economic and ecological aspects. Reflecting on human-water relationship, I began thinking of several broad research questions. What is the relationship between water and culture? What is the relationship between the way in which we understand water in the natural world and the kind of society we live in? What is the relationship between how we think about and use water and how we manage water as a resource, develop water policy, and apply water laws? Synthesizing these questions, my ethnographic research focuses on northern river resource development to explore the relationship between how Dene people think about and use a river, the established customs and values of water in specific social, economic, legal, and political contexts of northern river resource development. This conference paper will introduce northern river resource development in the Mackenzie River Basin, in particular W.A.C. Bennett Dam, proposed Site C, and Taltson Dam. It will examine the relationship between contemporary Dene people, hydroelectric corporation, and government institutions, and consider their relations to past hydroelectric projects in the Mackenzie River Basin, and to hydroelectric dam development in northern Manitoba and Quebec and more widely in the circumpolar north.

June 23, session 02.68: Social and economic impacts of megaprojects in the North

Brandišauskas, Donatas (Vilnius University, Centre of Oriental studies): *'Relying on my own two': Walking, Routes and Strength among Orochen-Evenki Hunters and Herders of Zabaikal'e (East Siberia)*

In the presentation, I will explore Orochen walking, sign-making and use of routes as being linked to powerful metaphors that reveal hunter's and herder's sense of belonging to the land. I will elaborate on the image of the 'Walking Tungus' (R. Peshyi Tungus), which was widely employed in a pejorative way in Imperial and early Soviet literature. Under the Tsar, Orochen-Evenkis were referred negatively as 'wanderers' but today Orochens consider their walking abilities to be their strength. Walking is, for them, both a means and a skill that is essential to hunting and herding activities. Hence, I will invert earlier negative images and replace it with the study of how the themes of pedestrian journeying and use of forest pathways provide central dimensions to the Orochen-Evenki worldview and moral code.

June 24, session 04.34: Movement for Pleasure – the Pleasure of Moving

Brewington, Seth D. (Graduate Center, City University of New York): *Human adaptation in the Norse North Atlantic: the settlement-period archaeofauna from Sandoy, Faroe Islands*

Twelve hundred years ago an initially homogeneous population colonized the offshore islands of the North Atlantic. During the early Viking Age (c. AD 800 – 1000) European settlers and domestic mammals and crops expanded from the north temperate islands of the Shetlands and Faroes into boreal Iceland and arctic Greenland. While these different islands shared similar vegetation and landforms, they reacted very differently to the impacts of human activity and climate change. This poster focuses on new zooarchaeological research into the historical ecology of the Faroe Islands, a set of small islands that provided both opportunities, such as a rich diversity of seabird and fish species, and challenges, such as a general scarcity of arable land.

Recent excavations at the site of Undir Junkarinsflótti, in the Faroe Islands, have revealed a substantial, well-preserved midden associated with a Viking-Age to Late-Norse structure. Preliminary analysis of the site's faunal assemblage has found evidence

for a domestic economy at Undir Junkarinsflótti that differs in several important ways from those seen elsewhere in the Norse North Atlantic, suggesting that the earliest Norse settlers of the Faroes quickly adapted their traditional farming-based economy to the unique environmental and ecological characteristics of their new home. In addition to the usual suite of domestic mammals, the Undir Junkarinsflótti assemblage suggests a substantial exploitation of local seabird populations. Fishing appears to have focused primarily on cod, the vast bulk of which seems to have been processed for export rather than on-site consumption.

June 24-25, Poster Sessions

Bronen, Robin (University of Alaska Fairbanks): *Rights and Resilience of climate-induced relocation of Alaskan indigenous communities*

Alaskan indigenous communities are at the forefront of climate-induced population displacement. Climate change is transforming arctic ecosystems and threatening the lives of the indigenous peoples who live along the navigable waters of Alaska's coasts and rivers. Disaster relief and hazard mitigation, the traditional humanitarian responses to extreme environmental events, are no longer able to protect communities in place despite spending millions of dollars on erosion control and flood relief. Relocation is the only durable solution to protect the inhabitants of these communities.

Determining which communities are most likely to encounter displacement requires a sophisticated assessment of a community's ecosystem vulnerability to climate change, as well as the vulnerability of its social, economic and political structures. Complex governance issues must be resolved in order to facilitate relocation. No United States federal or state government agency has the authority to relocate communities, no governmental organization exists that addresses the strategic planning needs of relocation and no funding is specifically designated for relocation. Despite these challenges, one Alaskan indigenous community, Newtok, is relocating. This session describes the work of federal, state and tribal governments to relocate Newtok, one of at least twelve communities that need to be relocated in Alaska due to climate change. The policy and practical issues to relocate the community have been enormous and clearly demonstrate that new governance institutions need to be designed that specifically respond to climate-induced relocation. This session describes the design and implementation of a unique adaptive governance relocation framework, based in human rights doctrine.

June 26, session 04.66: Relocation: State Inducements and Ideologies versus Strategies of Resistance and Response

Broz, Ludek (Max Planck Institute for Social Anthropology): **Habeck, Joachim Otto** (Max Planck Institute for Social Anthropology): *Changing habits of travelling in Siberia*

Introducing the session "Movement as Pleasure -- the Pleasure of Moving", we lay out the reasons for organising this session. We start by giving an illustrative (even though non-Arctic) example. Every Friday, from late spring to early autumn, hundreds of people from Novosibirsk, the largest city of Siberia, undertake an eight hours' drive to the Altai mountain range only to drive back on Sunday. Most of them, however, do not spend their time in Altai trekking in the stunning landscape. Rather, fuelled by alcoholic beverages, they oscillate between barbecue place and Russian sauna. Given that the three main components of such relaxation exist also in less distant places and in fact in Novosibirsk itself, we face here one of the ethnographic riddles that our current research project "Conditions and Limitations of Lifestyle Plurality" is dealing with. Why do people travel? What is the meaning of movement for them? Why are some places popular destinations while others are not? What role does travel play in people's lives and self-presentation? On what basis do they choose travel destinations? How have styles of travelling changed over the last 30 years? To address such questions our team has, among other tools, employed mobility biographies that we collect all over Siberia as well as photo elicitation interviews. In our paper we will introduce objectives of our fieldwork and some preliminary results.

June 24, session 04.34: Movement for Pleasure – the Pleasure of Moving

Bulgakova, Tatiana (Herzen State Pedagogical University of Russia): *The influence of climate change on the probable future decrease of the Jamal Nenets nomadic population*

The influence of climate warming upon reindeer husbandry encompasses such factors as weather instability and phenological shifts which negatively affect reindeer health and mortality rates, and consequently herder financial viability. These concerns have resulted in an increase in the proportion of settled Nenets relative to the nomadic population. The former herders comprise the most marginalized group within Jamal settlements due to lack of proper housing and employment. Climate driven reindeer mortality notably contributes to the formation of new social strata between the settled and nomadic groups of Nenets. One more stratum consists of the former herders, who continue living in tundra in chums, but no longer graze

reindeer, supporting themselves through fishing activity.

Managing the unfavorable natural conditions in the tundra demands a considerable increase in work, requiring corresponding increases in the number of herders. However the need for tundra based labor is undermined by a host of contrary policy and incentives. (The administration provided settlement housing for herders as an incentive to settle and cede their territories to industrial companies, encourages a change in value orientations, toward a settled life style, the schooling system does not support herders' children in learning about reindeer husbandry etc.). Recent climate changes, and associated threats to reindeer husbandry, are not properly acknowledged at a high level of governance and remain merely the topic for herders discussions. This is a considerable obstacle preventing the development of appropriate measures to cope with the negative consequences of climate change. All those factors can influence the continuing decrease of the Jamal Nenets nomadic population in future.

June 22-23, session 03.57: Community Adaptation and Vulnerability in the Arctic Regions (CAVIAR): Lessons and directions for future research

Byrne, Angela (History, National University of Ireland (Maynooth)/ Institute for the History, Philosophy of Science and Technology, University of Toronto): *Imagining the North: Science and Romanticism in the Subarctic, c. 1800–1830*

Early-nineteenth-century British concerns about the North related to scientific progress and the unification of the expanding Northern reaches of the empire. The North, a place of great scientific and economic interest, was constructed as a past in itself through the development of notions surrounding the Nordic origins of British people and society, leading to the scholarly construction or imagining of a 'greater North', stretching from Scandinavia, the northernmost reaches and Celtic fringes of Britain, across to Canada.

Published and unpublished narratives of the Subarctic by British men of science (particularly astronomers and cartographers) form part of the Romantic discourse. Themes contained within these narratives can appear contradictory – potential for development / preservation of (apparently) fast-disappearing ways of life; promulgation of Northern myths / gathering and presenting facts. However, a reassessment of our understanding of Romanticism can lead to a new appreciation of the mutuality of worldviews traditionally considered oppositional – Romantic aesthetic / scientific advancement; religion / enlightenment; objectivity / the picturesque. These discursive and aesthetic frameworks were not passive products of Romanticism, but rather contributed to the development of the Romantic in their own right as part of a greater cultural dialogue. Men of science travelling in Northern regions contributed to this dialogue through their conceptions, constructions and representations of the North. The apparently harsh Northern landscape was painted in parallel to the resilience of its peoples – characteristics admired, appropriated, and utilised in early nineteenth-century British self-fashioning on a national scale.

June 22-23, session 07.49: Practice Power North

Burke, Tracey Kathleen (University of Alaska Anchorage) **Renes, Susan L.** (University of Alaska Fairbanks): *Expanding access for indigenous students to the behavioral health workforce through distance education*

In this presentation, two university faculty from behavioral health disciplines describe and critique approaches to distance education in Alaska. The recruitment and retention of rural and indigenous Alaskans into the behavioral health fields (mental health, substance abuse, some disabilities) has been identified as a workforce priority for the state, and for the arctic. Technology has removed the limitations of time and space (Ke & Xie, 2009; Lawson 2007), and the number of students who can "attend" a college class has increased dramatically. Yet, the numbers of indigenous students in the behavioral health professions remains very low, while the number of indigenous clients receiving behavioral health services remains very high. Many factors contribute to this situation; in this presentation, we consider the ways faculty can make urban-based professional-degree programs more welcoming and accessible for place-committed indigenous students. Both presenters are actively engaged in curricular efforts toward these ends, and seek input from other scholars interested in systematically exploring the use of distance education strategies to expand the health workforce.

June 23-24, session 09.01: Schooling in the Arctic

Cameron, Emilie (Department of Geography and Environmental Studies, Carleton University); **Tester, Frank** (School of Social Work, University of British Columbia); **Hoogeveen, Dawn** (Department of Geography, University of British Columbia): *Governing Resource Extraction in Nunavut: Current Challenges*

This paper examines the Nunavut Land Claim Agreement (NLCA) and provisions dealing with resource extraction and the creation of Nunavut Tunngavik Incorporated (NTI). Operating within a corporate structure, NTI is charged with overseeing

the implementation of the NLCA and with ensuring that the rights and benefits flowing to Inuit, as outlined in the Agreement, are secured. Our focus is on the complex and potentially contradictory roles and responsibilities for NTI and the regional Inuit associations in the economic development of Nunavut. These organizations derive monetary benefit for beneficiaries from resource extraction. At the same time they have a mandate to protect Inuit rights and culture. Where resource extraction has implications for Inuit rights and culture, these potentially conflicting roles may limit NTI's ability to fully address both priorities. The paper outlines the roles and structures of the NLCA and of NTI and the trust created to receive financial benefits from mining and development activities, with particular emphasis on the ways in which various provisions in the agreement govern resource extraction and the distribution of resource royalties. We highlight recent debates in the territory around potential uranium extraction and its social, cultural, and environmental implications, with emphasis on concerns raised by beneficiaries about the limitations of the current resource governance system.

June 23, session 05.67: Consultation in Arctic Extractive Industries Development: Lessons learned for Arctic resource governance from the local to the international level

Canales Languasco, Marilú Beatriz (Chaire de Recherche sur la Condition Autochtone du Canada, Université Laval): *Beyond the differences: the parallelisms between the context of Amazonian and Arctic peoples. Strategies for breaking out of poverty*

Sixty percent of Peru is comprised by the Amazon. Its population is composed by the urban dwellers of not very large cities and by rural groups that live from the forests. These are diverse ethnic groups, each with their own language, worldview and cultural patterns. The immigration of indigenous Amazonians to the cities represents new challenges, dilemmas and cultural shock for the indigenous population in its increasing contact with Occidental culture. So it's possible to draw comparisons between the Amazonian peoples and the peoples of the Arctic. The traditional activities, such as hunting, fishing, food gathering and the use of natural resources are a sample of the close emotional and material relationship that the inhabitants of the jungle have with their natural environment, the Amazonian tropical forests, threatened by global extractive economic activities, such as logging, and oil and gas exploitation, often carried out, just as in the Arctic, by large international corporations. Thus, the life of many families continues in this intercultural context marked by the predominant poverty of the region, the high cost of life caused by geographic isolation and the constant threat of cutbacks of the state subsidies. In spite of the obvious differences between the Arctic and the Amazon there are significant similarities between the experiences and problems of their peoples. The families have to develop strategies for coping while many of their original customs are lost or questioned. One of the most notorious strategies of families of urban marginal areas to try to break the cycle of poverty is to bet on the education of their sons and daughters. In a context of fight against poverty it is pertinent to observe what family or community strategies are developed by the Arctic and the Amazon peoples in order to attempt to break the cycle of poverty.

June 26, Session 03.75: Living conditions and well-being

Capelotti, P.J. (Penn State University, Abington College): *The Archaeological Site in Arctic Tourism: A century of tourists at the Wellman, Baldwin, and Fiala base camps in Svalbard and Franz Josef Land*

Between 1894 and 1909, seven American polar expeditions created a substantial body of archaeological remains in the European and Russian Arctic. These expeditions included some of the most interesting attempts to reach the North Pole in the history of polar exploration and, as such, left behind some of that history's most interesting archaeological assemblages. These include two shipwrecks (one each in Svalbard and Franz Josef Land); three balloon inflation sites (one each in northeast Greenland, Svalbard, and Franz Josef Land); the remains of two airships in Svalbard; innumerable balloon buoy communication devices scattered across the Arctic; and numerous base camps, temporary shelters, relief stations, supply depots and scattered and isolated artifacts.

The remains of these expeditions have become fixtures in the Arctic cultural landscape. Those that are accessible have become regular visitation places for Arctic tourists; one of the sites was a tourist destination even before it was abandoned. This paper explores how these remains entered the archaeological record and became, in vastly different ways, a part of the regular agenda of polar tourism cruises and the subject of varying levels of study and protection by cultural resource management regimes. It suggests ways to both improve the tourist experience on these sites and at the same time contribute to their preservation and further study.

June 22-23, session 10.22: Claims on Sites and Knowledge in Cold Regions. Material and Immaterial Constructs of Nature, Nations and Industry

Carothers, Courtney (University of Alaska Fairbanks): *Enduring Ties: Salmon and the Alutiiq Peoples of the Kodiak Archipelago, Alaska*

For over 7,000 years the maritime peoples of the Kodiak Archipelago have made their living almost entirely from the resources of the sea. Over the course of the last century, market and subsistence production have supplemented each other in village-based sufficiency economies. In recent decades, the widespread enclosure of fisheries has prohibited flexible commercial engagements, and instead necessitated specialization and large-scale capital investments. The alienation of local resource rights and the globalization of salmon aquaculture are major drivers of decreased salmon fishing engagements in small coastal communities across the region. In the Alutiiq case, economic dispossessions (e.g., the ability to make income from salmon) outpace cultural change (e.g., the dominant imaginaries that communities are still fishing villages). While Alutiiq economies have shifted from salmon dependence, Alutiiq ecologies, cultures, and identities very much embody the close connections to salmon and marine resources. The recent economic disconnections of Alutiiq communities and the resources of the sea have profound impacts of the future of these ecologies, cultures, and identities. Drawing on archival and ethnographic research, this paper explores the major waves of social and cultural change in Alutiiq communities paying particular attention to the shifts caused by the capitalization and subsequent limitation of Alaska salmon fisheries. Using the concept of difference, I explore the alternative economies of earlier periods and the nature of the enduring ties between Alutiiq identities, cultures, places and salmon.

June 22, session 02.25: Salmon Fishing and Whaling Peoples of the North Pacific

Cavin, Philip A. (University of Northern Iowa); **Petrov, Andrey N.** (University of Northern Iowa): *Analyzing Dynamics of Creative Capital in the Canadian North (1991-2006)*

Studies into creative capital have demonstrated its importance for economic development in various regional settings. In particular, recent research has shown that creative capital is also an important factor in the development of economy in peripheral regions, including the Arctic. Existing studies confirm that creative capital is present (albeit not evenly distributed) across the Arctic regions and communities. However, there is still a very limited knowledge about the dynamics of creative capital over time and space.

This paper looks at the spatiotemporal dynamics of creative capital in the Canadian Arctic. It uses a four group occupation-based approach to identifying creative capital (including Leaders, Scientists, Bohemians, and Entrepreneurs). It also considers other creative class metrics, such as the Talent index as well as measures of community attractiveness. All utilized metrics have been previously developed and tested in the Arctic. The analysis was based on Census data 1991-2006.

The results show that geography of creative capital has been changing over the time span analyzed, and that the change was related to economic cycles in the North. Overall, the patterns were rather stable with territorial capitals having higher concentration of creative capital (except for Bohemia). Observed spatial dynamics was uneven throughout the Canadian Arctic communities, with a generic trend of increasing creative capital in larger communities and capitals. There were also signs of the economic downturn of the 1990s. In addition, we analyzed spatial and temporal trends in attractiveness indicators and identified correspondence between the latter and the change in creative capital.

June 22, Session 07.21: Living in the Arctic: a Creative Providence for the Global Challenge & Session 07.29: Arctic Creative: Building Arctic Futures through culture, innovation, and creativity

Chambers, Catherine (School of Fisheries and Ocean Sciences, University of Alaska Fairbanks); **Carothers, Courtney** (University of Alaska Fairbanks): *Oral History of Fisheries in Alutiiq Communities on Kodiak Island, Alaska*

Several prominent shifts throughout time have affected the ability of Alutiiq fishermen on the Kodiak Archipelago in Alaska to participate in commercial fisheries. Regulatory changes such as the limitation and commodification of fishing rights have occurred in conjunction with other technological, environmental, and economic transitions. Previous research suggests that the transitions experienced during the 1950-1970's were particularly important for evaluating more recent shifts from the 1970's through the present. Therefore, it is important to understand the specific histories of those involved in fishing to obtain a holistic view of the transitions in commercial fishing on Kodiak. Here, we use an oral history framework to document and explore individuals' personal fishing participation histories and the relative importance of the different changes experienced in several important time periods. We focus on all the different aspects encompassing the histories of Alutiiq fishermen, such as commonalities in lived experiences, variations in life paths, and trends in opinions and insights regarding participation in fisheries over time. This research also investigates individuals' perceptions of shifts in their home communities related to commercial and subsistence fisheries during the course of their lifetimes with special reflections on childhood and youth

experiences.

June 23, session 02.36: Northern fisheries: managing income, nutrition and cultural values

Chartier, Daniel (Université du Québec à Montréal): *The “North” and “the idea of Iceland”: contemporary cross-cultural construction of representations of Iceland*

In this conference, I would like to study a cross-cultural and cross-disciplinary process that leads to the creation of some new artistic representations of Iceland. This process began with an academic conference about the images of the North and the production of children’s drawings about the idea of the North which resulted in the creation of a book of fiction by a Québec author, Lise Tremblay, and its translation into Icelandic. This study highlights the relationship between research and artistic creation, and the nature of stereotypes and clichés about the North, the Arctic, and Iceland, and the relationship between the national and universal content of the images produced.

June 22-23, session 07.49: Practice Power North

Chemko, Ericka (Inuit Heritage Trust Inc.): *Heritage Training In Nunavut*

The Inuit Heritage Trust is dedicated to the preservation, enrichment and protection of Inuit cultural heritage and identity embodied in Nunavut's archaeology sites, ethnographic resources and traditional place names. The Trust's activities are based on the principle of respect for the traditional knowledge and wisdom of our Elders.

The Inuit Heritage Trust receives its mandate from the Nunavut Land Claims Agreement, the largest aboriginal land claim settlement in Canadian history, signed in 1993. In Nunavut, IHT represents Inuit interests in issues that relate to heritage, archaeology, ethnographic resources, traditional place names and spiritual places. IHT began researching the creation and implementation of a territorial-wide training program for heritage workers in 2005 – Nunavut Heritage Training Plan (NHTP). Training was seen as one of the greatest ways to overcome barriers that existed in our heritage sector (Heritage Sector Strategy, 2005 and 2010). As a result, we’ve developed a training program that groups modules together to balance learning with the high costs of travel, fosters cross-Nunavut networking, connecting heritage workers to professionals in the south and developing a Train-the-Trainer mentorship so that successful graduates become the next generation of trainers and hopefully heritage leaders. In addition to the NHTP IHT also runs other programs aimed at fostering the next generation of Inuit heritage leaders. We have a Mentorship Program (archaeology), Alain Muktar Heritage Scholarship and Heritage Leadership Program. We’d like to share what we’re doing, learn what other jurisdictions are doing and to potentially explore partnerships.

June 23-24, session 09.01: Schooling in the Arctic

Christensen, Suna (Roskilde University, Educational Studies): *Pedagogical practices applied in and out of formal institutions in Arctic Greenland*

On the basis of ethnographic fieldwork among caregivers in Arctic Greenland in the period 2008-2010 this paper from an anthropological perspective discusses the possible impact different pedagogical practices has for children’s achievements in the formal educational system.

Questions that will be addressed in this paper include:

- What kinds of different pedagogical practises can be recorded in and out of formal schooling institutions in arctic Greenland (especially concerning children 2-6)?
- How does a specific pedagogical practise preempt specific notions of child / person and does it possibly have a critical impact on school experiences?

June 23-24, session 09.01: Schooling in the Arctic

Churikova, Victoria (Novosibirsk State University); **Salomatina, Natalya** (Sobolev Institute of Mathematics): *Automatic creation of bilingual (English-Russian and R-E) dictionaries and data bases on the example of social sciences subject domain*

People have been writing or compiling dictionaries for years, sometimes for centuries. Nowadays we all can use on-line dictionaries, and it is very convenient. But ready-made dictionaries are not always good for our own purposes, especially in the narrow field. In the case when several fields are overlapped, it becomes a serious problem.

When we say “social sciences”, different things are included: archeology, linguistics, anthropology and others...the list is open. You may add your fields of interest or as we say in IT, subject domains.

1. Normalization

Words exist in different forms in the text or speech. To insert them into the dictionary we have to normalize them, that is to put into canonical (initial) form with indication of grammar indices (indexing codes). It is especially important for Russian as it contains many different forms of words. So, if we begin the process from the Russian texts, normalization is difficult and obligatory. In English we have no inclinations, conjugations, so it is much easier.

2. Analogy

When this data base is formed we face the problem of enrichment our dictionary automatically. Shortly the process is the following: first the machine is looking for the word or word combination in the existing data base, if there is no, it fulfills the procedure by analogy. The result is normalized word combination with indexing codes. Statistical analysis and L-gram spectrum procedures simply provide a procedure of word combinations selecting. As a result we may obtain new terms' combinations automatically. The final decision is made by a human being and manually. Still there is a lot of routine manual work. At the moment it is inevitable. But as the new programs will be written it will become easier and more automatic.

3. Translation and abstracting

Machine translation has already required bad reputation. But half-machine (with post-edition) translation gives good and quick results. If we have this data base of terms and word combinations, we will easily translate new texts from English into Russian and from Russian into English. Any other pair of languages may be based on the same technique. With the help of these techniques we may also abstract big papers automatically or half-automatically.

June 22-23, session 10.20: Data Management and Knowledge Stewardship: Perspectives and Practice from Communities and Researchers

Churikova, Victoria (Union of Itelmen Families): **Nawei, Shen** (School of Mechatronics Engineering, Harbin Institute of Technology): *Ecotourism in Kamchatka. A first attempt of collaboration with Chinese*

I am going to talk about eco-tourism in Kamchatka and the new recent trends in it. Tourism is developing in Kamchatka, but not so fast and efficient as it is desired.

So, collaboration with China and Chinese seems to be perspective trend as China is the third biggest country in the world after Russia and Canada and the most numerous. Besides, it is the Russia's neighbor.

This summer we made the first attempt, and Shen Nawei came to Kamchatka with his first visit to explore the new area and map new itineraries, mostly in the South of Kamchatka. With the help of professional local guides Nevin visited Mutnovsky volcano, Paratunka thermal springs and outlined with them the future programme. We are planning winter and spring skiing activities as well. And all these kinds of activities will give more working places for local people both in summer and winter. Video show at the end of presentation.

June 24, session 02.26: How can small, peripheral places profit from the booming tourism in the Arctic?

Clark, Douglas A. (University of Saskatchewan): *Polar Bear Social Science: is anybody listening?*

Polar bears have become the most widely-recognized symbol worldwide in efforts to combat climate change. Concurrently, there has also been a notable increase in social science research on polar bear-related topics from a variety of disciplines. Main themes of this body of research include: traditional ecological knowledge about polar bears; polar bear hunting and its economic, social, and cultural benefits for indigenous people; the political and policy dimensions of polar bear management; and polar bear tourism. Yet despite this surge of research effort, polar bear conservation institutions and the public discourse are still dominated by biological science and scientists. There appears to be little room at the table for social scientists, despite what many see as the evident value of such work. Why is this so? Analysis of the social context of polar bear conservation suggest a number of factors including widely-held narratives about science, accumulated power in established polar bear conservation institutions that have enjoyed a history of apparent success, enduring tensions in Aboriginal-state relations, scientific tribalism, and easy scapegoating due to the politicization of climate change. Social scientists must confront all of these challenges if their work is to realize its full potential for informing and transforming the process of polar bear conservation.

June 26, session 05.38: The Art and Science of Governing: politics and policy in the polar bear regime

Collings, Peter (University of Florida); **Pearce, Tristan** (University of Guelph): *The Community of Food Sharing in Ulukhaktok, NT*

This paper examines the community-wide food sharing in Ulukhaktok, NT, Canada. During 2008, Ulukhaktomiut were asked to report on networks of food exchanges with other households in the community. Of particular interest were exchanges of country (hunted) food, sharing of meals, and exchanges of money. Preliminary analysis of these food and resource networks using Ucinet/Netdraw suggests some important trends in the construction and maintenance of sharing relationships between households. One important trend is the apparent decline of the “traditional” Copper Eskimo pattern, which emphasized the primacy of social and economic ties with age mates at the expense of ties with more senior households. In the contemporary settlement, food and resource exchanges tend to be restricted to extended-family household groups – known and referred to elsewhere as the *ilagiit*, with senior households acting as the nexus of social relations. The paper examines contemporary network patterns in the context of significant social- structural changes to the community over the past three decades while considering contemporary notions of community and settlement.

June 25, session 03.60: The social economy of sharing in the North American Arctic

Colombi, Benedict J. (University of Arizona): *Coping with Surprises: Indigenous Peoples and Cultural Capacity*

Cultures continually face unpredictable ecological and economic events, and some of these are outside the range of human experience. Knowledge, sovereignty, and leadership are strengths for achieving adaptive capacity and include cultural traits that the Nez Perce Tribe have used to adapt to four recent unexpected shifts since A.D. 1700 that include: (1) the introduction of the horse; (2) the coming of European settlers and the 1855 Treaty negotiations to allocate homelands and salmon; (3) dam building beginning in the 1930s; and, (4) salmon restoration programs after the Pacific Northwest Electric Power Planning and Conservation Act of 1980. Each of these adaptations show Nez Perce adaptive capacity to cope with and adapt to unforeseen change. The Nez Perce experience is used to move beyond ecological concepts of resilience and sustainability and discuss cross-cultural examples from the ethnographic literature to reveal both good and bad examples of indigenous response to abrupt and unforeseen change, leading to either adaptive success or, ultimately, collapse.

June 22, session 02.25: Salmon Fishing and Whaling Peoples of the North Pacific

Cunsolo Willox, Ashlee (University of Guelph); **Harper, Sherilee** (University of Guelph); **Edge, Victoria** (University of Guelph); **the Rigolet Inuit Community Government:** *"Green Christmas, Full Graveyards:" Understanding the Mental and Emotional Impacts of Climatic and Environmental Change in Nunatsiavut, Canada*

For Canada’s Inuit populations, the landscapes surrounding communities, and land-based activities such as hunting, fishing, trapping, and travelling to cabins, contribute greatly to mental, emotional, and spiritual health and well-being. Climatic and environmental change and variability, however, are altering local ecosystems, and as a result, it is becoming increasingly challenging for many Inuit to continue to practice land-based activities. These changes in weather, ice, and snow directly affect the lives of Inuit, and hold significant implications for mental and emotional well-being.

While there is a burgeoning field of research examining climate-health relations, few studies consider the implications for mental and emotional health and well-being. Yet, from data gathered as part of a large-scale, multi-year, community-driven, capacity building project in Nunatsiavut, Labrador, Canada, it is clear that the emotional and mental consequences of climatic and environmental change are of increasing concern and importance to Northern residents. Nunatsiavut Inuit have shared that these changes are altering local ecologies in myriad ways, and as such, elicit feelings of anxiety, sadness, depression, stress, fear, anger, and lament for having connections with the surrounding ecologies change at a rapid, and often disorienting, pace.

In order to address this important aspect of health, and drawing from interviews with over eighty community members and public health representatives from throughout Nunatsiavut, Canada, this presentation will discuss the emotional and mental impacts of climatic and environmental change in Inuit regions. Implications on Northern health systems and workers will also be considered, and avenues for future research will be discussed.

June 22-23, session 06.40: Best practices for community engagement in health promotion research and population health practice - lessons from the North

Cunsolo Willox, Ashlee (University of Guelph); **Harper, Sherilee** (University of Guelph); **Edge, Victoria** (University of Guelph); **the Rigolet Inuit Community Government:** *Changing Climate, Changing Health, Changing Stories: Climate-*

Health Research and Promotion in Rigolet, Nunatsiavut, Labrador, Canada

In 2009, and understanding that changes in the land, snow, and ice directly impact health and well-being in Inuit communities, the Rigolet Inuit Community Government in Nunatsiavut, Labrador, Canada began a multi-year community-driven, participatory, storytelling project which examined climate-health relationships. Funded by Health Canada's First Nations and Inuit Health Branch, the Nasivvik Centre for Inuit Health and Changing Environments, and the Nunatsiavut Department of Health and Social Development, the community of Rigolet worked with social science researchers and epidemiologists to gather data about climate change in the region, the climate-health relationship, and current and possible adaptation strategies. This project utilized in-depth interviews, focus groups, a population survey, a community-wide questionnaire, and digital storytelling to gather this data collaboratively with the community. Through this process, Rigolet residents expanded research capacities and increased confidence to independently examine and study climate-related issues. This poster will present results from the observed changes in climate and environment by Rigolet residents, and the impact of these changes on human health and well-being. Specific emphasis will be placed on food security, water quality and access, changes in vegetation and wildlife, and changes in ice and snow conditions, as well as the mental, emotional, and spiritual impacts of environmental change. Information will also be provided about the emergence of the My Word: Storytelling and Digital Media Lab in Rigolet, and the opportunities for community-based research and capacity building programs this centre can provide to Northern communities, researchers, and policy makers.

June 24-25, Poster Sessions

Cunsolo Willox, Ashlee (University of Guelph); **Harper, Sherilee** (University of Guelph); **Edge, Victoria** (University of Guelph); **the Rigolet Inuit Community Government**: *'We are People of the Ice': The Connections between Land and Sea Ice, Health and Well-Being, and Adaptation for Inuit in Nunatsiavut, Labrador, Canada*

Throughout the Circumpolar North, Inuit have experienced rapid change and variability in the quality, stability, and abundance of sea and freshwater ice in and around their communities. These changes are directly impacting the ability of Inuit to hunt, fish, trap, and travel; as a result, it is becoming increasingly difficult for individuals to continue to practice socio-cultural activities that rely on ice formation throughout the winter months. In addition to disruptions in socio-cultural activities, Inuit have also reported clear linkages between the quality and stability of the ice, and their physical health, as they are not able to travel as regularly (if at all) on the ice, hunt wild meat, or participate in activities that require physical activity. The level of travel risk has also increased, with significant implications for personal safety. Additionally, there are also increased ice-related mental and emotional health impacts for Inuit. From research gathered as part of a multi-year, community-driven project situated in Rigolet, Nunatsiavut, Canada, community members have reported that there have been dramatic alterations in sea and freshwater ice quality, stability, reliability, and safety. These changes are causing distress, anxiety, fear, depression, sadness, and anger in the community—responses that directly impact on mental and emotional health and well-being. Drawing from Inuit voices and lived experiences in Nunatsiavut, this presentation will describe how changes and variability in ice directly impact the physical, mental, and emotional health and well-being of Inuit, and discuss the subsequent implications for individual and collective adaptation strategies and future research.

June 24, session 01.27: The Human Dimensions of Change to Arctic Sea Ice

Crate, Susan A. (George Mason University): *Viliui Sakha Perspectives on Changing Seasonality in Northeast Siberia, Russia*

This paper explores some of the preliminary results of the project PHENARC, a collaborative interdisciplinary effort to understand how local communities are affected by, perceiving, and responding to changing seasonality due to unprecedented climate change. The author's experience to date is partnering with Viliui Sakha communities, Turkic-speaking horse and cattle agropastoralists of northeastern Siberia, Russia, who are witnessing the disruption of their subarctic ecosystem due to changing seasonality on several levels. The paper discusses results of a questionnaire pretest and the resulting instrument to be used in both the original communities and also in four communities in Labrador/Nunatsiavut Canada in summer 2011. Additionally, the paper discusses how local Viliui Sakha residents are recording their daily observations of seasonal change, thereby defining linkages and interactions between varying components and processes of the arctic system that relate to changing seasonality and developing important local monitoring networks to establish how changing seasonality is affecting their physical and cultural adaptations to their environment. Lastly, the paper explores how these local activities work to build adaptive resilience by creating knowledge bridges amongst inhabitants and making them more able to respond as a community in future times of uncertainty. The project is founded on the PI's twenty years of ongoing research and work with Viliui Sakha communities and on her fluency in both the Sakha and Russian languages.

June 22, Session 01.46: Circumpolar Perspectives on Changing Seasonality in the Arctic

Crump, John (UNEP/GRID-Arendal); **Germano, Christine** (Constant Arts Society) and students from Alaska, Greenland, Norway, Nunavut, Fiji, Tuvalu, Marshall Islands, Kiribati and the Seychelles: *Portraits of Resilience – Youth picture climate change in the Arctic and Small Island Developing States*

There is much discussion about “engaging youth” who are affected by climate change at the UNFCCC negotiations. The Portraits of Resilience photography project does this in a concrete way. As part of the Many Strong Voices Programme (www.manystrongvoices.org), it illustrates the human dimension of climate change through the words and photographs of children in Arctic communities in Alaska, Greenland, Norway and Nunavut, Canada. It also presents work from students in Fiji, Tuvalu, Marshall Islands, Kiribati and the Seychelles. Students in the Arctic and Small Island Developing States are linked by the fact that they live in regions experience rapid climate change. Their voices need to be heard.

The goal of the project is to give these young people a voice in the United Nations Framework on Climate Change (UNFCCC) negotiations – and to put a youthful, human face on climate change. The main message in this work is that people in the Arctic and Small Island Developing States are not helpless victims of climate change. If anything, the students’ work shows that youth have a profound sense of place and a strong desire to see their cultures and communities survive and thrive.

Portraits of Resilience opened in Copenhagen in December 2009 at the National Museum of Denmark and has shown at the Winter Olympics, in Norway and is now at Field Museum of Natural History in Chicago. This multimedia presentation will showcase the work of students who, though distant geographically, are on the frontlines of climate change.

June 24, session 08.23: Creative Circumpolar Collaboration across Cyberspace in the Arts and Sciences

Crump, John (UNEP/GRID-Arendal); **Johl, Alyssa** (Centre for International Environmental Law, Washington DC); **Kelman, Ilan** (Center for International Climate and Environmental Research, Oslo (CICERO)): *Moving the Most Vulnerable: Climate Change, Human Rights and Forced Relocation in the Arctic and Small Island Developing States*

In December 2010, the UNFCCC COP 16 negotiations concluded with a set of decisions that reflect marked progress with respect to human rights protections. For the first time, final text “emphasizes that Parties should, in all climate change-related actions, fully respect human rights.” In addition, Parties recognize that the “adverse effects of climate change have a range of direct and indirect implications for the effective enjoyment of human rights.” This reference recognizes that the adverse effects of climate change will be felt most acutely by those segments of the population that are already vulnerable.

In 2007, the 4th Report of the Intergovernmental Panel on Climate Change identified the Arctic and Small Island Developing States (SIDS) as two of the regions most vulnerable to rapid climate change. IPCC IV also pointed to the potential for mass migration and relocation due to climate change. In the Arctic and SIDS, discussions are already underway about relocating communities. Such moves raise important questions:

- What is the relationship between human rights, indigenous rights and relocation?
- What happens to people’s rights to land, culture, identity, and citizenship when they are relocated?
- What criteria/guidelines need to be developed to protect peoples’ rights?
- How is it possible to ensure that communities are involved in making relocation decisions?

This paper will argue for the need to (i) develop guidelines to apply when relocating communities due to climate change and (ii) to have these guidelines implemented through the UNFCCC framework.

June 26, session 04.66: Relocation: State Inducements and Ideologies versus Strategies of Resistance and Response

Csonka, Yvon (Swiss Federal statistical office): *Inuit history, emic and etic*

The method Tiger Burch developed to reconstruct the history and past ethnography of Arctic indigenous societies will probably remain as one of the most influential among his many contributions to the anthropology of the Arctic. Burch went against stereotypes when he affirmed and demonstrated that Inuit oral testimonies could be at least as trustworthy as the written sources which are the mainstay of historians. On the basis of the method he devised to elicit and evaluate such testimonies, he produced amazingly detailed histories and historical ethnographies of Inuit societies in North Alaska and West Hudson Bay during the past century and a half. In this paper, I re-visit Burch’s and my own contributions to the ethnohistory of the Caribou Inuit—which was closely inspired by Burch—and discuss them in the context of the subsequent discussions, among anthropologists and Inuit, regarding the contrasts between emic and etic views of Inuit past.

June 23, session 07.47: In the Footsteps of the Giants – Honoring Ernest S. (Tiger) Burch, Jr., 1938–2010

Cudmore, Danielle Marie (Cornell University): *Dust and Other Wonders of the North: Economy, Ecology and the Literary Imagination in Phillip Pullman's The Golden Compass*

In this paper I explore how young-adult author Phillip Pullman explores the “instrumentalization” of the North in his popular novel *The Golden Compass*. To create the world of *The Golden Compass*, Pullman uses stock “Northern” images, including polar bears, snow queens, the Northern Lights, and an abundance of Arctic ice, which distinguish the North as Other and dangerous if not downright supernatural, but often inverts their typical symbolic valence. In doing so, Pullman creates dialogue with the imaginative instrumentalization of the North by other modern fantasy writers, most notably Tolkien and Lewis. By setting his narrative in an alternate world resembling Victorian or Edwardian England (an era of increased interest in imaginative, economical and political exploration and exploitation of the Arctic), Pullman engages the historical context of such stereotypes. Thus Pullman’s usage is simultaneously conventional and unorthodox, and while he treats the North in an instrumental fashion similar to previous writers he challenges this instrumental view by breaking down the symbolic foundation upon which it rests. Thus, *The Golden Compass* can be read not only as literary narrative, but an exploration of the discursive creation of North.

By discussing Pullman’s self-conscious engagement with the North in imaginative literature, this paper in a larger sense explores the parallel economic and imaginative instrumentalization of the Arctic and the creation of this deeply entrenched mode of thought that persists into the present day, from environmental policy to imaginative literature.

June 24-26, Session 07.32: Imagining the Supernatural North

Cunsolo Willox, Ashlee (University of Guelph); **Harper, Sherilee** (University of Guelph); **Edge, Victoria** (University of Guelph); **the Rigolet Inuit Community Government**: *Storytelling in a Digital Age: Digital Storytelling as a Critical Indigenous Method for Climate-Health Research*

For Canada’s Northern regions, climatic and environmental change pose significant challenges to the physical, mental, emotional, and spiritual health and well-being of residents. Inuit communities are particularly vulnerable to environmental changes, as many continue to live lifestyles closely tied to, and reliant upon, the natural environment.

Understanding the significance of the climate-health connection, the Rigolet Inuit Community Government in Nunatsiavut, Labrador, Canada, led a multi-year, community-based, capacity development and storytelling project, which examined the impacts of climate change on human health and well-being. The community of Rigolet partnered with a transdisciplinary team of social science researchers and epidemiologists to use digital storytelling to gather stories and data about climate change in the region, climate-health relationships, and impacts on cultural identity and livelihoods. These ‘digital dialogues’ formed an innovative and powerful platform for engaging participants, and for understanding the impacts of climate change on health in Inuit communities. Digital storytelling also emerged as a critical indigenous research method, capable of creatively engaging individuals and communities in the research process.

This presentation will discuss the process of using digital storytelling as a critical indigenous research method. Examples of the digital media created through this project will be screened, followed by a discussion of using participatory digital media not only to conduct research about climate-health relationships in Inuit communities, but also to create culturally-relevant health media. The creation of the ‘My Word: Storytelling and Digital Media Lab’—the first Northern centre dedicated to using digital media in Northern research—will also be discussed.

June 22-23, session 06.40: Best practices for community engagement in health promotion research and population health practice - lessons from the North

Dahl, Justina (Stefansson Arctic Institute/The European University Institute): The Arctic of “the other Arctic five”

The Arctic is undergoing a new politicization. This means that it is under increased international attention and that the actors interested and present in the region are in need to yet again define and justify their role and identity in its governance and utilization. One of the characteristics of this new politicization is that it is mainly focused on the Arctic Ocean, and not so much in the whole of the Arctic Council defined “Arctic”. One implication of this narrowed focus is that since the Ilulissat Declaration in 2008 the term “Arctic five” has come to challenge the 1996 established “Arctic eight” referring to the five littoral Arctic states: Canada, US, Russia, Denmark/Greenland and Norway. While a catchy term for headlines like its frequently occurring companion, “the race to the Arctic”, I argue in my paper that another group of five within the Arctic eight would offer a more comprehensive and constructive viewpoint to the challenges lying ahead in the Arctic, and that is the one consisting of the five Nordic states. The paper shows through the introduction of the Arctic politics of the five Nordic states how, due to their varying geographic positions as well as the economic, security and political alliances that these five states have chosen to take part in, they bring into the picture not only the other three Arctic states but as well many other significant

inter- and nongovernmental actors with interests in the governance and securitization of the Arctic. The unique peaceful cooperation between these states is also used as a reference point in the contemplation on the arrangement of the governance of the new Arctic emerging from the frost.

June 25-26, session 05.35: The Political Organization of Arctic Space

Dalmannsdottir, Sigridur (Bioforsk - Norwegian Institute for Agricultural and Environmental Research); **Kvalvik, Ingrid** (Nordland Research Institute); **Uleberg, Eivind** (Bioforsk): *The complexity of changing seasonability and the consequences for agriculture in Northern Norway*

Agriculture, as a primary industry, is directly dependent on natural conditions and therefore vulnerable to changes in climate. Even though the greatest increase in relative warming are taking place in the northern areas, the consequences for agriculture in this region are not straight forward, but dependent on the seasonability of changes and the interaction of different weather and biological elements. In this interdisciplinary study we have, based on downscaled climate change scenarios and interviews with local farmers in the three northernmost counties in Northern Norway (lat.65.5° to 70°), assessed biological and agronomic affects of climate change (and also their interaction with political, economic and social factors). The effects on agriculture can be both negative and positive. A critical factor seems to be when the different weather conditions occur and how it interacts with others factors. For example, increased temperature in the summer may increase harvest, while increased temperature in winter may lead to more frequent freeze-thaw cycles causing winter stress. Increased precipitation during spring and summer may be positive, while increased precipitation in the autumn will lead to harvesting difficulties. The downscaled climate scenarios and interviews with the farmers show big local variations, both in climate changes and their effects. For instance, earlier spring might not lead to earlier growing season if a cold winter with little snow has caused deep layers of frozen ground. The possibility of introducing more productive crops because of higher temperatures and longer growing season might be hampered by more unstable winters which increase winter damage to these plants. The challenges facing farmers in this area is therefore complex. In addition to long term climatic changes, the farmers also have to adapt to greater fluctuations in weather conditions between seasons and years.

June 22, Session 01.46: Circumpolar Perspectives on Changing Seasonality in the Arctic

Dannevig, Halvor (CICERO - Centre for International Climate and Environmental Research – Oslo); **Hovelsrud, Grete K.** (CICERO): *Fisheries management and community vulnerability in Lofoten*

Natural resource dependent communities in the north are highly exposed to natural variability and change to the resource base and climatic and social conditions, but not necessarily vulnerable. This paper examines the vulnerability/resilience of a fishery dependent community in Northern Norway to climate change, market collapse and changing regulations. We identify a range of climatic- and non-climatic elements that impinge on the profitability of the fisheries. As a carrier of traditions and cultural identity, coastal fisheries and stockfish production are identified as critical to the community in addition to the economic importance. In this paper we explore how values, traditions and culture have a bearing on the adaptive capacity to deal with change and thereby the community's resilience. We find that the Norwegian fishery management regime in combination with market failure may require transformation in the industry. We find that climate change likely amplify this process. We will discuss how the management regime may contribute to increased vulnerability rather than mitigating it. We further argue that new national objectives on adaptation diverge with the outcome of the current coastal fishery management.

June 22-23, session 03.57: Community Adaptation and Vulnerability in the Arctic Regions (CAVIAR): Lessons and directions for future research

Davydov, Vladimir (University of Aberdeen): *Fishery in 'free spaces': Evenki fishermen in the northern Baikal area, Russia*

Both Russian ethnographers and administrators often described Evenkis mostly as hunters and reindeer herders. However, fishery also played a great role in their economy. During the post-Soviet period, fishery became one of the main sources of income for the dwellers of the Native Evenki villages in the northern Baikal. In the situation when a number of villagers became unemployed, they managed to earn some money by selling fish. This time the local market became controlled by the entrepreneurs who resold hunting and fishing products in the larger settlements and cities.

Even though people are supposed to fish during particular seasons and to follow official quotas, those who can use special indigenous Evenki quotas usually exceed them. This creates a tension between the law and the moral rules by which local people organise their own actions and judge the actions of the official authorities. The official law never covers all the areas of human activities and 'free spaces' which serve as mediators between the law and local moral rules are always left. The term 'free spaces' was widely employed by the historiography of slavery in North America and means the existence of certain institutions and practices that people can control themselves. In the context of the Evenki villages in the northern Baikal, the

trope of 'free spaces' means, that local people control the knowledge of the landscape. As a result, many cases of law violation concerning fishing are not registered in the official documents and people try to regulate them locally.

June 23, session 02.36: Northern fisheries: managing income, nutrition and cultural values

Debusmann, Martin Eduard (Scott Polar Research Institute, University of Cambridge): *Sealing the EU off from Sealing: Anthropological and Legal Aspects of Exemption Clauses in the EU Trade Legislation/ EC No 1007/2009 on seal products*

Sealing, i.e. seal hunting, is a major source for commercial, cultural and subsistence welfare all over the Polar regions. Canada, Greenland (and non-polar) Namibia account for some 60% of the seals commercially killed each year (total: 900,000 animals). Other big players are also Russia and Norway.

In mid-September 2009, the European Parliament and the Council adopted Regulation (EC) 1007/2009 on trade in seal products. It applies both to imported products and to products produced in the EU, aiming to ban all seal products from the European market. The regulation is moreover likely to cause spillover effects on global market prices, and hence reaches beyond Europe.

Indigenous seal hunters regard this as a threat to their traditional lifestyles, a matter which even led into big international disputes. This is insofar remarkable as, although it is not the first, the current European ban explicitly entails an exemption clause in order not to harm the social and economic welfare of the indigenous peoples.

The proposed paper fills in the niches of academic silence on EU Regulation No 1007/2009. It addresses aspects in terms of development, legislation, environmental concerns and economic effects in a combined study. It especially discloses the high relevance of seal hunting for indigenous societies and their future development.

In this context, the paper will analyse whether exemption clauses can effectively protect indigenous peoples in exercising their rights, and will by this contribute to a better indigenous rights management.

June 23, session 05.53: Polar Law, Human Rights and Social Sciences

Del Acebo Ibáñez, Enrique (University of Salvador, Argentina): *Reinforcing the circumpolar social scientists network: the creation of an International Association (IACSI)*

Through a 10 minutes presentation, together with a poster, it will be presented the International Association of Circumpolar Sociocultural Issues (IACSI), created four years ago, which launches also an annual international peer reviewed journal, "Arctic & Antarctic - International Journal on Circumpolar Sociocultural Issues". The results of this networks (publications, North-South exchange of scholars and conferences organized) will be presented.

June 24-25, Poster Sessions

Del Acebo Ibáñez, Enrique (University of Salvador, Argentina): *Travel to the end of the world (Tierra del Fuego)*

During the April 2010 Campaign of the Oceanographic Ship "Puerto Deseado", that belongs to the Argentine National Council for Scientific Research, it was developed a sociological and psychosociological research applied to the crew and scientists on board during the above mentioned campaign (Ushuaia-Antarctica-Ushuaia-Mar del Plata). The survey included a questionnaire with opened and closed questions applied to the people on board, and interviews to key informants, where the main variables measured were: individual representations of space, time, circumpolarity, Antarctica, fair, risk, adventure, climate change, environment, social relations, free time, etc. These variables were also took into account during the documentary film. Both results will be presented, in written and screening part or the whole documentary film.

June 25, session 08.19: Arctic View: Reality & Visuality

Demuth, Bathsheba (University of California, Berkeley): *Laws of the Land: Gwitchin understandings of place in the era of Land Claims*

This paper will address differing notions of space and the human relationship to it, in the context of resource access and Land Claims negotiations between the Canadian government and the Vuntut Gwitchin First Nation in the village of Old Crow,

Yukon. Drawing on historical and ethnographic sources relating to the Vuntut Gwitchin, I will address how the late twentieth century saw the intrusion Western legal concepts that differ substantially from Gwitchin methods of understanding of how their land should be described, related to, and governed. This divide is particularly noticeable in Gwitchin discussions of proposed oil drilling and the Mackenzie Valley Pipeline project; while Europeans saw oil as a source of profit, people in Old Crow worried that drilling would transform a landscape they understood as infused with power – essentially a subjective space – into an object. Oil drilling thus presented a sustained threat to Gwichtin epistemology. However, to prevent drilling, this epistemology had to be tested, as the Gwichtin needed to use the language of object possession to gain legal control. This paper explores the ways in which the Old Crow community voiced their concerns about changes to their land and sought to maintain exclusive access to it, while simultaneously working to preserve an attachment to place that does not correspond easily with legal norms of property, resource management, or profit.

June 24, session 05.43: Governance in the Canadian Arctic: reconciling indigenous experience and western governance models?

Denning, Bryany (Institute for Circumpolar Health Research, Yellowknife, Canada); **Hunter, Duncan** (Queen's University, Kingston, Ontario, Canada); **Chatwood, Susan** (Institute for Circumpolar Health Research, Yellowknife, Canada): *Childbirth in the Northwest Territories*

In the Northwest Territories, available prenatal care and birthing options vary widely by community. Due to the perceived need for secondary or tertiary services for all births, only women in Yellowknife, and low-risk women in Inuvik and Fort Smith, have the option to give birth in their own community. All other pregnant women are required to leave their communities at 37 weeks gestation to give birth at the nearest regional or territorial center, regardless of their level of risk. Women in small, remote northern communities have less access to comprehensive prenatal care and prenatal education programs. At the same time, the risk factors for maternal and child complications are much higher. This presentation will place the current situation surrounding maternity care in the Northwest Territories and Northern Canada, and outline recommendations for improving maternal and child health in the north.

June 22-23, session 06.40: Best practices for community engagement in health promotion research and population health practice - lessons from the North

June 24-25, Poster Sessions

Dis, Asli Tepecik (Nordregio, Nordic Centre for Spatial Development); **Lange, Stefanie** (Nordregio): *Addressing climate change adaptation at the Nordic level*

The patterns Nordic countries cooperate vary between each other. While there are research and actions towards climate change in place, a joint Environmental Action Plan 2009-2012 has also been published including Nordic climate co-operation not only regarding mitigation but adaptation as well.

This paper will investigate and analyse how proposed policy tools and actions in response to climate change adaptation will affect governance in the Nordic Region. By discussing the potential of establishing a common climate change adaptation strategy on Nordic level and its possible added value, we will not only compare different climate change adaptation efforts undertaken in the Nordic countries but also take a closer look at governance related differences and similarities between the countries that might hamper or support a potential joint strategy.

Therefore we will look at the implementation of local and regional adaptation measures in the Nordic countries and analyze how far they are linked to and framed by national pre-settings. The role of transnational learning through different administrative levels and the fact that climate change adaptation is a multilevel governance issue both contribute to the discussion of establishing a common Nordic climate change adaptation strategy. Within this context we will take into consideration the existing European Baltic Sea Region Strategy and efforts regarding climate change adaptation as well as the role of the Nordic Council of Ministers and/or other potential facilitators.

June 25, session 05.28: Governing changes in the North

Doel, Ronald E. (Florida State University): *Militarizing the North American and Greenlandic Arctic: Reshaping Landscapes in the Cold War North*

In 1947, the Pentagon became interested in polar warming and global climate change. It did so not because of concerns about protecting the natural environment but because of pragmatic defense issues: the prospect of climate change in high latitudes

left military authorities worried about the United States' ability to confront the Soviet Union in the high Arctic, where a hot conflict with its emerging cold war adversary seemed increasingly possible. Pentagon officials also saw polar warming as a broader kind of threat: a warming Arctic climate meant that the Soviet Union might obtain new advantages in developing its agriculture and deploying its fleet from northern ports. By the late 1940s the polar region had become, as never before, a potential theatre of war.

State concern with the Arctic environment helped to shape U.S. military scientific planning and tactical studies in the north through the 1950s. This resulted in major initiatives throughout the Arctic. In Canada, military researchers, joining U.S. military counterparts, sought information on retreating sea ice; their reports underscored polar warming. In Greenland—which the U.S. unsuccessfully attempted to purchase from Denmark in the late 1940s because of its strategic location—American military forces built facilities to monitor the skies for incoming bombers as well as to explore the properties of the Arctic ice cap, hoping to construct a vast network of missile systems in this geographically strategic region. Both of these developments are part of the larger and still largely untold story of North American continental defense.

June 22-23, session 10.22: Claims on Sites and Knowledge in Cold Regions. Material and Immaterial Constructs of Nature, Nations and Industry

Donecker, Stefan (Alfried Krupp Wissenschaftskolleg, Greifswald): *The Supernatural Image of Iceland in Johannes Kepler's "Somnium"*

"Somnium", "The Dream", written by the eminent astronomer Johannes Kepler during the 1620s and published posthumously in 1634, has often been regarded as a milestone in science fiction literature. Kepler embedded his scientific theories on the movements of celestial bodies into a fantastic tale of witches, spiritualist séances and lunar demons. "Somnium" has been intensively analysed by scholars, who were particularly interested in the autobiographical elements of the story: Duracotus, the protagonist, is depicted as a student of Kepler's own teacher, Tycho Brahe; and the witchcraft performed by Duracotus' mother reflects the charges against Kepler's mother Katharina, who was trialed as a witch in 1620/21 and successfully defended by her son. However, another key aspect in the interpretation of "Somnium" has been hitherto largely ignored by scholarly research: Kepler decided on Iceland as the setting for his story. Duracotus is a native Icelander, striving to reconcile the scholarly erudition he has gained abroad (personified by Tycho Brahe) with the sorcerous traditions of his homeland (personified by his mother, the witch Fiolxhilda). Kepler's narrative includes numerous references to the supernatural phenomena which, according to early modern belief, could be found in the North: the mysteries of Mount Hekla, the wind summoning practiced by Scandinavian witches as well as the familiar spirits that serve them. As part of the panel on the imagination of the "Supernatural North", I intend to analyse Kepler's image of Iceland and the literary imagery he employed to characterize the mysteries of the North.

June 24-26, Session 07.32: Imagining the Supernatural North

Dorais, Louis-Jacques (Université Laval): *Community-level leadership in Nunavik*

In the Inuit North, the social significance of leadership at the community level may be as important as more encompassing and more formal modes of governance. In this paper, I'll examine various aspects of informal leadership in a small Nunavik community, and their incidence on local governance. The aspects that will be examined will include kinship, links to the land, and religion, as well as regional history since the 1940s. Data will be drawn from more than 40 years of research in that community. Qualitative analysis will show how these various forms of leadership are those that really matter to local people, but at the same time, we will see how this informal leadership has bred a mode of governance - religious in the case examined - whose influence reaches far beyond the limits of the community.

June 24, session 05.41: Inuit in Leadership and Governance in Nunavut and Nunavik

Douglas, Vasiliki (Health Sciences Programme, University of Northern British Columbia): **Chan, Laurie H. M.** (Health Sciences Programme, University of Northern British Columbia): *Reconfiguring Rangifer: Studying the changing relationship between reindeer, Inuit and caribou in the MacKenzie Delta, NT*

Caribou are one of the major traditional food sources for the Inuvialuit of the Canadian Western Arctic, but both scientists and traditional knowledge suggest that long term decline in herd sizes threatens the annual harvest. This has obvious implications for the security of the traditional Inuvialuit food supply, especially given the important role traditional food plays in Inuvialuti nutrition.

However, the semi-domesticated cousin of the caribou, reindeer, is also present in the MacKenzie Delta, where it has been

consumed as an alternative to caribou since the Canadian Reindeer Herd was established in 1935. This study uses ethnographic field research, including semi-structured interviews, participant observation and community focus groups to determine the relationship between reindeer and caribou in the Inuvialuit mentalité and in their traditional diet.

Preliminary results indicate that reindeer are accepted as an alternative to caribou. However, the location of reindeer outside the liminal space that traditional culture occupies among the Inuvialuit presents a serious obstacle to adoption of reindeer as a staple replacement for caribou, if the caribou herds continue their projected declines.

June 23, session 01.33: Narratives of vulnerability, resilience and adaptation among circumpolar communities in the era of climate change

Dudeck, Stephan (Siberian Studies Centre, Max Planck Institute for Social Anthropology, Halle/Saale (G), Germany): *Living with reindeer - working on the oil field. How indigenous people cope with wage labour jobs in Western Siberian oil companies*

The paper deals with the situation of young Khanty coming from reindeer herders families but working on neighbouring oil fields. In the last ten years more and more Khanty in this region have become oil workers. In the beginning of the nineties oil companies refused to hire indigenous people. They were considered notorious alcoholics and incapable to cope with the working discipline needed on the oil fields.

These jobs constitute serious challenges for reindeer herder's lifestyles in different ways. They represent new economic chances for their families but they change the orientation of forest inhabitants from traditional indigenous central villages to new established oil towns. Secondly they extend and transform the clientelistic relationship between oil-companies and reindeer herders living next to the oilfields. Thirdly they confront indigenous oil workers with diametrically opposed relationships with the land and its resources and of the organisation of work.

Boarding schools and the army play an important role in getting the young indigenous used to the working discipline of wage labour jobs. To cope with the opposite time structure and ethics, forest inhabitants working on the oilfields are setting up boundaries between the two areas. They are switching between different communication spaces, using different languages and changing the value system. But that doesn't mean life in the taiga and in the city is completely divided or people are forced to develop a split consciousness.

With these aspects the paper touches the question whether new jobs on the oilfields can be seen as just another step on the way to assimilation or as part of indigenous strategies to persist on a forest lifestyle and to preserve a distinct culture.

June 25, session 04.37: Commute Work and Mobile Labour in the Circumpolar North

Duyck, Sebastien (Northern Institute of Environmental and Minority Law, Arctic Centre, University of Lapland): *Participation of Non State Actors to Arctic Environmental Governance*

This legal paper considers procedures and formal opportunities offered to various groups of stakeholders to participate to international environmental decision-making in the Arctic Region.

The current regime of Arctic governance, with the Arctic Council playing a central role, offers a unique status to indigenous peoples as a key group of stakeholders in the region. While this particularity of Arctic governance has been well covered by academic work, the participation of other groups of stakeholders – including non-governmental organizations, the private sector or local government – has been the focus of fewer studies.

The first section of the paper presents a descriptive analysis of the rules and practices formally offering an opportunity for various groups of stakeholders to take part in environmental decision-making processes in different regimes of Arctic governance. Secondly, these provisions will be assessed at the light of international norms, such as the Agenda 21 as well as the Aarhus Convention and its Almaty Guidelines.

The paper aims at going beyond the study of Arctic particularism, as currently defined by an unusually high recognition of indigenous people's organizations. It will assess the general inclusiveness of various regimes of Arctic environmental governance – not only the Arctic Council – to different groups of stakeholders.

June 22, session 05.74: The Future of the Arctic: Governance in an Era of Transformative Change

Edge, Lois (Educational Policy Studies, Indigenous Peoples' Education, University of Alberta, Canada): *My Grandmother's Moccasins: Indigenous Women, Knowing and Aesthetic of Beadwork*

This study explores multiple perspectives concerning Indigenous women's engagement in traditional cultural activities and art forms, such as beadwork, and their contribution to identity formation, the formation of teacher/learner relationships, and relationships to social and cultural environments.

Indigenous women's ways of knowing and being are shared from an Indigenous perspective through lenses of ethnographic, historic and material culture. A personal narrative reflects and interprets learning experiences through writing and digital media as a method to strengthen alternative representation in research and enhance our understanding of methodologies and outcomes.

The research draws attention to the many contributions of First Nations and Métis women in the Subarctic regions of northern Canada whose legacy is a rich endowment of knowledge as located in art forms created and crafted by them from which current and future generations may continue to learn about Indigenous ways of being.

Analysis and reflection upon Indigenous women's ways of knowing contributes to our understanding of Aboriginal women's identity, lifelong learning and the health and wellness of Indigenous people in North America.

June 25, session 08.19: Arctic View: Reality & Visuality

Edwards, Nelta (University of Alaska Anchorage): *Comparing Housing Crowding in Arctic Alaska and Canada*

The right to adequate housing is a human right explicitly recognized in the Universal Declaration of Human Rights and other international human rights proclamations. A secure and adequate place to live not only fosters individual dignity, physical and mental health and overall quality of life, but also fortifies the well being of communities in the Arctic as they face rapid changes in the climate, the global economy and culture. Housing is also an environmental issue as poorly designed, constructed and maintained housing wastes natural resources, most notably fossil fuels used for heat and electricity. Housing crowding is generally defined as more than one person per room, although other measures, such as square feet or meters per person, are also used. This paper will use the Survey of Living Conditions in the Arctic (SLICA) to compare the two regions.

June 26, Session 03.75: Living conditions and well-being

Eilmsteiner-Saxinger, Gertrude (University of Vienna, Dep. for Geography and Regional Research): *Seeing Long-Distance Commute Work from an Ethnographic Angle: Russian Oil and Gas Workers on the Move*

The Russian Polar Regions are considered to be the back bone of the hydrocarbon industries today and especially for the future. Already since decades the number of local workforce is not sufficient to meet the increasing demand by the companies. Therefore, hundred thousands of blue and white collar workers travel thousands of kilometers from all over Russia every month to make their livelihood as so called Vakhtoviki. In the course of my dissertation I travelled with them, stayed in their home communities and visited work sites as well as local Vakhtoviki-communities in North-Western Siberia. This paper discusses the methodology employed and takes a critical look back to my fieldwork which I have started in 2007. I will emphasize on my mobile field-site model HOME-JOURNEY-ON DUTY, its practical challenges and scientific benefits. Questions for methodological discussion with the other panelists are raised.

June 25, session 04.37: Commute Work and Mobile Labour in the Circumpolar North

Eilmsteiner-Saxinger, Gertrude (University of Vienna, Dep. for Geography and Regional Research): *The Small and the Big Earth in Russia: Living and Working with Natural Gas in the Far North*

In North-Western Siberia large towns have been founded between the 1960s to the 1980s near oil and gas fields. Workers from all over the Soviet Union have been recruited to build up the industry, the towns and to settle there. Since the 1980s long-distance commute workers travel to the north in order to earn their livelihood. In everyday language they call the southern parts of Russia *bolshaya zemlja*, the big earth, whereas the North is understood as its counterpart – the small earth. For long-distance commute workers both spaces are rotationally relevant places for actual everyday life. The north for them has e.g. the meaning of a source of high income, as a space of danger and hard work in a harsh climate, a space of realizing dreams and adventure or a place of self-fulfillment; but always in the context of a soon return. For the incoming but now permanent residents of the northern industrial towns the small earth has similar meanings, but it has become their relevant place in life and the home for their families and offspring. For them the *bolshaya zemlja* became a place of soviet memories or a holiday destination. For some it is a place where their children will move to, where they potentially go after retirement or they choose

is as destination of their last journey - to be buried there. The paper presents comparative results from ethnographic fieldwork in North-Western Siberian gas regions and the Republic of Bashkortostan.

June 22-23, session 07.49: Practice Power North

Einarsson, Niels (Stefansson Arctic Institute): *Fisheries governance and human rights in post-crisis Iceland: Social discourses on equity, efficiency and externalities*

In spite of what could be called a hegemonic discourse in international resource fisheries economics there is a growing scepticism among practitioners and scholars of fisheries governance questioning the privatization of fisheries, especially that the gifting of common property to the privileged few actually meets public demands regarding economic efficiency, equity within and between generations, sustainability in terms of social and ecological factors, and indeed basic human rights. This paper examines the case of the island nation of Icelanders in terms of the social discourse on marine resource management. The discussion is situated in the wake of the economic and social crisis starting in autumn of 2008, following an abrupt end to an unsustainable financial expansion, which, the paper argues, the current controversial system of private property rights and commodification of fishing stocks paved the road for. The paper discusses the viability of coastal culture and communities, local ways of adaptation to forces of globalization embodied in fisheries management ideologies, and issues of human rights embedded in the closure of common property resources as part of fisheries policies based on neo-liberal ideologies and privatization.

June 23, session 02.36: Northern fisheries: managing income, nutrition and cultural values

Elixhauser, Sophie (University of Aberdeen): *Shared Hospitality: The flows of guests, goods, and gifts in East Greenlandic households*

This paper explores processes of visiting in the Ammassalik region, East Greenland, and the role of sharing in relation to visitors and overnight guests who enter and leave a house, and bring along or receive certain goods and services. For instance, visitors are allowed to use the amenities of a hosts' house, and they are provided with drinks and food, and sometimes accommodation. And not only do visitors expect to be treated in particular ways, but also hosts have expectations towards visitors. These may include the responsibility to provide news and entertainment, or to bring along goods such as particular foodstuffs or, on some occasions, presents. Sharing practices, nevertheless, differ with respect to the items and foodstuffs at stake, and some are shared out more regularly, such as Greenlandic subsistence foods, whereas others, e.g. money, are not included to the same extent. Hence, people's particular relationships with the different kinds of goods, the hunted animals and other environmental entities, influence processes of sharing and redistribution. This paper thus argues that hosting visitors and guests, and the sharing of manifold goods respectively, not only re-enacts relatedness among the Ammassalimmeet, and points out particular egalitarian values, but that it is embedded within human-environmental relations more broadly.

June 25, session 03.60: The social economy of sharing in the North American Arctic

Emery, Mary (Iowa State University); **Redlin, Meredith** (South Dakota State University); **Young, Wendy** (Iowa State University): *Using Complexity Theory to Understand the Impact of Efforts to Impact Policy Addressing Climate Change Impacts*

Complexity theory provides insight into situations, like those associated with climate change, with multiple interacting networks, feedback loops and self-organizing elements. In this paper we look at how these elements impact policy change related to declines in moose hunting and salmon fishing in Alaska. The paper operationalizes a systems approach to understanding change by using the community capitals framework (CCF) (Flora and Flora 2010) which includes seven types of capital found in every community: natural, cultural, human, social, political, financial, and built. The CCF offers a mechanism for identifying types of networks and feedback loops at play in a specific context and place and for tracing the interaction among these capitals and the interests they represent. Using complexity theory and the CCF, the paper describes how specific networks draw on resources in specific capitals in order to mobilize assets to impact policy with differing results. In the case of moose hunting, traditional networks and ways of thinking and doing (cultural capital) interfaced with state decision makers and others interested in protecting the moose population to implement a plan to build back the moose population. In contrast the strength of the commercial fishing networks and the accompanying short-term feedback loops have made it difficult to implement a similar policy to protect salmon. While financial and social capital are often studied in regard to policy change, this approach provides a way to study the role of cultural capital, particularly in regard to impacting feedback loops.

June 23, session 05.53: Polar Law, Human Rights and Social Sciences

Emke, Ivan (Grenfell Campus, Memorial University of Newfoundland): *Magic in the Sky: Using FM broadcasting for a community gathering place*

There are a variety of ways to engage communities in the discussion of local issues. Many of these involve some form of a communication tool, from face-to-face meetings to newsletters, radio or the internet. It could be argued that the kind of community engagement we can build depends on the kind of communications tool we use. For example, a teleconference will result in a different engagement and response than an in-person discussion; a telephone call may elicit different response than an e-mail; and a live radio broadcast will be different from a town hall discussion.

With this in mind, the presentation outlines a number of examples of the use of low-power FM radio in a community context. These projects used the Special Events category of Industry Canada's guidelines to get permission to broadcast, on FM, for a limited period of time. During the broadcasts, a wide variety of community partners and individuals participated on-air, and communities were able to hear their own issues, discussed by their neighbours, on their "own" radio station.

The presentation outlines the procedure for setting up these radio projects, offers examples of the responses of community members, and celebrates some of the learnings from the events.

June 25-26, session 03.70: The Social Economy and Community Economic Development in the Circumpolar North

Erlendsson, Guðmundur Egill (Lögmansstofa Akureyrar): *Arctic Resource and Energy Governance and Ownership*

The diverse Arctic resource and energy challenges are those of security first and foremost. Accessibility, pricing, environmental concerns and the sustainable utilisation of these are critical factors. Furthermore the resource and energy needs and use of Arctic states is subject to the same principles the rest of the world adheres to. Still the unique nature of the Arctic allows for some contemplation over the nature of contemporary energy and future resource usage.

Whether it is fortunate, the international legal framework does not address energy governance or ownership, leaving the nuances of regulating to sovereign states, obviously. Here the overview of the some of the arctic states will be presented. The ownership issues of natural energy resources and future prospects of use and whether a international legal regime would be feasible for at least fundamental policies in the field.

The implications of climate change to energy and resource utilisation Sustainable Development and its connection to the non-renewable resource exploitation needs to be addressed both in the field of legal research as well as in policy venues, be they supra-national or domestic.

Energy security will be focused upon from the view of resources that are being extracted and/or utilized in another manner to meet the energy needs of the Arctic states.

June 23, session 05.53: Polar Law, Human Rights and Social Sciences

Evans, Peter (Scott Polar Research Institute): *Call of Duty: The Evolving field of Aboriginal Consultation in Canada*

This presentation describes the evolving practice of aboriginal consultation in Canada. Here, a normative framework for engaging in consultation with aboriginal groups potentially adversely impacted by development is gradually emerging, incorporating elements of case law, federal and provincial policy, demands of aboriginal communities, and the requirements for both profitability and certainty from industry. Social scientists, offering expert knowledge and other brokerage, have important, if sometimes controversial, roles to play in facilitating and informing consultation and engagement. The author will describe the broad outlines of consultation in the Canadian context, and reflect on experience gained as a practitioner. Further, the author argues that inequities in capacity—in accounting, administration, management, and communications, for example—make it difficult for aboriginal communities to realize the full benefits of robust consultation and engagement.

June 23, session 05.67: Consultation in Arctic Extractive Industries Development: Lessons learned for Arctic resource governance from the local to the international level

Evans, Peter (Scott Polar Research Institute); **Pigott, Paul** (Memorial University): *Resettlement and Resistance in Okak Bay, Northern Labrador, 1942-1956*

This paper is built on the authors' archival and ethnographic collaborations on the environmental and social history of the Okak region of Northern Labrador in the 1940s and 1950s, a period in which state-sponsored economic development and

resettlement schemes brought all of Northern Labrador's aboriginal and non-aboriginal peoples into close contact with one another. The authors highlight the the subtly different ways in which Euro-Canadians viewed Inuit and Innu societies, which led agents of the early welfare state to undertake different interventions into their societies. We will examine a little-known relocation of Mushua Innu (Davis Inlet band) to Okak Bay in 1948—a scheme conducted by government traders attempting to make productive wage workers out of Innu hunting families. Although the scheme failed, it created a context for expressions of indigenous resistance against European plans, and cultural transmission between Inuit and Innu. Further, the scheme's failure to produce the desired effects on Innu lives and the Okak environment highlight the more general failures of European ideas about aboriginal agency and the northern environment.

June 26, session 04.66: Relocation: State Inducements and Ideologies versus Strategies of Resistance and Response

Fienup-Riordan, Ann (Calista Elders Council): *The Gift of a Good Question*

This paper explores the lasting influence of Tiger Burch's scholarship on my work in southwest Alaska. Although Tiger worked in a different part of the north and mined very different primary sources, his inquisitiveness and meticulous documentation provided models that will continue to inspire. He challenged me with questions, not answers. Using the topic of water as an example, I hope to show how valuable his insights could be.

June 23, session 07.47: In the Footsteps of the Giants – Honoring Ernest S. (Tiger) Burch, Jr., 1938–2010

Fienup-Riordan, Ann (Calista Elders Council); **Rearden, Alice** (Calista Elders Council, Anchorage): *Ellavut/Our Yup'ik World and Weather: Continuity and Change on the Bering Sea Coast*

"Ellavut/Our Yup'ik World and Weather" is based on gatherings with Yup'ik elders between 200 and 2008 sponsored by the Calista Elders Council, the primary heritage organization in southwest Alaska. It documents the qanruyutet (instructions) that continue to guide Yup'ik interactions with ella--translated variously as weather, world, universe, and awareness. "Ellavut" reflects CEC gathering topics, including wetaher, land, lakes and rivers, ocean, snow, ice, and environmental change. Many elders suffer over the fact that contemporary young people lack knowledge of ella. They actively support the documentation and sharing of traditional knowledge, which all view as possessing continued value in the world today.

June 24-25, Poster Sessions

Fitzgerald, Shannon Laurie (University Alaska Fairbanks): *Weaving Our Botanical Web*

An exploration of common plants utilized among Arctic communities, highlighting similar specimens and shared uses for particular plants in the Arctic. Literature review and compilation, as well as specification for needed areas of further study. Suggestions for international field study opportunities, this poster serves as initial impetus for Doctoral degree at UAF, with hopes to better connect Arctic communities to one another in the realm of ethnobotany. Author will address the need for socially responsible study of ethnobotany in these regions, discussing the structures and outlines of previously successful studies.

June 24-25, Poster Sessions

Flora, Janne (Scott Polar Research Institute, University of Cambridge): *Singing on the Land and Remembering Kin in northwest Greenland*

The Eskimo needs a profane existence' Marcel Mauss wrote in his classic study of the "Seasonal Variations of the Eskimo" (1979: 79). By this he meant that Inuit communities relied on constructing for themselves an anti-social form of life on the land during summer, in order to recreate and maintain intensified forms of social life in settlements during winter. While this paper, like Mauss, distances itself from ecologically deterministic models of migration, it also contradicts Mauss' assumption that being on the land denotes a 'profane existence'. Based upon ethnographic research in a northwest Greenlandic village, this paper explores the social and cultural importance of engaging with particular places on the land, and argues that not only 'visiting', but also carrying out various social activities such as eating and singing within such places, are some of many meaningful ways in which Greenlanders locally invoke and remember relationships with living as well as deceased kin.

June 24, session 04.34: Movement for Pleasure – the Pleasure of Moving

Fondahl, Gail (University of Northern British Columbia); **Crate, Susan** (George Mason University): *Trialing Arctic Social Indicators for Human Development in Sakha Republic*

During the first phase of the Arctic Social Indicators project (ASI-1), indicators and related measures were identified for six domains of human development in the Arctic, and a preferred indicator for each domain chosen. In the second phase of this project (ASI-2), researchers are testing these indicators in several regions of the Circumpolar North. In this paper, we examine how the chosen indicators and their measures perform in the Sakha Republic, at the scale of the republic and at ulus-level scale (akin to county- or district-level scale). Data challenges specific to Sakha Republic, and to the Russian North, are discussed, as are possible proxies.

June 24-25, Session 03.63: ASI – Arctic Social Indicators

Foote, Amanda (University of Alaska Fairbanks): *Fishing for tourists; cultural tourism and the impacts of outsiders in Teslin, Yukon*

Since before settling on the shores of Teslin Lake, the Inland Tlingit people have fished its waters. Today the people of Teslin also cast their nets along the Alaska Highway to lure tourists off the busy corridor. For small communities along the route, travelers represent both challenges and opportunities. Especially in First Nations communities decisions regarding tourism such as what products to develop, what services to provide, and how much access to allow carry much weight. This research constitutes a case study examining cultural tourism as a means of sustainable economic development for the community of Teslin, Yukon. It describes the broad landscape of tourism, given the history and culture of the Inland Tlingit people who comprise the majority of the community's population. Additionally it explores major events in Yukon history that have contributed to the current tourism landscape, as well as the impacts of land claims settlement, the Umbrella Final Agreement, and development of First Nations governments on tourism, culture, and heritage. This research reveals the gravity of sharing culture through tourism. The findings also suggest that within specific boundaries, Teslin residents perceive benefits from the presence of tourists in their community and often personally enjoy interacting with them.

June 24, session 02.26: How can small, peripheral places profit from the booming tourism in the Arctic?

Friedman, Robert Marc (University of Oslo/ University of Tromsø): *Seeing Aurora: Historical Interactions between Science and Native-Knowledge*

Exchanges of knowledge between native Arctic peoples and scientists is increasingly receiving attention among Arctic social and natural scientists. What occurs at the meeting of two epistemologically-different cultures has of course changed over time. In the heroic age of polar exploration, what did those explorers, including scientists, who spent time with Arctic peoples learn anything from them about the nature of ice, aurora, weather and climate, behavior and migratory patterns of animals, or plant ecology? To what extent and through what processes was information obtain from native-peoples processed into professionally-recognized scientific knowledge? The paper will begin to explore such issues by focussing on one polar phenomenon: the aurora.

The aurora borealis has status as one of the 'great enigmas' in the history of science. Well into the twentieth century the nature and cause of the aurora defied consensual explanation. Constituting the aurora as an object of inquiry itself proved almost as vexing a problem as explaining its nature. Stable consensual agreement over the aurora's characteristics first was achieved in the 20th-century. Who had the right to make authoritative claims about this phenomenon? Whose evidence counted? The history of making sense of the aurora points therefor to a messy complexity of changing interactions between amateur and professional science, popular culture and academic learning: how did the empirical claims of native Arctic peoples fit into this history?

June 22-23, session 10.22: Claims on Sites and Knowledge in Cold Regions. Material and Immaterial Constructs of Nature, Nations and Industry

Fugmann, Gerlis (Justus Liebig University Giessen): *Impact of the Small Business Sector on the Changing Community of Nain (Nunatsiavut)*

Nain, the largest community in Nunatsiavut, has been undergoing changes in recent years. In 2006, it became the administrative centre of the newly established Nunatsiavut Government. Around the same time, the Voisey's Bay Nickel Mine started operations just 35 kilometers southwest of the community providing the residents of Nain with job and business opportunities. The fish plant operated by the Torngat Fish Producer's Cooperative Society had been struggling in the last few

years and was only able to continue its operations - at a reduced level - due to the support of the regional and provincial governments.

Apart from these larger employers, a variety of small businesses contribute to the local economy and the job market. They range from self-employed artists, to retail stores to small contracting businesses in construction. This paper analyses the structure of the small business sector in Nain. What kind of services do these businesses offer? How do they contribute to the local job market? And what future potentials do they have as a result of the changes taking place in the community?

The data is based on a study conducted for the author's PhD project. Semi-structured interviews were conducted with local business owners, representatives of the Nain Inuit Community Government as well as the Nunatsiavut Government.

June 24-25, Session 03.63: ASI – Arctic Social Indicators

Fugmann, Gerlis (Justus Liebig University Giessen): *Nunatsiavut a New and Remote Tourist Destination - Potential Benefits for Local Residents and Businesses?*

Nunatsiavut has emerged since 2006 as a new tourist destination. The Torngat Mountain National Park, the remnants of the Moravian Mission in Hebron, the White Elephant Museum in Makkovik, a community board walk in Rigolet as well as the rich Inuit culture and history in the five Nunatsiavut communities are among the attractions promoted by the Nunatsiavut Government to attract tourists to this remote area. The Tourism Nunatsiavut Final Strategic Plan, published in 2008, envisions the region to "emerge as one of the world's most in-demand, quality circum-polar travel destinations".

The remoteness of the region, high costs of travel and limited infrastructure pose the greatest challenges for tourism development in this area. Cruise tourism, especially in small expedition-style cruise ships, with its only minor requirements on the communities is therefore seen as a potential area for development in the future. But this mostly externally controlled type of tourism only leaves limited possibilities for regional residents and businesses to participate and benefit. For tourism to benefit the regional economy and revenues to stay in the region, an increased involvement of regional stakeholders is necessary. This paper analyses - based on own observations, media articles, as well as interviews with local business owners, representatives of the Nain Inuit Community Government and the Nunatsiavut Government - the first steps taken in tourism as a bottom-up economic initiative in Nunatsiavut and its potentials for future development.

June 24, session 02.26: How can small, peripheral places profit from the booming tourism in the Arctic?

Garcia, Gabriel (University of Alaska Anchorage); **Sprague, Rebecca** (University of Alaska Anchorage); **Pastor, Nina** (University of Alaska Anchorage): *Health and Health Risk Behaviors among Immigrants in the Circumpolar Region*

BACKGROUND & PURPOSE. Immigrant populations in the circumpolar region, particularly in parts of Alaska have grown significantly in the past two decades. For immigrants, living in the circumpolar north presents significant climatic, geographical, and socio-environmental stresses. Transactional Model of Stress Theory suggests such stresses can lead to the development of health risk behaviors as a way to cope with these problems. The purpose of this study is to identify health and health risk behaviors common among immigrants living in the circumpolar region.

METHODS. Using the PubMed Central database with the circumpolar geographic hedge, we conducted a systematic literature review of original, peer-reviewed research studies conducted in the region from 1990 to 2010 that specifically identified the presence of immigrants in their sample. Key word search terms include "tobacco", "alcohol", "healthy lifestyle", "immigrant*", and "newcomer*". Search was limited to articles written in English.

RESULTS. One hundred fifteen articles met our criteria, with 18% related to tobacco, 22% to alcohol and 60% to healthy lifestyle. Most of the studies were predominantly conducted in Scandinavia. Literature showed that immigrants are likely to smoke, drink alcohol, lack physical activity, have poor diet, and not use preventive medical services.

CONCLUSIONS. This review suggest that health research on immigrants in the circumpolar region is scant and that the limited literature on this population showed they are likely to engage in health risk behaviors. Further research on this population is warranted to develop strategies in helping them cope with environmental and social challenges in their host countries.

June 22-23, session 06.40: Best practices for community engagement in health promotion research and population health practice - lessons from the North

Gardenour, Brenda S. (Saint Louis College of Pharmacy): *Winter's Flesh: Septentrio and the Monstrous Female Body in Late-Medieval Medicine and Theology*

In the thirteenth and fourteenth centuries, the disciplines of academic medicine and theology shared a language of discourse and a set of assumptions about the nature of the macrocosm and the most intimate of microcosms—that of the human body. Medieval medicine, which was rooted in the works of Galen and Aristotle, held that the body was composed of four humors, each of which was linked by its essential qualities to the seasons of the year, the movement of the stars, and the cardinal directions. Unbounded, the human body was a vessel open to unseen natural and supernatural forces that might cause humoral imbalance, the result of which was illness. Most dangerous in this regard was the north wind, or Septentrio, which was cold and moist in quality; allowed to enter into the body, the north wind engendered the production of phlegm, which was also cold and moist, and could cause runny nose, catarrh, and hydropsy. For theologians, the winds of Septentrio were not only medically but also spiritually perilous; a physical manifestation of supernatural forces, Septentrio carried the coldest and darkest of demons from the northern uninhabited regions. These winds were especially dangerous for women whose cold, moist flesh was inherently irrational and wanton. Unwarmed by Christian ardor, corrupted by the demon-laden north wind, a woman's spirit might be brought into darkness and her body transformed into monstrous feminine flesh—cold, moist, grey, disfigured, and ravenous for warm blood—the icy body of the witch.

June 24-26, Session 07.32: Imagining the Supernatural North

Garin, Nickolay P. (Ural State Academy of Architecture and Art): *The School of Arctic Design: the Educational Experience of Design Forecasting*

What is a human ability to predict the Future? Especially we are talking about the Future of the Arctic, the environmentally vulnerable territory, where is a relict taiga, marshes, lakes and rivers with uncontaminated flora and fauna. Besides that, here is the homeland of indigenous peoples, with their totally preserved traditional lifestyle.

Obviously, that sort of prediction requires a special attention and a thoughtful approach to the further embodiment. In case of Russian Arctic, we mean the vast land overfilled with oil, gas, minerals, fish, fur and feather as well as mosquitoes, winds, temperature extremes, etc. It is also a "testing area" for national projects, such as "Ural Industrial – Ural Polar", which results are expected to be new towns as well as temporary settlements, i.e. new industrial and cultural centers. Another more grandiose government programme, i.e. the programme of developing the Arctic offshore area is aimed to establish new settlements on the permafrost.

As for the human-and-social dimension, i.e. the emerging of a new culture, it is now going on at the border of two existing cultures, i.e. the culture of Arctic indigenous peoples and the polyculture of Arctic newcomers. The main issue is how to approach to these projects? How to keep the land pure in terms of physical and mental ecology? How to make it friendly and comfortable for newcomers (future residents) considering their multicultural features and habits as well as protecting from those? How to reconcile these contradictory cultures and to predict their further combination, i.e. a Future Culture?

This presentation aims to reveal some design efforts of meeting the issues by students and teachers of Arctic Design School, Ekaterinburg, Russia.

June 22, Session 07.21: Living in the Arctic: a Creative Providence for the Global Challenge & Session 07.29: Arctic Creative: Building Arctic Futures through culture, innovation, and creativity

Gearheard, Shari (University of Colorado); **Huntington, H.P.** (Pew Environment Group / Huntington Consulting); **Kielsen Holm, L.** (Inuit Circumpolar Council - Greenland); **Leavitt, J.** (Barrow, Alaska); **Oshima, T.** (Qaanaaq, Greenland); **Sanguya, J.** (Kangiqtuqaapik, Nunavut): *The Meaning of Ice: Inuit Writing and Illustrating Sea Ice*

From 2006 through 2010, Inuit hunters and Elders from Qaanaaq, Greenland, Barrow, Alaska, and Kangiqtuqaapik, Nunavut, worked together with international researchers on the Siku-Inuit-Hila (sea ice-people-weather) project. This project brought Inuit and scientists together at all three communities to study sea ice as a team, and share knowledge, tools, and varying perspectives on sea ice. One of the outcomes of the project is a book entitled, "The Meaning of Ice" (forthcoming from IPI Press), written and illustrated by the participating Inuit in the Siku-Inuit-Hila project. This presentation explores some of the content of "The Meaning of Ice", providing a view into how the Inuit authors expressed their perspectives on life with sea ice through their own written stories, illustrations, artwork, and family photos. The book provides one look into fundamental differences in how Inuit and scientists view, think about, talk about, and more poignantly feel about sea ice.

June 24, session 01.27: The Human Dimensions of Change to Arctic Sea Ice
ICASS VII ABSTRACTS

Gerhardt, Hannes (University of West Georgia): *Greenland: Does an Inuit State Spell the End of a Circumpolar Inuit Identity?*

The issue of sovereignty in the Arctic has become a topic of increased interest and contention in the last few years as challenges and opportunities posed by global warming quickly emerge. As states jostle to territorialize the Arctic, the Inuit, who are the predominant inhabitants of the Far North, have been placed on a defensive footing. The Inuit Circumpolar Conference, for instance, has issued a Declaration on Arctic Sovereignty in which it emphasizes the need for circumpolar cooperation and the recognition of the Inuit people as key actors within any regime of Arctic governance. Interestingly, however, the Greenlandic Self Rule Government has taken a different tack as it increasingly sees itself as a future independent "Inuit state". By theoretically engaging the concepts of sovereignty, territory, and scale this paper uncovers the limits and potentials of an independent Greenland. Particular emphasis is afforded to the impact that the process of achieving Greenlandic statehood may have on the broader Inuit cultural and political identity. The consequences of a potentially significant oil and gas extraction economy in Greenland are deeply implicated in the above focus. This paper is based on empirical findings garnered from field work conducted in Denmark and Greenland in the summer of 2010.

June 22, session 05.74: The Future of the Arctic: Governance in an Era of Transformative Change

Germain, Kate (Chaire de Tourisme, Université du Québec à Montréal): *Tourism in the Quebec's Arctic region: the role of a monitoring network in improving entrepreneurship and product development*

Community-based and small scale tourism businesses are developing in Northern Quebec but are still facing major challenges: remoteness, high cost of transportation and living, inadequacy between demand and offer, lack of market knowledge. With climate change making those destinations more accessible, the Quebec Government is developing a tourism strategic plan in collaboration with Northern Quebec stakeholders in order to provide a Nordic sustainable experience to outside visitors.

The Quebec Government contracted the Transat Chair in Tourism at the Université du Québec à Montréal (UQAM) to develop a monitoring network in Arctic tourism. This program aims at gathering and analyzing best practices in other Nordic countries, sharing lessons learned, addressing Quebec community concerns and responding to issues such as packaging, infrastructure improvement and capacity building. It is using case studies, and successful stories collected, analyzed and made accessible on the online « Guide book on Indigenous Destinations » www.aboriginal-ecotourism.org using a Content Management System and Web 2.0 functionalities.

We will present the major results of this Northern Quebec monitoring network and will illustrate it with three case studies issued from the Saami, Inuit and Cree tourism destinations in Northern Canada and Scandinavia.

June 24, session 02.26: How can small, peripheral places profit from the booming tourism in the Arctic?

Gibson, Julie (Orkney Islands Council): *Archaeology on the Edge*

The Orkney archipelago is an inundated landscape threatened by rising sea-levels and increasing storminess. Coastal erosion is a challenge to the future of the present day population and the resources of the past. The islands benefit from an exceptionally rich legacy of otherwise well-preserved archaeology covering some 6,000+ years. All our main visitor attractions are created from archaeological sites, many of which are coastally located, and currently protected by sea walls of various forms. Otherwise, our actively eroding archaeology can be a resource for science, for the community and for enjoyment and economic benefit. This poster will showcase the richness and potential of the resource, put the damage into context and indicate some of the work being enabled by a growing and inter disciplinary network of co-operation extending across the North Atlantic, incorporating local community activists, educationalists, tourism consultants, artists, media people and archaeologists from a variety of academic, commercial and local government backgrounds.

June 24-25, Poster Sessions

Giles, Audrey (University of Ottawa): *A Postcolonial Analysis of Positive Youth Development: Implications for Health*

The notion that organized sport and recreation activities help promote healthy youth through positive youth development (PYD) (Larson, 2000) is strongly rooted in Euro-Canadian culture (Holt, 2008). As a process, PYD claims to assist youth to move successfully from childhood to adulthood; a successful transition is said to be one where youth learn how to positively respond to new emotions, to discover new modes of thinking, and to acquire new skills, all while feeling good about themselves (Whitehead, Manarina-Cianfrone, & Price, 2010). Some youth populations have been discursively produced as

being in need of development; indeed, development programs for Aboriginal youth, especially those that target health, are often based on a betterment paradigm (Case, 2006), where Aboriginal youth are perceived as being “at-risk,” which in turn perpetuates colonial discourses that produce Aboriginal peoples as being in need of supposedly superior, typically Euro-Canadian based, intervention (De Leeuw, Greenwood, & Cameron, 2010).

In this presentation, we address the question, “is it reasonable to use a Euro-Canadian PYD approach with Aboriginal youth and to expect the same ‘positive’ health results?” To answer this question, we draw on archival research and semi-structured interviews with past participants in the Northwest Territories Above-Ground Pool Program to argue that PYD strategies that are not rooted in Aboriginal ways of knowing run the risk of reproducing colonial discourses and practices that have served to marginalize Aboriginal youth at place them and their health “at-risk” in the first place.

June 22-23, session 06.40: Best practices for community engagement in health promotion research and population health practice - lessons from the North

Gladstone, Joshua (School of Public Policy and Administration, Carleton University, Ottawa, Canada): *Evaluating the Effects of Comprehensive Land Claims Agreements in Canada: an Aboriginal Policy Perspective*

In the Canadian arctic, governance is mediated to a large extent by comprehensive land claims agreements. These treaties, enforceable like contracts but having the weight of constitutional authority, involve the surrender and often extinguishment of existing Aboriginal title in exchange for defined parcels of land, rights and other benefits. As such, they are potentially powerful tools for Aboriginal groups to achieve a measure of self-determination within the Canadian federation. Over 25 such agreements have been signed since 1975 and many more are under negotiation. While Aboriginal groups are voicing frustration and disappointment with government compliance, little is known about how land claims agreements are achieving their broader objectives of self-reliance and cultural and social wellbeing. This is a challenge for an Aboriginal leadership that is forced to account for land claims outcomes in the context of heightened expectations among land claim beneficiaries. This paper is an early exploration of the range of public policy tools that could be used to conduct systematic analyses of the effects of land claims implementation on Aboriginal beneficiaries in Canada. Conventional logic models for strategic program evaluation may not be robust enough to meet Aboriginal policy needs, to the extent that these models are ahistorical, non-counterfactual, non-participatory, and mostly program-based. Alternative approaches are considered in light of methodological constraints and potential for educational and democratic opportunities. The case of Nunavut Land Claims Agreement implementation will be used to illustrate potential policy applications.

June 25-26, session 03.70: The Social Economy and Community Economic Development in the Circumpolar North

Goldsmith, Scott (Institute of Social and Economic Research, University of Alaska Anchorage): *Managing Extractive Resource Wealth: Lessons from Alaska*

Cash economies in many parts of the Arctic North have long been dominated by resource extraction industries such as petroleum and metal mining. These developments are often short lived, generating cycles of economic booms followed by busts. And the wealth created by these activities tends to flow South, as profits to large firms and wages to temporary residents. But in Alaska the Permanent Fund (and a number of smaller financial accounts), has captured a significant share of the wealth generated by the production of petroleum over the last 30 years. Alaska residents now have the opportunity to use this wealth (currently estimated at \$45 billion in financial assets and \$81 billion in the state share of oil still in the ground) to build a strong economy, not only for the current generation but for future generations of Alaskans as well. This will be a unique challenge, balancing the needs of current and future generations, the preferences of urban and rural residents, permanent and temporary citizens, and others. This paper will examine the challenges facing Alaska as it begins the task of wealth management in an era of declining petroleum production. This should provide lessons for other regions impacted by cycles of resource extractive industries.

June 23, session 05.67: Consultation in Arctic Extractive Industries Development: Lessons learned for Arctic resource governance from the local to the international level

Goldstein, Michael A. (Babson College); **Sturm, Matthew** (U.S. Army Cold Regions Research and Engineering Laboratory); **Douglas, Thomas** (U.S. Army Cold Regions Research and Engineering Laboratory); **Huntington, Henry** (Huntington Consulting): *Cold Hard Cash: The Economic Importance of Ice in the Arctic*

We are studying the effect of changing seasonality on the Arctic economy by examining a unique 600-km "ice road" over frozen lakes and tundra constructed yearly in northwestern Canada. The road supplies three diamond mines with fuel and material. The mines account for 30% of the Gross Domestic Product of Canada's Northwest Territories, employing 4,000

people, roughly 35% of whom are Aboriginal. Winter operations of the ice roads hinge on predictable seasonal transitions (summer-to winter; winter-to-summer) and cryospheric conditions. Seasonal shifts are already adversely impacting minerals activities in the North with a trickle down impact on local and Northern economies.

Using data from 1959 to 1996, we examined how anticipated changes in seasonality will affect economic performance in the next decade and whether adaptive strategies can reduce the economic sensitivity of this key industrial sector to longer or shorter seasons, or a warmer, wetter, or more variable climate. We find road construction and maintenance techniques can lengthen ice road seasons, saving between \$6 million and \$27 million a year in transportation costs. However, reliance on ice roads also entails significant economic risk: modeling indicates the roads may fail to deliver sufficient supplies almost 27% of the years examined at a potential additional cost of up to \$84 million for each failed year. While engineering can make marginal changes, it cannot adapt sufficiently to account for additional costs due to rapid climate changes or variability. To ensure future operations, mines will either be shut or alternative transportation modalities will be required.

June 22, Session 01.46: Circumpolar Perspectives on Changing Seasonality in the Arctic

Golovnev, Andrei V. (Institute of History & Archaeology, Ekaterinburg, Russia): *Film and Northern identities*

Visual identities of the North and Northerners vary within the spectrum of images, from the hostile frontier to the hospitable home. The latter mainly generated due to the native/indigenous cultural values and their presentations. In contrast to pages of textual descriptions and columns of statistics a film easily reveals an aspect of story happened on the North from viewpoint of northerner or visitor/newcomer. In most cases a northerner (and following documentary camera) looks around habitually as far as an outsider does it heroically (curiously). There could be at least two kinds of Arctic film panoramas based on feelings of, accordingly, everyday practice and casual exploit. Both approaches are of certain value though they open different motives and attitudes toward the North reflecting in film rhythm, a ngle of shot, narration, editing, and drama-making. The spirit of discovery associated with the North makes it customary expecting from each film about North to be a sort of discovery. However, from the northerner's stand many other aspects and scenarios like nuances of cultural dialogue or environmental change may acquire key priority. By this sense a regular film festival can reveal certain drift of northern vision. For example, the film-winners of Russian Anthropological Film Festival held in Salekhard (Yamal), 1998–2008, outline the trajectory: 'camera-explorer' (1st and 2nd RAFF), 'native insight' (3rd), 'ethno-portrait' (4th), 'ethno-art' (5th), and ethno-thriller (6th).

June 25, session 08.19: Arctic View: Reality & Visuality

Golovnev, Ivan (Ethnographic Bureau): *EthnoFilm project*

The "EthnoFilm" project intended as the educational ethnocultural initiative, aimed to attraction of interested youth to ethnographic research and video fixation of the unique cultural phenomena of the peoples of Arctic and Subarctic regions: Nenets, Khanty, Mansi, Komi. The first stage of the project, consisted of lectures and seminars, was considered as development of traditional positions of ethnography as well as visual forms of description of ethnic groups. The courses regarding film production, dramatic art, editing, filming were delivered. The basic attention was paid to individual lessons that had been related to working out of creative sketches and plans of realization of the future films as final works of project's participants.

The central stage of the project was the «field film-school», ethnographic and film practice in the form of expeditions towards the places of residence of the various indigenous communities. During the expeditions the ethnographic material has been gained and first editing of the received materials at portable montage studio has been made. Besides, the film draft version accompanied with a language translation and updating of film details has been showed to protagonists of shootings. This process involved into account the opinion of participants from the national environment.

The final stage of the "EthnoFilm" project was considered as editing of the film almanac. Almanac's films were united by a project's theme. On another hand, all the films were considered as individual works: the film's style and content depended upon the chosen characters, environment and author's position.

June 25, session 08.19: Arctic View: Reality & Visuality

Graben, Sari M. (Queen's School of Policy Studies): *Arctic Participation: How the Public and Private Collide in Co-Management*

In Canada, co-management boards are regulatory agencies which comprise Indigenous peoples, state agencies and other stakeholders and which serve as an alternative to centralized decision-making prototypical of resource management. However, reservations about whether co-management arrangements permit Indigenous values to impact decision-making persist. This paper explores the extent to which the opposite may be true - that law can provide the space necessary for adaptation that can transform regulation to reflect local values.

Using the Mackenzie Valley Environmental Impact Review Board, a co-management board in Northern Canada as a case study, this paper describes how participatory processes have led to the adaptation of regulatory instruments. The paper begins with a description of the institutionalization of particular community values about participation into environmental assessment guidelines on socio-economic assessment. More specifically, it traces how community input into the guidelines impacted their final formulation as highly participatory. Furthermore, it traces the subsequent use of those guidelines to foster private negotiation between Indigenous communities and industry as a central feature of environmental assessment.

The paper argues that these impacts do evidence the adaptation of the environmental assessment regime to integrate community based values of participation. The methods, however, used to achieve adaptation are not value free. Rather, they raise concrete questions about the impacts of local participation on notions of downwards and upwards accountability which underpin agency authority. While there is clearly a good argument that the promotion of negotiations between communities and private industry may render the board more accountable to communities, measuring the incorporation of Aboriginal values remains tied to answering issues of representation. More specifically, answering who in the community is represented in co-management, how these community norms are translated and the degree to which the board's reliance on community input allows public and accountable procedures to mask private and unaccountable ones.

Ultimately, agency efforts to adapt environmental assessment to reflect Indigenous community values should be recognized as having an impact on law reform. However, the insights of critical scholarship continue to complexify concepts of participation used to justify this adaptation and how those concepts contribute to or diminish accountability. In addition, however, to answering domestic questions of accountability, this work also contributes to the growing number of studies which attempt to describe how law is adapted at the micro level. In doing so, notions of participation as a method of law reform, must also be interrogated

June 24, session 05.43: Governance in the Canadian Arctic: reconciling indigenous experience and western governance models?

Graburn, Nelson (Department of Anthropology/ Chair of Canadian Studies, University of California at Berkeley): *Canadian Inuit Film, Video and TV Production: Assimilation and/or resistance*

The Canadian Inuit have countered threats to their language and culture - due to massive assimilation by Canadian bureaucratic, educational and economic systems, and through the media by North American popular culture - by developing their own radio and television programmes e.g. the government-run IBC (Inuit Broadcasting Corporation).

This led to a boom in independent films by Isuma Productions (Igloolik) showing their mythology /Atarnarjuat/the Fast Runner/, their recent history /The Journals of Knud Rasmussen/ and demonstrating traditional skills, e.g. /Kamik/[making skin boots]; /Saputi/[fishing at the weir].

Others films directly attack the colonial condition: /Starting Fire with Gunpowder/ [Inuit taking control of TV], /Kakalakuvik/ 2009 [boarding schools] and /Ullumi/ 2008 [Inuit world view today]. /Qallunaanik Piusiqsiuriniq/ [Why Whitemen are Funny] (2006) presents the Inuit as anthropologists studying white people, running tests on specimens brought back from the South, and presenting papers on their research at a conference! Recent productions focus more on external global phenomena affecting today's Inuit, such as climate change, weather borne pollutants, and non-indigenous relatives in Europe.

June 24, session 08.23: Creative Circumpolar Collaboration across Cyberspace in the Arts and Sciences

Graybill, Jessica K. (Colgate University): *"It's all changing, but it isn't global climate change": Narratives about vulnerability and resilience in sub-Arctic Kamchatka*

Knowledge of global climate change has increased dramatically over the past several years across arctic and subarctic regions, as rapid regional climate and weather changes are increasingly witnessed, discussed among communities, and scientifically studied. In one sub-Arctic region in the Russian Far North – the Kamchatka Peninsula – both scientific (glaciological,

dendrochronological) as well as socio-environmental and anecdotal (herding, subsistence) knowledge of resources and territories indicates a warming trend. My ethnographic and cognitive mapping research on Kamchatka in 2009-10 reveals the development narratives of denial of global climate change (GCC) in local communities (indigenous and post-Soviet) on daily lives and livelihoods in this region. I argue that the resistance to accepting GCC on Kamchatka is a result of two things. First, it reflects an entrenched belief in Russian/Soviet science that nature's problems are solvable with technological solutions. Second, it is closely related to how local communities currently conceptualize their existing resilience and abilities to respond to ongoing transformation (cultural, economic, political, environmental) over the last century. Existing discourses of resilience to socio-ecological change serve local people well, bonding communities socially and territorially, especially after near-systemic collapse in 1991. With this case study of Kamchatka, I show that understanding the roles of local science traditions, socio-environmental histories and current conceptualizations of vulnerability and/or resilience are vital in creating a broader understanding of the challenges of adapting to GCC in vulnerable locales. Acknowledgement of local narratives will be necessary in creating just science and policy decisions about local people and places.

June 23, session 01.33: Narratives of vulnerability, resilience and adaptation among circumpolar communities in the era of climate change

Gremaud, Ann-Sofie Nielsen (University of Copenhagen): *Issues of site specificity in Icelandic landscape depictions*

In this paper I focus on different types of site specificity as it is expressed in depictions of Icelandic landscape. By use of iconographic analysis I compare various media including money bills, sculptures and modern abstract and figurative art. I unfold two different modes of site specificity concerning, on the one hand, art works connected to a certain physical milieu and, on the other, depictions of sites interpreted through different types of what Henri Lefebvre entitles pictorial space.

In many Icelandic art works the North Atlantic Ocean is depicted with an emphasis on site specificity whereby it is identified as part of the national territory. By combining approaches from visual studies, sociology and human geography comparisons of depictions of ocean and of terrain shed light on different modes of representing and identifying landscape as being national.

By synthesizing theories by e.g. D. Cosgrove, M. Halbwachs, M. Kwon, M. Foucault and theories of liminal spatiality, I seek to shed light on depictions of specific Icelandic sites as meaningful aspects of (real and imagined) structures upholding the national collective in a time of newfound autonomy. The paper thus approaches landscape imagery as complex spaces of negotiations of national identity and reflections of socio-economic conditions; asking questions such as: Which roles do representations of territory play in the national collective? How do different conceptions of space influence the relation between a physical site and its depiction? Which sites are produced and reproduced as meaningful?

June 22-23, session 07.49: Practice Power North

Griggio, Consuelo (Memorial University of Newfoundland): *Himmelblå and the Vega Archipelago of Norway: a tourist flop!*

In 2004 the Vega Archipelago – a cluster of islands just south of the Arctic Circle – was declared a UNESCO Heritage Site. Since then, Vega has experienced an increase in tourists and it has been mainly constituted as a “landscape of consumption” for the tourist industry (Neumann 1998: 23). From 2008 to 2010 the drama series *Himmelblå*, filmed on a small island just off Vega, became an instant hit in Norway and Sweden. As my data confirm, many people in Vega thought that this sudden, nationwide visibility would attract more tourists. This has not happened so far. Drawing upon classical anthropological theory on tourism (MacCannell, Löfgren, Urry) and semiotics (de Saussure), I will discuss some of the reasons why Vega did not profit from this unexpected and free advertisement campaign and sudden broader visibility. As I will show, the Vega administration fundamentally failed to create a connection between the marker (defined by MacCannell 1976: 41 as “information about a specific sight”, that is, life on a rural, isolated island) and the site itself (the Vega archipelago). As Jewesbury correctly observed (in Crouch and Lübbren 2003: 228), “the commodification of the tourist site involves an ideological as well as a financial investment”. The incapability of Vega to incorporate the hit series *Himmelblå* as part of its own identity and duplicate it as image-commodity left the few, curious tourists that committed to the ‘pilgrimage’ (Urry) without a reason for returning or for advertising the place once at home.

June 25, session 02.56: Tourism, People and Protected Areas in Polar Wilderness

Grønnow, Bjarne (The National Museum of Denmark): *The Non-Empirical Environment of the Saqqaq Culture*

Inspired by Ernest Burch's anthropological studies on the non-empirical environments of the Alaskan Eskimos, this paper deals with the spiritual world of the palaeo-Eskimo Saqqaq culture, the archaeological designation of the first groups of humans who migrated into West Greenland about 4.500 years ago. Neither oral tradition nor genetics connect these early

Arctic pioneers with historic Inuit, and conclusions on Saqqaq ‘non-empirical environments’ must be based on analyses of material culture: archaeological finds and find contexts. Due to excellent preservation conditions, two permanently frozen sites in West Greenland, Qajaa and Qeqertasussuk, offer a potential for studying a variety of non-functional aspects of palaeo-Eskimo artifacts. This paper presents some of these unique finds, for example fragments of drums, ornamented bone tubes, and harpoon heads, and thus it offers a glimpse of the symbolic and spiritual world of the Saqqaq.

June 23, session 07.47: In the Footsteps of the Giants – Honoring Ernest S. (Tiger) Burch, Jr., 1938–2010

Guernsey, Brenda (University of Alberta): *The Industrialization of First Nations Environments in Northern British Columbia*

Intensive industrialization of the lands and resources in northwest British Columbia (BC) has historically impacted the relationships between First Nations peoples, their environments, and traditional foods. My research involves gaining a better understanding of the intricacies of the impacts of industrialization on the health and well-being of Tsimshian First Nations communities in northern British Columbia. First Nations in this region experienced extraordinarily rapid social and cultural changes with the onset of industrialization in the late 19th century that significantly impacted their interaction with their environments, where they lived, how they made a living, and what foods they ate. As an example, many villages were all-but abandoned in favour of moving to various cannery towns in order to engage in the new capitalist, wage-based economy. Sometimes this movement was seasonal; often it was a more permanent migration. People became physically and socially distanced from their territories as a result of not only these new economies but also from the creation of reserves. These physical relocations led to considerable changes in their food economies. These ‘traditional’ food economies were not simply about food procurement, provisioning and consuming, but were intimately entwined with political, social and spiritual life. Despite the changes, many First Nations communities continue to have a culturally significant reliance on traditional foods that allow people to maintain important relationships with land, food and heritage. My examination of food in this historical context will lay the groundwork for my proposed exploration of the complexities that allow a community to maintain core values and societal structures through times of environmental stress.

June 23, session 02.68: Social and economic impacts of megaprojects in the North

Haakanson, Sven (Alutiiq Museum, Kodiak, Alaska): *Beyond borders: the repatriation of Indigenous knowledge through material culture, international exhibitions, catalogues and exchanges*

For the past decade the Alutiiq Museum has been involved in innovative and collaborative work to repatriate traditional knowledge from collections scattered across the world. Through exchanges, exhibitions and collaboration on catalogues they have built relations that go beyond what is expected of a museum's role within a community. In 2008 they worked with the Chateau Musee in Boulogne-sur-Mer, France to bring an international and collaborative exhibition to Kodiak, Alaska to share traditional masks collected from their region in 1872. In 2010 they supported the Museum of Anthropology and Ethnography on creating a catalogue on Alutiiq material culture collected between 1784-1900. How are they doing this and why? Repatriation of knowledge and building mutual trust between institutions is important. They have reversed the flow of knowledge so that it is owned by the community and not just the collector or museum. The result from this work have helped to reestablish traditional knowledge within the community once again. They are building a foundation of exchanges that are going beyond one generation.

June 23-24, session 09.01: Schooling in the Arctic

Habulinc, Silvije (University of Zagreb): *Greenlandic legends and myths*

The key of this work is a research of Knud Rasmussen and his collection of Greenlandic folk tales which he printed more than a century ago. Legends and myths from all over the world are based on true events and after it happened people started to tell stories about it from generation to generation and during their telling they started to change and over exaggerate. Greenlandic legends and myths are the same but with some exceptions. The main difference is not “what” is told, but “how” it is told. The other difference is that they usually can prove their stories with some evidence. I present a few varieties of these stories which were told by people from East, West and North of Greenland and I try to express their view of the universe on the base of these stories, especially the perception of North Greenlanders whose “country is always shut in by ice, and the daylight never reached over the tops of their high fjelds”. I try to compare them mutually and I also compare them with some other myths and legends which are told far away from Greenland. The comparison of these stories with Greenlandic legends and myths shows differences, but also some similarities.

June 24-26, Session 07.32: Imagining the Supernatural North

Hafsteinnsson, Sigurjón Baldur (University of Iceland): *The Social Mandate of Aboriginal Peoples Television Network*

In this paper I argue that the first national indigenous television network in Canada, Aboriginal Peoples Television Network (APTN), is based on democratic practices that the anthropologist Arjun Appadurai has termed “deep democracy” (Appadurai, 2002). These practices at APTN originate among the Aboriginal peoples themselves i.e. Inuit, Métis and First Nations. They are deeply local, as they endeavor to introduce or revive democratic principles in a way that “suggests roots, anchors, intimacy, proximity, and locality” (Appadurai, 2002, p. 45). In this paper, I will look particularly at APTN’s social mandate as an example of deep democratic practices.

June 24, session 08.23: Creative Circumpolar Collaboration across Cyberspace in the Arts and Sciences

Haftendorn, Helga (Free University of Berlin): *Militarizing the Arctic? Testing the Feasibility of a Nordic Nuclear Weapon-free Zone*

In the Cold War era several proposals have been made for nuclear weapon-free zones (NWZ) in the High North. Finnish President Kekkonen and Swedish Foreign Minister Lundén have suggested the creation of a nuclear-free zone in Scandinavia and forming a club of nuclear weapon-free states. These states would renounce the possession, production and testing of nuclear weapons, the use of these weapons would be prohibited against any non-nuclear state, and permanent measures were established to ensure compliance.

The rising tide of international support for a greatly reduced role of nuclear weapons in both national and alliance security – as has been demonstrated by the 2010 U.S. Nuclear Posture Review – produces a favorable setting for discussing such a proposal. Canada and the Nordic states have long renounced nuclear weapons in peacetime. While in the past the Soviet Union had been broadly sympathetic to a Nordic NWZ, today’s Russia is reemphasizing the nuclear elements in its security strategy. Its long-range fighter-bombers and nuclear submarines have resumed patrols along the coasts of Canada, Iceland and Norway. These have raised new concerns among the Arctic Ocean states about Russian intentions and have instigated dire warnings from SACEUR Stavrides about sparking a new cold war in the Arctic.

A Nordic NWZ might be an appropriate means for diffusing concerns, enhancing confidence and preventing a new arms race in the High North. What should a new proposal for a NNWZ look like and how might both Russia and the USA be enticed to support it?

June 22-23, session 10.22: Claims on Sites and Knowledge in Cold Regions. Material and Immaterial Constructs of Nature, Nations and Industry

Hall, Þorbjörg Daphne (Iceland Academy of the Arts): *Contestation of the image and identity of Reykjavik City: A Case Study of Iceland Airwaves*

The paper will shed light on the role of the music festival Iceland Airwaves in creating an official identity for Reykjavik City and what kind of identities are involved. The image of the festival will be analysed through media, marketing and public discourse. Icelanders seem to be occupied with defining themselves but the image projected outwardly does not necessarily cohere with the national identity. Therefore it is interesting to analyse the contestation between identities and images of the city and where the difference stems from, how it is represented and maintained both in Iceland and abroad.

The conclusion is that with increased influence of tourism on music images of nature and national identity take over from the city identity. This creates tension between the musicians and the music industry as the nature image, which originally appeared with Björk, is transferred to most ‘indie’ music. The music is therefore reduced to homogeneous ‘Icelandic music’. The city has a long way to go before the music created and consumed in Reykjavik will be viewed as Reykjavik music since images of nationality and nature are entwined with the music. However, the city also benefits from being the only city in Iceland and does not need to singularise itself and can therefore benefit from the national and naturist images.

June 22-23, session 07.49: Practice Power North

Hamilton, Lawrence C. (University of New Hampshire): *Community and Environment in Southeast Alaska: Results from a Telephone Survey*

Southeast Alaska lies outside the Arctic, but shares some Arctic Alaska characteristics such as low population density and communities unconnected by roads, often focused on natural resources and with a strong Native presence. In 2010 we conducted telephone surveys that interviewed random samples of more than 1,500 residents across this region. Social scientists have employed telephone surveys very widely in southern areas, but research applications to rural areas of the far North are uncommon. In comparison with community case studies or face-to-face interviews, telephone surveys are less personal and interactive. On the other hand, in a short time and for a relatively low cost, they can hear the perspectives of a large and testably representative cross-section of the population. They also can easily cover geographical regions that are too spread out and rural for other methods to be practical. Our 2010 survey asked questions about community and environment, including climate change. Responses to the climate questions show some interesting contrasts between different social groups, and between regions within Southeast Alaska. They also exhibit patterns of similarity and differences when compared with identical survey questions asked in other rural parts of the U.S. This research approach appears promising for learning views on climate and other issues from cross-sections of Arctic residents as well.

June 23, session 01.33: Narratives of vulnerability, resilience and adaptation among circumpolar communities in the era of climate change

Hannell, Lucas (Mammuthus 2010 – 2014); **Lainé, Ludovic** (Mammuthus 2010 – 2014): *Uniting Scientific and Cultural Heritage*

The Arctic offers glimpses into worlds of extraordinary nature and culture that are unfortunately disappearing. Threatened by factors such as economic pressures, resource exploitation and climate change, the collective heritage of the Arctic would benefit from an improved framework of conservation.

The well-preserved record of recent natural history that lies scattered throughout the Arctic allows scientists to approach pertinent questions of biodiversity, ecosystem dynamics and climate change with singularly excellent data. The cultures of the Arctic are inextricably tied to a fundamental time in human history. Customs and traditions, from art to folklore, that survive to this day are often the only living link to the same world that scientists are working to decipher through the scope of paleontology and related disciplines.

Cross-pollination in these fields - science and culture - has the potential for mutual enrichment as well as to raise awareness for the conservation of tangible and intangible heritage in the region.

The Mammuthus Program 2010 - 2014 is a scientific exploration initiative in Arctic Siberia that adopts such an interdisciplinary approach, uniting the knowledge of indigenous cultures with twenty-first century science to tell a more comprehensive story of the Arctic's legacy.

June 22, session 07.52: «Patrimonialisation» of Arctic Aboriginals' Territories. Promoting cultural heritage within protected areas

Hansen, Ketil Lenert (Centre for Sami Health Research, Faculty of Health Sciences); **Høgmo, Asle** (University of Tromsø, Faculty of Education); **Melhus, Marita** (University of Tromsø, Faculty of Health); **Lund, Eiliv** (University of Tromsø, Faculty of Health): *Ethnic discrimination and bullying in the Sámi and non-Sámi populations in Norway: the SAMINOR study*

Objective. To investigate the prevalence of self-reported experiences of ethnic discrimination and bullying among Sámi and non-Sámi adults.

Subjects. This analysis was based on 12,265 men and women aged 36-79 years. Ethnic distribution was Sami (33.1%), Kvens (7.8%) and majority (59.1%).

Results. Overall, Sámi and Kven responders reported more ethnic discrimination and bullying in general than ethnic Norwegians ($p < 0.001$). The reporting was highest among the younger participants ($p < 0.001$). Men reported more ethnic discrimination than women, while women reported more bullying. Responders with the strongest Sámi affiliation reported higher levels of ethnic discrimination outside the Sámi language Act's district, while responders with weak Sámi affiliation, Kvens and ethnic Norwegians reported higher levels inside this district. Among the responders that reported bullying previously, the most common type was discriminating remarks and the most common locations were public schools. For the reported bullying last year, the most common types were gossiping and discriminating remarks, and the most common locations were at work and in the local community. Two out of three of those reporting ethnic discrimination, independent of ethnicity, also reported bullying.

Conclusions.

The findings from this study show that the Sámi and Kven population more often experience bullying and ethnic

discrimination than ethnic Norwegians. These results are consistent with experiences from other minority and marginalized groups that experienced colonization. More research is needed to understand the role of bullying and ethnic discrimination in the Sámi and Kven population's well being and health.

June 24-25, Poster Sessions

Hansen, Ketil Lenert (Centre for Sami Health Research, Faculty of Health Sciences); **Melhus, Marita** (University of Tromsø, Faculty of Health); **Lund, Eiliv** (University of Tromsø, Faculty of Health): *Ethnicity, self-reported health, discrimination and socioeconomic status: a study of Sami and non-Sami Norwegian populations*

Objectives: Investigate the association between ethnicity, social factors and self-reported health conditions of Sami and non-Sami Norwegian populations.

Method: SAMINOR is a population-based study of health and living conditions that was conducted in 24 municipalities in northern Norway during 2003 and 2004. The present study included 12,265 individuals aged between 36 and 79, whose ethnicity was categorized as Sami (33.1%), Kven (7.8%) and Norwegian majority population (59.1%).

Results: Sami respondents reported inferior self-reported health conditions in comparison to Norwegian majority population. The most unsatisfactory conditions were reported by Sami females living outside the defined Sami area (with great integration and assimilation) (p

Conclusions: The findings of this study suggest that self-reported ethnic discrimination combined with low socioeconomic status contributes to inequalities in self-reported health when Sami and Norwegian majority population are compared.

June 22-23, session 06.40: Best practices for community engagement in health promotion research and population health practice - lessons from the North

Hansen, Ketil Lenert (Centre for Sami Health Research, Faculty of Health Sciences); **Sørli, Tore** (University of Tromsø/University Hospital in northern Norway): *Ethnicity, ethnic discrimination and psychological distress: a study of Sami and non-Sami populations in Norway*

The prevalence of psychological distress and the association between ethnic discrimination and psychological distress was examined among 13,703 participants (36 to 79 years of age) in a population based study of health and living condition in areas with indigenous Sami, Kven (descendant of Finnish migrants) and Norwegian populations (the SAMINOR study). Sami and Kven males reported greater levels of stress than ethnic Norwegians. Ethnic discrimination was associated with elevated levels of psychological distress. Given this substantiation, ethnic discrimination is a major potential risk factor regarding mental health which may contribute to ethnicity-related inequalities in mental health between Sami and non-Sami populations.

Keywords: Ethnic discrimination, mental health, psychological distress, Sami, SAMINOR

June 22-23, session 06.40: Best practices for community engagement in health promotion research and population health practice - lessons from the North

Hansen, Ketil Lenert (Centre for Sami Health Research, Faculty of Health Sciences); **Høgmo, Asle** (University of Tromsø, Faculty of Education); **Melhus, Marita** (University of Tromsø, Faculty of Health); **Lund, Eiliv** (University of Tromsø, Faculty of Health): *Sami value patterns in Norway*

Objectives: To study and contrast personal values in ethnic minority (Sami) and ethnic majority (Ethnic Norwegian) populations in Norway.

Study design: A population-based, cross-sectional study called the SAMINOR study was carried out in 2003-04 in areas of populations with mixed ethnicity.

Method: From 24 municipalities, a total of 12,623 subjects between the ages of 36 and 79 were included in the analysis of personal values. The survey instrument consisted of a 19-item questionnaire and the analysis was based on responses from 10,268 Ethnic Norwegian and 2,355 Sami participants. Associations between personal value variables were assessed using principal component analysis.

Results: From the 19 values, Sami respondents held the following five personal values in the highest regard: being in touch with nature; harnessing nature through fishing, hunting and berry-picking; preserving ancestral and family traditions;

preserving traditional Sami industries and preserving and developing the Sami language. On the other hand, Sami respondents' least important values included modern Sami art and the Sami Parliament (Sametinget). Four dimensions associated with values were identified: "Traditional Sami Values", "Modern Sami Values", "Contact with Nature" and "Feeling of Marginalisation".

Conclusion: Four distinct value patterns were identified in the Sami population. The four dimensions reflect important aspects of today's Sami society.

June 24-25, Poster Sessions

Hansen, Klaus Georg (Nordregio): *The challenge of governance and CSR: A case study of the Greenland aluminum project*

Since spring 2006 the aluminum company Alcoa has been in dialogue with the Greenland authorities about the possibility of establishing an aluminum smelter on the west coast of Greenland. To deal with the aluminum project the Greenland authorities have established an administrative project organization and an external company named Greenland Development. Since 2007 the public have more extensively been informed about the project, and the Greenland parliament has had different political discussions about the project. The case study will analyze the interests some of the main actors have shown in involving the public in the political decision process. The discussion will set out from a public empowerment point of view, and the discussion will involve aspects of the interests of identified stakeholders and of the public in general. Looking at the authorities it will be discussed to what extent the principles of good governance have been adopted and if different bodies in the administration have taken the same position or not on the use of the principles of good governance. Regarding the private companies involved in the aluminum project the study will discuss if, who, how and in which way they have pursued the principles of corporate social responsibility (CSR) in relation to the aluminum project. Finally the study will from a broader perspective also discuss the question of possible 'natural limitations' in governance and CSR in regards to national mega projects like the Greenland aluminum project.

June 25, session 05.28: Governing changes in the North

Hansen, Klaus Georg (Nordregio): *Understanding the different expectations about the social and economic impact of an aluminium smelter in Greenland*

Aluminium smelters are one of the types of megaprojects creating most significant social impact on the region a smelter is placed in. For smelters in the North this impact is even more significant, primarily because a smelter is so labour intensive. This becomes especially critical if smelters are located in small communities. Opposite to the situation in Iceland, Greenland has still not politically decided to have its first aluminium smelter. An aluminium smelter project has been discussed and matured since 2006. In 2008 it was decided that if a smelter is to be built it will be placed near the town Maniitsoq in central west Greenland. A final political decision in the Greenland parliament whether or not to approve the realization of the project can be expected in the second part of 2011 or in the beginning of 2012. The public debate in Greenland regarding the construction of the aluminium smelter has shown many different views on the impact if an aluminium smelter will be built. The different views on the possible smelter show several different positions in regard to the question of both the social impact and the economic impact. The paper will discuss and analyse some of the most significant positions in the debate like "Greenland must be modernized" and "Our town will be saved from depopulation" from the proponents and "The historical sites must be protected" and "Our natural resources will suffer too much" from the other side.

June 23, session 02.68: Social and economic impacts of megaprojects in the North

Harrison, Ramona (The Graduate Center, City University of New York); **Roberts, Howell M.** (Fornleifastofnun Islands): *Iceland in a medieval world system: Archaeological contributions to the theory on regional surplus staple production and international exchange*

This poster presents preliminary archaeological data from a regional study building on excavations at the C13th-14th trading site Gásir in NE Iceland's Eyjafjörður. Ongoing research of Gásir's impact on the local and regional hinterlands and their respective environments indicates that Möðruvellir, a nearby medieval monastic manor was involved in the market activities. This site had extensive farm lands and drew on available natural resources, especially grazing land, from a series of valley systems that made up the hinterlands area for both Gásir and Möðruvellir. For better understanding of this issue, a more regionally oriented research approach was initiated. The Gásir Hinterlands Project (GHP) is aimed at a better understanding of the human impact on the local environment (and vice versa) combined with the decision making strategy involved with trans-Atlantic influences and a regional trading economy in medieval Iceland. Preliminary ideas on the region's social and environmental dynamics draw on zooarchaeological and artefact analysis, are supplemented by ongoing processing of

environmental data (i.e. soil Micromorphology, Tephrochronology, charcoal analysis, etc.), and based on an extensive regional landscape survey.

June 24-25, Poster Sessions

Hastrup, Kirsten (Department of Anthropology, University of Copenhagen, Denmark): *Scales of Attention: Global Connections and Local Concerns in the Arctic*

The social sciences face a set of complex challenges in an era of intensifying global connections, undermining the constitutive objects of these sciences. Cultures, nations, and even societies are not what they used to be, and the ‘methodological nationalism’ that once qualified the social sciences is no longer valid. Global connections are of many kinds, and their effects diverse; yet there is a general implication in that they force the social sciences to revisit their scaling practices and their notions of place. This evidently also goes for the Arctic.

One of the manifest global connections in the Arctic is embodied in the experience of dramatic climate change. Based on fieldwork in North Greenland, this presentation addresses the question of scaling through discussions of how to follow the leads provided by different situations in the field. Apparently localized encounters and stories transcend both the time and the space of the encounter and show the inherent complexity of scaling and of the field itself. Along the way it will be shown how local concerns about the melting ice are deeply implicated in global knowledge regimes.

June 23, Keynote presentation

Hayes, Amos (Geomatics and Cartographic Research Centre, Carleton University); **Taylor, D.R. Fraser** (Geomatics and Cartographic Research Centre, Carleton University): *Building a Distributed Community Data Management Network for Local and Traditional Knowledge*

For more than a decade, the Geomatics and Cartographic Research Centre (GCRC) at Carleton University has been developing theory and practical technologies to support data management and dissemination with a strong focus on cultural context. Recent work on a number of community-led interactive atlases and International Polar Year projects have highlighted challenges in organizing, representing, and ensuring the preservation of knowledge in digital form without affecting the control and possession of the information by communities themselves. Communities have expressed a desire to be able to host and grow these digital collections within the community while recognizing that longer term preservation may be better achieved by partnering with regional or territorial governments, knowledge centres, or even other communities with sufficient technical capacity.

To attempt to address these concerns, the GCRC is mid-way through the design and deployment of a pilot distributed data management system where each participant community, region, or organization hosts a node comprised of flexible data storage, an interactive atlas-based front-end for discovery, input, and management, and robust data replication among selected trusted peers in the network. In conjunction with Inuit Tapiriit Kanatami (ITK) researchers and community representatives, a consent model is being built to guide the access control capabilities of the system. GCRC and ITK are also working with Arctic College in Nunavut to develop a for-credit course focused on community research theory and practise.

This paper will provide an overview of the system being built, the supporting consent and education work, the community content already housed in the system, and future directions for the project.

June 22-23, session 10.20: Data Management and Knowledge Stewardship: Perspectives and Practice from Communities and Researchers

Hayes, Amos (Geomatics and Cartographic Research Centre, Carleton University, Canada); **Laidler, Gita** (Geography and Environmental Studies, Carleton University, Canada); **Aporta, Claudio** (Department of Sociology and Anthropology, Carleton University, Canada); **Pulsifer, Peter** (National Snow and Ice Data Center, University of Colorado Boulder, USA); **Taylor, D.R. Fraser** (Geomatics and Cartographic Research Centre, Carleton University, Canada): *Inuit Siku (sea ice) Atlas - Exploring Knowledge and Use of the Ice*

The Inuit Sea Ice Use and Occupancy Project (ISIUOP), as the Canadian component of the broader international IPY Sea Ice Knowledge and Use (SIKU) project, seeks to document, map, and represent Inuit sea ice knowledge and use in several communities in Nunavut and Nunavik. Through this project, local concerns have been expressed about environmental change, cultural change, and bridging knowledge transfer and language gaps between elders and youth. Cybercartography is being

employed to help communicate and address these concerns by incorporating various types of qualitative and quantitative information in a multimedia and multi-sensory format. The “Inuit siku (sea ice) Atlas” (<http://atlas.gcrc.carleton.ca/isiuop>) has enabled the rendering of research results in a more accessible community context. Strong emphasis was placed on translating research results into locally useful educational materials and facilitating community-centred narratives. This presentation will highlight: i) the background, research process, and technical development that have led to the launch of this Atlas; ii) the conceptual and ethical challenges and opportunities in developing such interactive multi-media technology; iii) our efforts to link this to northern high school learning activities and curriculum; and, iv) an evaluation of the utility of the Atlas based on community feedback received in winter 2011.

June 24, session 01.27: The Human Dimensions of Change to Arctic Sea Ice

Heiðarsson, Jón Þorvaldur (The University of Akureyri Research Centre): *Building of aluminium smelter in East Iceland – Effects on the society, housing market and crowding out effects*

In 2003 it was decided to build rather big aluminium smelter in East Iceland as well as hydro power plant to serve it. It was discussed what influence the smelter would have on population, housing market and economy in the area but the population in East Iceland is only between ten and fifteen thousands. Also there were expectations in the area of economic benefit. RHA did monitor the social effects of this project on East Iceland. Many interesting things came up as result of this big project. The crowding out effects were not quit the same as in populated areas and that did perhaps show that standard economics doses not always count for situations as in rural north. The housing market did respond in interesting way and houses were built in much more scale than needed. That was though the case in other parts of the country as well as at this time there was housing bubble in Iceland. Also it is interesting to see afterwards what kind of housing was built. It seems in some cases that the new houses were not the ones which did fit the society.

June 23, session 02.68: Social and economic impacts of megaprojects in the North

Heikkinen, Hannu I. (Thule Institute, the University of Oulu): *Land use planning processes and practices in mining projects; Case Kolari, Finland and Pajala, Sweden*

The Arctic is rich of different kind of potential resources and particularly mining projects are one of the most debated developments and as well as in Europe as in North America. My paper will build forward from a new project DILACOMI, which targets to develop a model for best regulation and practices for integrating different land use activities and local communities in mining projects. Our work packet one will particularly focus on developing land-use planning processes and practices and will engage in international comparisons. Our research starts from the hypothesis of resource community cycles (Lockie et al. 2009) related to mining developments, which means that mines have several different phases in terms of their impacts on local communities. Impacts begins with prospecting phase, continues with high peaks of building and mining and ends up to closing down of mines or the beginning of new cycle with reopening of mines or altered production modes. The main study areas are the neighboring municipalities of Kolari, Finland and Pajala, Sweden. For community cycle perspective the setting is most fruitful. Kolari has seen already several mining booms and results of closing down phases. Instead the two other local and sometimes competing land-use forms, tourism and reindeer herding, have stand firm and are now preparing to cope with the new mining developments. In Pajala, Sweden, mining is rather recent development altogether. My paper will aim to arouse international comparisons of lessons learned for sustainable community planning which makes possible the coexistence of economies with different lifespan.

June 26, session: 02.65: Collaborative scenario building regarding mining, tourism, climate change and local livelihoods in the Arctic and sub-Arctic regions

Heinämäki, Leena (Northern Institute for Environmental and Minority Law, Arctic Centre, University of Lapland): *Towards ecological and spiritual values in international law: drawing from the cosmology of indigenous peoples and modern esotericism*

Due to challenges posed by global changes, governments of the world's states are more and more facing the fact that they can no longer continue focusing only on the national goods, without caring for the world outside the national or even regional borders.

Global climate change has appeared to be a phenomenon that cannot be tackled by traditional, state-centered, sovereignty based governance of international law. Particularly from the early nineties, an ecological approach has started to emerge in the field of international law, declaring the intrinsic value of the nature and all beings. Indigenous peoples have played a pivotal role in bringing the spiritual approach into the dialogue concerning global environmental protection. According to this holistic

approach, all beings and particles of the nature belong to a sacred web of life, and by harming one of the components, we destroy the wholeness.

Indigenous peoples' understanding plays a key role in the transformation of the global environmental consciousness of humanity, which is necessary for saving the planet, and for cultivating equality and justice. For humanity, spiritual values of sharing and caring, emphasized in the modern esotericism concerning the New World Order, are a key to establish a brother-sisterhood that include not only all humans but also the Earth. The aim of this presentation is to discuss how international law has started to establish ecological and spiritual values and how the wisdom of indigenous peoples as well as modern esotericism makes a valuable contribution to the new global environmental governance.

June 24-26, Session 07.32: Imagining the Supernatural North

Heininen, Lassi (University of Lapland, Finland/ Northern Research Forum): *Changes on Northern Geopolitics - from a frontier (of confrontation) to a region (of peace)*

In spite of some disputes on maritime borders, asymmetric environmental conflicts and claims by indigenous peoples, and the fact that the region is divided by national borders, the Arctic of the 21st century is a peaceful region with large international cooperation and high stability, without wars and armed conflicts. This state can be taken as a success story and real achievement in what ever times, particularly in the times, when in the world does exist two major wars, about 20 minor wars or regional armed conflicts, and a constant global fight against terrorism. Yet, this state of stability and peacefulness is neither given nor determined, and there are more rules of soft law than those of international treaties. Furthermore, a significant and rapid level of environmental and geopolitical change with global perspective has occurred into the circumpolar North recognized by several indicators, such as climate change, growing utilization of natural resources, the importance of energy security; and generally a growing global interest toward the region. The presentation shows that parallel to, and consequent of, this the region plays an important role in world politics due to its high strategic global importance and as 'workshop' for (inter)disciplinary research on the environment and climate change. Furthermore, this is due to more immaterial values, such as the diversity of the ecosystem, that of northern cultures, innovations in political and legal arrangements, and the high stability and peace. These points of view would request more academic interest and scientific study, particularly the latter one on stability, peace and security.

June 25-26, session 05.35: The Political Organization of Arctic Space

Heleniak, Timothy (University of Maryland): *Comparison of Mobility across the Circumpolar North*

The purpose of this paper is to analyze mobility of the population of the circumpolar north. Three levels of analysis are carried out – change in mobility over time, among northern regions, and between circumpolar regions and the rest of the countries. Both mobility and immobility will be analyzed. Lifetime, annual, and other temporal measures of mobility are computed. Differences between mobile and immobile populations are analyzed in terms of age structure, gender, educational levels, and other characteristics. The causes of both mobility and immobility and consequences are examined. To answer these questions data from population censuses, administrative, and survey data across the circumpolar north are used. There have been some recent methodological advances in being able to compare internal migration and mobility across countries which will be applied to the circumpolar regions.

June 22, session 04.01: Mobility and Immobility in the Circumpolar North

Heleniak, Timothy (University of Maryland): *Data for Studying Migration in the Circumpolar North*

Circumpolar regions and populations are unique when it comes to studying migration and migration is one of the key ASI indicators. This paper explores the key sources of data and information available for analyzing migration in the circumpolar north and the challenges presented by them. As with migration elsewhere, the major sources of data on migration are population censuses, administrative data and population registers, and surveys. All of the circumpolar countries have long histories of conducting high-quality population censuses, which include questions on migration in addition to other demographic characteristics. The Nordic countries have among the most advanced statistical systems in the world and have substituted population registers for periodic censuses. Data from population registers and other administrative sources, such as the resident permit system in Russia, are used to track migration.

Surveys to monitor migration across the circumpolar north include both those devoted solely to migration and other social and household surveys which include questions or modules devoted to migration. This paper explores how these data sources are

unique across circumpolar populations and how they differ.

June 24-25, Session 03.63: ASI – Arctic Social Indicators

Heleniak, Timothy (University of Maryland): *Key Issues in the Study of Migration in the Circumpolar North*

Migration has been identified as a key theme in AHDR-II. This paper explores some of the key questions regarding migration in the circumpolar north. Among the issues or question are: is there a unique theory of circumpolar migration or do people move into and around the north for the same reasons they do elsewhere? Given the aspects of the circumpolar north in terms of high-latitude, cold climates, sparse populations, and being distant periphery regions, do these somehow make migration processes unique? How do people in the circumpolar north undertake migration? What migration networks do they move in? What role do state or local policies play in circumpolar migration? How mobile or immobile are the circumpolar populations? How do mobile migrants in the circumpolar north differ from non-mobile populations? What are the demographic, social, and economic consequences of migration on both large circumpolar regions and small Arctic settlements? Though the circumpolar regions share these characteristics, there are also significant differences among them that might make migration differ across the region. Given expected economic, environmental, and other changes in the future, what will the circumpolar population look like at mid-century?

June 23-24, session 10:62: AHDR-II: Arctic Human Development Report: Regional Processes and Global Linkages

Helgadóttir, Guðrún (Holar University College); **Nilsson, Per Åke** (Holar University College); **Holm, Dennis** (The Research Centre for Social Development, Faroe Islands); **Árnason, Sigurður** (The Regional Institute, Iceland): *Back-movers and in-movers. A study of back migration flows into a small society over time*

In the Nordic context, the depopulation of peripheral regions has been going on since the World War II. In contrast with theories on international migrations from developing countries to developed countries the literature on temporary mobility within a country in the developed world is sparse and unsystematic. This project is directed towards a special target group: people who have left a peripheral area and then moved back. The motives for these back-movers may be of interest for future actions for in-migration. The study involves small communities in Northern Iceland, Northern Norway and the Faroe Islands. The investigated item is the household and the method has been semi-structured interviews. The interview questions aim to identify motives for out migration and in migration and the specific situations before moving and after moving back. Demographic information has been mapped. The results reveal the importance of access to education as basic motive for out migration, but there are other and mixed motives of place attachment and lifestyle at play. Place attachment, cheaper living costs and good conditions for raising children are the main motives for moving back. Housing has a great impact on the back move decisions. The results can inform local and central policymakers about the needs of an important target group for in-migration and conditions mitigating out-migration.

Key words: demography, depopulation, peripherality, backmovers, migration motives, push & pull factors, access to education, lifestyle.

June 23, session 04.11: Identity Making in the Border Regions of the European North

Hendriksen, Kåre (Aalborg University): *Globalization and climate change challenges the Arctic communities adaptability and increases vulnerability*

The previous isolation of the Arctic will change as a wide range of areas increasingly are integrated into the globalized world. Parts of the Arctic are characterized by a relatively high material standard of living that is partially based on economic subsidies from the South, and for a number of Arctic consumers globalization appears primarily as a potential for improved supplies of consumer goods.

The massive and growing pressure from multinational companies to exploit the Arctic mineral and oil resources as well as hydro-power in large scale industries appears to (local) governments as a potential for economic growth and thus reduced economic dependence on subsidies from the nation states the Arctic are dependent of. Coinciding climate changes cause an easier access for worldwide market as well as for the extraction of coastal oil and mineral resources.

In an attempt to optimize the fishing fleet by economic measures it is centralized to larger units, and the exports of unprocessed fish and shellfish to low wage countries, carrying out the processing before export, are increasing. Although the local populations often are able to adapt to climate change and exploit new seasonal fluxions and species, these developments

leaves a series of smaller settlements without proper basis for commercially viable activities and survival.

Trusting that heavy industry and oil and mineral extraction can absorb the redundant labor from the subsistence activities and local economies and create economic growth (local) governments are installing economic and other policies leading to a further centralization of the population.

There is not necessarily consistency between official political statements and the implemented measures. On top of this the population in smaller settlements has no frame or means to understand the impact of the discussed and applied interventions. They are therefore to some extent left behind and are not included in contemporary developments leaving them with a feeling of being powerless.

The consequences of contemporary policies and the problems arising will be illustrated through examples from traditional hunting and fishing districts in Greenland.

June 23-24, session 10:62: AHDR-II: Arctic Human Development Report: Regional Processes and Global Linkages

Henri, Dominique (University of Oxford): *Combining Inuit Ecological Knowledge and Western Science in Wildlife Governance: The Case of Polar Bear Co-management in Nunavut*

Given the significance of polar bears for both northern indigenous peoples and the scientific community, there has been growing support for the complementary use of traditional ecological knowledge (TEK) and scientific information in polar bear research and management in Canada and elsewhere. However, while collaborative attempts utilizing both western science and indigenous knowledge in wildlife governance have extended over the years, the acceptance of their combined use remains contentious.

Drawing theoretical insights from the disciplines of ecological anthropology and science and technology studies (STS), this paper reviews and discusses research and management initiatives that have sought, over recent years, to combine Inuit TEK or Inuit Qaujimaqatugangit and scientific information for understanding and managing polar bears in the Nunavut Territory, Canada. In doing so, it aims to : (1) advance current understandings of the challenges and opportunities posed by such an approach; (2) identify potential areas of convergence between scientific expertise and Inuit TEK; and (3) explore mutually affirming ways in which resource users, biologists, wildlife managers and policy-makers can engage with issues of concern.

Based on interviews conducted with Inuit hunters, biologists and wildlife managers over the course of 10 months of field research in Nunavut, this paper argues that while Inuit can bring significant and original contributions to polar bear governance, the process of combining Inuit TEK and western scientific knowledge in polar bear co-management in Nunavut has faced numerous challenges, including : (1) the lack of transparency and communication between local, scientific and managerial communities regarding the strengths and limitations of TEK and scientific knowledge and their respective methodologies; (2) the challenge of finding culturally relevant ways of assessing the validity of knowledge claims rooted in multiple cultural traditions; and (3) the existence of mistrust and power struggles among stakeholders, which hinders the building of collaborative research and management partnerships.

This paper offers the view that neither western science nor Inuit ecological knowledge is sufficient in isolation for understanding the complexities of polar bear ecology, especially in the context of global climate change. It therefore explores ways in which such perspectives can enter a constructive dialogue.

June 24, session 05.43: Governance in the Canadian Arctic: reconciling indigenous experience and western governance models?

Henshaw, Anne (Oak Foundation and the Arctic Studies Center, Bowdoin College): *Indigenous Knowledge and Science in the New Arctic: policy implications for community-based research*

The Arctic is increasingly a place where community-based research and collaboration are being recognized as prerequisites for conducting science and documenting indigenous knowledge. As arctic sea ice conditions continue to fluctuate and change, there is an increased need to value such collaborations in the policy realm especially in decision-making processes designed to help communities cope with the food security and resource development implications of a more ice-free environment. This paper will explore the regulatory constraints and opportunities for incorporating indigenous knowledge and practice in the management of the Beaufort Sea in both arctic Alaska and Canada to illustrate the need for more social science research that helps build capacity and enhance ecosystem services at the local level.

June 24, session 01.27: The Human Dimensions of Change to Arctic Sea Ice

Hicks, Jack (Ilisimatusarfik): *The political epidemiology of persistent social suffering*

Kleinman, Das and Lock suggested in their 1997 book *Social Suffering* that “Social suffering results from what political, economic and institutional power does to people and, reciprocally, from how these forms of power themselves influence responses to social problems.” But how are we to understand the persistence of social suffering in situations where aboriginal people (e.g. Inuit) exercise considerable say in the operation of sub-state political structures (e.g. Nunavut)? From a political epidemiology perspective, this paper explores the political and ideological factors that shape the decisions (or the lack of decisions) made by these political structures – and their failure to address persistent social suffering.

June 24, session 05.43: Governance in the Canadian Arctic: reconciling indigenous experience and western governance models?

Hicks, Megan T. (C.U.N.Y. Graduate Center): *Farming for a Millenium: long term human ecodynamics at Skútustaðir, northern Iceland*

The Mývatn region of northern Iceland has been the focus of several long-term interdisciplinary archaeological and ecological studies (see McGovern et al. 2007). Such work has forged an understanding of changing landscapes, social relationships, ecology and economies, where people and their natural surroundings cannot be understood separately. Iceland’s heavy reliance on animal products from the household level to interregional and international trade, means that zooarchaeology – the study of past human use of animals - is a worthwhile manner of comprehending Iceland’s long-term, co-evolutionary socioeconomic and ecological change. In 2007, extensive archaeological deposits were discovered at Skútustaðir – a long-term farm settlement in the lake Mývatn area. Archaeological teams lead by C.U.N.Y. and Fornleifastofnun Íslands (Archaeological Institute of Iceland) have since worked to recover and understand the record there, which spans from the time of settlement through the early modern period, the 9th through 19th century CE. Ongoing analysis and interpretation of the faunal collection is being carried out to contribute to an understanding of the interrelating changing landscapes, social relationships and economies in this region.

June 24-25, Poster Sessions

Hill, Erica (University of Alaska Southeast): *Men, Women and Shamans: Reconstructing Ritual Practice in the North*

Ethnographic studies and archaeological reconstructions of northern indigenous religion have focused upon a limited set of features, most commonly shamanism. I argue that such a narrow focus obscures the role of hunters and their wives in establishing and maintaining relations with animals and the environment. Using prehistoric and ethnohistoric examples from Alaska, Canada and northeastern Siberia, I illustrate the ways in which shamans have been constructed as the sole religious actors in the North and provide an alternative perspective that highlights the ritual roles of ordinary men and women. Although shamans were critical mediators between the human realm and that of the supernatural, they were not alone in their ability to contact, cajole and placate non-human entities.

In arctic North America, as well as in some parts of Siberia, shamanism is generally associated with men. When scholars construct northern religion as shamanic and male, the ritual activities of other members of northern societies, including ordinary men and women, are discounted. Women, in particular, tend to be excluded from analysis, despite evidence that both hunters and their wives interacted with the supernatural in order to remain healthy, avoid accidents and ensure good hunting.

June 24-26, Session 07.32: Imagining the Supernatural North

Hoogensen Gjørsv, Gunhild (University of Tromsø): *Multiple security approaches towards oil and gas activity in the Arctic*

Security is, at its core, is about protecting the things we most value with the hope that they will remain into the future. The notion of security evolved with different foci and on multiple scales through the history of western political thought, but became narrowly associated with state interests particularly after WWII. The 1970s and 80s saw the beginning of attempts to take back security and examine its relevance to multiple referents, if not yet at multiple scales. Since then, perceptions of security have included various actors beyond the state, including human security perceptions. Multiple perceptions of security via multiple actors has become increasingly relevant and employed in many parts of the world, but interestingly the Arctic is still strongly dominated by the rhetoric of state security (sovereignty issues) and now energy security, given the focus on the oil and gas potential of the region. These security discourses play a significant role in Arctic politics, but the community/individual voice is missing. A multiple actor security approach allows for community input and community perceptions to be placed at par with national and international perceptions, going head-to-head identifying values. This paper

will present a discussion about the dynamics of security in the Arctic, particularly as driven by the importance of oil and gas development. Empirical research conducted by IPY GAPS and PLAN projects (housed at University of Tromsø) will be used to inform a community/human security perspective on oil and gas development for different Arctic communities.

June 23, session 05.67: Consultation in Arctic Extractive Industries Development: Lessons learned for Arctic resource governance from the local to the international level

Hirshberg, Diane (Inst of Social & Economic Research, Univ of Alaska Anchorage); **Hill, Alexandra** (University of Alaska Anchorage); Argetsinger, Tim Aqukkasuk (Alaska Native Policy Center): *Formal Schooling of Indigenous Peoples in Rural and Remote Arctic Regions: Past and Present Models*

In this work we take a critical look at past and present models of formal schooling of indigenous students across rural and remote Arctic regions. We identify the characteristics that make different schooling options particularly effective or ineffective.

We explore how formal education systems were developed for indigenous students, and then take a critical look at the outcomes of the different approaches, which range from boarding schools to small village based schools to distance delivery. Finally, we look at recent alternatives being developed.

Early formal schooling for indigenous students was intended in most places to foster assimilation and acculturation into the colonizing culture, and the destruction of indigenous languages and cultures. Many were taken away from their homes and families, and sent to boarding schools that facilitated this. This legacy continues to influence schooling. While in most (but not all) places forced removal of indigenous students has stopped, the loss of language and culture continues. Moreover, schools in rural and remote communities are for many largely unsuccessful; there are concerns about both the quality of education provided in small village schools as well as the high cost.

However, in some places there are departures from the mainstream. Boarding schools in Alaska have been repurposed. Greenland is merging the Inuit worldview with standards-based education. Technology has spurred innovative ideas for educating students in small communities. Looking across these different models, we conclude with a discussion of the most promising options for meeting the needs of indigenous students in circumpolar regions.

June 23-24, session 09.01: Schooling in the Arctic

Hodgkins, Andrew (University of Alberta): *A Critical Analysis of Aboriginal Trades Programs in Northern Canada*

This paper shares empirical findings of recent doctoral research comparing vocational education and training (VET) partnerships occurring in the Regional Municipality of Wood Buffalo, Alberta and the Beaufort Delta, Northwest Territories (NWT). Key questions guiding the research include: How is educational and training policy for aboriginal people impacted in regions that are characterized as resource-export dependent, have different governance structures, and are undergoing rapid socio-political and economic change? What are the barriers for aboriginal learners participating in VET programs as they transition from school to work? Related to this second question are issues concerning access to career information, education, and employment. Using an extended case study method, I compare federally funded trades preparation programs in the NWT with a similar program sponsored by a bitumen mining company in Alberta. Twenty participants in each case site were interviewed beginning in the Fall 2010 and Spring 2011, including ten students in each program, educators, members of the business community, and local knowledge holders. Whereas rapid expansion of bitumen mining in Wood Buffalo and the potential development of the Mackenzie Gas Project in the Beaufort Delta have spawned numerous social, economic, and environmental studies, my contribution stems from the paucity of educational policy research in northern regions. The research will identify ways to improve education, training, and skills development in order to build capacity and empower northerners as they navigate new frameworks of governance and economic development.

June 23-24, session 09.01: Schooling in the Arctic

Holen, Davin (Division of Subsistence, Alaska Department of Fish and Game): *The Community Subsistence Information System: 30 years of subsistence data collection in Alaska*

The Division of Subsistence, Alaska Department of Fish and Game has been collecting subsistence harvest data for over 30 years. This includes data for over 220 rural communities across Alaska. These quantitative data provide information on wild resource harvests and uses, seasonality of fishing, hunting, and gathering, harvest levels, sharing of subsistence foods, economic and demographic characteristics of communities, and more recently geographic harvest and use areas. Much of this

data until recently was maintained in databases at the Department of Fish and Game and only available upon request. Recently this data has become available via the Community Subsistence Information System (CSIS), an online database. This database provides communities in Alaska with a valuable resource to understand subsistence harvest and use trends in their own community and region. In addition geographic harvest and use data (GIS) is now being catalogued and planned for online distribution. This presentation will discuss data collection methods, the importance of creating long-term relationships with communities, and how the researcher can work with the community to use this database.

June 22-23, session 10.20: Data Management and Knowledge Stewardship: Perspectives and Practice from Communities and Researchers

Holen, Davin (University of Alaska Fairbanks): *The praxis of fisheries as culture: the adaptive capacity of fishing communities in rural Alaska*

In rural Alaska a fishing community is a social-ecological system incorporating ecological boundaries and fishers with a central interest in ensuring the continuity of both the subsistence and commercial fisheries in their region. Alaska fisheries are complex systems where knowledgeable users maintain the adaptive capacity of the system through their participation in the fishery and involvement in local fisheries politics. This research project investigates the long-term viability of rural fishing communities in Alaska by understanding how fisheries create and maintain culture and community. There are many contemporary internal and external factors that create long-term viability of rural fishing communities in Alaska. To understand long-term viability of rural fishing communities this project focuses on internal socio-cultural factors such as culture change, kinship based social networks, and local-level politics that shape contemporary commercial and subsistence fisheries in Alaska. It also investigates the local mixed economy that enables families to ensure adequate food security. Subsistence harvests, especially of salmon, are important for rural communities in Alaska. Salmon as a resource has become a reified symbol of the reliance on subsistence for many rural communities in sub-Arctic Alaska situated along river and coastal marine environments. This project identifies whether a robust subsistence economy is an indicator of cultural success in these communities. Finally this research identifies whether a project such as this could create indices to measure the long-term viability of rural fishing communities in Alaska.

June 23, session 02.36: Northern fisheries: managing income, nutrition and cultural values

Holzlehner, Tobias (University of Alaska Fairbanks): *Moving Against the State: Mobility and Spatial Strategies After Forced Migration in Chukotka, Russia.*

State-induced resettlement policies intertwine political macro processes, local communities, and various forms of belonging in the uprooted landscape of relocation. This paper reflects on a case study of forced relocation of native villages in Chukotka, Russia during the 20th century. The consequential traumatic loss of homeland and the vanishing of traditional socio-economic structures sent devastating ripples through the social and corporeal fabric of the relocated coastal communities.

Space and place making have been acknowledged as significant elements of landscape inhabitation. But what becomes of a place after it has been abandoned? What happened to the attachment to and the sense of place when one is forcibly removed from the dwelling? This paper explores local reactions to translocal forces through different periods of time (i.e., the Sovietization of the High North, the Cold War, and the collapse of the Soviet Union). Notions of abandonment and nostalgia are situated in relation to place and mobility, while stories and strategies as to how people come to terms with the ruins of a fragmented past are examined. Extraordinary resilience as well as novel strategies of coping with loss and industrial collapse created new forms of communities, where the re-use and re-settlement of previously abandoned village sites play a paramount role. Focusing on individual strategies of mobility and place making amidst a relocated population, the paper addresses the central role of mobility, informal space, and subsistence activities in relation to border landscapes and state policies.

June 22, session 04.01: Mobility and Immobility in the Circumpolar North

Hoover, Kara C. (Anthropology Department, University of Alaska Fairbanks); **Dickey, Clarissa** (University of Alaska Fairbanks): *Are Arctic immune systems equipped to respond to disease threats from invasive species due to global climate change?*

The 1990 WHO report "Potential Health Effects of Climatic Change" examined the most prevalent vector-borne diseases and potential changes in their distribution due to global climate change. Seven of the most prevalent diseases (including malaria, African sleeping sickness, Dengue and Yellow Fevers)—all carried by insects (chiefly mosquitoes)—are likely or highly likely to expand their distribution to temperate and possibly sub-Arctic areas. The presence of six species of *Anopheles* (the mosquito genus) is testament to the potential future health risk by insect-borne diseases to immunologically naïve populations

of the north. Tropical populations who have lived with these diseases long term may carry genes enabling greater disease resistance than those in the circumpolar region who are tens of thousands of years removed from their tropical origins. An understanding of the immunological genetic diversity that exists within circumpolar populations promotes a deeper understanding of the potential health impact. We present a small exploratory case study comparing immune system diversity in one Arctic and one African population.

June 24, session 10.73: Global Human Ecodynamics and the Circumpolar North: The GHEA initiative

Hörnström, Lisa (Nordregio): *'Redistributive regionalism' - the Nordic experience of regionalisation*

In the Nordic countries the regional level has traditionally had a relatively weak position in the political system. In addition, regional policy aiming to strike a balance between different parts of the country has emphasized centralisation and redistributive measures. The pan-European trend towards a stronger role for the region has also found its way to the Nordic countries. This article shows that actors, both public and private in peripheral regions express a view on the role of their regions that can be designed as 'redistributive regionalism'. The actors' claims for a stronger regional level must be understood in the context of the unitary state. The state remains the key actor and is expected to guarantee equal conditions in all parts of the country. Actors in the three regions do not see any contradiction between a strong state and increased regional influence on development issues. In sum, the study finds that the idea of a stronger regional level has been embraced to a certain extent but that this idea has been adapted to national characteristics – among these characteristics are especially the unitary state and the strong role of local government, as well as to the specific conditions in the three regions.

June 25, session 05.28: Governing changes in the North

Hot, Aurélie (Université du Québec en Abitibi-Témiscamingue); **Pellerin, Gloria** (Université du Québec en Abitibi-Témiscamingue): *The implementation of videoconferencing to support Inuit teacher training in Puvirnituk and Ivujivik, Nunavik*

Since 1984, the University of Quebec in Abitibi-Témiscamingue (UQAT) has developed an Inuit teacher training program in collaboration with two communities in Nunavik (Puvirnituk and Ivujivik). Motivated by a constant need for improving retention and graduation rates, UQAT, the Kativik School Board (KSB) and Tamaani (Nunavik Internet provider) have started a partnership in order to implement videoconferencing (as a complement to classroom instruction) in these two communities. This joint effort gravitates around a research project aimed at showing the advantages and limitations of ICT implementation for Inuit students as well as the potential benefits for the communities involved. The process of videoconference implementation will be observed in detail and discussed in interviews conducted by Inuit researchers. Both implementation and data collection will lead the research team to identify the optimal conditions of Inuit teacher training in the communities of Puvirnituk and Ivujivik. We believe this new approach will improve pedagogical knowledge and professional practices of teachers through community networking. This experience could be reproduced in other Inuit communities for postsecondary education and training.

This communication will first explain how our partnership, collaborative approach and diverse expertise have shaped our project and goals. It will then briefly present our research method and schedule and finally discuss anticipated challenges and results.

June 23-24, session 09.01: Schooling in the Arctic

Huctin, Jean-Michel (University of Versailles Saint-Quentin-en-Yvelines France/University of Paris Diderot Paris 7, France/Uummannaq Polar Institute, Greenland): *Child neglect and culturally relevant education in Greenland: the experience of Uummannami Meeqqat Angerlarsimaffiat, the children's home in Uummannaq*

Through the presentation of the author's PhD anthropological study about the healing of children victims of neglect and abuse in Greenland, this paper intends to contribute to the current process of building up a more culturally relevant education in this country. It is based on a long-term fieldwork in the Uummannaq Children's home (*Uummannami Meeqqat Angerlarsimaffiat*), a state boarding institution which is housing one of the largest contingents of neglected young people and promoting creative educational programs. The paper will particularly highlight its "Issi Nuan' / Cold Comfort" experience which involves dogsled journeys, outdoor life, hunting and fishing in the educational process. The method includes a 12 year-long participant observation in the Home, a qualitative analysis of follow-up cases and recent interviews of children, educators and local hunters. Positive results (individual resilience of neglected children, social well-being of the local people involved in the experience, etc.) will be discussed as well as possible limits (motivation of the participants, difficult synergy between the institution and different community circles). Can this case study, aimed at the most vulnerable children and taking place in a small northern community, also apply to different educational contexts and to other geographical conditions in the Arctic?

June 25, session 03.54: Arctic Children and Youth in a Global Perspective

Hudson, Anna (Department of Visual Arts, York University): *Inuit storytelling as spoken word*

Does the spoken word practice of Taqralik Partridge, an Inuk poet and performer originally from Nunavik, demonstrate the resilience of traditional storytelling? Does she turn her personal and culturally-specific experiences into a globalized one, readily accessible and nuanced by those listening? By embodying the tensions between self and other, margin to centre, I argue that Partridge cultivates a common ground of communication.

The acoustic space of spoken word (including rap, slam poetry, performance poetry...) creates new and renewed social relations in which Inuit art might defy containment in Western commodity culture. At issue is the power of performance practice to create what the Chicana author and cultural theorist, Gloria Anzaldúa, called the third self, which is greater than the sum of its distinct cultural parts. This paper ultimately questions the potential of Inuit spoken word to intervene, reshape, reinvigorate, and transform – as Michael Warner posits, the space of public life itself.

June 26, session 07.42: Contemporary circumpolar art: vehicles of indigenous knowledge

Hudson, Heather E. (University of Alaska Anchorage): *Connectivity across the Arctic: A Comparative Analysis of Broadband Access in Alaska, Northern Canada, and Greenland*

Access to broadband is increasingly important for Arctic communities – for distance education, telemedicine, access to government services (e-government), and e-commerce, as well as to share cultural activities among remote communities. Yet in some Arctic regions, bandwidth is severely limited, while in others, service is available but not affordable for most residents and organizations.

This paper compares broadband initiatives in three Arctic regions: Alaska, northern Canada, and Greenland. In Alaska, funds from federal government stimulus programs have been awarded to upgrade service in parts of southwestern and interior Alaska, and to provide community Internet centers and training for local residents in remote villages. In Canada, a subsidy program called “Connecting Rural Canadians” is extending broadband to some unserved communities. The Canadian regulatory agency (CRTC) is undertaking a review of whether broadband should be considered a “basic service”, and whether subsidies for rural and remote telecommunications should therefore apply to provision of broadband. Greenland has been recently connected to Europe and North America via submarine cables to Iceland and Newfoundland. International capacity is now much greater than was available via satellite. However, pricing remains very high, so that schools as well as households must limit their use of this important resource.

The paper analyzes the policies and strategies that affect access to broadband – including availability, affordability, and applications – in these three Arctic regions.

June 24, session 08.23: Creative Circumpolar Collaboration across Cyberspace in the Arts and Sciences

Huijbens, Edward H. (Icelandic Tourism Research Centre): *The role of geotourism in destination marketing and management of fragile polar environments*

This paper will explore the potential of applying the notion of geotourism when promoting tourism in polar environments. The concept is currently being promoted by National Geographic as an advancement of the sustainability and ecology rhetoric of environmentalists. Whilst sympathetic to this, National Geographic aims to promote tourism as a positive force in destination development aiming to attain the lofty aims of this rhetoric. The way in which the term has been deployed worldwide will be explored in the paper and also how it has taken root amongst tourism stakeholders in Iceland. The paper argues that although the stated aims of geotourism and guidelines for destination development form a solid ground for strategic planning the way in which it is being promoted in Icelandic tourism rhetoric is too vague and loose and non-resource oriented. No sustained engagement with the resources of tourism exists in Iceland, which the paper argues is essential for geotourism to live up to its full potential in destination development. The paper thus argues that in order for sustainable destination development in general and geotourism development in particular, a sustained mapping and engagement with the resources of tourism in polar regions needs to be undertaken prior to the adoption of marketing and promotion slogans and materials.

June 25, session 02.56: Tourism, People and Protected Areas in Polar Wilderness

Humrich, Christoph (Peace Research Institute Frankfurt): *Claims in the Cold. Infrastructures and Rule in the Arctic*

The paper presents a project which is part of a larger collaborative research effort on power and infrastructures. By a combination of process-tracing, discourse analysis and socio-geographic data analysis, the project will focus on the role of infrastructures for asserting rule (Herrschaft) in the Canadian and Norwegian Arctic in three different stylized historical periods: the end of nation-building after the Second World War, the period of indigenous and environmental movement in the arctic (1970s-2000), the period of rapid environmental change in the Arctic since then. The assertion of rule through infrastructures comes in (at least) two different forms: instrumental and symbolic. Supplying the instruments of rule, like people and equipment, infrastructures are a necessary means to exercise control over a given territory. In the symbolic sense, infrastructures are a visualization and representation of rule or of the claim to an entitlement to rule. Announcing the building of a military training site and a deep water port in the Canadian Arctic, Prime Minister Harper provided a striking example: the military site is (claimed to be) instrumental for defending rule. The deep water port represents „usage“, which is claimed to ground the entitlement to sovereignty the first principle of which allegedly is: „Use it or lose it“. The project is in an early phase, its conceptual and theoretical framework will be presented and illustrated. More importantly, the cases selected for analysis shall be presented. I hope to get feedback on the case selection now in progress.

June 22-23, session 10.22: Claims on Sites and Knowledge in Cold Regions. Material and Immaterial Constructs of Nature, Nations and Industry

Huskey, Lee (University of Alaska Anchorage): *Moving Around in Arctic Alaska*

The literature on migration from rural to urban areas is well developed for both developed and less developed countries. A number of authors have pointed out that our understanding of migration within rural regions is little studied or understood. This paper examines the patterns and determinants of migration within rural Arctic Alaska. Two types of migration are examined: migration from smaller villages to larger regional centers and migration between villages. The determinants of the migrants and the places are examined to explain the patterns and rate of migration. Policy lessons are drawn from this analysis.

June 22, session 04.01: Mobility and Immobility in the Circumpolar North

Ingram, Scott E. (Arizona State University); **Dugmore, Andrew** (University of Edinburgh); **Arneborg, Jette** (Danish National Museum); **Hambrecht, George** (City University of New York); **Hegmon, Michelle** (Arizona State University); **Kintigh, Keith** (Arizona State University); **McGovern, Thomas** (Hunter College, City University of New York); **Nelson, Margaret** (Arizona State University); **Oram, Richard** (University of Stirling); **Peeples, Matthew** (Arizona State University); **Spielmann, Katherine** (Arizona State University); **Vesteinsson, Orri** (University of Iceland): *Climatic Hazards and Social Transformations in the North Atlantic Region and the U.S. Southwest, 900 to 1500 CE.*

This presentation explores the relationship between climatic hazards and social transformations from 900 to 1500 CE in the North Atlantic region and the U.S. Southwest. In the North Atlantic, we consider periods of extreme temperatures and storminess and social transformations among the peoples of Greenland, Iceland, Faroes Islands, and Scotland. In the U.S.

Southwest, we consider very dry periods and transformations among the peoples in archaeological regions known as Hohokam, Zuni, Mimbres, and Ancestral Puebloan. Cool temperatures and increased storminess in the North Atlantic and dry periods in the Southwest challenge successful food provisioning, increase the risk of famine, and often stimulate human responses to manage these risks. Possible responses include changes in provisioning, regional-scale settlement reorganizations, the complete depopulation of regions, and/or dramatic social transformations. We hypothesize that climatic hazards occurring at time scales outside of human memory offer the greatest challenges to people. We explore the relationship between these hazards and social transformations in order to provide some tentative, generalizable statements about the influence of climatic conditions on social transformations that crosscut regions.

June 24, session 10.73: Global Human Ecodynamics and the Circumpolar North: The GHEA initiative

Ip, Morgan (Carleton University): *Architecture and Healing*

Community members and knowledge holders in the remote hamlet of Cape Dorset, Nunavut, instigated this project by expressing a strong desire to have a cultural healing centre designed and built for their community. In response to contemporary built forms that disregard cultural paradigms, an architectural resolution was needed to better reflect local culture as well as climatic and geographic conditions. The notion of healing was taken as a powerful metaphor for architecture that proved itself literally in the design process and dialogue within the community. Culture would be fostered in the proposed centre in tangible and ephemeral forms, with the building as an object itself evoking memory through materiality and spatiality. For the architecture to be appropriate required consideration of local people and their social and cultural values, and using architecture as an interface between both environmental and human realms in the face of climatic and social changes. It was determined that architecture as a healing aid could be manifested within the community with inclusive design principles, the built form determined by the creative energies of local community members. Local collaboration at the design stage was done in a series of workshops and design charettes held in Cape Dorset in 2008 that culminated in a hybrid design reflecting traditional building form and spatial organisation with modern programs, and building technologies. The resulting model, thesis and drawings were left in the community in 2010 to support and influence local and regional efforts towards building. The programmatic functions within this centre would then continue to nourish this creative healing spirit and strengthen the community.

June 22, Session 07.21: Living in the Arctic: a Creative Providence for the Global Challenge & Session 07.29: Arctic Creative: Building Arctic Futures through culture, innovation, and creativity

Ip, Morgan (Carleton University); **Consaul, Laurie** (Canadian Museum of Nature); **Doubleday, Nancy** (McMaster University); **Donaldson, Shawn** (Carleton University); **Grimwood, Bryan** (Carleton University); **Harper, Karen** (Dalhousie University); **Hermanutz, Luise** (Memorial University); **Johnstone, Jill** (University of Saskatchewan); **Ross, Frances** (Dalhousie University); **Van Oostdam, Jay** (Health Canada): *IPY Legacy –Case Studies of Endogenous Initiatives Arising from Research Collaborations*

Our IPY-sponsor research program included a variety of active and collaborative projects with local community members and organizations in scientific research, knowledge sharing, capacity building and outreach in northern Canadian communities from 2007-2010. Subprojects in Yukon, Labrador, and Nunavut involved the collaboration of Elders, community members, researchers and botanists who collectively gathered plants and created local herbaria while exchanging traditional and scientific knowledge to compose baseline datasets for future generations and research potential. Single and multi-day on-the-land camps were held in tandem as recommended by local community members. A comparative photograph component was done concurrently with the Nunavut subproject that followed the collaborative principals in the creation of local datasets. Similar methodology was used in a food choice study where a community-based health research framework engaged local organizations and members in Kimmirut, Cape Dorset and Iqaluit to ensure that community-level health needs and concerns were reflected in research. Cape Dorset further saw an architectural project emerge from community consultations. Knowledge holders called for a centre where culture would be nurtured to strengthen local identity, social health and cohesion. The resultant design proposal reflected and incorporated traditional knowledge, spatial references and notions of materiality. Education and outreach subprojects focused on how researchers, educators and northern communities collaborated to create educational materials for northern students that integrated IPY science and indigenous knowledge. Together these projects show how Arctic research can be done that combines multiple ways of knowing and methodologies that encourage cross-cultural collaboration.

June 23, session 01.33: Narratives of vulnerability, resilience and adaptation among circumpolar communities in the era of climate change

Irlbacher-Fox, Stephanie (University of Toronto/Institute for Circumpolar Health Research, Yellowknife NT): *Dene Being, Interrupted*

This paper examines notions of Dene land attachment, and how its interruption contributes to social suffering evidenced in so many Dene communities. Drawing on research about moose hide tanning with Dene women, this paper reviews notions of dwelling (Ingold, 2000) and land-attachment constructed through reflections on male hunter-gatherer experiences (Nadasday 2003; Ingold 2000; Willerslev 2008), contrasting male-centered notions with those of the woman-dominated domain of hide tanning. This multi-dimensional grounding in notions of attachment allows for better understanding psychological implications for both Indigenous and non-Indigenous peoples, of both the severing and regulation of Indigenous land attachment by the nation-state in Canada.

June 26, session 05.12: Indigenous and Nation State Land Attachment: Continuances and Assertions

Irlbacher-Fox, Stephanie (University of Toronto/Institute for Circumpolar Health Research, Yellowknife NT); **The Inuvialuit People:** *Measuring the social and economic impacts of oil and gas developments: Baseline data research by the Inuvialuit Regional Corporation*

Through in-house research Inuvialuit Regional Corporation (IRC) has accumulated a considerable amount of social, cultural and economic data that can be used to measure the impacts of oil and gas spending in the region from 1999 to 2009 (Inuvialuit Regional Corporation Indicators Research Project). The IRC continues to use this data to measure social, cultural and economic conditions and resource development impacts and is making this data available to researchers working with the Resources and Sustainable Development in the Arctic (ReSDA) project. The IRC will work with these researchers in their attempts to develop reliable baseline indicators to measure social change in areas affected by natural resource development. Particular focus will be given to validating the socioeconomic impacts of hydrocarbon development identified in submissions to the Joint Review Panel (JRP) and in the JRP's final report in relation to the Mackenzie Gas Project. The research will establish standards to measure resource development impacts in the Inuvialuit Settlement Region, and may be used by other Arctic jurisdictions.

The presentation will give an overview of the existing IRC data and will discuss issues that IRC would like researchers from ReSDA to consider.

June 24-25, Session 03.63: ASI – Arctic Social Indicators

Iskanius, Päivi (University of Oulu, Thule Institute): *Initiating the Northern research and innovation platform*

The objective of this paper is to present how the Northern research and innovation platform has been initiated. The platform connects the key research and innovation actors regionally, nationally and internationally under the theme environment, energy and sustainable use of natural resources with a strong geographical emphasis of north and arctic aspects. The key actors of the platform will define a common vision and research agenda based on the chosen themes and areas of focus. The outcome of the project will be a platform on northern research organized and programmed “at work” which gathers together, within the themes derived from the starting points of the economic life, the key actors for realizing a jointly defined strategy and programme.

The platform is based on the European Research Area (ERA) and Northern Dimension (ND). The main aim of the platform is to support and generate northernmost transnational research activities in the above mentioned field; especially speed up innovations for mining industry, for sustainable use of forest resources, and for environmental changes in northern areas and in man's operational prerequisites. Further, the aim is to increase the awareness and visibility of northern research within the local and national as well as within EU authorities, and to strengthen the influence on national and EU programmes.

The actors in the northern issues are small, which encourages cooperating and networking. Improving coordination of northern research will add interest in this horizontal multidisciplinary area of research on a national and international level. This will provide northern research with more resources which can be targeted on research benefiting the economic life and developing new innovations. Thus, northern research will offer better support for regional innovation activity and regional entrepreneurship, and promote equal regional development. The platform will aim at better coordination between the separate programmes and networks and the funding systems for research and innovation activity in order to realize the research community's will and future scenarios.

Ísleifsson, Sumarliði R. (Reykjavík Academy): *Islands on the Edge: Medieval and Early Modern National Images of Iceland and Greenland*

In my paper accounts of Iceland and Greenland from the late Middle Ages to the end of the 18th century will be examined with consideration given to the type of national images appearing there. The aim of the paper is to explain these images and discuss their development and origin, not least how ideas about islands and the North in general have influenced the descriptions of these two countries. The research is based on two connected research traditions: the field of imagology and postcolonial studies, which means that the sources are studied as representations, as a discourse on islands in the periphery in the far North.

June 22-23, session 07.49: Practice Power North

Jacobsen, Rikke Becker (Innovative Fisheries Management - an Aalborg University Research Centre/Greenland Climate Research Centre): *GREENLANDIC FISHERIES GOVERNANCE – Power and Participation in Policy and Management Decision-making*

Greenlandic governance institutions have been criticized for their colonial heritage of centralization and lack of democratic participation. In the same manner, Greenlandic fisheries management is notorious in the academic literature for its centralized and locally illegitimate character. While recognizing the lack of localized co-management fisheries governance institutions in Greenland, this article argues that something has yet to be said about power and user participation in the centralized institutions that have developed. From a symbolic interactionist perspective this article dissects the centralized institutions in terms of a differentiated cast of actors and their interaction. It argues that participation and power comes in many institutional guises as the complex cast of actors within the centralized system represent themselves and others. If we are to understand power and participation in Greenlandic fisheries governance, we need to understand the creation of alliances of subject-positions that seek control of the Self-rule fisheries governance decision-making.

June 23, session 02.36: Northern fisheries: managing income, nutrition and cultural values

Jardine, C.G. (Centre for Health Promotion Studies, University of Alberta): *Youth Voices on Tobacco: Working with the K'álemì Dene School in the Northwest Territories, Canada*

Smoking is one of the biggest health problems in many First Nations communities today. Of particular concern is the high rate of smoking in youth. This research program was initiated to better understand how youth view smoking in their communities. It was done in partnership with the K'álemì Dene School in N'Dilo, and involved training older students to conduct the research with the younger students. Training sessions covered the research process, research ethics, and specific skills needed to conduct the research (such as interviewing skills, interpretation skills, and data presentation skills). The student researchers designed a series of questions about smoking that were used as the basis for initial interviews. Using PhotoVoice, students were asked to take pictures of smoking in their community and then to discuss their pictures with the student researchers in a semi-structured format they had helped prepare. The student researchers also participated in the decisions on the interpretation and presentation of the results. The final research product was a collaboratively developed booklet entitled "Youth Voices on Tobacco" which was distributed to all members of the school and the Yellowknives Dene First Nation communities of N'Dilo and Dettah. This booklet provided compelling commentary on tobacco use as seen through the eyes of children and adolescents. Working with students had many advantages, including obtaining more candid research results, developing community research capacity and instilling student interest in the research process.

June 22-23, session 06.40: Best practices for community engagement in health promotion research and population health practice - lessons from the North

Jauhiainen, Jussi S. (University of Turku and University of Tartu): *Individual, institutional and network practices of creativity processes in challenging areas: Towards a research agenda*

Creativity is intimately human, an integral though not easily explainable process from inspiration to ideas and sometimes to innovations. Intrinsic, task-focused motivation is very important to creativity. Creativity is about particular moments in particular places – a spatio-temporal change. One cannot be creative alone – creativity is contextual intertwining of individuals, institutions and environment.

In the early 21st century creativity has become a buzzword, vividly but often narrowly discussed in geography. The most

visible and cited research about creativity focuses on the core areas of the contemporary economy, namely large cities and metropolitan areas. Less favored, challenging and “peripheral” areas are mostly neglected. The construction of peripherality rises from the dominant discourses narrowing down alternative ways of seeing. In addition, the recent academic debates in economic geography urge for broadening of methodologies and carefully designed multiple methods. Different ontological and methodological viewpoints must be considered to study creativity and practices of creativity linking together individuals, institutions and environment. However, in research still much of spatio-temporal processes of creativity linking inspirations, ideas and innovations together are still “a black box”.

This paper discusses individual, institutional and network practices of creativity processes in challenging areas. The issue is about particular human-environment interactions, about spatio-temporal processes of creativity in academic research, artist practices and business development and institutions and environment linked to them, especially regarding the northernmost areas, including the Arctic. The task is to open a research agenda considering creativity and periphery.

June 22, Session 07.21: Living in the Arctic: a Creative Providence for the Global Challenge & Session 07.29: Arctic Creative: Building Arctic Futures through culture, innovation, and creativity

Jensen, Christian (Faculty of Social science, Ilisimatusarfik - University of Greenland); **Lennert, Miillaaraq** (Faculty of Social science, Ilisimatusarfik - University of Greenland); **Sandborg, Eva** (Faculty of Social science, Ilisimatusarfik - University of Greenland): *Preparing the future of Greenland - Innovative Educational Projects*

In 2005, almost 60 % of the Greenlandic workforce was without any formal education besides public school, which means that there are not enough workers with the right competitive efficiency and flexibility in all professions. These shortcomings indicates that it is important to clarify the formal skills of the potential and actual workforce and their prior learning assessments

-To develop professional careers of the individual, which contains both the improvement of formal expertise through training - and
 - prior learning in the form of courses that qualifies, or makes one more qualified to perform a work function in the future (eg language courses, communication courses, etc.)

Consequently, the Greenlandic government chose to create a long-term educational plan for upgrading of the workforce. In 2006 The Home Rule Government and the parliament agreed upon a nationwide educational program where the goal is that 2 / 3 of the workforce in 2020 must have a qualifying education. In connection with the Education Plan many exciting projects has been initiated. We have chosen to examine the Competency Development - and Prior Learning Assessment Recognition projects, where we will examine these projects status.

The main objective for the projects is to enhance the skills of the labor force. To achieve these goals, the Greenlandic government has been forced to think creatively and innovatively, to launch a development – and to further develop existing efforts and enterprises - on the Greenland labor market. Our presentation intends to describe and analyze the challenges that face the projects and which needs they are meant to meet

June 22, Session 07.21: Living in the Arctic: a Creative Providence for the Global Challenge & Session 07.29: Arctic Creative: Building Arctic Futures through culture, innovation, and creativity

Jingfang, Tu (Polar Research Institute of China (PRIC)); **Xia, Zhang** (PRIC): *Foundations and Prospects for China as a Near-Arctic state Participate in peaceful use of Arctic*

Rapid changes in the Arctic climate has greatly changed the geographical nature of the Arctic Ocean, which will dramatically change in the Arctic and the rest of the world's geo-economics and geopolitics relations. Around the Arctic Ocean, with the accelerated process of globalization and regionalization, is likely to occur a new geo-economic circle structure in the northern hemisphere: the Arctic Ocean coastal State, the Arctic state, near-Arctic state and non-Arctic state. China as an emerging country, but also a "near-Arctic state ", has legitimate interests the geographic advantage and capacities with the use of Arctic Ocean. In the using sea-route, trading in resources ,marine utilization, Arctic climate change and applied technology research, enhancing and Promotion of multilateral and bilateral international cooperation and other aspects has a broad prospect for development. China should enrich content about relationship with relevant countries, which have strategic partnership with China, actively involve in shaping the new Arctic geopolitics relationship, commitment to environmental protection and sustainable development in the Arctic.

June 24-25, Poster Sessions

Joelsdottir, Sigrun Sif (University of Akureyri Research Centre); **Halapi, Eva** (University of Akureyri Research Centre); **Kukarenko, Natalia** (NORUT Tromsø); **Odland, Jon Øyvind** (Faculty of Health Sciences, University of Tromsø); **Mikkelsen, Eirik** (NORUT, Tromsø): *Climate change and human adaptation: A Pilot study in Iceland*

Climate change may pose one of the greatest threats to mankind in the 21st century with potentially devastating effects on environment and human health. Successful implementation of mitigating and adaptive measures to curtail current and future impact of climate change is dependent on the participation of the general public. Few data are however available on how the general population perceives climate change. A semi-structured interview was conducted with the participation of 43 individuals either directly dependent (farmers, fishermen), indirectly dependent (tourist industry employees) or nondependent (teachers, employees in office) on nature for livelihood exploring the following themes: Awareness, Belief, Observations, Concern, Adaption, and Responsibility with respect to climate change.

While the majority of interviewees in the present study said they were familiar with climate change and believe that it will have an impact on their daily lives, only a minority expressed concern. Changes in air and sea surface temperatures, winter season and vegetation were among the most frequent observations related to climate change mentioned by interviewees. Many of the respondents perceive opportunities (such as novel and/or improved business opportunities in farming and the tourist industry) rather than threats from climate change. Majority of respondents believe the government should be responsible for initiating mitigating action to curtail effects of climate change. A large portion of respondents also mention individual responsibility and most of the interviewees engage in daily “green” activities such as recycling. On the contrary, corporate responsibility was brought up by few of the interviewees in this study.

June 23, session 01.33: Narratives of vulnerability, resilience and adaptation among circumpolar communities in the era of climate change

Jóhannesson, Hjalti (University of Akureyri Research Centre): *Megaprojects in Small Communities - Experiences from East Iceland*

During the period 2004-2010, social impacts of megaprojects on the communities in east Iceland were studied by University of Akureyri Research Centre. These megaprojects were a 690 MW hydropower plant, Kárahnjúkar, in the east Iceland highlands, finished in 2007. The power plant was built for delivering power for an Alcoa aluminum smelter in the fjord Reyðarfjörður with a production capacity of 350,000 tonnes annually. The research was initiated by the Icelandic parliament and funded by the state. This was considered to be a good opportunity to monitor the social impacts as this was the first time that such a project was undertaken in rural Iceland. The study period covered most of the construction phase and the beginning of the operation phase. Decision to commence these projects in 2003 was controversial and the project was heavily protested, especially due to nature concerns. In East Iceland the project was however long awaited for and seen as a sign of a brighter and more prosperous future for the region. Among finding was that impacts of the two megaprojects were observed to be confined to primarily two municipalities where the projects are located. Sample surveys indicated positive attitude towards impacts on economic conditions in the area and increased diversity of jobs. Too much housing was built and housing types did not match the demand in the area. Infrastructure was strengthened. Foreign males were dominant during construction. The aluminum plant is important for the social rhythm.

June 23, session 02.68: Social and economic impacts of megaprojects in the North

Jóhannsson, Halldór (Arctic Portal); **Viitanen, Leena-Kaisa** (Arctic Portal); **Hallsson, Húni Heiðar** (Arctic Portal); **Arnarsson, Sigmar** (Arctic Portal): *The Arctic Portal - The Arctic Gateway*

The Arctic Portal is a comprehensive gateway to the Arctic on the internet. It provides access to Arctic related data, information and organizations across the Arctic, facilitating cooperation between public and private parties.

The Arctic Portal is an endorsed IPY Project Nr. 388. Its development constitutes a contribution to the legacy of the International Polar Year (IPY) and it functions as a venue for various IPY activities and projects. The Arctic Portal permanently hosts www.ipy.org through an agreement with the IPY International Program Office. Consequently it will serve as an interface to and host of IPY legacy information, multimedia material and data, including national IPY web sites.

In addition many key Arctic organizations and projects have established their web presence through and with the assistance of the Arctic Portal. The list keeps growing and now includes: IASC, IPY.org, CAFF, PAME, IPS, ICR, EALAT, APECS, CBMP, AMSA, NRF, IPA, SAON, PAG, Arctic Data and also IASSA. Additionally, the Arctic Portal provides links and a searchable interface to a myriad of other Arctic entities, projects and activities. Arctic Portal Projects include The Virtual

Learning Tools Project, UArctic Atlas, Arctic Language and Community Square, Arctic Climate Change Portlet, Arctic Energy Portlet, Arctic Shipping Portlet and various others Arctic related projects. The Arctic Portal welcomes and encourages cooperation with further organizations, projects and networks as cooperation and interoperability is vital to the success and sustainability of Arctic societies.

June 22-23, session 10.20: Data Management and Knowledge Stewardship: Perspectives and Practice from Communities and Researchers

June 24-25, Poster Sessions

Johnston, Jay (Department of Studies in Religion, University of Sydney): *Arctic Otherkin: The Influence of Northern Mythology and Fauna on a Contemporary Spiritual Subculture*

"Otherkin" are a contemporary subculture for individuals who consider themselves to be not fully human. In particular, many claim to have the soul or spirit of another species: including specific animals or supernatural 'nature spirits' like elves, fairies and dwarves. The concepts of 'animal' and 'nature spirit' that the members of the subculture employ are strongly informed by contemporary esotericism and paganism.

This paper will discuss the strong influences that discourses and images of the 'north' have had on this relatively new form of spirituality. This will include the role of contemporary shamanism and Nordic mythology in the shaping of individual concepts of self and spirit. As well as the influence of texts like Pullman's His Dark Material's series in their conceptualization of the human, the soul and their relationship to the Northern environment.

June 24-26, Session 07.32: Imagining the Supernatural North

Dawson, Jackie (University of Ottawa); **Stewart, Emma** (Lincoln University); **Johnston, Margaret** (Lakehead University); **Pearce, Tristan** (University of Guelph): *Tourism Vulnerability and Resilience in the Arctic (TVRA Project): understanding local-level risks and opportunities associated with cruise tourism*

The Tourism Vulnerability and Resiliency in the Arctic (TVRA) research project undertakes an empirical assessment of the interactions of climate change and tourism in Canadian Arctic communities using a community vulnerability and resiliency assessment approach. The main objectives of the study are to: (i) assess current exposure and adaptive capacity in Northern communities in Northwest Territories (NWT), Nunavut (NU), Nunavik and Nunatsiavut; (ii) assess future exposure and adaptive capacity in a tourism context; and, (iii) provide a comprehensive tourism assessment that can be used by communities, stakeholders, decision-makers, and operators throughout the Canadian Arctic. In this presentation we discuss findings from the 'Cruise Tourism in Arctic Canada' (C-TAC) study; a project taking place within TVRA that focuses on the rapidly increasing number of cruise ships visiting small communities in the Canadian Arctic. Results from interviews conducted with local residents from the communities of Pond Inlet, Gjoa Haven (NU), Cambridge Bay (NU) and Ulukhaktok (NWT) are presented (n=224). A number of risks are identified, including safety and security concerns, protection of the physical and cultural environment and concerns relating to the development of local infrastructure. By contrast, a variety of opportunities are highlighted including, the prospect for diversifying economic development, the potential to educate visitors about the north, and issues relating to sovereignty. The presentation discusses the need to involve local people in defining vulnerabilities, opportunities and adaptation strategies related to rapid change, and highlights possible local and regional level adaptations designed to minimize risks and maximize opportunities presented by the burgeoning cruise industry in the region.

June 25, session 02.56: Tourism, People and Protected Areas in Polar Wilderness

Jokinen, Mikko (Finnish Forest Research Institute METLA): *Mining in sensitive fields – need and possibilities for integration of nature-based tourism, reindeer herding and mining*

Mining industry is living a new Renaissance in polar Finland. After closedowns of several mines in late 1980's in Lapland and regression of whole industry in general, mineral and gold mines are strongly coming back. These closures led to large scale depression in local communities; jobs were gone and remarkable amount of people migrated out. Mercifully, tourism, new economy in the area made breakthrough and new era was launched in western Lapland. Now when mines are coming back hopes are again high regardless of bad memories in late 20th century. Basis of local economies and mining industry has although changed and mining projects meet new challenges.

In this paper I introduce a new research project Different Land-uses and Local Communities in Mining Projects (DILACOMI) that was launched in the area 2011. Project aims to study and design best practises for implementation of mining projects in

sensitive areas where nature-based tourism is major economy and traditional livelihoods carry important cultural meanings. New iron ore mines are going to open close to Pallas Ylläs national park and tourist destinations. Sustainable solutions are strongly required but it is already evident that consolidation of all land-uses are not possible at same time in the very same area. Sustainability is a philosophical, cultural and scientific matter that is studied and defined in this research project for practical solutions.

Early findings from participatory planning and collaborative learning processes among local communities, officials and mining companies are presented in June in Akureyri.

June 23, session 05.67: Consultation in Arctic Extractive Industries Development: Lessons learned for Arctic resource governance from the local to the international level

Joliet, Fabienne (Agrocampus-Ouest, Département Paysage, France): *The interest of aboriginal landscape imagery in the Tursujuq Park creation (Nunavik, Canada)*

The Tursujuq National Park Project (aka Guillaume Delisle-Lac-à-L'Eau Claire) is now in progress. Beyond the preliminary regulatory studies carried out since 2002 by both the Quebec government and the Inuit institutions, in order to develop a network of national parks, the research focuses on understanding how the analysis of the Tursujuq park landscape perceptions could complement and adjust the park's conception.

The perceptions analysis deals with the iconographic landscaping representations and their related practices.

The purpose is to create and analyse inuit landscape images of the park's perimeter or vicinity.

The fact of choosing a landscape representations vector for the study has made possible the creation of an Inuit Landscape Imagery via a Landcape Photography Contest and a Children's Landscape Drawing Workshop.

The framing and composition of the photographs, showing a selection of places and areas as well as particular elements of landscape, will contribute to a better analysis of underlying landscape preferences. These landscape representations will also bring out associated landscape practices.

Ultimately, such expressions of landscape imagery are expected to weigh in the decision-making process of the perimeter, zoning and routing of the future Tursujuq National Park.

June 22, session 07.52: «Patrimonialisation» of Arctic Aboriginals' Territories. Promoting cultural heritage within protected areas

Jolles, Carol Zane (University of Washington): *Subsistence Knowledge and Tradition: in remembrance of Herbert Anungazuk: Inupiaq anthropologist and marine mammal hunter*

Cultural anthropologist Herbert Anungazuk was born in Wales, Alaska. From 1997 until 2010, he and I were research partners. We focused primarily on subsistence traditions and practice, most recently on the transmission of subsistence knowledge across generations. That work, in his homeland village and the neighboring island village of Diomede, was our last together. He died in mid-August 2010. Herbert considered Tiger Burch, with whom he had worked in the early 1990s, his mentor and teacher. One of Tiger's last thoughtful gestures was to write to Herbert's wife Lena upon his death. A few weeks later Tiger too was gone. In tribute to both Tiger and Herbert, I begin to piece together Herbert's transformation from marine mammal hunter to anthropologist using our own work on subsistence as vehicle. In narrative fashion I move back forth between the elements of subsistence practices in Wales and Diomede as these have emerged in our work, reflecting both on features of subsistence that reveal characteristics of a spiritually informed Inupiaq world view and the changes that have arisen as climate shifts and modernization have impacted knowledge transmission and local practices. At the same time, using my own experiences with Herbert, I offer a profile of our collaboration in more personal terms and touch on the benefits, pitfalls and critical importance of Native/non-Native collaboration in arctic social science research.

June 23, session 07.47: In the Footsteps of the Giants – Honoring Ernest S. (Tiger) Burch, Jr., 1938–2010

Jones, Jen (University Anchorage Alaska): *A Community Approach to Preventing Injuries*

Aboriginal Canadians are at disproportionate risk of injury compared to non-Aboriginal Canadians. In Yukon, over two-thirds

of all life lost by Aboriginal people is by preventable injury. Often promotion and prevention programs are unable to respond to specific community identifies or needs, resulting in unsustainable change and awareness.

The Council of Yukon First Nations and the Yukon First Nation Health and Social Development Commission collaborated on designing injury prevention programs based on community identified needs and priorities. The projects recognized the role of historical trauma, addictions, mental health and culture in injury prevention. In addition, the projects were able to support the workplace realities of First Nation health and social departments. Staff support, access to resources, and training facilitated the development and implementation of successful prevention initiatives by and for community members.

Communities were involved in program and funding design prior to applying for funding, ensuring the ability of the program to respond in a cultural and community specific manner. Documenting the process continues to facilitate knowledge exchange among communities as well as territorial and national funders.

The presentation and paper focus on the individual projects, lessons of collaboration as well as the role of culture and historical trauma in the design and implementing of injury prevention tools and initiatives. This Yukon First Nation injury prevention project provides an opportunity to examine building capacity in small northern communities. Application of this model could apply to other health promotion and prevention activities across the North.

June 22-23, session 06.40: Best practices for community engagement in health promotion research and population health practice - lessons from the North

Jónsson, Steingrímur (University of Akureyri and the Marine Research Institute): *Changes in the physical oceanographic conditions in Icelandic and adjacent waters and their impacts on fisheries*

Over the last 10-15 years a considerable increase in temperature and salinity has been observed in Icelandic waters as a consequence of advection of warmer and more saline Atlantic waters to the area. One manifestation of this has been much warmer waters off the north coast of Iceland. The flux of this water, as well as the heat transported with it, to the north Icelandic shelf has been monitored with current meters since 1994. This area has over the last century showed large variations in response to climate variability and sometimes the flow of Atlantic water is completely cut off and Polar water originating from the East Greenland Current coming straight from the Arctic Ocean occupies the area which can then also become ice covered. This has drastic effects on the ecosystem, not only in the ocean but also on land, leading to lower phytoplankton growth and reduced biomass at higher trophic levels. The impact of the recent warm water influx has caused changes in the distribution of many exploited fish species that have found opportunities to expand their territories northwards and westwards. This has led to conflicts between nations harvesting the resources. The most recent example is the dispute over the mackerel stock that has been present in large quantities in Icelandic waters in recent years.

June 24, session 02.58: Human Aspects of Fisheries in the Arctic Coastal Regions

Jørgensen, Ulrik (Technical University of Denmark): *Development visions in Greenland and their grounding in social and economic rationales – the role of climate change and global integration*

Though some common goals for societal development in Greenland are shared among political fractions, government and societal stakeholder quite radical means are included in visions for the economic future of Greenland are dominant in the political and commercial debates. These are dominated by professional knowledge as well as economic and political discourses predominantly coming from the centers of economic and political power and knowledge located outside the Greenland and the Arctic region. Climate change is visible and experienced at the local levels but in terms of economic development visions the role of global investments and corporations outside Greenland play an enormous role.

Infrastructure decisions and investments are made by nation states and transnational companies with only little involvement of the local population that typically are not able to establish neither a local economic basis nor the knowledge and competences needed for such large scale engagements. The paper will – based on studies of trade and mining policies in Greenland combined with studies of the experiences from earlier economic developments, large scale mining activities and centralizations of the population – explore the different scenarios for future developments and how they take into account the consequences of economic power relations, competence structures, social problems and costs as well as social differentiation. Contemporary development policies are dependent on knowledge and expertise generated outside Greenland challenging the political cohesion as well as the knowledge distribution in Greenland.

June 23-24, session 10:62: AHDR-II: Arctic Human Development Report: Regional Processes and Global Linkages

Just, Christina (Humboldt-University of Berlin): *Today's Greenlandic theatre. Indigenous and European influences in the modern Greenlandic theatre.*

I would like to present the Silamiut theatre, the soon-to-be national theatre of Greenland (founded in 1984 in Nuuk). I focus on the question which role traditional Greenlandic arts play in the Greenlandic theatre. While analyzing the works of the Silamiut in the last years, I want to speak about the indigenous influences in this theatre considering traditional arts like drum and mask dancing.

The discourse about Greenlandic art is quite current. A national gallery will be founded in the next years and the Silamiut will get the national theatre status in 2011. I am interested in the role of arts inside a nation building progress which takes place in Greenland. Is there a political desire for indigenous arts? How is this presented in a theatre placed in a Danish/Greenlandic/native mixed town like Nuuk? How are Greenlandic legends transformed into modern theatre plays?

June 26, session 07.42: Contemporary circumpolar art: vehicles of indigenous knowledge

Kaden, Ute (University of Alaska Fairbanks): *Teacher Preparation for Arctic Alaska - The Rural Practicum at the School of Education at the University of Alaska Fairbanks*

Preparing teachers for Arctic Alaska at the School of Education (SOE) at the University of Alaska (UAF) is powerfully shaped by the values and needs of Native communities. Alaska is the traditional home of distinct indigenous cultures and languages, ranging from the Inupiaq of the northern arctic coast to the Tlingit, Tsimshian, and Haida of the southeast. Geographic isolation and poverty make K-12 education an especially difficult task in rural Alaska. Rural schools often struggle to attract and retain qualified teachers. A consistent and qualified teacher workforce integrated into the native community is critical to the stability of schools, and the vitality of Arctic and indigenous communities. As a response, a one-week Rural Practicum in Arctic villages is part of our teacher education program with the goals to:

- Gain first-hand experience of expectations for a teacher in a rural school setting,
- Increase teachers' knowledge and skills in delivering place-based curriculum,
- Provide experiences in working with students whose cultural backgrounds are different from their own,
- Benefit from the guidance of people who are grounded in educational methods that are different from those based on a literate tradition, including the experiential-based oral tradition of Alaska Native communities.

The paper describes the design, and implementation of the Rural Practicum as part of the secondary teacher education program. It discusses qualitative and quantitative research data and results on the effectiveness of the program for preparing teachers for Arctic Alaska. Video reports from participating student teachers support the presentation.

June 23-24, session 09.01: Schooling in the Arctic

Kämpf, Mandy (University of Alaska Anchorage); **Haley, Sharman** (Institute of Social and Economic Research, University of Alaska Anchorage): *Risk Complexity: The Arctic Offshore as a Case Study*

The Deepwater Horizon Oil Spill in 2010 reflects a series of system-wide risk management failures. It is imperative that project stakeholders in the Arctic increase their understanding of risk complexity as resource development shifts from the deep water of the Gulf of Mexico to the Arctic Offshore. This research-oriented study critically evaluates linear risk management practices by applying the wicked problem concept. Wicked problems are problems which are unique, novel, highly socially and technically complex and include stakeholders who have varying definitions and understanding of risks. This research uses a content analysis methodology to examine presentations of the North by 2020 seminar series, addressing questions such as: who are stakeholders in Arctic offshore resource development projects? What risk paradigms, risk attitudes, and data do they employ? How can the wicked problem concept contribute to the new project management paradigm of Project Management of the Second Order (PM-2)? This research concludes that natural resource development projects in the Arctic offshore are a wicked problem/project. It synthesizes strategies from soft system thinking literature to assist project and public managers in identifying and navigating wicked projects. This paper suggests a complimentary approach, consisting of both – hard and soft approaches – to identify and manage risks.

Keywords: risk management, systems complexity, wicked problem, critical systems thinking, systems modeling, Project Management of the Second Order (PM-2)

June 23, session 02.68: Social and economic impacts of megaprojects in the North

Karlsdóttir, Anna (University of Iceland, Geography and Tourism studies): *From fortune seeking to creeping enclosure – the rise, fall and rise of the Icelandic fishery system*

Fisheries in the 20th century can be said to have been a source of great economic wealth attracting fortune-seekers of various types and capacities rather than being associated with poverty. It's role in transforming the Icelandic Economy is inevitable. However the transformation of fisheries specifically related to the industrialization have not only generated a blue revolution interacting between ecology, technology, production and law but also a new introduction of new property arrangements limiting entry to the fisheries, affecting the life and long term viability of fishing communities. In this presentation of post-collapse Iceland, the origins of the Individual Transferable Quota (ITQ) system is traced and linked to a series of event that eventually led to the downfall of the banks as well as contributing to a regional turnaround. Ongoing attempts to reform the fisheries management system are discussed. These include the re-establishment of open-access coastal fishing and the gradual recall of ITQs by the state.

June 23, session 02.36: Northern fisheries: managing income, nutrition and cultural values

Kasyanova, Maria (Moscow State University): *Realm of the North in ancient Greek proverbs and sayings: from natural phenomena to supernatural images*

Ways of the North designation in ancient Greece were closely connected with archaic images of the North and its inhabitants. It was a feature of mythological consciousness to believe that natural phenomena such as winds or stars were supernatural beings, that is why the North was considered to be both a realm of the north wind Boreas (the very word "Boreas" in ancient Greek language means "North") and a place lying under the constellations of Ursa Major or Ursa Minor, so that the North was designated as "arctos", i.e. ancient Greek "bear". These ancient ideas were later rationalized and transformed to well-known mythological stories about Boreas and about the Bears and their placement by Zeus in the sky.

But there is another particular source of the North images in Greek culture, which not only reflects the ancient perception of the North, but also gives an opportunity to see, which traditional images of the North still were alive since the first papers in natural science, geography, history, and astronomy appeared. That is proverbs, sayings, set comparisons, and allegories concerning the North (i.e. "Boreas" and "arctos") and northern natural phenomena. Being part of a very old and invariable linguistic level, these language "clichés" were used in ancient Greek literature of different genres, from poetry to "scientific" prose of the 8th century BC – 5th century AD. Paper shows how natural phenomena in such phrases receive supernatural features, where did these phrases originate from and what is finally the folk ancient Greek image of the North, according to these proverbs. Some of the allegories and phrases, which will be discussed, are now the part of the world folklore and known to people of different European cultures and languages.

June 24-26, Session 07.32: Imagining the Supernatural North

Kauffeldt, Nora (Humboldt-University Berlin): *Imaging the Supernatural in Greenland*

In the medieval Icelandic sagas, Greenland is represented as a space where supernatural events and superstition take place. "The Other" in relation to the Icelanders and Iceland as space is constructed through supernatural events and heathen rituals that are held by the Norse settlers in Greenland.

The questions to answer in this paper are: Which role does the supernatural play in the representation of Greenland in the medieval Icelandic sagas? How is the Norse settlement in Greenland described, what kind of characters live in Greenland? In which way does this representation develop when the contact between the settlements in Greenland and Iceland becomes more and more rare until it ends totally?

Torfi Tulinius argues that the longer the contact lies back in time, the more fantastic and supernatural does the representation of Greenland become. In this paper, I would like to point out that the supernatural is "outsourced" from the medieval Icelandic society to a place which lies outside of the Norse world but still has a connection to it. For example, the aspect of the supernatural and heathen is important in *Grænlandinga saga* and *Eiríks saga rauða*. The difference between the Icelanders and the Greenlandic settlers seems to be their relation to the supernatural and heathen religion.

I will analyse which function this "outsourcing" has for the medieval Icelandic society and if the representation of Greenland changes in times in which Greenland is getting more popular and accessible for tourists.

June 24-26, Session 07.32: Imagining the Supernatural North

Kazakevich, Olga (Laboratory for Computational Lexicography, Research Computer Centre, Lomonosov Moscow State University): *“Look and remember”*: Reminiscences of shamanistic practices in Selkup, Ket, and Evenki communities

In the paper it is supposed to analyze the place and role of the shamanistic tradition in Selkup, Ket and Evenki communities of Western and Central Siberia today. The analysis will be based on three text corpora of life-stories in local dialects of Selkup, Ket and Evenki containing reminiscences on shamanistic practices participated, seen, or heard of by the story-tellers, and a corpus of interviews in Russian recorded within the last decade in the framework of language documentation projects. It is worth mentioning that quite a lot of our informants had shamans among their ancestors. Though doing our fieldwork we heard of one or two presently practicing shamans all the recorded episodes date back to the period from the 1920s up to the 1970s as far as shamanic séances concerns. People mostly describe impressions of the childhood or of the youth. An interesting and important detail illustrating how the traditional culture used to be transmitted: being taken to a shamanic séance children or teenagers were always told by their elder relatives: “Look attentively and remember!” The younger generation has no such experiences. Still, the presence of shamanistic tradition in the communities is strongly felt: here and there people tell about shaman attributes drawn somewhere in the taiga by white reindeer or hid on a stone pine, they discuss the perishing results of improper behavior of those descendants of shamanic clans who give or sell some of the shaman attributes of their ancestors to local museums, instead of keeping them away from profanes, etc.

June 24-26, Session 07.32: Imagining the Supernatural North

Kazakevich, Olga (Laboratory for Computational Lexicography, Research Computer Centre, Lomonosov Moscow State University): *A documentary on a language and its speakers, or can a language life be visualized*

Can the life of a language be visualized, and in case it can, how should it be done, so that the result could become not only a part of a linguistic multimedia archive, but also interest a “wider audience”? These issues are supposed to be discussed in the paper. The discussion will be illustrated with some fragments of the documentary “The Evenkis of the God’s Lakes”, a by-product of the linguistic activity aimed at documentation of local dialects of the Western Evenkis. The Soviet Lakes situated over the Arctic Circle in the Western part of the Turukhansk district, Krasnoyarsk Territory, at the boarder with Yamalo-Nenets autonomous area, were once called the God’s Lakes, and this name is preserved in the language of the local Evenki community whose summer nomadic camps are spread over the banks of the God’s (Soviet) Lakes. Here the Evenkis still keep reindeer and preserve the ethnic language, though the children and teenagers prefer to speak Russian, and in the Evenki speech of elderly people switches to Russian are common. It is difficult to say how long the local community will be able to lead the reindeer way of life: not far from the Lakes a large oil and gas field was discovered and its exploitation started recently. But at present we can still watch the life of reindeer herders camps and admire sophisticated smoking fire constructions erected by thoughtful masters, to provide their reindeer a place where they can get rid of tiresome mosquitoes and midges.

June 25, session 08.19: Arctic View: Reality & Visuality

Kazakevich, Olga (Laboratory for Computational Lexicography, Research Computer Centre, Lomonosov Moscow State University): *An obstinate community: a story of the relocation of the Upper-Tolka Selkups*

The paper presents a story of a tiny Selkup community (100 people) of the Upper-Tolka, Yamalo-Nenets autonomous area. During the XXth century the community was twice forced to move away from its traditional territory and twice people returned. The first “Babylonian captivity” happened at the beginning of the 1940s. It followed the “final liquidation of the shamans” in the district when about a dozen the community members were accused of practising shaman rites and arrested. The community was then removed 500 km to the South nearer to the district centre so that the authorities could keep an eye on the relatives of the shamans. After the Second World War the remainder of the community (many people died at the new place) was allowed to returned to the Tolka river basin. Gradually the life began to return to normal. By the early 1980s the village appeared to be in the centre of oil and gas prospecting area and the district authorities decided to clear the way to the progress by removing the village population. This time the community people were offered a choice: they could move to another village of the district or to the district centre. Three families refused to leave and remained in the deserted village with their reindeer. In the early 1990s, the time of great expectations, the village was rebuilt and many of its former residents returned to it joining the obstinate reindeer herders. The phenomenon of the community’s obstinacy and its outcomes will be discussed.

June 26, session 04.66: Relocation: State Inducements and Ideologies versus Strategies of Resistance and Response

Kazakevich, Olga (Laboratory for Computational Lexicography, Research Computer Centre, Lomonosov Moscow State University): *Traveling for pleasure in Selkup, Ket and Evenki life stories*

In the paper it is supposed to presents some descriptions of traveling for pleasure extracted from three corpora of life stories in local dialects of Selkup, Ket and Evenki recorded during the last decade. The tradition of traveling to visit relatives was and still is quite popular among the reindeer herders of the Siberian Arctic. As a rule, people travel in spring by reindeer sleigh or by motor sleigh, which appears to be less reliable. The distance does not mean much for the travelers: 500-600 km seem to be O.K., and 100-200 km are felt as quite nearby. It is not often that we come across such descriptions in the texts. Only one text of our collection is fully dedicated to a leisure travel. An Evenki reindeer herder told us about his trip from the Soviet Lakes in the Turukhansk district to the village of Potapovo in the Taimyr autonomous area. It took the family about a week to get there and only three days to come back, they covered over 1000 km in the whole. It is not by chance that our texts contain few descriptions of leisure trips.

It seems that traveling at long distances is an essential element of the life of reindeer herders, and those who still keep to a traditional way of life, draw no distinct boarder between traveling for hunting or reindeer herding and traveling for pleasure. Traveling is as natural as breathing and it is pleasure, irrespective of its purpose – that’s what you feel listening to Selkup, Ket, or Evenki life stories or reading them.

June 24, session 04.34: Movement for Pleasure – the Pleasure of Moving

Kearns, John L. (University of Saskatchewan, School of Environment and Sustainability): **Reed, Maureen G.** (University of Saskatchewan, School of Environment and Sustainability): *Evolution of Principles and Guidelines for Northern Research in the Circumpolar North*

In the 1970s, ethical principles were being drafted in the United States and Canada which aimed to encourage respectful relationships between researchers and northern communities. In the 1980s Ethical Principles for Research in the North were popularized by organizations such as the Association of Canadian Universities for Northern Studies. The basic principles set out in these (and other similar) documents have continued to evolve throughout the 1990s and 2000s in order to better reflect the interests of northern and indigenous communities in research. This research project traces the history and evolution of key themes found in sets of principles and guidelines for northern research using document analysis and literature review. Contributions of this research to the history of northern research guidelines will include the comparison of key themes over time with emphasis on developments in the past decade, as well as the inclusion of international guidelines, and those found throughout the circumpolar world.

June 22-23, session 10.20: Data Management and Knowledge Stewardship: Perspectives and Practice from Communities and Researchers

Keskitalo, E. Carina H. (Umeå University): *Adaptation to climate change in multi-use forest systems*

Adaptation to climate change is an increasingly important issue in northern areas. To efficiently adapt to climate change in multi-use forests require the integration of stakeholders in sectors including forestry, reindeer husbandry, and conservation. Drawing upon semi-structured interviews in Gällivare, a municipality in northernmost Sweden, this paper applies the formalised CAVIAR (Community Adaptation and Vulnerability in the Arctic, cf. Smit et al. 2007) framework for vulnerability assessment, which highlights present and future exposure-sensitivity and adaptive capacity. Outlining the perceived stresses in the targeted three sectors of renewable resource use, the paper concludes that climate change impacts may have an especially large impact on the relatively small reindeer husbandry sector, for which relatively small changes in day-to-day conditions may be significant. The interaction and relations between different land uses constitutes one important factor in determining adaptive capacity, and improved coordination between sectors may to some extent support adaptive capacity.

June 22-23, session 03.57: Community Adaptation and Vulnerability in the Arctic Regions (CAVIAR): Lessons and directions for future research

Keskitalo, E. Carina H. (Umeå University): *Sweden and the Arctic Policy Context*

In the last few years, the Arctic policy context has been transforming from a focus on civil cooperation to one highlighting more strategic considerations. A result of expected impacts of climate change on transport, resource extraction and sovereignty in the Arctic, this has provoked some concern in Sweden, a country lacking climatically Arctic land area or Arctic policy of its own but since the establishment of the Arctic Council included as one of eight Arctic states. As an EU member, Sweden is also strongly impacted by the formulation of EU policy on the Arctic. This chapter discusses recent policy concerns in Sweden, comparing Swedish official statements on the north with established Arctic Council and Cold War military discourses. It also situates Swedish policy statements within Nordic, EU Northern Dimension, Barents, Baltic, Northern Sparsely Populated Areas and other regionally relevant policy developed outside and within Sweden. The chapter concludes

that while Swedish statements on the Arctic have often been relatively general and emphasized traditional High Arctic natural science research and exploration together with some nods to areas established in Arctic Council discourse, recent strategic considerations may have led to an increased focus on a continued Swedish role in relation to the Arctic sea states, with the ultimate aim to influence areas that may impact Swedish security under climate change. This re-awakening of a strategic focus for the Arctic will provide a test for the stabilizing function of the plethora of general Arctic-related fora established after the Cold War, as well as for Sweden's role in northern security policy.

June 25-26, session 05.35: The Political Organization of Arctic Space

Keul, Adam (Florida State University): *Routes toward a Resource Frontier: The Arctic in a Globalized Market*

Driven by debates over sovereignty and the issue of increased access due to climate change, non-arctic nations and corporate interests have begun to press for a global resource frontier conception of the Arctic, establishing it as an international free trade zone. Ranging from the notion of an Arctic corporate "land-grab" to simply increasing freedom of trade, this possibility revolves around the rights of states and corporations to access and exploit Arctic oil, gas, minerals and wildlife. Despite the fact that Arctic states have sovereign claims on most of the Arctic Ocean through the 200nm EEZ, particular state and corporate interests present a range of arguments for why the Arctic should be held as a common space and why they should be allowed to claim its resources in a globalized market. This issue has recently played out with the consideration of non-Arctic states as observers or participants on the Arctic Council, much to the chagrin of some participants who do not want to see the limited powers of the Council diluted over more players. Still others believe that debates surrounding resource extraction and sovereignty in the Arctic are moot in the sense that the costs of exploiting Arctic Ocean resources and the lack of will to do so prohibits exploration.

June 25-26, session 05.35: The Political Organization of Arctic Space

King, Alexander D. (University of Aberdeen): *Ememqut's whale festival: satirizing sacred rituals in century-old recordings of Koryak narratives*

In the winter of 1901, Vladimir Bogoras used cutting edge audio technology to record several Koryak tales and songs. Nineteen cylinders of Koryak recordings made it back to America, and we have five stories on six cylinders and 13 songs. The longest story spans two cylinders and narrates the tale of how the raven trickster Ememqut hosted a whale festival and invited all the animals. This paper discusses the reception of these recordings in Kamchatka and my process of transcribing them onto the page, as well as translating into English. I played a cassette copy of the wax cylinders to Koryak people in many villages. People were excited to hear these old recordings and many commented on their quality, power, and the ability of the singer or narrator. I represent the narratives on the page using an ethnopoetic framework with an ear for pause, intonation, and voice quality, as well. Oral narratives are best represented on the page as verses organized into larger units of stanzas and scenes. An ethnopoetic framework takes into account qualities of the text, "paralinguistic" features of the recording, and additional insights provided by modern audiences of native speakers. My Koryak translators and commentators found this story the most hilarious of the set recorded by Bogoras. I use these insights to discuss aspects of Koryak humor and comedic performance.

June 22, session 02.25: Salmon Fishing and Whaling Peoples of the North Pacific

King, Leslie A. (Vancouver Island University, Canada); **Petrov, Andrey N.** (University of Northern Iowa); **Cavin, Philip A.** (University of Northern Iowa): *ASI II: Applying Arctic Social Indicators to NWT Canada*

Phase II of the Arctic Social Indicators Project is the implementation phase of the arctic social indicators identified in ASI Phase I in each of six domains. The implementation phase includes applying-testing, validating, and refining the indicators, applying the indicators to different arctic regions, enabling regional and time series comparisons, and developing a long-term system to monitor arctic human development. This paper presents the results of that application to Northwest Territories, Canada. Using existing data, the application revealed positive relationships among education and material well-being, cultural integrity and fate control, and cultural integrity and contact with nature. The data revealed a negative relationship among cultural integrity and economic well-being, contact with nature and economic well-being, cultural integrity, and contact with nature with education and suicide and fate control. The data also reinforced the difference that population size and aboriginal control make to the interpretation of indicators. The application also revealed data limitations and problems with reconciling different data sets. From this initial application we observe that there has been general improvement in human well-being in the NWT in the time period from 1991 – 2006 although there were considerable differences among communities. There appear to have been gains in fate control and contact with nature, and declines in cultural integrity, while material well-being has been stagnant. We conclude that ASI indicators are suitable for monitoring human development, that data exist to apply indicators from all six domains, but that population size and composition as well as regional differences are significant

variables and should be investigated further.

June 24-25, Session 03.63: ASI – Arctic Social Indicators

Kinney, DJ (Florida State University): *Aleutian Nuclear Testing and the Birth of the Environmental Movement*

Most accounts of the emerging environmental movement of the late 1960s trace its origins to ecological concerns that emerged in the Lower 48 states. This presentation will show, through contemporary narratives and the U.S. government's own classified and publicly available documentary film evidence, that the Amchitka, Alaska nuclear tests of 1965 to 1971 were not simply concurrent with a widening environmental movement, but were fundamental in sparking that movement's birth and development.

The Amchitka tests gave birth to organizations which would continue to be major actors in the environmental movement including Greenpeace, which coupled antinuclear aims with environmental policy concerns. Within the United States, formal protests came from the state governments of Alaska, Hawaii, Washington, and Oregon, though the concern over Amchitka quickly became international. Japan, Canada, the Soviet Union, Sweden, and Peru formally protested the Amchitka tests based not only on opposition to nuclear weapons, but on potential environmental impacts. Embassies were picketed, trade unions halted work, and thousands of students blockaded the U.S.-Canada border.

In response to the groundswell of opposition, the U.S. Atomic Energy Commission produced a 30-minute film in 1968 about its environmental protection efforts and undertook a massive publicity campaign to reassure the public. Despite these efforts, the revolt would succeed in making the Amchitka tests a political liability, and successfully halted further testing.

The Amchitka atomic tests were one of the major catalysts of the environmental movement and the moment when the Federal government began—however hesitantly—to respond to that new sensibility.'

June 22-23, session 10.22: Claims on Sites and Knowledge in Cold Regions. Material and Immaterial Constructs of Nature, Nations and Industry

Kinney, DJ (Florida State University): *Northern Environmental Sensibilities and the Bomb: A Film Screening*

Between 1965 and 1971, the Atomic Energy Commission fundamentally changed the means by which it represented its activities in the far north and the way in which it dealt with public dissent, particularly with regard to its environmental sensibilities. With protest mounting over its Alaskan nuclear testing plans, the AEC set out to produce public relations materials which would improve its public image and depict it as a steward of the northern environment.

Five films explicitly demonstrate this shift: Project Long Shot (1965), The Warm Coat (1968), The Milrow Test (1969), The Amchitka Program (1970), and Project Cannikin Review (1971).

Beginning with Project Long Shot, the traditional face of the AEC is maintained. The landscape is described as foreboding, barren, and vacant of life and purpose. As the films progress, however, the discourse within them becomes almost compulsively obsessed with environmental terminology. Whole segments of these films are devoted to preserving the safety of bird habitats and ocean life. Prolonged shots of soaring eagles abound. It becomes increasingly difficult to remember that one is watching a government document of a nuclear test and not a film about Aleutian ecology.

I propose a screening of these films for their value as historical documents of the ways in which government—and public—views of the northern environment changed in the years concurrent with the birth of the environmental movement.

June 23, Film and Video Screening

Kishigami, Nobuhiro (National Museum of Ethnology, Japan): *Aboriginal/Indigenous Subsistence Whaling in Alaska, USA*

The Inupiat of the Northwest Alaska have hunted bowhead whales for at least the past 1000 years. In this presentation I describe contemporary whaling activities and associated festivals, and the distribution of whale products in Barrow, Alaska, USA. I then examine the significance of the whaling complex (the system of whaling and associated activities) in Inupiat society. Although Inupiat whaling has been negatively affected by climate warming as well as environmental and animal rights movements for the last few decades, it is inseparably related to the Inupiat way of life. The Inupiat's engagement in whaling activities, and sharing and communal feasting of the meat and maktak (skin parts with blubber), are social and

spiritual cores of their life, thus providing a basis for their identity. Also, a boat captain and his wife can acquire social prestige through a successful whale hunt and hosting of feasts. Furthermore, bowhead whaling functions politically as an ethnic symbol distinguishing Inupiat society from other societies, especially the USA majority society. This study case demonstrates the cultural and political significance of a subsistence activity such as whaling for indigenous people in the increasingly globalized world.

June 22, session 02.25: Salmon Fishing and Whaling Peoples of the North Pacific

Kishigami, Nobuhiro (National Museum of Ethnology): *Sharing and Distributing of a Bowhead Whale among the Inupiat in Barrow, Alaska*

The Inupiat of the Northwest Alaska engage in bowhead whale hunting, a more than 1000 year tradition. In this presentation, I will describe and discuss contemporary sharing practices and distribution of the meat and maktak (skin parts with blubber) of bowhead whales among the Inupiat in Barrow, Alaska. (1) Once a whale is caught, it is shared among the successful whaling boat captain, his crew, and other boat crews who help tow and butcher the whale, according to fixed rules. (2) One or few days after a successful hunt, the successful boat captain invites all the villagers to a feast at his house. (3) When the successful boat captain lands his whaling boat at the end of spring hunt, he and his wife invite all the villagers to a feast on shore near the community. (4) The boat captain and his wife provide whale meat and maktak for several community feasts held at the Nalulataq (Blanket Toss Festival), Thanksgiving Day, Christmas, or/and Kivgiq (Messenger Feast). (5) The boat captain, his crew and their wives may send the meat and maktak to their family members or/and kinsmen in other places such as Anchorage, Fairbanks, etc. By these means, even a small portion of the meat and maktak reaches almost all the Inupiat in Barrow and many other places. The bowhead whale hunt and sharing of the whale products provide important opportunities of reproducing indigenous social relationships and identity among the Inupiat.

June 25, session 03.60: The social economy of sharing in the North American Arctic

Knútsson, Ögmundur (University of Akureyri); **Gestsson, Helgi** (University of Akureyri): *An effective fish industry's business model*

The paper maps the structural changes in the Icelandic fisheries from 1990 to present. The background is the radical and substantial changes in the structure of harvesting, production and processing as well as the transformation of the export activities and marketing operations in Icelandic fisheries. The main characteristics of the fisheries sector has changed from being a centralised, regulated and synchronised supply and value chains to being a deregulated, diversified and specialised structured. The study focuses on the changes in the structure of the value chain in the Icelandic demersal fisheries analyzing the main forces of these changes. The study addresses the impact of macro-environmental changes on the seafood value chain and the seafood sectors reaction to these changes. The methodology is built on the analysis of organisational theory and on statistical analysis and micro-economic assessment.

The study emphasises the way in which the fish industry has dealt with different situations in its business environment in as is the case of decreasing quotas. The key to the success of the fishing industry is the industry's flexibility and the capability to quickly adapt to changing market needs. This flexibility is mainly based on the current fishery management system that is based on individual transferable quota. Fish markets also play a major part and have supported market driven specialisation that is also driven by the innovation and value creation of the Icelandic fishing companies. The Icelandic fish industry has through a mix of its large vertically integrated fishing companies and SMEs, specialising in fishing, producing or marketing grown to be one the most competitive fish industries in the world making its approach and business model an interesting benchmark for other fishing nation.

June 24, session 02.58: Human Aspects of Fisheries in the Arctic Coastal Regions

Koester, David (University of Alaska Fairbanks): *Salmon and Entertainment – Rich Resources and Rich Cultural Life among the Itelmen of Kamchatka*

This paper starts with a striking comment in Georg Wilhelm Steller's eighteenth century description of Kamchatka. He described the polyphonic choral singing of the Itelmen people as being as beautiful and sophisticated as the music of Orlando Lassi heard in Paris. This for him seemed to contrast with their otherwise barbaric lifestyle. While Itelmen life was in most other aspects characterized by 18th century writers as lowly and primitive, Itelmens were also known for rich knowledge of the plant world and equally rich traditions of visiting and hosting, storytelling, humor and dance. What was the relationship between the rhythm of performative culture and the seasonal richness of Kamchatka's spectacular salmon runs? Did the leisure time afforded by abundance contribute to the complexity and creativity of Kamchatkan performance and entertainment traditions? This brief paper reviews the ethnohistorical evidence for the production of Itelmen performative and entertainment culture and the temporal aspects of this production in relation to life as a people of salmon.

June 22, session 02.25: Salmon Fishing and Whaling Peoples of the North Pacific

Komarenko, Julia (Ural State Academy of Architecture and Art); **Sudakov, Ivan** (Nansen International Environmental and Remote Sensing Centre (NIERSC), St. Petersburg, Russia): *Above the Ice: a Design Concept of a Scientific Settlement on the Permafrost*

The poster is aimed to present the initial results of an interdisciplinary collaboration, which was undertaken by scientists from Nansen Environmental and Remote Sensing Center, Russia-Norway and students of the School of Arctic Design, Russia.

The precise area, i.e. the geographical point of collaboration is Yamal Peninsula, Russia. In terms of natural sciences and in the context of struggling against the global warming, this territory is outstanding due to the special structure of permafrost, i.e. with natural caverns, which are examined with purpose to be filled with CO₂, so become a global CO₂-storage in the future.

What do designers have to do with it? A short answer is to develop the integral artistic image of a new lifestyle, i.e. imagine and present how scientists and shift-workers would exist there, where and how they would be sleeping, eating, relaxing, etc., so nothing about developing the storage technology itself.

Cutting-edge investigations in the field of housing development for Polar Regions are in more extent intended to meet technological issues. Aesthetical aspect is normally a secondary one or, in worse scenario, totally out of the subject under consideration.

A material environment followed with a narrow-focused artistic image becomes being of high social importance [Lynch, K.]. This image is also a point of additional immaterial value for the settlements established in extreme conditions of Polar Regions.

June 24-25, Poster Sessions

Kotkina, Irina (Russian State University for Humanities, Department of the History of Arts, Faculty of the Cultural Studies): *Stalinist Arctic: Myth and Reality*

This paper is dedicated to the mythical value of Arctic for the Stalinist culture. The idea of developed and conquered Arctic became very dear to the Soviet government in 1930s. It took one of the central places in the propagandistic rhetoric and became symbol of high cultural accomplishments for the whole Soviet Union. In the conference presentation we will try to analyze the meaning of Arctic for the Stalinist government. In 1930 there took place refusal of revolutionary values and return to certain normality in the Soviet society, known as "the great retreat" (after the famous book by sociologist Nicholas Timasheff). During this era exploration of Arctic, famous expeditions, non stop flights, and the development of the "Northern Sea Path" took place together with the introduction of physical geography into the school curriculum, which devoted spectacular role to the Arctic enterprise of the Soviet government. Simultaneously special attention was given to the fate of the Arctic peoples of the USSR, who were proclaimed to be protected, and linguistically and culturally developed. We suppose that this policy served to a special aim of the Stalinist government, which in reality moved from one failure to another, to deliberately create a myth of certain "model" Soviet territory, the "territory of constant success" out of Arctic. Thus, very distant, severe, underdeveloped and depopulated territory was positioned by Stalinist propaganda as the representation of energy and might, and this image was embedded into the minds of all the Soviet people.

June 22-23, session 07.49: Practice Power North

Kowalczyk, Marcin (The School of Business and Science, University of Akureyri): *Social Impact of the recession in the Nordic states – a study of Iceland*

Main thesis: Icelandic society has been affected by the economic crisis starting in 2008. Among the most important social aspects of recession, one should take into account disillusionment with commercial and financial sector, lower voter participation (measured as voting turnout) and citizen distrust. Voting participation in Iceland has been significantly lower in the last year elections (as relates to the local government elections and constitutional assembly elections) due to disillusionment following economic breakdown and resulting confidence crisis.

Main points to be discussed:

- comparison of the voting patterns in the past elections (respectively: in 2002, 2006 and 2010), with possible distinctions regarding regions, cities vs countryside, gender, education, age etc.
- voter absenteeism phenomenon vs active voting participation: which factors play the key role in each of these processes. Analysis of past elections voter turnout in Iceland (in 2002 and 2006) with these factors in view.
- mechanism of confidence crisis; how economic downturn may affect voter participation. Finding possible references from other countries affected by the global recession, such as Greece, Hungary, Spain, Portugal, Italy and Ireland and the Baltic States (Lithuania, Latvia, Estonia).
- explanation of the confidence crisis mechanism as it applies to Iceland. How do citizens show their discontent in democratic process; consequences of the banking crisis on individual attitudes and voting patterns, possible long-lasting effects of the low voting participation and discontent with democracy in general.

June 25, session 05.28: *Governing changes in the North*

Kravitz, Meredith (University of Toronto): *Arctic Scramble: Prospects for a New Governance Regime*

The global hunt for hydrocarbons and alternative shipping routes has kindled a strong interest in the waterways and natural resources of the circumpolar north. Heightened interest in the region has spurred a rash of commentary debating the merits of a new governance regime. Impetuses vary: some authors stress the potential for armed conflict over natural resources; others fear the impact oil and gas exploration will have on the fierce, yet delicate Arctic environment. Still, others insist on the adequacy of existing mechanisms, stressing that a new treaty would be superfluous. This paper will address the following questions: What is the current legal status of the Arctic? What are the main threats to the region? Are existing regimes adequate? And finally: Do we really need a comprehensive Arctic treaty? The paper concludes that while current legal regimes will likely prove inadequate given probable future scenarios, a sober view is warranted: imagery of “final frontier” lawlessness is not supported by the evidence. While tailored bilateral or multilateral arrangements are promising solutions, a comprehensive legal regime for the Arctic is neither practicable nor particularly desirable at this time.

June 25-26, session 05.35: *The Political Organization of Arctic Space*

Kremer, Hartwig (Land-Ocean Interactions in the Coastal Zone (LOICZ), Geesthacht, Germany); **Forbes, Donald L.** (Geological Survey of Canada); **Rachold, Volker** (International Arctic Science Committee); **Lantuit, Hugues** (International Permafrost Association); **Reiersen, Lars-Otto** (Arctic Monitoring and Assessment Program): *State of the Arctic Coast 2010: Scientific Review and Outlook*

Arctic coast are key social-ecological systems featuring human activity, a rich band of biodiversity, critical habitat, and high productivity, and most dynamic components of the circumpolar landscape. Changes of this interface are sensitive mirrors of interaction between land and sea, humans and nature. Essential ecosystem goods and services support indigenous human lifestyles; attract expanding infrastructure investment and cause growing security concerns in an area in which climate warming is expected to trigger landscape instability, and increased hazard exposure.

Starting in 2007, the International Arctic Science Committee (IASC), the Land-Ocean Interactions in the Coastal Zone (LOICZ) Project, the International Permafrost Association (IPA) and Arctic Council’s Arctic Monitoring and Assessment Programme (AMAP) jointly initiated this State of the Arctic coast assessment. It draws on initial findings regarding climate change and human dimensions for the Arctic as a whole provided by the Arctic Climate Impact Assessment (ACIA) and Arctic Human Development Report (AHDR) to develop a comprehensive picture of status, current and anticipated change in Arctic coasts. The report aims to be a first step towards a continuously updated assessment and to identify key issues of future scientific concern in an Earth system research agenda.

The report first provides an assessment of the state of Arctic coastal systems under three broad disciplinary themes – physical systems, ecological systems, and human concerns in the coastal zone; the second examines progress in integrative approaches

to monitoring, understanding, and managing change in Arctic coastal systems; it concludes by identifying data gaps and future research priorities.

www.arcticcoasts.org

June 24-25, session 03.63: ASI – Arctic Social Indicators

Krupnik, Igor (Smithsonian Institution): *Crossing boundaries: what did we learn in IPY 2007–2008 and who learned it?*

The International Polar Year (IPY) 2007–2008 was the broadest scholarly initiative in polar studies ever undertaken, and the social science and humanities field in IPY was the largest and the most diverse program of its kind, judging by the number of projects, nations, and scientists involved, level of funding, and the breadth of research topics. It is estimated that 35 projects in social sciences and humanities implemented during IPY and scores of related initiatives engaged more than 1,500 researchers, students, indigenous experts and monitors, and representatives of polar indigenous people's organizations. For the first time, physical, biological, social, and humanities researchers, and local community-based experts were encouraged to join forces under a common multi-disciplinary framework.

To many polar social scientists, the legacy of collaboration with a broad spectrum of experts from other disciplines during IPY was eye-opening. The paper explores the impact of multiple experiences learned in course of the interaction with the largest-ever group of scholars from many fields and in conducting joint research during the IPY era (2002–2012), including our different vision of the science 'frontiers' and 'discoveries,' and the record of IPY across-boundary partnerships among specialists within the social sciences and humanities; academic researchers, community experts, and indigenous organizations; Arctic and Antarctic specialists; social scientists and scholars from physical and natural science disciplines. The lessons of IPY 2007–2008 may be instrumental to the planning for future multi-disciplinary initiatives, including the next IPY in 25 or 50 years from now.

June 24, Keynote presentation

Krupnik, Igor (Smithsonian Institution): *In the Footsteps of the Giants: The 50-Year Arctic Career of Ernest S. (Tiger) Burch, Jr., 1960–2010*

The paper reviews the life and professional career of Ernest S. (Tiger) Burch, Jr., 1938–2010, whose pioneer research, influential books and papers opened a new era, particularly in ethnohistory, studies of social relations (kinship, social organization) and culture change in Alaska. Burch's trademark work at the junction of early historical records, oral tradition, and good social theory, and the methodology of ethnohistorical reconstruction he perfected over the years, expanded the horizon of our historical vision of the early contact Native Alaskan societies by almost 100 years.

Burch's career in Arctic ethnology is followed through the lenses of major projects (studies) he undertook over 50 years: human ecology and social organization in Kivalina, Alaska (early 1960s); changing family relations through contact and modernization (mid-late 1960s); reconstruction of the 19th century demographic and social structures of the North Alaskan Iñupiaq Eskimos (late 1960s–early 1970s); aboriginal 'societies' in Alaska (1970s); circumpolar historical map "Peoples of the Arctic ca. 1825" (late 1970s–1983); the 10-volume encyclopedia, "Cultural and Natural Heritage of Northwest Alaska" (1983–2000), followed by three seminal monographs (1996, 2005, and 2006); and the unfinished work on the history of caribou herds in Northwest Alaska (1998–2010).

June 23, session 07.47: *In the Footsteps of the Giants – Honoring Ernest S. (Tiger) Burch, Jr., 1938–2010*

Krupnik, Igor (Arctic Studies Center, Smithsonian Institution, Washington, DC, USA): *Crossing Boundaries: What did we learn in IPY 2007–2008 and who learned it?*

The International Polar Year (IPY) 2007–2008 was the broadest scholarly initiative in polar studies ever undertaken, and the social science and humanities field in IPY was the largest and the most diverse program of its kind, judging by the number of projects, nations, and scientists involved, level of funding, and the breadth of research topics. It is estimated that 35 projects in social sciences and humanities implemented during IPY and scores of related initiatives engaged more than 1500 researchers, students, indigenous experts and monitors, and representatives of polar indigenous people's organizations. For the first time, physical, biological, social, and humanities researchers, and local community-based experts were encouraged to join forces under a common multi-disciplinary framework; dedicated efforts were made to encourage cross-disciplinary studies linking

socio-cultural processes, climate change, and ecosystem health.

IASSA played crucial role in mobilizing Arctic social scientists for their participation in IPY 2007–2008, since fall 2003 and beyond. The paper explores the impact of multiple experiences learned in course of our interaction with the largest-ever group of scholars from many fields and in conducting joint projects during the IPY era (2002–2012). It covers the history of the belated social sciences entry to the IPY program in 2002–2004; new/old questions that social scientists asked in IPY; different vision of the science ‘frontiers’ and ‘discoveries’ by scholars from various disciplines; and the record of IPY cross-boundary partnerships, including those among academic researchers, community experts, and indigenous organizations; Arctic and Antarctic specialists; social scientists and scholars from physical and natural science disciplines. The lessons of IPY 2007–2008 will be instrumental to IASSA’s future participation in other big multi-disciplinary

June 24, Keynote presentation

Kukanov, Denis (Ural State Academy of Architecture and Art): *Back to the Future: the Design Concept of a Mammoth Museum*

In summer 2007 the interdisciplinary team of creative practitioners and theory-based scholars was involved into a project with the aim of developing the concept of a newer museum. Lugovskoye, i.e. marshy lowland with lots of ancient mammoth bones, has been listed as one of the famous sights of Khanty-Mansi Autonomous Region due to its exceptional historical and scientific value since 2004, so it was declared as a natural historical monument on the international scale.

During the design analysis, the main attention was paid to the unique location of the future museum: nowadays, in Russia there are no museums established directly on places of archeological excavations. Moreover, Lugovskoye is located closely to Khanty-Mansyisk city and to a federal automobile road as well. All the points above give us the opportunity to look widely at possible models of visiting the museum.

Any design proposal always begins from searching a creative image and developing an artistic concept of a future object. The main purpose of the initial stage is to develop the proper form of communication between an artifact and both the environment and users.

To present the context as well as content to users, i.e. to let them to immerse to the ‘Mammoths Era’, the form of the building should be presented at the highest level of ethics and aesthetics, and addressed all the environmental needs and requirements. In addition to that, new social and economic perspectives of the region on global scale are expected to be revealed.

June 24-25, Poster Sessions

Kuklina, Vera (V.B. Sochava Institute of Geography, Siberian Branch of Russian Academy of Sciences/ the Centre for Independent Social Research and Education): *Perception of homeland of indigenous people in Russia in a system in educational migrations: Case of Buryats*

As the notion of “indigenous people” is closely connected to environmental discourse and the rural remote areas those indigenous people who move to the cities have to claim their ethnic identity to prove it. According to traditionalist discourse there is common sense who are “real indigenous people”. From one side urban indigenous people can lose such “real indigeness”, but from another side they have access to dominated government and intellectual discourses related to the indigenous rights, social movements, and environmental ethics. Through with new discourses and practices in the cities indigenous people rethink their perception of themselves and location in world system. It gives them opportunity to speak on the same language with power holders and to promote homeland especially of those who live in remote rural areas. Particular case of educational migrations in such reconstruction has special importance connected to formation of intellectual elites through this process. The image of “center” for Buryats is traditionally located in homeland where the secundines were buried. Movement to cities supposes transformation of center-periphery relations. The last years it implies movement of most educated and well fixed indigenous young graduates to Russian centers that are located in Moscow and Saint-Petersburg. Another image of space is translated through religious Buddhist education that becomes popular among Buryats. The centers for such system are located in Eastern world, including Tibet and Mongolia. Argumentation and consequences of perception of homeland between East and West through educational migrations of young Buryats will be explored in the paper.

June 26, session 05.12: Indigenous and Nation State Land Attachment: Continuances and Assertions

Kvalvik, Ingrid (Nordland Research Institute); **Dalmannsdottir, Sigridur** (Bioforsk): *Vulnerability and adaptation to climate change in the agricultural sector in Northern Norway*

Agriculture, as a primary industry, is directly dependent on natural conditions and therefore vulnerable to changes in climate. Even though climate change is expected to cause fewer negative effects in Norway, and Northern Norway in particular, than many other countries, there are several challenges and many rural communities are vulnerable. In this interdisciplinary study we have, based on downscaled climate change scenarios and interviews with local farmers in the three northernmost counties in Northern Norway (lat.65.5° to 70°), assessed biological and agronomic effects of climate change, and their interaction with political, economic and social factors. Our study confirms that the challenges facing farmers are complex, and that negative effects from climate change comes on top of all the other challenges. For instance, the political and economic framework conditions, including the structural policy aiming for more efficient agriculture have put many farms on severe stress, and the regulations and incentives enforced to reduce submission not always enhance adaptation to climate change effects. Further, wider ongoing social and economic transformations at the community level, like the reduction of farm industries in the local community, accessible counseling, the long working hours and wage disparities compared to other work and the status of agriculture, might have serious implications for the agricultural sector's adaptive capacity. The study has revealed big local differences in how farmers are affected by climate change and their capacity to adapt. While some are mainly benefitting from the changes, others have experienced negative impacts that might be the decisive factor in their decision to liquidate their business.

June 22-23, session 03.57: Community Adaptation and Vulnerability in the Arctic Regions (CAVIAR): Lessons and directions for future research

Lähteenmäki, Maria (University of Eastern Finland): *Reminiscence of the Ceded Petsamo after WWII*

Petsamo was in the 1920s-1930s Finland's corridor to the Arctic Ocean. This multicultural region had 5100 inhabitants and was situated between Northern Norway, Kola Peninsula of the Soviet Union (SU) and Finnish Lapland. After WWII Finland lost the area to the SU and people of Petsamo – Finns and Sami – were evacuated to Finland. Nowadays the area is a part of the Murmansk region. In my presentation I will discuss, in which way the ceded Petsamo has been remembered in the postwar era in Finland. Methodologically and theoretically the subject could be situated in the scientific debates of oral history and identity talk. The key concept will be the "narrative identity" introduced by Paul Ricoeur. According to Ricoeur narratives are the most important elements in making of collective and also personal identities. My sources are the archives of the Petsamo Society, regional and nationwide newspapers and oral history material.

June 23, session 04.11: Identity Making in the Border Regions of the European North

Lajus, Julia (European University at St. Petersburg/ Institute for the History of Science and Technology): *On Land, at Sea and in the Air: Polar Stations, Research Vessels and Aircrafts as Sites of Knowledge Production in the USSR in the Times of the Second IPY*

In this paper I would like to discuss the development of infrastructure for knowledge production in the Arctic which Soviet scientists and authorities faced on the eve of preparation for the Second International Polar Year, 1932-33. By the end of 1929 when the discussions on preparations for the Second IPY began within the Academy of Sciences, the country had only a handful amount of research stations and very few research vessels. Vessels were essential not only for oceanographic research which were put on the agenda of IPY program by Soviet oceanographers, but first and foremost for the aim of connecting stations most of which situated on islands and remote peninsulas with the civilized world. After 1928 success with "Krasin" icebreaker rescue trip the usefulness of icebreakers for operating in High Arctic became evident, and the same was proved for airplanes during Cheliuskin episode in 1933. One of the specificities of knowledge production in the Arctic by Soviets is seen in the cases that all kind of vessels, aircrafts, and even natural sites like ice floe were used for observations. I argue that among other reasons it was a lack of capacity of scientific community itself, including the Academy of Sciences, to afford obtaining very expensive equipment and infrastructure for Arctic research that led to the crucial change in development of the Second IPY activities from scholarly cooperation to a governmental project made with substantial material and staff inflow which were in power only for the state.

June 22-23, session 10.22: Claims on Sites and Knowledge in Cold Regions. Material and Immaterial Constructs of Nature, Nations and Industry

Langstaff, Liane (University of Guelph); **Cosuolo Willox, Ashlee** (University of Guelph); **Harper, Sherilee** (University of Guelph); **Edge, Victoria** (University of Guelph); **the Rigolet Inuit Community Government**: *Livelihoods in Transition: The Socio-Economic Impacts of Climate Change on the Inuit Food System in Rigolet, Nunatsiavut, Canada*

This poster examines the potential local socio-economic impacts of climate change on the Canadian Inuit community of Rigolet in the Nunatsiavut region of Labrador, Canada. This investigative case-study was conducted as part of the Changing Climate, Changing Health, Changing Stories project, which was funded by Health Canada's First Nations and Inuit Health Branch. Surveys and in-depth interviews were conducted with Rigolet residents to identify their perceptions on the impact of climate change on the Inuit food systems. Providing observations of changes in temperature, snow cover, and sea ice duration and thickness, study participants related experiences of food insecurity under a changing climate. Furthermore, reductions in the availability and accessibility of traditional foods were analyzed through the lens of economics. The results indicate that Rigolet community members have observed some negative economic impacts in response to climate change among other independent factors such as commodity price increases. Specifically, study participants felt that climate change had contributed to increases in harvesting expenditures and caused consumers to shift from traditional, country foods to store-bought foods. Finally, food sharing, a social practice integral to Inuit culture and economy, was believed to have decreased under climate change. Overall, the results highlight that climate change appears to have some noticeable, negative consequences on the Rigolet economy and social sphere. Given that changes in climatic variables are projected to increase, climate change may place further stress on the Rigolet community and has the potential to bring about similar, negative socio-economic impacts in other Inuit communities.

June 24-25, Poster Sessions

Lantto, Patrik (Centre for Sami Research, Umeå University): *Historical and contemporary external encroachments of Sami reindeer grazing areas in Sweden: The examples of hydroelectric and wind power development*

In a recent policy document concerning development of wind power, the Sami Parliament in Sweden expresses grave concerns regarding how this process is being handled, and has demanded a slower and more careful process based on Social Impact Assessments before projects are approved, as well as veto power for local Sami communities if their economic existence is threatened. In the document, the so far limited opportunities for local Sami communities to influence this process are viewed as analogous to the earlier large-scale development of hydroelectric power in northern Sweden during the twentieth century, where little or no concern was given to the rights and interests of the Sami. The comparison with the hydroelectric power development is apt – despite the changed social context and more developed Swedish Sami policy.

This paper will analyze the historical development of hydroelectric power and the contemporary development of wind power from a comparative perspective. Does, for example, the strengthened legal position of Sami reindeer husbandry today mean that the position to influence decisions concerning proposed wind power development is improved in comparison to the hydroelectric power development? And what effect does the decision to assign certain parts of the reindeer grazing area the status of “national interest for reindeer husbandry” in Sweden have for the planning and development of new wind power parks? These and other issues will be raised in the paper.

June 23, session 05.67: Consultation in Arctic Extractive Industries Development: Lessons learned for Arctic resource governance from the local to the international level

Laugrand, Frédéric (Université Laval); **Coutard, Jérôme** (Université Laval /FILTERIS): *Inuit leaders and the Web: A preliminary study on their presence and visibility*

This paper presents the preliminary results of a study conducted by Frédéric Laugrand and Jérôme Coutard. The study has been completed within a SHRCC-CURA grant entitled Inuit Leadership and Governance as well as an important project entitled Igalak supported by the Canadian Innovation Foundation. The methodology has been developed in cooperation with Filteris and tested on a database of about 200 Inuit leaders from Nunavut and Nunavik. The paper discusses some results and problems in conducting such a study at a time when the Web has become an important tool used by a wide range of people.

June 24, session 05.41: Inuit in Leadership and Governance in Nunavut and Nunavik

Larsen, Joan Nymand (Stefansson Arctic Institute/ University of Akureyri); **Fondahl, Gail** (University of Northern British Columbia): *AHDR-II (Arctic Human Development Report II)*

This presentation gives an introduction to the AHDR-II project. The purpose of the AHDR-II project – *Arctic Human*

Development Report II: Regional Processes and Global Linkages – is to move the study of human development in the Arctic beyond the AHDR (2004) baseline, to provide the second assessment and synthesis report on the state of human development in the Arctic, and to contribute to our increased knowledge and understanding of the consequences and interplay of physical and social global change processes for human living conditions and adaptability in the Arctic, and to strengthen the competence and international leadership role in human dimension scientific assessments and research. With the production of AHDR-II – ten years after the first AHDR - it will be possible to move beyond the baseline report and start making valuable comparisons and contrasts between critical time periods in an era with rapid change impacts in the North. The project will yield a report that include as overarching cross-cutting themes global change impacts; climate change; regional processes and global linkages.

June 23-24, session 10.62: AHDR-II: Arctic Human Development Report: Regional Processes and Global Linkages

Larsen, Joan Nymand (Stefansson Arctic Institute/ University of Akureyri); **Schweitzer, Peter** (University of Alaska Fairbanks): *ASI-II (Arctic Social Indicators)*

This presentation gives an introduction and overview of the ASI-II (Arctic Social Indicators) project. The ASI-I project was formulated to fill a critical gap in knowledge identified by the AHDR (2004) on the construction of social indicators to help facilitate monitoring of changes in human development. The AHDR identified domains of particular relevance to Arctic residents important to incorporate in measuring human development in the Arctic. The ASI project team devised a set of indicators that reflect key aspects of human development in the Arctic, that are tractable in terms of measurement, and that can be monitored over time at a reasonable cost in terms of labour and material resources; and the six domains for indicator development are these that have been identified as reflecting key aspects of the most prominent features of human development: Human health and population, material wellbeing, education, fate control, closeness to nature, cultural wellbeing. Guided by the AHDR results, the first phase of ASI identified a set of Arctic-specific indicators to monitor Arctic human development and quality of life in the Arctic. The next step, which constitutes the ASI-II Implementation project, aims to implement the identified indicators, through testing, validating and refining the indicators across the Arctic, and then measuring and performing analyses of select cases, with the ultimate goal of moving toward to adoption by Arctic governments and the Arctic Council of the indicators for the purpose of long-term monitoring of human development.

June 24-25, Session 03.63: ASI – Arctic Social Indicators

Lárusson, Kári Fannar (Conservation of Arctic Flora and Fauna Working Group of the Arctic Council): *Conservation of Arctic Flora and Fauna and Community Based Monitoring*

The Conservation of Arctic Flora and Fauna (CAFF) working group of the Arctic Council has the mandate to address the conservation of Arctic biodiversity, and to communicate the findings to the governments and residents of the Arctic. Arctic residents have a deep and profound connection to nature, which has formed all aspects of Arctic subsistence over the ages. Climate change is causing unprecedented changes to the Arctic environment which simultaneously presents a threat to the Arctic way of life and provides its residents with a multitude of opportunities.

The task to successfully conserve the natural environment and allow for economic development requires participation of all stakeholders ranging from nation states to local communities. Comprehensive baseline data assembled and monitoring coordinated. CAFF's monitoring work is through its cornerstone project the Circumpolar Biodiversity Monitoring Program (CBMP).

The CBMP pursues a multidisciplinary, integrated ecosystem-based approach through the establishment of four integrated expert monitoring groups: Marine, Coastal, Freshwater and Terrestrial group. The EMGs are asked to develop circumpolar integrated biodiversity monitoring plans that give consideration to promoting and utilizing community-based observations and citizen science, understanding the value and significance of Arctic peoples, and maximizing their contributions to biodiversity monitoring

The peoples inhabiting the various regions of the Arctic spend vast amounts of time on the land and at sea. Drawing on personal experience, information shared with other, and knowledge handed down through the generations, residents of the Arctic are able to recognize subtle environmental changes and offer insights into their causes. They are community-based monitors by virtue of their day-to-day activities.

June 23, session 01.33: Narratives of vulnerability, resilience and adaptation among circumpolar communities in the era of climate change

Launspach, Jonathon (University of Northern Iowa); **Petrov, Andrey** (University of Northern Iowa): *Climate Change, Tundra Wildfires and Arctic Livelihoods: A Spatio-temporal analysis of recent trends and possible impacts*

An increased wildfire activity and shifts in wildfire seasonality have considerable effects on arctic ecosystems and livelihoods of people in the Arctic. This paper provides spatial and temporal analysis of wildfires occurrence and intensity Arctic tundra using satellite data for five seasons between 2004 and 2008. We analyze spatial expansion and temporal dynamics of wildfires, and their connections with usual phenological events and human activities. We explore a possible relationship between increased fire incidence and changing climate and increasing anthropogenic disturbance. Since a growing prevalence of wildfires in tundra is expected to become one of the defining trends in a warming Arctic, we attempt to define and analyze impacts that wildfires could have on land-based activities. Specifically we examine the impacts of wildfires on reindeer forage stock in eastern Yamal-Nenets and western Taimyr regions and their possible implications for reindeer husbandry and hunting.

June 24-25, Poster Sessions

Lavrillier, Alexandra (European Center for the Arctic (CEARC), UVSQ – University of Versailles Saint Quentin): *Comparison of Religious Perceptions and Consequences of Climate Change among Nomadic and Settled Tungus of Siberia*

Living in close relationship with the environment of the Siberian taiga and the tundra, the Tungus (Evenk and Even peoples) have been noticing for several decades numerous deteriorations and shifts in climate, in flora and in wild and domestic fauna. This paper is based on eight years of field work (between 1994 and 2010) among Tungusic reindeer herders, hunters and fishermen in Yakutia, Amur region and Kamchatka.

This paper will comparatively explore how climate change modifies the economical and religious relationship of humans with the natural environment. It will study the nomads', villagers' and townspeople's interpretations of these observed mutations according to their shamanistic collective representations, as well as the economical and political adaptive reactions. This paper analyses the religious shifts implied by the environmental changes, such as the creation of new rituals, the rebirth of shamanistic legends, the emergence of native preachers and of millenarian narratives.

Film: “School on the move”, La Gaptière production, a film of Michel Debats, 2007 – 52’

This documentary film shows the working flow of a nomadic school created by Evenk nomadic reindeer herders and hunters in Siberia. Collected in winter during one month of moving from one camp to another, the interviews given in native language by the Evenk nomadic parents, tell the recent history of this people, the problem of education, culture safeguarding and language revitalization. These interview also emphasise the collective representation about the human – natural environment, the relationship between human and reindeer, as well as the problems appeared with climate change.

June 23, session 01.33: Narratives of vulnerability, resilience and adaptation among circumpolar communities in the era of climate change

Lemelin, Harvey (Lakehead University); **Mattina, Charlie** (Lakehead University); **Johnston, Margaret** (Lakehead University): *Tourism Vulnerability and Resilience in the Arctic (TVRA Project): Understanding opportunities and uncertainties associated to an emerging tourism industry in Nunatsiavut*

The Tourism Vulnerability and Resiliency in the Arctic (TVRA) research project undertakes an empirical assessment of the interactions of climate change and tourism in Canadian Arctic communities using a community vulnerability and resiliency assessment approach. The main objectives of the study are to: (i) assess current exposure and adaptive capacity in selected communities in Nunavut, Nunavik and Nunatsiavut; (ii) assess future exposure and adaptive capacity in a tourism context; and, (iii) provide a comprehensive tourism and climate change assessment that can be used by communities, stakeholders, decision-makers, and operators throughout the Canadian Arctic. In this presentation we discuss the findings from the 30 Nunatsiavut community interviews that include the establishment of the Torngat Mountains National Park; the development of a ‘parks-gateway’ community; and, cruise tourism issues. While many local residents expressed their excitement with the new ‘park-gateway’ community designation provided through the creation of the Torngat Mountains National Park, individuals also expressed some disappointment with certain aspects of the new park (e.g., employment opportunities). Some participants expressed optimism regarding the “untapped” potentials of tourism (from cruise tourism to locally-guided ecotourism opportunities), while others raised concerns regarding the future potential of tourism in the community. Our early assessment is that adaptation strategies for tourism change in Nain and elsewhere in Nunatsiavut should focus on the development of education and outreach strategies aimed at informing and engaging residents in local and regional tourism

June 25, session 02.56: Tourism, People and Protected Areas in Polar Wilderness

Lemelin, Raynald Harvey (Centre for Northern Studies); **Trapper, Lillian** (Moose Cree First Nation); **Trapper, Peter** (Moose Cree First Nation); **Beaulieu, Michel** (Lakehead University); **Wiersma, Elaine** (Lakehead University); **Kapashesit, Randy** (MoCreebec Council of the Cree Nation): *Picture if you will, climate change from a local perspective*

Qualitative attempts at capturing concerns and observations of climate change have been mostly conducted through experiments, interviews and focus groups. Indeed, images of climate change, when utilized at all, are often used as confirmatory depictions of the research outcomes. From a local Indigenous perspective, the issues of “representation” and “trustworthiness” of these images is often contested. A team of researchers affiliated with the Centre for Northern Studies at Lakehead University in cooperation with citizens of the Moose Cree and Mocreebec First Nations are exploring the impacts of climate change through photo-history and Photovoice. Photo-history provides a historical visual analysis of cultural and environmental changes in the area, while Photovoice provides a contemporary visual analysis of socio-cultural changes as depicted by the citizens of the Moose Cree and Mocreebec First Nations. This presentation identifies images and narratives contributing to a greater understanding of the impacts of climate changes on the distribution of culturally significant flora and fauna and Cree livelihood in the Canadian sub-Arctic. The conclusion describes how participatory photography is perceived as more relevant to community-based research because it engages community members and researchers in a dialogical process.

June 22-23, session 10.20: Data Management and Knowledge Stewardship: Perspectives and Practice from Communities and Researchers

Lemelin, Raynald Harvey (Centre for Northern Studies); **Walmart, Brian** (Keewaytinook Okimakanak Research Institute); **Kakekaspan, Mathew** (Fort Severn Cree Nation); **Siebel, Franz** (Keewaytinook Okimakanak Research Institute); **Dowsley, Martha** (Lakehead University): *Polar Bear Management in Ontario, Canada*

This comparative analysis examines the development of two polar bear management strategies in Ontario: the proposed Wabusk Co-Management Plan in the 1990s; and the development of the Polar Bear Recovery Strategy in 2010-11 from a resiliency perspective. Both management strategies recognize Aboriginal rights and traditional knowledge, however, differences in consultative approaches and definitions of co-management exist. This presentation examines the socio-political arenas, the actors, consultative processes, and the subsequent development of two separate polar bear management in the province of Ontario throughout the past three decades. Also discussed is the failure to ratify the Wabusk Co-Management Plan in the 1990s, and the development of the Polar Bear Recovery Strategy under the Endangered Species Act in Ontario, scheduled for implementation in the fall of 2011. We conclude by suggesting how certain safeguards like the establishment a community-based polar bear monitoring system and the expansion of current tourism options can stimulate the current imposed management regime into an adaptive co-management strategy for the future.

June 26, session 05.38: The Art and Science of Governing: politics and policy in the polar bear regime

Leonova, Valentina Grigorievna (Inuit Circumpolar Council, Chukotka/Chukotka Institute of Education and Training): *Languages of the Chukotka Indigenous Peoples*

As in many remote areas of the Russian Federation, one of the pressing problems of the Chukotka Autonomous Region today is the problem of preserving the native languages of the indigenous peoples of Chukotka.

If in the second half of the twentieth century there was a reduction in the incidence of use of the languages of the indigenous peoples, then already in the first decade of the twenty-first century the question arises about their disappearance.

The society of Chukotka includes major components such as culture, education, management, administration, industry, media, agriculture. In the Region attention is paid to the languages of the indigenous peoples in the media, education, cultural institutions and agricultural enterprises.

TV and radio programs are broadcast and a regional newspaper is issued in the languages of the indigenous peoples. Schoolchildren are taught native languages and subjects of ethnoregional content up to grade 9 in the amount of 1-2 hours per week. Cultural institutions collect folklore, provide for national song and dance ensembles. One can hear live native speech in rural fishing and reindeer enterprises, which maintain the traditional use of natural resources.

Non-governmental organizations, such as “Chychetkin vetgav” (Chukchi), “IRS-Chukotka” (Eskimo) play a certain role in the preservation of languages and culture.

The government of Chukotka and the gold mining enterprise “Kupol” make their contribution in support of languages and

culture, they finance a variety of cultural and linguistic projects, hold contests, provide funding, material and technical base.

In order to ensure the educational process to teach the native language in educational institutions of the Region, training manuals to assist teachers to create a learning environment to communicate in the native language, teaching aids with a complex of training exercises for the development of oral speech of children, books for family reading are produced. Literature in the native language (poems and fairy tales) is published.

Periodicals "Mother Tongue", "LDC (Legacy. Development. Culture) are issued for the teachers of northern languages and the teachers who teach the history and culture of Chukotka, refresher courses are held annually.

Nonetheless, the situation with languages is not improving. Languages and culture are becoming more decorative, exotic constituting a component of various entertainment events.

Some of the reasons are:

- The multiplicity of the languages and the small number of people speaking them.
- A small percentage of indigenous people in relation to the visitor Russian-speaking population.
- The fragmentation of the language dialects.
- The Russian language is the guarantor providing access to education and hence to employment, i.e. to full social wellbeing for an indigenous inhabitant.
- Lack of speech environment in families.
- The functioning of the social sector (services, trade, health, legal and governance structure) is based on Russian.
- A decline in the prestige of the languages, considered to be languages of uncivilized people, due to a pervading image of an indigenous inhabitant as a drunk, uneducated parasite.

In this situation, when the role of the indigenous languages is getting smaller, it is necessary to artificially maintain their existence.

The following measures are becoming more important:

- Raising self-awareness among young people and children in terms of positive self-identification as indigenous people;
- Advocacy of a rich and unique cultural heritage of indigenous peoples;
- Dissemination of information both about the history of indigenous peoples and the history of the development of the Northern Territories by the Europeans, the impact of their civilization;
- Research in the field of the languages, history and culture of indigenous peoples;
- Creating a positive image of an indigenous inhabitant through the media making an example of the best representatives of indigenous peoples;
- Promoting the achievements of decorative and applied arts of the peoples of the North;
- Making the profession of a teacher of the native language more prestigious;
- Production of radio and TV programs, addressed to the youth of today, where language and culture would occupy a central place;
- The use of the languages of indigenous peoples as a means of communication.

Partially the above measures are implemented through non-governmental organizations. So "IRS-Chukotka" holds yearly a number of events on culture and language of the Inuit. "Chychetkin vetgav" works actively to promote and preserve the Chukchi language. The organization "CHAZTO" acts in behalf of the professional community of marine hunters.

Of course, it is impossible to bring about all these measures without proper funding and support from the authorities of the state. But the importance of an active role of the indigenous inhabitants, increasing their self-awareness can hardly be underrated. Promotion of these could be the result of the activity of non-governmental organizations that already have an impact on public opinion, may enter into a dialogue with the authorities, learn to negotiate with them, trying to defend their interests. At the same time, these organizations see their primary task in working with indigenous people and their involvement in public life by organizing various recreational activities that promote the culture and spiritual values of people.

Hopefully, the work on conservation and development of the native languages of the indigenous peoples of Chukotka in Russia will continue.

June 22-23, session 07.49: Practice Power North

Lépy, Élise (Thule Institute, University of Oulu): *International comparisons for learning lessons from the past in Northern mining projects*

Our emerging new project DILACOMI (Different Land use activities and local Communities in Mining projects) aims to improve the sustainability, social acceptability and regulation of mining developments in Finland. Our role in the first work package – community planning of the University of Oulu – is to focus on an international comparison of two northern Finnish case studies: the reopening phase of the iron mine of Hannukainen in Kolari and the working and expanding gold mine of Suurikuusikko in Kittilä. The expanding and reopening, but also the history of previous mining developments in Northern Finland, including physical remains of old mining cycles, are at the heart of many discussions between mining companies, local communities and actors of nature-based activities as reindeer herding, hunting, fishing, tourism, etc. Important study questions emerged so far are the ways how mining companies legitimize their activities (social licensing) and the time and spatial scales of impact estimations. We are particularly interested in international experiences of the life cycle of mines and related communities especially after mine closure (ghost towns, touristic attractions, reopening phases). Thus the aim of an international comparison will be to draw lessons learnt from the various histories of other circumpolar mines which criterias regarding the environment, the form of settlement (dense or spread out, existing or temporal community), the nature-based land uses, etc. are comparative. International comparisons will target to the identification of strengths and weaknesses of past processes and the creation of a draft of regulation and practice model for mining projects. The presentation will focus on presenting our progresses so far, but more emphasis will be with establishing a scientific network and exchange of information and experiences with other researchers working to solve similar kind of dilemmas especially in arctic or subarctic regions.

June 26, session: 02.65: Collaborative scenario building regarding mining, tourism, climate change and local livelihoods in the Arctic and sub-Arctic regions

Lewis, Jordan (University of Alaska Fairbanks, Center for Alaska Native Health Research): *What has your community done for you? The role of community in the definition of successful aging among Alaska Native Elders*

Alaska Natives view aging from a holistic perspective, which is not an approach that is typical of the existing successful aging literature. The lack of a culturally specific definition often results in the use of a generic definition that portrays AN Elders as aging less successfully than their White or non-Native counterparts. This research explores the concept of successful aging from an Alaska Native perspective, or what it means to age well in Alaska Native communities. Interviews were conducted with 26 Elders in six participating communities to explore successful aging and the role of their community in the aging process. This study highlights the four (4) elements of successful aging, or “Eldership,” which include: emotional, spiritual, physical health, and community engagement. More specifically, these findings highlight the fact that rural communities serve as protective factors to healthy aging. AN Elders rate their quality of life higher when they are engaged in the community, are sought after for their traditional knowledge, eat Native foods, and remain active by engaging in subsistence activities.

Community Roles: Family member, tribal council member, leader, traditional Elder, teacher, and “Wisdom Bearer”

Healthy characteristics: security, engagement, familial and community support, sense of ‘togetherness,’ surrounded by family and friends, passing down of traditional knowledge, and subsistence food (“live off the land”)

Negative influences: television, technology, Western diet, and “Western influences”

June 24-25, Poster Sessions

Liggett, Daniela (Gateway Antarctica, University of Canterbury); **Rehse, Christoph** (Georg-August-Universität Göttingen): *Applying geospatial modelling to the case of Antarctic tourism: Towards a better understanding of anthropogenic environmental risk in the Antarctic Peninsula*

The Antarctic Peninsula has experienced a rapid increase in tourist numbers over the last two decades. Similarly, tourism to this region has undergone a significant diversification and now includes activities such as scuba diving, kayaking, parachuting, or running marathons. Increased human visitation and a greater portfolio of activities in the Antarctic Peninsula regions bring along not only a higher risk of incidents with serious environmental consequences but generally also a bigger, and possibly more permanent, human footprint.

To design effective management tools, it is important to understand the environmental risk arising from human activities in the Antarctic Peninsula as well as their actual and cumulative impacts. In the absence of long-term research and monitoring of human impacts in the Antarctic, geospatial modelling of environmental sensitivities of landing sites in the Antarctic Peninsula against the nature and scope of tourism activity can yield valuable insights on site-specific environmental risks of certain

activities.

Using the example of Antarctic tourism, this paper discusses the challenges associated with measuring the effects of human activity in the Antarctic Peninsula and presents a GIS-based model designed to understand environmental risks arising from a range of tourist activities in this region. We will show that only a very limited number of frequently visited sites record high levels of environmental risk associated with tourism and that previous incidents and accidents have occurred mainly in areas of high visitation. These findings have far-reaching implications for environmental management, which will also be addressed in our paper.

June 25, session 02.56: Tourism, People and Protected Areas in Polar Wilderness

Liggett, Daniela (Gateway Antarctica, University of Canterbury); **Steel, Gary** (Lincoln University, New Zealand): *Adding “value” to Antarctic research, management and policy: A project-driven approach towards creating a community of Antarctic social and human scientists*

Media coverage during the International Polar Year (IPY) stimulated people’s awareness of the polar regions and the challenges humankind faces with regard to their use and management. High-quality scientific cooperation between researchers from more than sixty countries during the IPY has also increased the knowledge we have about the polar regions.

Despite the lack of an indigenous population in Antarctica and only a limited number of visitors, IPY and the ensuing media attention has given people cause to consider the worth of Antarctica to humankind: the time, effort, and money put into work on the continent, and the benefits received from this investment. These are questions of value – from an economic but also from a scientific, environmental, political, socio-cultural and intrinsic viewpoint. Understanding the scope and nature of these values is significant for decisions on future activities and management in the Antarctic.

Against this background, an interdisciplinary, collaborative research project on Antarctic values has been initiated by a group of social and human scientists. To our knowledge, this project is the first coordinated effort to understand the range of values Antarctica holds for humans. Through this project, we also endeavour to create an active community of Antarctic human and social scientists that crosses disciplinary boundaries and advances our knowledge of the “human” side of Antarctica. Our paper will document the genesis and development of this project, the prospects of greater cohesion and cooperation among Antarctic human and social scientists and the challenges involved in working across disciplinary and national boundaries.

June 22-23, session 10.22: Claims on Sites and Knowledge in Cold Regions. Material and Immaterial Constructs of Nature, Nations and Industry

Loo, Tina (University of British Columbia): *Rethinking Relocation in the Canadian Barrenlands*

The disappearance of the caribou and the subsequent evacuation of two groups of inland Inuit from the Canadian Barrenlands to coastal settlements along Hudson Bay in the 1950s and 60s has proved to be fertile ground for scholars: the Keewatin relocations exemplify the destructive combination of neglect, stupidity, and good intentions that can characterize colonial power.

While their negative effects can’t be denied, taking a wide-angle view of events in the Keewatin over the longer term provides a different perspective from which to assess the relocations and their impacts.

Rather than treat these compelling episodes in isolation, I put them in the context of other state-sponsored movements of people that were occurring in the north at the same time, under the auspices of the emergent welfare state; specifically, ones that directed Keewatin Inuit into industrial wage labour, particularly mining. With the pressures of an immediate emergency absent, these removals occurred in a more considered fashion, revealing different aspects of state power and its effects.

If the Barrenlands evacuations have to be put in a larger context, so too do the efforts to rehabilitate the survivors. The second argument this paper offers is that to understand the Keewatin rehabilitation project we need to place it into the broader national and international intellectual and political context in which it was conceived. Doing so reveals that developments in the Keewatin were informed by discourses about Canadian citizenship, decolonization, and regional economic development that emerged in the postwar period.

June 26, session 04.66: Relocation: State Inducements and Ideologies versus Strategies of Resistance and Response

Loukacheva, Natalia (Munk School of Global Affairs, University of Toronto, Canada/Stefansson Arctic Institute, Iceland): *Polar Law Developments and Major Trends in the Arctic*

The magnitude of fundamental changes occurring in the Arctic at various levels has generated a diverse number of developments resulting in increased action among several states and other stakeholders in asserting their claims, interests, and agendas in the region. These developments also have fostered discourse over a variety of issues of Arctic concern. Regardless of some success in growing international cooperation and dialogue on matters of common concern for this area, there are still unresolved legal and political matters that beg further inquiry into how current and emergent Arctic issues may unfold. Existing academic and political discourse on Arctic matters indicates that there are differing approaches and views on who should control, own, or benefit from various areas of Arctic development and how collaboration and partnerships dealing with this development should be enforced. This paper aims to give a general overview of the different developments that currently take place in the Arctic with relation to law and policies and shall attempt to outline the emergent trends, challenges and opportunities with regards to legal and geo-political settings. It shall elaborate on various factors that shape the state of Arctic affairs and shall also examine the nexus of law with social sciences in addressing areas of common concern for the Arctic

June 23, session 05.53: Polar Law, Human Rights and Social Sciences

Lovecraft, Amy Lauren (University of Alaska Fairbanks): *Creating future fit between sea ice and society: A plan for Arctic refugia*

There is the need to create a system of governance that would provide sea-ice refugia. The Arctic sea ice system can be characterized as a social-ecological system that provides not only vital geophysical and biological services to climate and oceans but also provisioning services to people and industry. These services are under threat from a general pan-arctic decline in sea ice cover. As the Arctic Ocean and its surrounding waters open due to sea ice loss the current strategies to preserve individual species or sea ice system functions may become obsolete in the next several decades. Concurrent to this will be the rise of traffic in areas currently not passable and an increase in exploitation of natural resources further north. This expansion of human activity does not have a suite of institutions in place that comprehensively address a future open Arctic Ocean and the coasts of the circumpolar north. Consequently, as the amount of space that can preserve a diversity of sea ice system services shrinks and the use of that space becomes crowded with interests, governments across scales need to be able to plan to balance the increase in use with preservation of services valuable both in terms of regulating and supporting planetary processes and the cultural and provisioning services more immediately tied to human flourishing. In short, it is a race between stressors and human capacity to manage them through rules minimizing their direct impact on the ice. Novel and collaborative governance must institutionalize pockets of refugia in coordination with a core “ice shed” boundary of a minimum summer sea ice cover.

June 24, session 01.27: The Human Dimensions of Change to Arctic Sea Ice

Lowe, Marie (ISER, University of Alaska Anchorage): *Youth and Contemporary Rural-Urban Migration in Alaska*

As economic conditions in Alaska’s rural communities worsen, residents face difficult choices about remaining in home communities and what they should do to prepare the next generation for a possibly different future. A survey of new families in the Anchorage school district demonstrates movement to Anchorage from both road system and off-road system Alaska regions for employment, educational opportunities, and because of a rising cost of living. Children are also moving independently to Anchorage. Alaska Native and older, high school aged children face the most difficult acculturation issues in the urban context and often move back to their home communities or back and forth. Many children and families live a dual existence between their home communities and Anchorage. Flexible migration strategies that often involve return or circular movement mitigate socioeconomic challenges rural Alaska families face in finding employment, adequate housing, and educational opportunities, and in negotiating lifestyle changes. Anchorage is playing an increasingly central role in Alaska’s response to changing economic times but the data suggest a complex and evolving relationship between rural and urban Alaska as families and particularly, young people, struggle with the cultural transitions this relationship entails.

June 22, session 04.01: Mobility and Immobility in the Circumpolar North

Lundberg, Erik (Centre for Tourism, School of Business, Economics and Law at University of Gothenburg, Sweden): *Using the Triple Bottom Line to Evaluate Tourism Impacts in a Peripheral Destination: a case study in Swedish Lapland*

With the growth of tourism, impacts of tourism development have become more visible in society. There is a continuous demand from researchers to examine an array of impacts which go beyond economic impacts. This goes in line with the

increasing focus on sustainable tourism development where economic impacts are considered alongside sociocultural and environmental impacts.

In peripheral destinations tourism has been used as a tool for local development. There is, however, strong empirical evidence that these destinations may suffer harder from economic, sociocultural and environmental problems.

This paper develops and applies the Triple Bottom Line-approach (TBL) in order to evaluate economic, sociocultural and environmental impacts. The peripheral destination of Jukkasjärvi (the Icehotel) in Swedish Lapland serves as empirical example where a direct flight from London has recently opened up and increased the number of visitors.

Developing the TBL-framework and linking it to concepts of Carrying Capacities and Capital constructs is the aim of this paper. Moreover, empirical results are used to test the framework as well as to discuss sustainability of tourism development in peripheral destinations.

The results show that TBL offers possibilities for holistic evaluations of tourism impacts. However, more research is needed in order to further adapt the method and the indicators. Being able to measure, describe and understand tourism impacts, other than economic, also helps peripheral destinations and tourism developers plan and execute more sustainable tourism development.

June 24, session 02.26: How can small, peripheral places profit from the booming tourism in the Arctic?

MacDonald, Joanna (University of Guelph); **Harper, Sherilee** (University of Guelph), **Cunsuolo Willox, Ashlee** (University of Guelph), **Edge, Victoria Rigolet** (University of Guelph); **Inuit Community Government: A Necessary Voice: Climate Change Observations and Perspectives from Inuit Youth in Rigolet, Nunatsiavut, Canada**

The importance and value of including youth voices is frequently overlooked in climate change research and policy development. In order to address this gap in research and policy, this presentation will discuss research conducted with Inuit youth (12-18 years) and young adults (19-25 years) in Rigolet, Nunatsiavut, Canada to explore the observations and perceptions of climate change in their community. This research emerged from the Changing Climate, Changing Health, Changing Stories project in Rigolet, a multi-year community-driven project dedicated to using qualitative methods and digital media to study the impacts of climate change on health and well-being. Data were collected through in-depth interviews to discover youth observations and perceptions about changes in the land, snow, ice, sea, weather, hunting, and trapping in and around the community. The participants reported substantial climatic and environmental changes throughout their lives, and five main themes emerged: the ways in which climate and environmental changes are altering travel conditions and access to hunting; the impact of these changes on Inuit culture; the concern that youth have for Elder well-being in the face of these changes; the strong emotional responses youth expressed because of these changes; and youth-identified adaptation strategies. Considering the significant changes facing Northern youth, their families, their culture, and their communities, researchers and leaders have an obligation to discover what motivates youth and effectively educate, engage, and include this group in future climate change work, research, dialogue, and policy.

June 24, session 01.27: The Human Dimensions of Change to Arctic Sea Ice

Magnussen, Tone (Nordland Research Institute); **Wiggen, Oddny** (Nordland Research Institute): *Between traditional use and wilderness tourism-cultural and natural landscape tourism in Norway*

The natural/cultural landscape is the most important common resource for the tourism industry in Northern Norway. These resources are, however, all public goods, that cannot be directly sold at the market. Which implications do transforming public goods into private products/services have? In our paper, we will focus on a broad range of implications; cultural, social and economic.

The paper explores perceptions of cultural and natural landscape tourism among differently positioned actors in local communities; farmers, entrepreneurs, local population, tourists, land owners, recreationists and management authorities. In what way is cultural and natural landscapes perceived? What kind of attitudes and use are connected to these landscapes? What are the implications of different perceptions for the tourist industry's use of landscape resources? How does landscape based tourism affect the local communities and traditional users of the natural and cultural landscape? Do conflicts occur between traditional use of the landscape and tourists/strangers?

Specifically, the paper presents the case of the world heritage area the Vega islands in the North of Norway, and the impact increased commercial tourism has had here. The Vega Archipelago is not famous for large monuments or ingenious creations of architects. Its universal value lies in the way the area had handed down history and cultural traditions evolved on an

exposed coast with rich natural resources. New commercial enterprises have left few traces to break the long lines back in time.

June 24, session 02.26: How can small, peripheral places profit from the booming tourism in the Arctic?

Mainland, Ingrid (University of the Highlands and Islands, Orkney College); **Gibson, Julie** (Orkney Islands Council & University of the Highlands and Islands); **Downes, Jane** (University of the Highlands and Islands): *Archaeology and Sustainable Communities in the Northern Isles of Scotland*

There is a growing recognition that archaeology can, and should, participate in current policy debate. In this respect, sustainability, a key issue for contemporary political and economic agendas, is emerging as one area in which archaeology can make significant contribution. In particular, the potential of the deep time dimension afforded by archaeology for understanding the resilience of societies, past and future, is attracting much research. Of equal significance, however, is archaeology's potential economic and pedagogic role, via sustainable development and in promoting sustainability literacy. During the last few decades, cultural heritage has become a major provider of employment and educational opportunities. Indeed, in some regions, cultural resource management and the heritage industry are key factors in economic development and hence contribute to the future sustainability of modern day communities. This is particularly true for areas which are economically and/or geographically peripheral, such as the Northern and Western isles of Scotland.

Taking Orkney as a case study, this paper will present an overview of a series of recent initiatives by the Dept. of Archaeology, UHI and local government through the county archaeologist which demonstrate the role of archaeology in promoting the sustainability of the archaeological resource of this region as well as the present-day communities who live there. By being based within the peripheral regions of Scotland as part of the UHI, archaeology is able to act as a knowledge-hub for research, pedagogic and economic development in the community while being part of the community itself.

June 24, session 10.73: Global Human Ecodynamics and the Circumpolar North: The GHEA initiative

Mameamskum, John (Naskapi Nation of Kawawachikamach, Canada); **Herrmann, Thora** (Ethnoecology and Biodiversity, U of Montreal); **Füleki, Blanka** (Aga Khan Foundation/Paul Wilkinson & Assoc.): *The "Caribou Heaven": Recognizing a Natural Sacred Site and Integrating Naskapi Ecological Knowledge in the Management of the Future Kuururjuaq Nation*

Sacred sites are increasingly recognized as being vital for the expression and transmission of culture, the conservation of biodiversity, and as a manifestation of spiritual values related to nature. Following Recommendation No. 13 of the Vth International Union for Conservation of Nature (IUCN) World Parks Congress in 2003, sites of cultural value can be designated as "sacred areas" upon the establishment of protected areas. In northern Québec, the Government of Québec, in partnership with the Kativik Regional Government (14 northern villages, 14 Inuit reserved lands, and one Naskapi reserved land) plans to create the Kuururjuaq National Park that covers 4,274 km² of tundra ecosystem. However, a cultural important site for the Naskapi First Nation is believed to be situated within the limits of this protected area. Our paper describes an example of putting IUCN Recommendation No. 13 into practice in the Canadian province of Québec. It first provides an overview of the linkages between Aboriginal peoples and protected areas in Canada. It then illustrates the crucial role that caribou play in the socio-cultural, spiritual, and economic life of the Naskapi people. Next, it explains how Naskapi ecological knowledge was used to designate a culturally significant location, the Caribou Heaven, as a sacred area within the proposed Kuururjuaq National Park in Nunavik, Canada, to ensure its preservation and integrity. The initiative is among the first of such efforts by the Government of Québec to give expression to the importance of and to provide protection to the sacred sites of Aboriginal nations.

June 24-25, Poster Sessions

Mameamskum, John (Naskapi Nation of Kawawachikamach); **Herrmann, Thora** (U of Montreal); **Füleki, Blanka** (Aga Khan Foundation; Paul Wilkinson & Assoc.): *The "Caribou Heaven": Recognizing a Natural Sacred Site and Integrating Naskapi Ecological Knowledge in the Management of the Kuururjuaq National Park*

Sacred sites are increasingly recognized as being vital for the expression and transmission of culture, the conservation of biodiversity, and as a manifestation of spiritual values related to nature. Following Recommendation No. 13 of the Vth International Union for Conservation of Nature (IUCN) World Parks Congress in 2003, sites of cultural value can be designated as "sacred areas" upon the establishment of protected areas. In northern Québec, the Government of Québec, in partnership with the Kativik Regional Government (14 northern villages, 14 Inuit reserved lands, and one Naskapi reserved land) plans to create the Kuururjuaq National Park that covers 4,274 km² of tundra ecosystem. However, a cultural important site for the Naskapi First Nation is believed to be situated within the limits of this protected area. Our paper describes an example of putting IUCN Recommendation No. 13 into practice in the Canadian province of Québec. It first provides an

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June 22, session 07.52: «Patrimonialisation» of Arctic Aboriginals' Territories. Promoting cultural heritage within protected areas

Manero Salvador, Ana (Derecho Internacional Público-Universidad Carlos III, Madrid, Spain): *The extension of the Russian continental Shelf in the Arctic*

The Notification of Russia to the Commission on the Limits of the Continental Shelf extends 1,2 millions of km², and gives rise to the largest claim for the extension of sovereignty rights in the Arctic. Russian communication bases its extension in the consideration that the Lomonosov and Alpha ridges Mendelejev are natural extensions of the Siberian shelf, so that would be part of the Russian continental shelf. However, the consideration of the dorsal and components used to delineate the extent of the continental shelf is problematic because there aren't any compulsory interpretation of article 76 UNCLOS. Article 76 has led to the perplexity of the doctrine, while it may come to consider that there are contradictions between paragraphs 3 and 6 of this fundamental article. Thus, although Article 76.3 of the natural extension excludes the oceanic ridges, Article 76.6 does believe that the submarine ridges may represent the outer limits of the continental shelf, and even contemplates the possibility of extending beyond 350 miles, in case of facing "submarine elevations that are natural components of the continental margin."

The aim of this paper is to analyze the scope of article 76 and the extension of the Russian continental shelf.

June 23, session 05.53: Polar Law, Human Rights and Social Sciences

Mariat, Emilie (Ecole des Hautes Etudes en Sciences Sociales (EHESS)-Paris/French Polar Institute (IPEV)-Brest): *When fishing means resisting: the evolution of fishing practices from small boats in Iceland between 1991 and 2010.*

Fishermen and inhabitants of Icelandic coastal villages have had to face up technical, social and economical transformations which occurred since the Implementation of Individual Transferable quotas (ITQ) in 1991. The implementation of ITQ had led to a process of individualization of fishing practices and we intend to reveal the technical, social and economical determinants of this process.

During the nineties, in the context of the decline of both artisanal small-scale and industrial fisheries in coastal villages, a new political system for the exploitation of marine resources reintroduced and encouraged long-line fishing from small boats up to 15 tons.

We intend to present the historical conditions of development of these new fishing practices on small-boats since the eighties and to analyze them as being the result of power struggle between ship-owners and politicians (1), and to identify and analyze, on the one hand, social, economical and technical breakings off who presided over and favored the development of original fishing practices on small-boats (2) and, on the other hand, individual and collective strategies of local inhabitants to answer to governmental injunctions (3) in order to put in light a variability of the regional consequences of Icelandic marine resource management policies. In a comparative perspective, we consider marine resource management policies as both « theoretical » and « practical » objects.

June 23, session 02.36: Northern fisheries: managing income, nutrition and cultural values

Mariat, Emilie (Ecole des Hautes Etudes en Sciences Sociales (EHESS)-Paris/ IPEV (Brest)): *Icelandic fishing in crisis: the impact of the financial crisis on fishing practices and on marine resource management policies*

Since the collapse of its banking system, Icelanders have been greatly affected and the economical and financial crisis is also a deep political and social crisis. In this context, fishermen, who were already in debt before the bankruptcy, have to cope with many difficulties which strike coastal villages at large.

In this presentation, we propose to identify and analyze

(1) the real effects of the economic crisis on fishing practices since 2008, and individual and collective but also local and national strategies of fishermen -we intend to identify fishermen groups and their economical and professional evolution since the year 2000

(2) the evolution of the public debate about marine resources management policies. The modality of access to marine resources, their status, their legal nature and the stakes related to the redistribution of profits created by sales of marine produces are at the height of the political debate. In this context, the notion of measure implies both quantitative and qualitative meaning which put in light the socio-cultural dimension of marine resource management policies. The examination of both of these aspects requires the study of the articulation between (1) marine resource management policies as they are conceptualized and elaborated and (2) practices and strategies of professionals and policy makers who must adapt their measures according to professional answers to their previous jurisdictions.

June 24, session 02.58: Human Aspects of Fisheries in the Arctic Coastal Regions

Marino, Elizabeth (University of Alaska Fairbanks); *Resisting the Methods of Moving: Cross-Cultural Communication in Relocation Planning*

The relocation of indigenous communities has a sordid history in Alaska and other parts of the circumpolar North. It is widely acknowledged among policy-makers in Alaska today that the forced relocation of indigenous peoples is a breach of human rights. Contemporary relocations of Native Alaskan communities, however, are necessary because of flooding and increasing erosion. State and federal policy makers are working with indigenous communities to plan organized relocations. Despite concerted efforts, interview data suggests that Native Alaskan residents are dissatisfied with relocation planning.

This paper explores how speech patterns and decision-making hierarchies clash in cross-cultural environments, resulting in state-induced pressure to adhere to preordained policy-making form and, following, local resistance to that form. For example, policy makers frequently push for a single representative from the community to make decisions. In Shishmaref, Alaska culturally governed rules of representation resist reducing the multiplicitous opinions of the community to a single 'voice'. Another example is that the planning process itself places high value on question/answer discourse that takes place during bureaucratic meetings. In Shishmaref, elders and others resist saying things in the immediacy of a meeting and would rather respond to new information after a period of reflection.

This paper discusses the mechanics of relocation in contemporary settings and suggests that communicative patterns across cultures during relocation planning can alienate Native participants. We also suggest that when Native communities refuse to alter speech patterns and representation structures after bureaucratic systems this constitutes a form of resistance to the mechanics of relocation.

June 26, session 04.66: Relocation: State Inducements and Ideologies versus Strategies of Resistance and Response

Maschner, Herbert D. G. (Idaho State University); *Salmon, Whales, and People: A 12,000 year history of the North Pacific*

The great north Pacific arc sweeping from Hokkaido to Kamchatka to the Aleutian and Kodiak Archipelagos, and southeastward to the Northwest Coast, is home to the earliest sedentary villages, the largest foraging population densities, and the most politically complex hunter-gatherers found in world prehistory. The unifying theme underlying an immense cultural diversity is the most productive marine ecosystem on the planet, and as early as 12-15,000 years ago, the earliest inhabitants of this landscape were harvesting this marine ecosystem. But the ability to harvest the north Pacific and the cultural variability in local subsistence economies seen ethnographically, are tempered by a complex dynamic between climate change and marine primary productivity, technological innovation, and regional cultural trajectories that structured how the north Pacific was used throughout the history of human-landscape interactions. Beginning with the end of the last glacial, this study will present a 12,000 year history of humans on the North Pacific, highlighting the key events that led to early marine resource economies, intensive salmon harvesting, and the beginnings of whaling. I will further show how these data can be used to investigate the effects of commercial harvests and modern global climate changes.

June 22, session 02.25: Salmon Fishing and Whaling Peoples of the North Pacific

Mason, Arthur (Energy and Resources Group, University of California, Berkeley); *An extractive industry is in the eye of the beholder*

In this paper, I identify three forms of time that, between 2000 and 2004, offer up visions of constructing a pipeline to deliver natural gas from arctic Alaska to the continental United States. I shall attempt to show the mediating role of energy consultants in producing and disseminating these temporal forms as well as how these forms provide a concrete visualization of natural gas pipeline development under conditions specific to capitalist energy markets.

There are three basic types of expectation surrounding Alaska pipeline development and there are consequently three corresponding methods for fixing time and space: (1) volatility time, where price spikes determine outcome; (2) government time, where laws and regulations assist in commercial enterprise, and; (3) entrepreneurial time, where individuals of industry take the risk. In short, there are three development time-spaces (chronotopes as Mikhail Bakhtin uses the term).

For clients of experts seeking to make strategic decisions from perceptions of the energy future, these temporal modes of registration often appear as a set of Power Point images (e.g. maps) as well as forward-looking statements. There has arisen then, a particular kind of distance that connects modes of quantitative registration with qualitative forward-looking representations. For the client, the future is a visible signature of the hidden presence of quantity, whereas for the energy forecaster the future remains a secretive arrangement of quantity under a transparent sign of quality.

June 23, session 05.67: Consultation in Arctic Extractive Industries Development: Lessons learned for Arctic resource governance from the local to the international level

Mathé, Barbara (American Museum of Natural History): *Towards Collaborative Online Representation of Cultural Collections*

Representing cultures electronically, whether through an in-house museum collection database or a fully collaborative international web exhibit, requires extending the same kind of inquiry as has been brought to historic, particularly visual, means of communication. For example: Is the nature of the web display, i.e. the look and feel of the varied new media, always—or ever—neutral? What are the inherent hierarchies or assumptions, if any? What languages will be used, and how will they affect searching, retrieval, and communication? Collaborative descriptive projects can allow for more than a single voice. How are these voices found, heard, identified, and authorized? Beyond language, how is interpretation reliant upon cultural conventions?

This talk will compare the presently conventional collection web sites of the American Museum of Natural History with two other projects. The Reciprocal Research Network is a joint project co-developed by Musqueam Indian Band, the Stó:lō Nation/Tribal Council, the U'mista Cultural Society, and the Museum of Anthropology at the University of British Columbia. Many partner institutions from around the world are also involved. The Plateau Peoples' Web Portal is a gateway to the cultural materials of Interior Plateau peoples held by Washington State University's Libraries, Archives, Museum of Anthropology, and national donors. The collections represented were chosen and curated by tribal consultants working in cooperation with university and museum staff. The site uses Mukurtu, an open source community archive platform. This provides international standards-based content management tools adaptable to local cultural protocols and intellectual property systems of indigenous communities.

June 24, session 08.23: Creative Circumpolar Collaboration across Cyberspace in the Arts and Sciences

Maynard, Nancy (NASA Goddard Space Flight Center): *NASA-Tribal College "Externships": Taking NASA Science & Engineering out to the U.S. Indigenous Community*

NASA's Science, Technology, Engineering and Math (STEM) Education Program annually supports a large number of exciting science and engineering summer internships at NASA Centers through which students from all across the U.S. gain valuable experience to pursue schooling and careers in science and engineering fields. However, the program had not been able to attract and/or retain American Indian and Alaska Native students in this internship program. Recently, however, the NASA Tribal Colleges & Universities Project (TCUP) initiated a new approach which has removed a significant barrier to tribal college student participation in NASA internships through the implementation of "externships". Since many tribal college students have family or personal obligations which have prevented them in the past from participating in the standard NASA internship, the NASA externships were specially-redesigned to accommodate the personal needs of participants such as single parents, parents of young children and/or heads of households. To minimize the need to be away from home for a significant length of time (standard 10-week NASA internship), NASA TCUP has arranged for NASA and other scientists and indigenous scholars to bring their expertise out to Indian Country. Thus, an initial 3-week training session is now held at a tribal college in Indian Country (to make it possible for students to travel home for unexpected emergencies), after which students spend 7 weeks conducting project research at their home institutions. This arrangement has minimized the need to be away from home for a significant length of time, while providing valuable research methods training and experience.

June 23-24, session 09.01: Schooling in the Arctic

Mazzullo, Nuccio (Leibniz-Institut für Länderkunde, Germany/Arctic Centre, University of Lapland, Finland): *Cross-border identities and development policies: Sámi identity and space in the light of Interreg policies*

In this presentation I shall look at some of the aspects that are related to the implementation of the European policy programme of cross border cooperation called Interreg IIIA and IVA North Sápmi. I shall focus on the impact it has had on the local Sámi community in Finnish Lapland and on the discursive articulation of identity and space.

Following on some of the interviews with the actors involved, I shall argue that through the implementation of these policies, issues of identity and space have become, to a certain extent, structured within a political rhetoric which is functional to the access and control of the resources which they allow.

Furthermore, according to some of the interviewees, most of these policies' outcomes are perceived as having a limited impact of the lives of local communities' members and are seen entangled in complex bureaucratic labyrinth of practices that does not allow local community members to be able to fully participate and benefit of the possibilities the policies aim to open up.

June 23, session 04.11: Identity Making in the Border Regions of the European North

McComber, Louis (Interuniversity Centre for Aboriginal Studies and Research (CIÉRA), Laval University): *A New Trend in Nunavut Governance: the Emergence of a Public Inuit Women Leadership*

Most students completing post-secondary education today in Nunavut are women. Increasingly, Inuit women are becoming the bread winners of their domestic unit. Women now form the majority of the Government of Nunavut Inuit workforce. This is occurring while the traditional male occupation of harvesting country food is in constant decline. As family breadwinners and as government administrators, more Inuit women are then placed in position of authority over Inuit men. This is a radical departure from traditional gender roles. More Inuit women are also running for elected positions in Inuit organizations, municipal councils, the legislative assembly, and even the Canadian parliament. This is a new phenomenon, as most elected positions were, and currently still are, filled by men. The educational gap between men and women in Nunavut is widening, adding new stress to family and community relations. We will examine this emerging trend of Nunavut governance from the testimonies of twelve Inuit women who have shared their experience of public life in the book *Arnait Nipingit* (Iqaluit, Nunavut Arctic College, 2010)

June 24, session 05.41: Inuit in Leadership and Governance in Nunavut and Nunavik

McCorristine, Shane (Department of English, NUI Maynooth/Scott Polar Research Institute, University of Cambridge): *Mesmerism and Victorian Arctic Exploration*

The premise of my research is that the history of human experience in Arctic environments requires serious re-thinking because of a failure to take sufficiently seriously Victorian debates about the legitimacy of supernatural, disembodied knowledge, and other interactions with extreme landscape. Approaching the history of Arctic experience through the idea of the dreamscape highlights networks of feeling that have hitherto been bypassed by historians working in one specific field. As I understand it, the dreamscape is a category of mental imagining that expresses the percipient's disembodied thinking about (Arctic) place, which in the period was frequently grounded in the material technologies of the séance.

This paper deals with the attempts to contact, map, and describe what happened to the lost John Franklin expedition through the use of mesmeric travel to the Canadian Arctic in the 1850s. During this decade dozens of mesmerists from Britain, Ireland, India, and Australia placed female mediums into a trance and reported on the mental voyages these women took. Beginning at the time of greatest anxiety regarding the fate of the expedition, these clairvoyant visionaries and their operators formed part of an incredibly vibrant field of rumours, speculations, and experiments. Both critics and supporters of mesmeric clairvoyance tried to use the Franklin episode as a unique experiment to prove or disprove the claims of this new technology. This paper seeks to address the extent to which the North been imagined as a place that can be spiritually as well as physically travelled.

June 24-26, Session 07.32: Imagining the Supernatural North

McDonald, Jim (University of Northern British Columbia (UNBC)): *Development, reconciliation, and transformation in British Columbia: First Nations and globalization*

Industrial development in Canada historically benefitted some groups but marginalized Aboriginal peoples, their cultures, and way of life. Megaprojects today promote the regional benefits that result, and catalogue benefits for local communities. The

degree to which development actually provides benefits varies among Aboriginal communities. First Nations insist that industry respect their needs and are developing methods to ensure this happens. Litigation and negotiation are two key methods. Canadian law recognizes certain aboriginal rights to lands and resources. Litigation has established a duty requiring industry to consult First Nations in order to identify and mediate impacts a project might have. This duty is a means by which First Nations are able to negotiate partnerships with developers. Politically, the government's Transformative Change Accord is a policy to reconcile Aboriginal rights and title with those of the Crown, and establish a new relationship based upon mutual respect and recognition. The Province of British Columbia recognizes the economic cost of conflict with First Nations and the benefits of establishing a new relationship. This presentation examines some of the challenges and opportunities that First Nations experience in developing a full partnership with industry. A set of current megaprojects and the blossoming trade into the Chinese market will be assessed in order to evaluate the process of reconciliation between Aboriginal peoples and industry. The case study will concentrate on the northwest region of British Columbia but will incorporate comparative examples from across the Canadian north.

June 23, session 02.68: Social and economic impacts of megaprojects in the North

McGovern, Tom (CUNY Northern Science Education Center, North Atlantic Biocultural Organization (NABO)); **Perdikaris, Sophia** (CUNY, NABO); **Schweitzer, Peter** (University of Alaska Fairbanks): *The Global Human Ecodynamics Alliance: progress and prospects*

In October 2009 an NSF-funded workshop on "Global Long Term Human Ecodynamics" was held at Eagle Hill Maine with 71 participants from 15 countries (a conference report and community statement is available at www.nabohome.org/meetings/glthec2009.html). The overall objectives were to connect the perspective of the *longue durée* with present and future efforts to achieve resilience and sustainable societies, and to connect workers active in the circumpolar north with the rest of the globe. The Eagle Hill meeting proved to be very high-energy and productive, generating both a book and (Jago Cooper and Payson Sheets (ed.s) in press, 2010 *Living with the Dangers of Sudden Environmental Change: Understanding Hazards, Mitigating Impacts, Avoiding Disasters*, U Colorado Press) and a new cooperative group "Global Human Ecodynamics Alliance (GHEA)". Follow on workshops at Arizona State, U Edinburgh, and the 2010 Society for American Archaeology meetings led by Ben Fitzhugh demonstrated widespread interest and led to the establishment of the new GHEA website (see www.gheahome.org) hosted by U Edinburgh School of GeoSciences. GHEA is intended as a highly informal bottom up international cooperative aimed at improving communications among the many individuals and organizations working in this rapidly expanding field. GHEA is member driven and in a very active "r" phase, as the diverse papers in this session will indicate. GHEA is open to all and everyone is welcome to join in the collaborative work.

June 24, session 10.73: Global Human Ecodynamics and the Circumpolar North: The GHEA initiative

McMillan, Roger (University of Alberta); **Parlee, Brenda** (University of Alberta): *"Sharing What You Have": The Distribution of Dene Food in Fort Good Hope, NWT*

This paper considers the social norms of Dene-food sharing in the community of Fort Good Hope, NWT, Canada (66° 15'N, 128° 37'W), and their implications on the social-ecological resilience of the community to changes such as variation in barren-ground caribou (*Rangifer Tarandus Greonlandicus*) populations. For analysis, we review various typologies that have been applied to the sharing of traditional foods in indigenous communities, and reconsider some of the merits of Sahlins (1965) framework against numerous critiques from both cultural anthropology, and evolutionary ecology, and offer a new adaptation based on Fiske (1992). This framework is then applied to a comparative case study of food-sharing between individual hunts and a community hunt that took place in 2009. Drawing on semi-structured interviews with hunters and hunt organizers, participant observation of both hunting activities, and surveys to track the distribution of harvested meats, we outline the social norms of food sharing in relation to the hunting processes that procured the food. The paper concludes that layered and nuanced norms of equity are evidenced in the distribution of harvested meats from both hunts, which ensured access to country food to vulnerable populations within the community (such as elders and single mothers). Such norms may bolster community resilience to ecological change.

June 25, session 03.60: The social economy of sharing in the North American Arctic

Meek, Chanda L. (University of Alaska Fairbanks): *Methods for comparing governance strategies across the North*

Increasingly, policy scholars are paying attention to the ways in which governance approaches steer policy actors towards desired outcomes. This paper appraises methodologies for evaluating the effect of policy context on governance strategies and outcomes. To begin, I inventory theoretical frameworks useful for understanding the motivations of policy actors. Next, I question which sources of evidence and methods of data collection could reliably test these theories. The international

Agreement on the Conservation of Polar Bears is used to evaluate the relevance of the theoretical frameworks, as well as the usefulness and feasibility of each method. I outline four alternative approaches and discuss the trade-offs relating to data availability, scale and time-depth of observations.

June 26, session 05.38: The Art and Science of Governing: politics and policy in the polar bear regime

Meek, Chanda L. (University of Alaska Fairbanks); **Lovecraft, Amy Lauren** (University of Alaska Fairbanks): *The institutional dimension of sea ice service conservation*

After the United Nations' Millennium Ecosystem Assessment, ecosystem services are increasingly being used as an organizing framework for evaluating political, as well as ecological issues relating to conservation. Identifying multiple services in a land or seascape begs the question – how do societies evaluate and monitor trade-offs between services when trade-offs are identified? This presentation reports on an effort to document institutions at multiple scales in Alaska related to the management of sea ice ecosystem services. We argue that sea ice monitoring systems have so far been disconnected from not only the human uses of sea ice, but also the governing systems created to track, and potentially mitigate, environmental change. We further argue that a monitoring approach connected to existing institutions provides an efficient way to foster policy-relevant observations. To begin with, we inventory services in accordance to the ecosystem services framework as provisioning, regulating, supporting, and cultural services. We next identify institutions relating to the governance of each service and evaluate the extent to which sea ice observation systems are connected to them. Finally, we identify prospective sea ice variables corresponding to critical services, but also suitable for incorporating into local, regional, national, and international observation systems.

June 24, session 01.27: The Human Dimensions of Change to Arctic Sea Ice

Mettiäinen, Ilona (Arctic Centre, University of Lapland): *Climate change as a source of dystopia in the future of the Arctic?*

Climate change belongs to the increasing group of environmental problems that are understood as a result of developed measurement devices and scientific knowledge. But what kind of knowledge is needed for anticipating the changes in the local lifeworlds? How can different types of knowledge be gained for and then used in regional climate change strategy planning processes for anticipating changes in natural and social environments?

Climate change strategies are currently being made all over the world so that nations, regions, municipalities, towns, villages, companies and citizens could adapt to the projected effects of climate change. This presentation focuses on a regional climate change strategy from the Arctic area. The paper analyses a futures oriented and highly political planning process by asking what is taken as credible and relevant knowledge. The theoretical perspective puts emphasis on conceptual discussion on climate change and strategic planning as consisting of Latournian translations and black boxes.

Climate change is expected to bring along remarkable changes in both natural environment and societies particularly in the Arctic. Whether actually happening or not, climate change has become an actant that has the power to make changes in the current stabilized actor-networks. The changes in the actor-networks challenge the stability of the “black boxes” and thus the mechanisms of the current uses of different modes of knowledge can be studied.

June 22-23, session 03.57: Community Adaptation and Vulnerability in the Arctic Regions (CAVIAR): Lessons and directions for future research

Michaels, Jennifer E. (Grinnell College): *Myths of Mount Hekla and their Deconstruction: Ida Pfeiffer's Journey to Iceland*

Like many European countries, German-speaking countries were fascinated in the 19th century by Norse mythology, a fascination that began with German Romanticism and ideas of nation building and extended to middle class and mass culture. Readers found the heroic tales of Gods and heroes gripping. Iceland became for many a mysterious (and threatening) realm of the supernatural. In the popular imagination Mount Hekla was viewed as a particularly evil and demonic place, an opening into hell or purgatory, a place where witches and magicians practiced diabolic rites.

In 1845, a time when few foreigners visited Iceland, the Austrian writer, Ida Pfeiffer, travelled alone to Iceland and recorded her experiences in *Reise nach dem scandinavischen Norden und der Insel Island im Jahre 1845* (1846; *Journey to Iceland and Travels in Sweden and Norway*, 1852). From her previous reading she expected to find an Arcadia, but was disappointed. Pfeiffer criticizes previous depictions of Iceland that stemmed in her view from an “over-excited imagination” or “unblushing falsehoods.” She asserts that her view may not be right, but at least “I possess the virtue of describing facts as I see them, and do not repeat them from the accounts of others.” An example of her intention to describe facts as she sees them is her ascent of Mount Hekla, the first foreigner to do so in nine years. Dismissing views of the supernatural, she vividly records the scene

from the summit of “a petrified creation, dead and motionless, and yet magnificent.”

June 24-26, Session 07.32: Imagining the Supernatural North

Mingaleva, Anna (Ural State Academy of Architecture and Art): *Trip of imagination: the input of design research into development of Arctic tourism*

Global integration processes are always featured with new potentialities as well as new issues and challenges, which cannot be addressed with methods and approaches based on out-of-date patterns. The Polar areas are of most noticeable changes and challenges due to their extreme natural conditions, where human beings have to exist on the razor-edge of their adaptive capacities.

All the processes indicated above become especially visible in case of Arctic tourism, i.e. the developing industry. The issues are e.g. how to fulfill the thirst for adventures and protect human from natural aggression.

Design as the area of “practical creativity” is able to facilitate a multidisciplinary problem-solving cooperation due to its professional focus on people’s experiences and qualitative data rather than quantitative ones. In terms of holistic approach it might be considered as dealing with open system interconnections instead of fixed points.

This paper contains a comparative description of two projects by students of the School of Arctic Design, Yekaterinburg, Russia. They both are devoted to developing essentially “Arctic” tourist product (i.e. a trip): the most valuable sort of tourist resources, i.e. the culture of Siberian natives, should be transformed by the means of design into a form appropriate to be presented to tourists. Two different forms are suggested as follows:

- 1) “dynamic”: an Ethnical Tour to to Kazym River, Western Siberia with purpose to gain a first-hand experience of immersing into the culture of Khanty people (by Gumarova, E.); and
- 2) “static”: a Theme Park “Yugra Planet” with purpose to concentrate all the sights of Western Siberia at one point comfortable to achieve (by Akhunova, A.).

The core idea is that entire material environment for “dynamic” tours as well as “static” should be based on principles borrowed from native peoples, i.e. designed to be ethical as well as eco-friendly.

June 22, Session 07.21: Living in the Arctic: a Creative Providence for the Global Challenge & Session 07.29: Arctic Creative: Building Arctic Futures through culture, innovation, and creativity

Moberg, Bergur Rønne (University of Copenhagen): *Modernity at Sea. Place-Making in Faroese Literature*

I will take a look at the strong placial consciousness in Faroese literature with respect to representation of the sea as seen as a situated response to globality. The sea plays a key role in the expansion of Faroese literature as a symbol of an unending fluid process of creolization, singularity and commonality. Rather than being a discrete unity, the oceanic Faroes becomes a crisscrossing set of pathways, open-ended and ever multiplying, weaving in and out of its own culture and geography. The ocean is an input channel, a pathway, routes of transit and a form of attachment unifying all the connecting tissues binding The Faroes to the rest of the world (cf. Dimock 3). The dominant role of waterscape creates a gateway connection expressing the importance of culture not as a fact of having a border, but as a fact of being a border filled with zones of overlap. By virtue of place-making motifs Faroese literature became a network zone between home and abroad, the local and the global. Seen through the current state of the field of Place-Studies I will show how Faroese literature is a continuing geography lesson. I will take a closer look at four writers: the founder of modern Faroese poetry J.H.O. Djurhuus (1881-1948), the Danish-writing twin-pillars in Faroese literature William Heinesen (1900-91) and Jørgen-Frantz Jacobsen (1900-38) and finally the cosmopolitan Gunnar Hoydal (b. 1941). Heinesen and Jacobsen are considered the main authors.

June 26, session 07.42: Contemporary circumpolar art: vehicles of indigenous knowledge

Møller, Helle (University of Alberta): *Double culturedness' a prerequisite for University education for Inuit*

This paper discusses Inuit experiences in postsecondary education in institutions located in the Arctic but dominated by Euro Canadian and Danish culture and language. It is based on anthropological PhD research focusing on the experiences of Canadian and Greenlandic Inuit nurses and nursing students.

In Arctic Canada and Greenland it is not possible to receive university education in the local languages, taught by local instructors. Also, secondary education is most often not taught by local instructors in local languages. This circumstance

places specific demands on those who are able to enroll, thrive in, and complete university education. For Inuit nurses and students these demands include the ability to communicate in at least two languages and cultures, the ability to negotiate and interact with at least two ways of being in the world and two ways of learning and teaching, and the ability to negotiate and relate to at least two ways of perceiving the body, health and disease. This ‘double culturedness’ makes Inuit nurses and students very valuable for the Arctic healthcare systems. That it is necessary to be ‘double cultured’ in order to become educated in the Arctic is problematic. Listening to the experiences and ideas of those who are, and basing recommendations for change in the educational institutions on these, may allow instructors with no background in the local languages and cultures to serve Inuit in such a way that more are able to enter and succeed in secondary and post secondary education.

June 23-24, session 09.01: Schooling in the Arctic

Morrell, Galya (Ummannaq Music, Ummannaq Polar Institute); **Spiegelman, Joel** (Ummannaq Music): *Ummannaq Music: Social media as a catalyst in bringing international expertise to a community-based cultural initiative in northern Greenland*

Ummannaq Music, an ongoing music festival at Ummannaq Children’s Home in Greenland—the world’s northernmost orphanage, also known as the Ice School—was born in cyberspace and quickly evolved into an established collaboration of international artists, musicians, and professors with local hunters and fishermen across the circumpolar north. Ummannaq, a little island located 590 km above the Arctic Circle, is accessible only in “good weather.” Through new communications technologies, Ummannaq Music is bridging the island’s geographic isolation and connecting residents to the rest of the world.

Ummannaq Music’s mission is to bring a love of music to Inuit children who face formidable environmental and social challenges. World-renowned musicians from Germany, Venezuela, the USA, Russia, and elsewhere have come to Ummannaq to perform for and work with the children. Students and teachers make spontaneous music together using whatever materials are available. Preservation of local traditions is emphasized. The students’ first production was assisted by local hunters and professional contributors based in 15 countries. The second project was the Month of Kyrgyz Art, Music, and Culture in Ummannaq in 2010. The international founders of Ummannaq Music observed the recent political revolution in Kyrgyzstan while working there on projects related to democracy and culture, and subsequently brought Kyrgyz arts from the steppe to the Arctic. The festival was closely followed in Central Asia via the Internet, receiving overwhelming acclaim there. Members of the governments of both Greenland and Kyrgyzstan have joined Ummannaq Music and are following its cultural initiatives through social networking media.

June 24, session 08.23: Creative Circumpolar Collaboration across Cyberspace in the Arts and Sciences

Morisset, Jean (Atelier de géopoétique et Département de géographie, Université du Québec à Montréal): *The Pristine Aryan and Redeeming North: the Canadian Quest for a Northern Mystic Identity*

Formerly designated as British America, the country, now known under the name «Canada», appropriated this frenchified native name from a former Métis Canada that did encompass half of Northern America for two centuries.

Thus proceeding from a conceit borrowed identity, present-day Canada is in quest of a God, a Mystique, a telluric personality and the Far North is there... naturally supernatural, just waiting to be glorified and serve as the State trade mark as go the lyrics — The true North, strong and free — of national anthem equally borrowed from the former French Métis Canada.

But, was there a wrong North? It seems so.

For the official literature surrounding the making of the British American Act (1867) is quite clear about it. The celtic bone, the white Gods of the white snow... Thor and the pristinity of pure ice, the Aryan atmospheric surroundings would create a new country devoid of any «Métissage» as well as weak migrants of latin-like origin, and a strong and free Royal White Crown casted in iceberg would put away any republican attempt. For the true North, of monarchical essence, calls for a Polar identity where the ice, the land transcend the aboriginal rover and the frenchified half-breed affiliate to create a strong northern power which one day would model the real developed world.

Through images, maps, photographs and poetry, one discovers that from the very beginnings there always was, under the lead of native Manitou, a hidden Canada behind Canada that present-day Northern spiritual rhetoric sets about to dispose.

June 24-26, Session 07.32: Imagining the Supernatural North

Moshøj, Charlotte Margaret (Department of Arctic Environment, National Environmental Research Institute, Roskilde University); **Forchhammer, Mads C.** (Department Of Arctic Environment, National Environmental Research Institute, University of Aarhus); **Forbes, Valery** (Department of Environmental, Social and Spatial Change, Roskilde University): *The effect of climate, environment and hunting on variations in Ringed Seal (*Phoca hispida*) population fluctuations in Greenland over 200 years.*

From the historical catch statistics and observations of Inuit hunters it has been accounted how the total annual catch of ringed seals during the last 200 years have fluctuated from 10000-, to a record high of 120000 for all of Greenland. These periods of low and high catch rates coincide with periods of respectively warmer and colder climate. Ringed seal catches in the central areas of west Greenland rise in periods of colder climate and increased stagnation of the Baffin Bay ice, while there is observed a general northward shift of ringed seal catches during mild periods. While hunting statistics of ringed seals from western Greenland municipalities give a good indication of these seasonal changes in distribution and abundance, they may also on a broader timescale indicate which underlying biological factors and environmental changes are significant for the species distribution and abundance, and model future predictions of ringed seal populations under changing climate variables and human hunting pressure.

June 22, Session 01.46: Circumpolar Perspectives on Changing Seasonality in the Arctic

Müller, Dieter K. (Umeå University): *National Parks for Tourism Development in Polar Areas – Curse or Blessing? The Case of a Proposed National Park in Northern Sweden*

National parks in peripheral areas are often promoted as tool for regional development and a way of restructuring resource-based economies into tourism. Though not always embraced by local communities, tourism businesses are generally expected to be in favor of new park establishments. However, the coalition between environmentalists and tourism entrepreneurs has recently been challenged. The purpose of this paper is to analyze discourses regarding the establishment of national parks in Arctic areas. This is done regarding the proposed National Park Vindelfjällen in northern Sweden. Using discourse analysis of media debate, public documents and interviews it is demonstrated that struggle over national parks is not only about tourism development, but wider concern regarding the management of Arctic environments. In this context it is not possible to simply classify stakeholders in local, national and international. Interests differ in both arenas and mirror rather a general struggle over control of northern areas. Hence tourism development is used just as an arena for negotiating issues of governance and power.

June 25, session 02.56: Tourism, People and Protected Areas in Polar Wilderness

Murashko, Olga (Moscow State University): *Lessons of the project on gathering information about the traditional land use in Nenets Autonomous okrug, Russia*

The project deals with experience of the joint work of the anthropologist and the NGO of indigenous peoples – the Association of Nenets peoples “Yasavey” (V.V. Peskov, Leader), obtained in the course of implementation of the project “Monitoring of Development of Traditional Indigenous Land Use Areas in the Nenets Autonomous Okrug, NW Russia” (W.K. Dallmann, Norwegian Polar Institute, Head of the project) <http://npolar.no/ipy-nenets>

One of the main objectives and methods of presenting the data of the project was mapping of all the objects of traditional land use in their interrelation with the objects of oil and gas industry.

A questionnaire for gathering information on the traditional land use has been prepared, methods of mapping the objects of traditional land use have been developed (O.Murashko). The questionnaire has been discussed and amended by all the participants of the project and by its foreign consultants (Gyunhild Hogenson and Florian Shtammler). The questionnaire contains the questions on all types of traditional land use – reindeer herding, hunting, fishing, gathering, processing, procurement of products, other sources of family incomes, on sacred sites, on impact of the objects of oil and gas industry.

The work on gathering of information and its primary processing was done in the office of NGO “Yasavey”: training seminars for the project’s personnel, transfer into the digital format of questionnaires and maps collected during polling, discussion of preliminary results and further steps of the project.

Questionnaire survey and mapping were carried out by representatives of NAO indigenous peoples. 6 interviewers have been trained who during the period of one year and a half gathered 103 questionnaires and 76 maps from reindeer herders and rural

inhabitants of six settlements in NAO.

Interviews with the respondents were taken by their fellow-countrymen, due to which the level of confidence and credibility during recording of interviews was high. The completeness of interviews depended on the focus of interests of the interviewer.

The respondents showed an excellent knowledge of maps, sincerity of answers. The analysis of the answers showed a high degree of dependency of the respondents on the results of traditional land use, self-confidence, and at the same time a high degree of victimness of their consciousness and isolation from the rest of solum.

June 24-25, Poster Sessions

Murashko, Olga (Institute of Anthropology, Moscow State University): *Agents or victims? Lessons learned from traditional land use and consultation monitoring in North West Russia (NAO)*

The presentation deals with lessons learned from the joint work of an anthropologist with an NGO in the course of implementing the project "Monitoring of Development of Traditional Indigenous Land Use Areas in the Nenets Autonomous Okrug (NAO), NW Russia". One of the main objectives of the project was mapping of all the objects of traditional land use in their interrelation with the objects of the extractive industry. The second purpose was to analyse the relations of indigenous tundra dwellers with companies. A large sample-size of 103 respondents from six areas in NAO was achieved by a questionnaire, filled out by six especially trained indigenous collaborators jointly with respondents. Questions on all types of traditional land use and on consultation practice were covered, basing on pre-tests and comments by consultants of the project (Gyunhild Hogenson and Florian Shtammler).

The respondents showed great depth in their answers. Questionnaire-analysis showed a high degree of dependency on traditional land use and self-confidence in their livelihood. At the same time, vis a vis the dominant society many indigenous respondents perceive themselves as being victims and living in isolation. Participants of consultations from the indigenous side are not ready to enter an equal dialogue with industrial companies. Their questions and comments do not correspond to the goals of the consultations, and expectations may remain unfulfilled or betrayed, because there is no standardized procedure of considering indigenous people's opinion on industrial projects nor of monitoring the implementation of any of their input into consultations.

June 23, session 05.67: Consultation in Arctic Extractive Industries Development: Lessons learned for Arctic resource governance from the local to the international level

Murasugi, Kumiko (Carleton University): *Inuktitut Language Change*

This paper reports on linguistic changes found in young speakers of Inuktitut, the language of the Canadian Inuit. Anecdotally, their speech has been described by older Inuit as "baby talk," "lazy talk" and "slang." Dorais (1990, 1993, 1997) has observed a number of structural simplifications in the Inuktitut of younger speakers, such as shortened words and sentences, decrease in number of affixes, omission of wordbases and final affixes, and regularization of number and case markers.

The present study investigates language change in a particular component of Inuktitut grammar, the verbal agreement system. Young speakers were presented with various linguistic tasks that tested their comprehension and production of ergative (transitive) and antipassive (intransitive) verb forms: free narrative, verb and sentence completion, verb comprehension and sentence translation. The results suggest that the language is changing from an ergative to accusative system, as younger speakers show an overwhelming preference for intransitive rather than transitive verbal forms in production, and have more difficulty comprehending transitive forms. Such change has been observed across dialects of Inuktitut, and in other ergative languages under the influence of majority accusative languages.

June 23-24, session 10:62: AHDR-II: Arctic Human Development Report: Regional Processes and Global Linkages

Nakhimovsky, Alexander (Colgate University): *Timelines, Google Maps, and Sequences of Events*

We present EventMap, a collaborative framework for representing narrative structures. An EventMap is a sequence of annotated Google maps controlled by a Timeline: each map corresponds to a time interval, and together a map and a time interval represent an Event. The Timeline makes it possible to navigate event sequences and observe changing event patterns over time. Event locations can be represented by points, lines, polygons, and image overlays (e.g., scanned maps). Every event is linked to an annotation that can contain arbitrary web content, including multimedia and output from complex Web

applications. e.g., GIS data filtered through an analytical tool.

EventMaps are dynamically produced from a "store" that can be a spreadsheet, XML, or relational database. The store can be on the local hard drive or in the "cloud." We use Google spreadsheets, maintained on Google servers around the world. The spreadsheets can be private, public, or shared with invited participants. Google provides HTML forms for adding data to spreadsheets; these can be filled out from smartphones. The resulting framework for collaborative authoring does not require advanced computer skills or server maintenance, and is thus well suited for widely dispersed local communities or field stations.

Spreadsheet data is transformed into RDF and combined with ontologies that can also be kept locally or on the Web. An EventMap for the end user is produced by a SPARQL query, just like different database views are produced by SQL queries. The same data store can thus produce multiple event maps depending on the filters built into the query.

June 22-23, session 10.20: Data Management and Knowledge Stewardship: Perspectives and Practice from Communities and Researchers

Nango, Joar *Sámi Huksendaidda (Saami Architecture)*

Saami architecture is an unwritten chapter in the European history of architecture. The project "Sámi Huksendaidda" aims to discuss the architects' role in the making of indigenous societies. The project is conceived by a Saami architect and one of its main goals is to create engagement and discussion within the Saami society itself. "Sámi Huksendaidda: The fanzine" is an important part of the project. It is an independent publication investigating contemporary architects' use of traditional design in its attempts to define a contemporary Saami architecture. So far, the small publication has been released in five different issues.

The 1st issue, "Sámi huksendaidda: The fanzine #1 – For Beginners" is an overview of traditional Saami architecture and a research on the methodology used by architects in the contemporary design for a traditional Saami community.

The 2nd issue, "Sámi huksendaidda: The fanzine #2 – Goes To America" is a comparative study between the traditional and contemporary architecture of the Mi'kmaq people of eastern Canada and the Saami people.

In the 3rd issue, "Sámi huksendaidda: The fanzine #3 – Does Reality", a number of 1:1 studies, workshops and projects are presented.

The 4th issue contains an investigation of the living condition in the Russian-Saami communities on the Kola - Peninsula and a resumé of a workshop on Saami Urban Space conducted on the Art Academy in Tromsø October 2009.

The 5th issue "Collapsible Architecture" was released in September 2010 and is a research on indigenous use of tents and portable architecture in political fights for rights and self-govern. also being developed.

The 6th issue is under construction and will present a number of different architectural experiments taken place in Greenland throughout the last 100 years.

The publication project will be presented in a 30-45 min lecture which addresses important issues such as; "the often superficial understanding of the Saami culture, as seen by outsiders", "How to deconstruct the dichotomy of a "traditional" and a "modern" indigenous culture." Or "how can traditional knowledge be used in a modern sustainable architectural design?"

June 22, Session 07.21: Living in the Arctic: a Creative Providence for the Global Challenge & Session 07.29: Arctic Creative: Building Arctic Futures through culture, innovation, and creativity

Natcher, David (University of Saskatchewan); **Felt, Larry** (Memorial University of Newfoundland): *Subsistence and the Social Economy of Nunatsiavut, Labrador*

This paper explores the complex social, economic, and political interplay that takes place between subsistence and wage economies, sharing and reciprocity, and regulatory regimes that now mediate Inuit access to wildlife resources in Nunatsiavut, Labrador. By focusing on subsistence, with its equally important social and economic attributes, this paper argues that the harvesting, processing and distribution of wildfoods and resources continues to be a central component of Nunatsiavut's social economy. This paper concludes by arguing that any attempt to develop effective northern policy in the future must account for the complexity and heterogeneity of community economies and remain open to the plurality of forms they may take.

June 25-26, session 03.70: The Social Economy and Community Economic Development in the Circumpolar North

Nickels, Scot (Inuit Qaujisarvingat: The Inuit Knowledge Centre, Inuit Tapiriit Kanatami); **Grable, Carrie** (Inuit Qaujisarvingat: The Inuit Knowledge Centre, Inuit Tapiriit Kanatami): *Inuit Qaujisarvingat: The Inuit Knowledge Centre and Arctic Science – Emerging Opportunities in Knowledge Stewardship*

Issues of sovereignty, resource development, climate change and militarization have attracted surging interest in the Arctic, creating increasing demands for the best available knowledge. These global and national drivers are influencing Arctic science through increasing the need for timely scientific information as well as the engagement and knowledge of Inuit. These changes present many opportunities and challenges to building sustainable Inuit communities in Canada and finding innovative ways that connect Inuit knowledge to sound science, research, and policy development.

This presentation will talk about a new initiative – Inuit Qaujisarvingat: The Inuit Knowledge Centre (IKC) – that has been launched by Inuit Tapiriit Kanatami, the National Organization that represents the Inuit of Canada, to work towards addressing these opportunities. The IKC will focus efforts to ensure an increasingly active role for Inuit in research that leads to the generation of innovative knowledge for improved research, science and policy decision making within a Canadian and global context. Data management and knowledge stewardship are an integral part of IKC's mandate and activities in this area will be briefly outlined. The continuing opportunities for partnership between broader science and research initiatives, and the IKC, will be discussed.

June 22-23, session 10.20: Data Management and Knowledge Stewardship: Perspectives and Practice from Communities and Researchers

Nielsen, Flemming A.J. (Ilisimatusarfik/University of Greenland): *The clash of imaginations when the Bible came to Greenland*

The earliest continuous texts written in any Eskaleut language were produced by the Norwegian missionary Hans Egede in Greenland as early as 1723, 1724 and 1725, only a few years after his arrival in 1721. They testify to the introduction of theories about the nature of the world that were new to Inuit society of the day. Likewise, the Europeans were confronted by a world view that were new to them, and discussions between Inuit and Christian world views began. I intend to give a presentation of Hans Egede's understanding of Inuit's religious ideas and show how this understanding is reflected in the way he introduced Christianity to the old Inuit society in Greenland as witnessed by his earliest manuscripts containing Bible translations and catechetic texts in broken Greenlandic. The encounter between the two world views ushered in a transformation of Inuit society in Greenland leading to the establishment of an imagined Christian Inuit nation.

June 22-23, session 07.49: Practice Power North

Nilsson, Annika E. (Stockholm Environment Institute); **Avango, Dag** (Royal Institute of Technology, Stockholm); **Lajus, Julia** (European University, St Petersburg/ Université de Strasbourg); **Sörlin, Sverker** (Royal Institute of Technology, Stockholm); **Wormbs, Nina** (Royal Institute of Technology, Stockholm): *Assessing Arctic Futures: Voices, Resources and Governance*

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. This presentation will discuss the need to develop new tools for understanding and assessing Arctic futures, including the growing number of (frequently contradictory) voices that influence the production of Arctic futures. It will present a new research project – Assessing Arctic Futures: Voices, Resources and Governance – which aims at understanding how claims of different stakeholders in the region have influenced the Arctic in the past and where we will draw inspiration from actor-network theory and “political ecology” in order to illuminate power relations and the shifting status of different voices. We will 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 change and regime shifts in the Arctic actor landscape. The presentation will focus on the theoretical framework and methodology for the project and how we will use it in the different subprojects. The subprojects are 1) natural resources and industrial geopolitics, 2) marine resources between local users and the state, 3) the politics and diplomacy of Arctic futures, 4) Arctic pluralism and international relations, 5) and Arctic assessments.

June 25-26, session 05.35: The Political Organization of Arctic Space

Nilsson, Annika E. (Stockholm Environment Institute): *Challenges in assessing the Arctic*

Since the late 1990s, a large number of scientific assessments have been conducted to map developments in the Arctic. Some of the reports, such as AMAP's assessment on pollution in the Arctic and the Arctic Climate Impact Assessment, have had important impacts on knowledge about the circumpolar north and policy development far outside the region. Many of them have also served as important platforms for bringing different knowledge traditions together, thereby contributing to new directions in research. This presentation will draw on experiences from participating in several assessments and from research on the processes connected to and following the Arctic Climate Impact Assessment. It will highlight dynamics that have led to productive outcomes in terms of new knowledge but also some of the challenges in assessment processes under the auspices of the Arctic Council. This includes issues of how the assessment process is organized, how the science-policy interface is constructed, and how assessments become linked to more long-term scientific and political processes. The presentation will place these lessons in relation to AHDR-II specifically, but also to a broader context of an increasing need to find assessment methods that even better integrate information across scientific disciplines and knowledge traditions. The Arctic is experiencing the combined impacts of climate change, pollution, economic globalization, increased attention to energy security, and several other aspects of global change. The presentation will highlight some issues that need to be addressed to ensure that scientific assessments support a better understanding of their dynamic interactions in ways that also support policy development.

June 23-24, session 10:62: AHDR-II: Arctic Human Development Report: Regional Processes and Global Linkages

Noring, Maria (Dep of Environmental Strategies Research/ Royal Institute of Technology, Stockholm (KTH)); **Sjöberg, Eric** (Stockholm University): *A framework for sustainable governance of Arctic natural resources*

Arctic Games – Interactive development and application of a transdisciplinary framework for sustainable governance options of Arctic natural resources is a recently started project within the research program Mistra Arctic Futures in a Global Context. The project aims at developing a transdisciplinary framework to study incentives and conditions for sustainable governance options of Arctic natural resources. The framework is based on, economics, game and governance theory and will be used for analysing strategic behaviour among different actors under various scenarios of future development of the Arctic.

The framework will be developed within a case study characterised by typical conflicts and tradeoffs connected to natural resource extraction in the Arctic region. The ecosystem constituted by Barents Sea and the Lofoten Islands area will be used as a case study in Arctic Games. This area contains a potential conflict where on one hand it might become a World Heritage Area due to e.g. the high biodiversity, and on the other hand the area is an object for oil and gas extraction. Hence, actors and stakeholders in the area such as the fishing and oil industry have interests that diverge. The framework implies analysing the situation in a game theoretic manner using input such as governance structures and a cost benefit approach for evaluating the effects on ecosystem services of different outcomes.

The framework developed is intended to be general enough to provide a structure for analysing similar situations of natural resource exploration conflicts within the region.

June 25, session 05.28: Governing changes in the North

Nuykina, Elena (University of Vienna): *Intraregional long-distance commuting as an alternative strategy of sustaining mono-industrial communities of the Russian North*

Among other consequences, the world economic crisis has had destructive impact on mono-industrial cities of the Russian North. Being established under the soviet system of state planning, these communities have faced with the necessity of modernization. Official position of the Russian government towards mono-industrial settlements considers two options aimed community viability. Those cities specified by the state as being “perspective” have been stimulated to diversify their economies. On the other hand, “depressive” cities were induced towards gradual shrinkage both in terms of population and space. This paper intends to look beyond two-sided approach “diversify or die” taken by the federal government. It particularly looks at intraregional long-distances commuting as an alternative strategy of sustaining arctic mono-industrial communities. Responding to the question of the future well-being, some northern cities use their labour force for supplying the next big city or industrial sites. Specialists from “depressive” places work outside the city on the basis of shift-work. For specialists who lost their job but chosen to stay in the Far North, intraregional long-distance commuting is a source of the household's survival. Also the municipal economy benefits as a whole since people spend their salaries in the place of living rather than the place of working. The intention of this paper, therefore, is to look at the effects long-distance commuting has

on people, northern communities and the cities.

June 25, session 04.37: Commute Work and Mobile Labour in the Circumpolar North

Nuykina, Elena (University of Vienna): *Shrinking cities on Russia's Arctic Frontier*

Disintegration of the Soviet system in the 1990s had a significant impact on the Russian Far Northern cities and their population change. Many of them have experienced considerable economic decline and high outmigration resulted in a structural crisis. Responding to the question of the future viability of the arctic mono-industrial communities some municipalities took a direction towards gradual shrinkage by stimulating out-migration processes. Administrative depopulation has been implemented through special resettlement programmes and subsidized by budgetary sources. The purpose of this paper is to look at the processes of shrinkage on Russia's Arctic Frontier and its governance from the macro level perspective. It overviews the different stages of shrinkage Russian northern cities went through and administrative instruments of state inducement. The main question of this work is how shrinkage influences community viability and what the social implications of the post-socialist restructuring are.

June 26, session 04.66: Relocation: State Inducements and Ideologies versus Strategies of Resistance and Response

Nyers, Alex (Department of Anthropology, Oregon State University); **Kingston, Deanna** (Department of Anthropology, Oregon State University): *Data Management in the King Island, Alaska, Place Names Project*

In 2003, the National Science Foundation funded the project entitled "Documenting the Cultural Geography, Biogeography, and Traditional Ecological Knowledge of King Island, Alaska". Two field seasons followed in 2005 and 2006 that entailed considerable involvement of King Island elders, community members (over 60 individuals participated in some form) and western scientists (including biologists, archaeologists, anthropologists, a videographer, and a linguist). The project resulted in an interactive website entitled "King Island Place Names" (<http://kingislandplacename.com>), which contains an interactive map and photographic gallery. The project generated a considerable amount of digital data, including 80 hours of audio and video recordings, 8000 photographs, maps, informed consent forms, reports, field guides, and published articles. This presentation will discuss the participatory and analytical methods used as well as discussions about how to share this data both within and outside the King Island Native Community. In addition, the presentation will discuss some of the challenges inherent in managing such a large volume of qualitative data, including collaboration with other researchers, developers and community members and disaster recovery of data.

June 22-23, session 10.20: Data Management and Knowledge Stewardship: Perspectives and Practice from Communities and Researchers

Nyman, Elizabeth (Florida State University): *Enclosing the Arctic? Environmental Groups and Visions of Protection*

There are various and competing ideas on the best way to manage and govern today's Arctic in an ever-changing world, ranging from those which are very nation-state centric to those that advocate for a state-free Arctic zone. I focus on examining the role of environmental groups in projecting a vision for Arctic space. Considering the World Wildlife Fund (WWF) in particular, I explore WWF's overall strategy as set forth by their main Arctic office, and how this vision is translated to specific state policy-makers by representatives of the various national branches of the WWF. The overall vision for the Arctic as presented by WWF is one that emphasizes protection at the cost of marginalizing indigenous peoples, but this vision is twisted and diluted at the national levels of WWF, especially in the US and Canada, in pursuit of alternative goals and strategies. Thus, while the WWF may advocate for a protected Arctic at any cost, the practical realities faced by national branches such as the WWF-Canada indicate that this vision is over-simplistic and extreme even to the organization that is promoting it.

June 25-26, session 05.35: The Political Organization of Arctic Space

Oddsdóttir, Embla Eir (The Stefansson Arctic Institute/the Northern Research Forum): *Increased Activity in the Arctic; capacities, opportunities, resilience and risks in the face of change*

Greater awareness of multilevel impacts of Climate Change emerges and the Arctic experiences intensely the consequences of global warming and melting ice. Adaptive capacity in human and natural systems will be a crucial factor in maintaining resilience. Receding sea ice has boosted interest in economic prospects within the region, the most significant being the opening up of new transport routes, the extraction of oil and gas and related activities such as transshipment ports. Speculation

as to how and to what extent it is necessary, possible even, to protect fragile ecosystems in the Arctic and maintain conditions for cultural survival and community security takes place among stakeholders at the local, national and international level. Stakes are high in environmental, social and economic terms; increased activity in shipping related services and trans-shipment ports, oil refineries and storage facilities might provide local, regional and national economic benefits while increased levels of pollutants risks in terms of spill accidents might have a devastating effect on well-being of local communities with implications also at regional and national levels. It is important to consider the long-term costs for environmental and community well-being.

What are the risks involved with such activities in a precarious area where response and rescue is problematic? Drawing on case studies from the past, what might the scope of impact from disaster be? What is the level of adaptive capacity and resilience of communities at risk and how do we even adequately measure the highly complex interactive variables involved, particularly when dealing with uncertainties and to a considerable extent, unknown variables?

June 23, session 02.68: Social and economic impacts of megaprojects in the North

Öfner, Elisabeth (University of Vienna); **Ivanova, Maria** (Faculty of Humanities and Social Sciences, Ufa State Petroleum Technological University, Russia); **Muchametgaleeva, Elvira** (Faculty of Humanities and Social Sciences, Ufa State Petroleum Technological University, Russia); **Yakovlev, Maksim** (Faculty of Humanities and Social Sciences, Ufa State Petroleum Technological University, Russia): *Becoming a long distance commute worker in the Russian North: students on the Ufa State Petroleum Technical University*

Long-distance Commute Work (LDC) in the Russian Circumpolar North is an increasingly common form of labour organisation – especially for the hydrocarbon industry. Since the 1970ies workers have been recruited from places throughout the Soviet Union and the Russian Federation today in order to meet the labour demand on work sites in areas with low population density as this is the case in the northern hydrocarbon sector.

LDC has become reality in southern sending regions of workers such as villages and cities in the Republic of Bashkortostan. The Ufa State Petroleum Technical University is specialised on the education of high qualified workers and engineers for the oil and gas sector. Therefore students are potential labour force for the Siberian oil and gas industries. This means that either they will start a life as long-distance commute worker, called Vakhovik(i) or settle in the Siberian North on a permanent basis.

The paper presents preliminary results of the study on students` ideas on and identities as potentially moving oil or gaz workers (“nefjaniki” or “gazoviki”). Which ideas and expectations do they have about a life as a long-distance commuter? What is the motivation for choosing this particular life-style? Are the ideas about and coping strategies with being constantly on the move passed on from one generation to the next? This paper contextualises the questions above with images and spatial constructions about the Far North that have been researched through ethnographic qualitative data during long-term fieldwork in Ufa and rural regions of Bashkortostan.

June 25, session 04.37: Commute Work and Mobile Labour in the Circumpolar North

Ogilvie, Astrid E.J. (Institute of Arctic and Alpine Research (INSTAAR)/Stefansson Arctic Institute); **Demarée, Gaston R.** (Royal Meteorological Office of Belgium); **Hill, Brian** (Institute for Ocean Technology, Canada); **Patterson, William P.** (Department of Geological Sciences, University of Saskatchewan, Canada): *Comparing Changing Patterns of Seasonality in Sea-Ice Records from the Labrador/Nunatsiavut and Iceland Sectors*

Prior to the era of systematic meteorological records and satellite data, information concerning sea-ice variations in North Atlantic/Arctic regions is available from documentary records and other climate proxy data. For Iceland there are a variety of excellent historical records available from ca. AD 1600 onwards. For the Labrador/Nunatsiavut region, documentary data may be found in the detailed meteorological records of the Moravian missionaries from AD 1771. As well as records from coastal locations, sea-ice observations were also made during the annual voyages of the missionary ship between London and Labrador. Documentary data concerning sea ice off the Newfoundland and Labrador coasts are also available in bulletins from the U.S. Hydrographic Office for ca. 1889 to 1954. The documentary historical data used here combine to provide an excellent overview of sea-ice patterns in the North Atlantic over the past ca. 300 years. To clarify these further, the data will be compared with evidence gathered from a study of proxy climate data (tree-ring cellulose) obtained from the Nain area for ca. 1725 to the present. Preliminary results show considerable interannual variability. However, it is clear that the period ~1820 to ~1920 was one of worse than “normal” ice conditions in the North Atlantic. A period with less ice followed over the next ca. 50 years interrupted by a brief re-occurrence of severe ice conditions. The current shrinkage of sea ice is well documented. The human dimensions of changing sea-ice patterns will also be highlighted in this presentation.

June 22, Session 01.46: Circumpolar Perspectives on Changing Seasonality in the Arctic

Øian, Hogne (Norwegian Institute for Nature Research): *Two types of consumptive orientations to angling*

Recently the promotion of angling tourism in Norwegian rivers has led to more strict angling rules, at least in some parts of the most popular water courses. The new rules imply strict bag limits and the practice of catch & release. These changes have been strongly resented among some anglers, while saluted by others. Some anglers want to retain the productive aspect of angling and insist that angling is only defensible as harvesting of nature resources. Others tend to perceive angling as any other modern leisure activity. Hence there seems to be two types of consumptive orientations: The one is about consuming the fish itself, the other about consuming the experience of the angling process. In this paper I want to explore some of the dynamics of the cultural models people appear to use in order to give meaning to angling. In this connection I will also look into the way in which human /nature relations appear to be reformulated, depending on different modes of relating to the fish during process of angling.

June 23, session 02.36: Northern fisheries: managing income, nutrition and cultural values

Ólafsdóttir, Hildigunnur (ReykjavikAcademy): *Drinking in Iceland and Ideas of the North*

It is hypothesised that ideas about the North as an extreme and turbulent force have been instrumental in shaping images relating to Icelanders' drinking culture and the imagined position of alcohol in the community. In line with this understanding, the governing image of the position of alcohol in society has been of an excessive drinking pattern which is based on a special connection between alcohol and the national character. The objective of this study is to examine how specific preconceptions about the North have been linked to images of the drinking culture, and to define emphases and conflicts surrounding these assumptions. Particular attention is paid to the image of drinking pattern as it is represented abroad, and how the image of the Icelandic drinking pattern is used in alcotourism. The sources used for this study are various types of written materials, newspapers and advertisements, particularly from the last two decades. The method is analysis of text and discourse. The conclusions reveal that the image of Icelandic drinking culture is deeply-rooted and has been instrumental in shaping the position on alcohol, although this does not preclude that the image is challenged. The image of drinking has an intrinsic value as it is used both to reject an old pattern and to justify a new one, yet images appear to have had little value as a tool for class distinction. On the other hand, preconceptions acquire practical value when used in promoting tourism.

June 22-23, session 07.49: Practice Power North

Ólafsdóttir, Rannveig (Faculty of life and environmental sciences, University of Iceland): *Tourism and Polar Wilderness: Friends or Foes? Assessing ecological impact of tourism in Vatnajökull National Park, Iceland*

The Icelandic wilderness is one of the major motivating factor attracting tourists to Iceland. Increased tourism in the wilderness areas is becoming a growing environmental concern mainly due to interference with extremely fragile ecosystems and lack of suitable infrastructures and tourism planning. This study aims to increase the knowledge and understanding of the interactions between tourism and the wilderness in the northern territory of Vatnajökull national park in Iceland by assessing and analyzing the spatial and temporal pattern of tourism development as well as the ecological impacts from tourism use and associated activities. The study will also focus on the key factors that affect the management of ecological impacts from tourism use in fragile wilderness areas. The proposed approach is based on the use of Geographical Information System. The initial results will be presented at the conference.

June 25, session 02.56: Tourism, People and Protected Areas in Polar Wilderness

Olsen, Lise Smed (Nordregio): *Women's entrepreneurship in Nordic sparsely populated areas: the case of Iceland*

Sparsely populated areas in the Nordic countries are generally marked by depopulation and an ageing population. It is often the young women who leave these areas for urban centres and the capitals. Entrepreneurship is of great importance and a prerequisite for a sustainable economic and regional development in the rural and sparsely populated areas of the Nordic countries, and women's entrepreneurship is of special interest since there is a large untapped potential among women to increase the number of entrepreneurs and sustainable firms.

This paper explores public policies in place to support women's entrepreneurship in sparsely populated areas in Iceland, more

specifically the publicly funded initiatives by Impra, the national service centre for entrepreneurship and small and medium-sized enterprises. The initiatives which are in focus involve a business start-up course and the service of ongoing counselling and mentoring of women in sparsely populated areas. The study is based on a number of qualitative interviews with the project manager, business advisors and women who have participated in the course and advisory/mentoring activities, both some who have become entrepreneurs, and some who have not. The case study is carried out as part of the project 'Women's entrepreneurship in Nordic Sparsely Populated areas' funded by the Nordic Council of Ministers. Similar case studies are conducted in all the Nordic countries, and the paper will place the case of Iceland in a comparative perspective with public policy initiatives and strategies for women's entrepreneurship in other Nordic countries.

June 24-25, Session 03.63: ASI – Arctic Social Indicators

Ostanina, Natalia (Ural State Academy of Architecture and Art); **Kukanov, Denis** (Ural State Academy of Architecture and Art): *Principles of Cross-cultural Design: the concept of a School for Children of Arctic Nomads*

According to the Russian Education Act accepted in 1996, the notion of an "ethnic school" was removed from a legal framework, i.e. ceased to exist. The main consequence is that the only way for indigenous peoples to be educated is to send the children to boarding schools.

Most scientists point out lots of drawbacks of that sort of education, especially the following:

- the destruction of a domestic lifestyle including the loss of working skills due to the lack of interest and involvement to day-to-day native activities;
- the loss of a native language and, therefore, the lack of interest to native rites, rituals, customs, etc.

One of the possible ways to overcome the difficulties above, might be a holistic reorganization of the educational environment considering physical and psychological peculiarities of "users" (i.e. children of nomads) as well as the cultural identity of the region (i.e. Yamal, Russian Arctic). And one of key points (equally with methodology of education) is to change the physical appearance of a school, i.e. how it looks on the eyes of young nomads.

A design model as an outcome of design activity should be a mediator of knowledge and up-to-date information to overcome the information inequality between nomads and "civilized people".

To confirm the research findings, the author suggests a concept of a New School for Arctic Children: it is a mobile inflatable construction in the form of a cloudberry (i.e. one of the favorite delicacies of tundra dwellers). The school contains 10-15 "work places", provided with a comprehensive set of educational equipment.

The entire space is intended to fulfill needs of active and passive processes of learning including 'teacher-pupil' and 'pupil-pupil' communication, developing adaptation skills, etc.

June 24-25, Poster Sessions

Ozkan, Umut Riza (School of Public Policy and Administration, Carleton University); **Schott, Stephan** (School of Public Policy and Administration, Carleton University): *Sustaining and Expanding the Capabilities of Traditional Societies*

Our paper develops a sustainable development framework in a mixed economy model that is applied to the Northern Canadian economy. We build on the premise that there is a need to maintain a mixed-economy, which integrates wage and subsistence sectors, without allowing the basic capabilities to be jeopardized. The sustainable livelihood literature recognizes the importance of different capabilities to achieve multiple livelihoods but pays insufficient attention to how different livelihood capabilities can be integrated to ensure sustainable development. We explicitly model the possibility of conflict between various livelihood capabilities in the wage-based or traditional sector, which may erode or strengthen certain capabilities of individuals and the sustainability of communities and the economy. Certain interactions do not necessarily sustain the balance between wage and traditional economy but can instead create more intra-generational inequalities (i.e. the erosion of the egalitarian structure of the communities, the lack of access to traditional food and hunting) and inter-generational inequalities (i.e. the disruption of transfer of local knowledge and the potential loss of wildlife stocks). This paper assesses various interlinkages between different assets (social, human, physical, natural, financial capital) of wage and traditional sectors and their transformation into 'capabilities' and 'functionings'. We examine how different activities will change capital assets in both sectors and ultimately affect capabilities. We then derive a list of meaningful capabilities and functionings in the market and traditional economy. Finally, we propose a number of indicators that can aid in measuring the change in capabilities and tracking the sustainability of development paths.

June 24-25, Session 03.63: ASI – Arctic Social Indicators

Pálsson, Gísli (Department of Anthropology, University of Iceland): *The invention of Homo islandicus*

Emphasizing the shift from textual studies to physical and biological anthropology during the Twentieth Century, this talk explores anthropological discussions of the history and characteristics of Icelanders, *Homo islandicus*. The discussion is largely based on the works of several Icelandic scholars and the social memory they represent, the ways in which the past is collectively established and preserved. Drawing upon different takes on nationalist and academic agendas, the “thought styles” involved, to use a term launched by Ludwig Fleck, differ significantly on method and sources, the relative merits of texts, bones, and DNA material and the kinds of comparison explored. If for Scandinavian and German nationalists Icelanders represented the closest available link to the Norse past, a kind of radical Us, for Icelanders their neighbors in Greenland – “Eskimos”, as they used to be called – represented a radical Other. Thought styles do not develop from thin air; rather they are intimately connected to the contexts in which they are embedded, both constituting and being constituted by the imagined communities of nations, cultures, and disciplines and their traditions of remembrance and authority.

June 22, Keynote presentation

Palulis, Patricia (University of Ottawa): *Geo-literacies in lands of text, image and ice: Circumpolar tales at-drift as interdisciplinary sites of pedagogy*

Drawing on conceptions of poststructural geographies, Marcus Doel (1999) contends “geography is an act, an event, a happening.” Sometimes a storybook becomes an event. An Arctic tale becomes a geographical event. As a teacher of Language Arts, I want to engage the audience in the story of Lulie the Iceberg as geo-literacy ... as an act, an event, a happening ... drawing from a teaching life as auto/ethno/graphy and from a teaching praxis in the space of a/r/tography. As a teacher who engages with arts-based literacy at the interstices of theory and practice, a/r/tography becomes a habitus for in-dwelling on a slope. Like the little iceberg whose story it narrates, a book as text and image continues to tell its story as driftwork ... as a traversal ... cutting across the theoretical spaces of geo-literacy, eco-literacy, and transcultural dialogue to evoke possibilities for re-readings of environmental experiences and responsibilities. A storybook at-work labours with issues and concerns of global warming in Arctic regions, sustainable communities and ecosystems. A storybook, rich with generative possibilities, provokes research as arts-based activism within the discourse of ecocriticism. A storybook becomes a worksite for shaping and being shaped by environment and place. A traveler’s tale journeys from Baffin Island in Nunavut to Greenland, from Vancouver to Ottawa, from the site of a primary classroom to a graduate class in academia. For textworking in spaces of complexity. What happens when Lulie the Iceberg encounters the Diary of Abraham Ulrihab? A misfire, a diffraction, ice music ... an act, an event, a happening ... a complicated conversation

June 23-24, session 09.01: *Schooling in the Arctic*

Parlee, Brenda (Faculty of Native Studies, University of Alberta); **Catholique, Tsatsiye** (Lutsel K’e Dene First Nation, Northwest Territories, Canada); **Lovely, Margaret** (University of Alberta): *Predictable Predictions: Long term effects of Mining within the Social Economy of Northern Canada*

Pro-mining arguments articulated in environmental impact assessment (EIA) processes consistently raise public expectations of project benefits, particularly among vulnerable populations; accountability of proponents to such predictions is, however, limited. Guided by an interest in the role of mining in the social-economy, this paper unravels industry-government predictions from three EIAs of diamond mining in the NWT (1998-2001). We analyzed the validity of predictions based on government data (2000-2010) and from studies with an impacted community (2000, 2010). Pro-mining arguments were grouped in four themes: 1) northerners will benefit as a result of royalties, employment and business development; 2) mining will be a spring-board for economic diversification; 3) wage and business benefits will contribute towards the sustainability of the traditional economy of indigenous peoples; and 4) our youth will have a better future. Evidence from 2000-10 suggests the socio-economic effects predicted are not those being experienced presently. The majority of northern populations, particularly in small communities, seem to have seen little positive change in their way of life. Although expectations of benefits were high, the realities include: increased cost of living (particularly housing), decreased social cohesion (owing to significant in-out migration to project sites), shrinkage in other sectors of the economy (e.g. service, tourism), decreased time for land-based activities, as well as increased drug/alcohol addiction problems particularly among young adults and youth. Further research is needed to gain a broader understanding of the distribution of benefits as well as to understand more about those most involved in mitigating negative socio-economic effects.

June 25-26, session 03.70: *The Social Economy and Community Economic Development in the Circumpolar North*

Pearce, Tristan (Univeristy of Guelph); **Ford, James** (McGill University); **Furgal, Christopher** (Trent University): *Transmission of Environmental Knowledge and Land Skills among Inuit Men in Ulukhaktok, Northwest Territories, Canada*

and Adaptation to Climate Change

This paper investigates the relationship between the transmission of environmental knowledge and land skills, and human adaptation to climate change. This relationship is empirically tested in an arctic community to document how environmental knowledge and land skills are transmitted among Inuit and what role, if any, do environmental knowledge and land skills play in adaptation to climate change.

The transmission of environmental knowledge and land skills was studied with Inuit men in Ulukhaktok, Northwest Territories, Canada. Just over half of all skills were being transmitted through 'hands-on' learning among younger respondents. Some skills including general hunting, traveling, fishing and camp-related skills, and skills related to caribou, musk ox, seal (summer) and duck hunting were transmitted well. Others such as fur preparation, dog team handling, winter seal hunting, traveling on the sea ice, and some traditional navigation and weather forecasting skills, were not. Despite similar learning ages between generations, there has been an incomplete transmission of several skills among younger respondents. In the context of adaptation to climate change, incomplete skill transmission is of particular concern. For example, most young respondents had not learned the detailed knowledge needed to navigate in poor visibility, how to anticipate and cope with changes in weather, or how to travel on the sea ice in different seasonal conditions. Based on these findings, a number of insights are provided for supporting skills transmission in the context of adaptation planning for climate change.

June 25, session 03.60: The social economy of sharing in the North American Arctic

Pearce, Tristan (University of Guelph); **Notaina, Roland** (Community of Ulukhaktok); **Kudlak, Adam** (Community of Ulukhaktok); **Wright, Harold** (Community of Ulukhaktok); **Smit, Barry** (University of Guelph): *Transmission of Environmental Knowledge and Land Skills among Inuit Men in Ulukhaktok, Northwest Territories, Canada and Adaptation to Climate Change*

Inuit environmental knowledge and land skills have been identified as key determinants of adaptive capacity to climatic changes that affect subsistence harvesting. There is evidence however, that traditional modes of knowledge transmission are not functioning as they were in the past. As a result, many younger and inexperienced hunters are not as well equipped to cope with the risks of hunting, and changing climatic conditions are making it even more hazardous for them. This poster presents findings from research that empirically tested the transmission of environmental knowledge and land skills among Inuit men in Ulukhaktok, Northwest Territories, in the western Canadian Arctic. A list of 83 skills important for safe and successful harvesting was generated with 14 active hunters and elders, and tested with a sample of 39 men. Just over half of all skills were being transmitted through 'hands-on' learning among younger respondents. Some skills including general hunting, traveling, fishing and camp-related skills, and skills related to caribou, musk ox, seal (summer) and duck hunting were transmitted well. Others such as fur preparation, dog team handling, winter seal hunting, traveling on the sea ice, and some traditional navigation and weather forecasting skills, were not. Despite similar learning ages between generations, there has been an incomplete transmission of several skills among younger respondents. The relationship between skills transmission and adaptation to climate change is made and policy interventions to support transmission are identified.

June 24-25, Poster Sessions

Pedersen, Kennet (Department of Cultural and Social History, Ilisimatusarfik, University of Greenland); **Egede, Múte** (Department of Cultural and Social History, Ilisimatusarfik, University of Greenland); **Lynge, Pipaluk** (Department of Cultural and Social History, Ilisimatusarfik, University of Greenland); **Nathanielsen, Helga** (Department of Cultural and Social History, Ilisimatusarfik, University of Greenland): *Generation and Identity: experiences, constructions, and reflections among young students in Nuuk, Greenland*

On the basis of an array of methodical knacks in dialoguing, questioning, and corresponding, this paper aims at drawing a varied picture of how young students generationally describe themselves, and how they differentiate themselves in the overarching generation structure of modern Greenland. An emphasis will be put on why this group finds that their "cohort destiny" is of essential importance. This group might be suspected of not being particularly representative, but in an opposite direction one could argue that this group is made up of individuals who in a few years will pull the wires in public life in Greenland.

The paper will sketch a model of social identity formation processes and of the construction of generational elements in these processes. From this model it should be possible to extract the pertinent features of generational identity among the student group. An emphasis will be put on the reference to events in the recent political history of Greenland. Here one of the interesting aspects in our empirical material - and we will elaborate on this - is the fact that the major constitutional transformations (1953, county status in Denmark; 1979, home rule; 2009, self government) are temporarily spaced with,

roughly, in, and hardly incidentally, intervals of 30 years. That is the distance of a generation.

In conclusion the paper will discuss if this coincidence of major constitutional changes and the arrival of new political cohorts might account for the importance of generationality in identity formation among young Greenlanders.

June 26, Session 03.75: Living conditions and well-being

Pelyasov, Alexander (Council for the Study of Productive Forces, Moscow): *Age in the Arctic economies: two types of regional development in the Russian High North*

One can distinguish two types of the Russian Arctic regions. 1) Old industrial territories like Murmansk, Archangelsk oblasts, Norilsk industrial district. Their colonization has begun three generation ago - that is more than 75 years ago. On one side they have accumulated strong scientific centers and schools, human capital, that are positive for innovative modernization of the regional economy. On the other side old industrial assets, numerous mono-profile cities and settlements, conservative attitudes of the local authorities are barriers for the innovative development. Modernization of the old economic system will advance here through the creation of innovative clusters at the result of transformation of the previous industrial complexes.

2) Arctic regions where large-scale economic development has begun recently that is 30-40 years ago. These are Chukotka, Yamalo-Nenets, Nenets autonomous okrugs and polar districts of Republic of Sakha-Yakutia. One can mention here industrial undeveloped Taymir autonomous district of Krasnoyarsk kray. On one side young industrial assets, mobility and flexibility of the major economic structures and settlement patterns are positive for modernization. On the other hand shortage of human capital, local educational structures, innovative infrastructure are barriers for modernization. Modernization of the regional economic system will advance through the creation of the vast zones of rapid development.

June 23-24, session 10:62: AHDR-II: Arctic Human Development Report: Regional Processes and Global Linkages

Perdikaris, Sophia (CUNY Northern Science Education Center, North Atlantic Biocultural Organization (NABO)); **Johannesdottir, Sif** (Kids Archeology Project Iceland (KAPI); **Ingasson, Unnsteinn** (Kids Archeology Project Iceland KAPI); **Mainland, Ingrid** (Orkney College); **Gearheard, Shari** (Institute of Arctic and Alpine Research, University of Colorado (STAAR)): *Beyond Outreach to Community Participation*

The GHEA alliance "Beyond Outreach" working group seeks to promote active local community involvement in field science and engage local residents and local schools in projects that make use of digital technology to better integrate TEK with global change science. During the recent IPY, the NABO (North Atlantic Biocultural Organization) cooperative worked closely with local schools in Northern Iceland, sparking a community led "Kids Archaeology Project Iceland (KAPI)" now involving several school systems and local museums and heritage organizations (<http://www.nabohome.org/projects/kap/fornleifaskolibarnanna1.pdf>). Thanks to NSF support, NABO has been able to provide kits of hand held Garmin GPS and robust digital cameras to schools for use in gathering place name evidence and other place-based heritage information. The KAPI data is now being integrated into the NABO Google Earth-based project reporting system so that student collected results can be displayed along with the other place based project results. The KAPI initiative has spread to Orkney and to Barbuda through a series of teacher-to-teacher meetings. A series of projects directed by Shari Gearheard combine the expertise of Inuit hunters with ruggedized GPS to collect global change data not otherwise available. We hope to use the GHEA initiative to promote wider development of this digital empowerment program to directly involve northern communities in northern science.

June 24, session 10.73: Global Human Ecodynamics and the Circumpolar North: The GHEA initiative

Petrasheva, Viktoria V. (Kamchatkan Branch of the Pacific Institute of Geography, Russian Academy of Sciences); **Degai, Tatiana S.** (The Tulalip Tribes): *Salmon Culture of Itelmens: Ethno-Ecological aspect*

Over the course of a long historic period of development, the culture of Itelmens was shaped into a maritime and riparian culture. Sea mammal hunting and fishing are the basis of subsistence for these aboriginal people who live in the North-Pacific Rim on the Kamchatka peninsula, unique for its rich wild salmon resources.

In this presentation the authors discuss research on traditional fishing technologies as well as the role of salmon in traditional culture: cuisine, clothing and art. Changes in traditional land use, alienation from traditional places of inhabitation caused by the closure and relocation of most native settlements resulted the contraction of Itelmen traditional subsistence activities, poverty, the loss of priceless knowledge of conservation and the loss of the distinctive culture of one of the most small-

numbered aboriginal peoples in the world.

The article is observing traditional salmon activities which are still strongly maintained among contemporary Itelmen. The authors are looking at the evolution of some of them through written history and the value of Itelmen knowledge in sustainable nature use nowadays.

June 22, session 02.25: Salmon Fishing and Whaling Peoples of the North Pacific

Petrov, Andrey N. (University of Northern Iowa): *Creative Arctic: Creative Capital as a Development Force in the Arctic*

This paper reports some results of the NSF Creative Arctic Project that aims at exploring creative capital accumulation and role in the Circumpolar region. My main argument is that the creative capital is a pivotal factor of regional development, and is an agent economic transformation in the peripheries. My previous work demonstrated that although the geographic distribution of the creative capital is uneven and heavily clustered in urban centers, some Arctic regions perform exceptionally well.

The paper implements the two-ring-four-sector approach to define the creative capital structure. It extends the creative capital metrics to measure four 'sectors' of the creative class and introduces Arctic-specific indices to account for unique conditions in the region. The empirical analysis implemented for Canada, Russia, Alaska, and the Nordic North identifies creative clusters in economically, geographically and politically privileged communities that serve as creative 'hot spots'. It shows patterns and relationships between the creative capital accumulation and attractiveness of places to the creative class similar to those observed in southern regions. However, in the Arctic we see disconnect between the creative capital and levels of formal education as well as a weak connection between different groups of the creative capital, not observed in the metropolitan south. A weak entrepreneurial component is a particular problem in Arctic communities that prevents them from taking advantage of unique creative capacities they possess. In some parts of the Arctic (e.g. in Canada) we also observe a strong performance of Aboriginal-gear indices pointing to an exceptional role of Aboriginal creativity.

June 22, Session 07.21: Living in the Arctic: a Creative Providence for the Global Challenge & Session 07.29: Arctic Creative: Building Arctic Futures through culture, innovation, and creativity

Poort, Lars (Inerisaavik – Institute of Learning Processes, Ilisimatusarfik – University of Greenland): *NIVI – a research project on interest in and knowledge on science among 8th graders in Greenland*

Driven by a need to know, a wonder of, what parameters have an effect on pupils' interest in and knowledge on science, the NIVI-project was initiated. (Research on Natural Science and Knowledge). Target group for the project is grade 8 (age 14) in the public school in Greenland.

The initial part of the project was an online survey among 25 % of all 8th graders in the country, on various parameters of interest and knowledge.

The presentation will focus on three significant parameters related to pupils interest and knowledge: computer access, gender and language.

June 23-24, session 09.01: Schooling in the Arctic

Poppel, Birger (Survey of Living Conditions in the Arctic/SLiCA): *A survey of living conditions among indigenous peoples in the Arctic – (Some) Lessons Learned – and what next?*

In 1994 Statistics Greenland conducted a Survey of Living Conditions in Greenland based on the Scandinavian model for measuring living conditions. One of the lessons learned was that this survey either did not reflect the welfare priorities of a large part of the Greenlandic population or documented inconsistency between the goals of the individuals and their actual choices.

In connection with the analyses and reporting of the Greenlandic living conditions study in 1994, it became obvious that problems arose when a research design presupposing a high degree of social and economic homogeneity internally, and hence the presence of universally necessary resources from a relatively homogeneous late industrial society, were transferred to a country which first of all is characterised by a non-parallel development, secondly can hardly be described as industrialised, and thirdly has its own cultural and historic profile.

The conclusion to these findings, experiences and consultations with researchers, indigenous organizations, and governments in the Arctic States were that any further research into the living conditions of the indigenous population in Greenland and other indigenous peoples of the Arctic would require a new survey instrument designed specifically for countries in Arctic regions where a large numbers of indigenous residents still rely on the harvest of local resources for food.

This presentation focuses on some of the methodological and theoretical deliberations, the major objectives and the research design of the Survey of Living Conditions in the Arctic, SLiCA and the lessons learned from this collaborative, cross discipline and international research effort.

SLiCA has been conducted in a partnership between researchers and the indigenous peoples in the countries and regions. The significance of this partnership will be addressed too.

June 26, Session 03.75: Living conditions and well-being

Poppel, Birger (Ilisimatusarfik, University of Greenland): *Inuit World. A SLiCA application (application of ASA)*

The analysis of Survey of Living Conditions in the Arctic, SLiCA is based on more than 8,000 personal interviews with Inuit and Sami adults in Greenland, Canada, Alaska, Norway and Sweden and indigenous adults in Chukotka and Kola Peninsula.

The International research team in collaboration with our indigenous partners developed an international core questionnaire. This questionnaire offers opportunities to examine a number of living conditions dimensions: Communication and Technology, Community viability, Discrimination, Education, Employment/Harvest, Environment/Resource management, Family relations and social networks, Health, Household economy, Housing, Identity management, Justice/Safety, Language, Mobility, Political resources, Religion/Spirituality, and Work/Leisure.

The first SLiCA results were published on the project website www.arcticlivingconditions.org in March 2007. Among others almost 600 tables were made available. Organizing the tables we developed categories corresponding to those included in the Arctic Human Development Report (AHDR) recommendations that later was developed into the six ASI domains. This categorization of SLiCA variables (and results) indicate that SLiCA might contribute to a social indicator system. The presentation illustrates – with the Inuit Settlement region as an example – how and under which conditions a survey – like SLiCA – designed to measure living conditions and individual well-being can contribute to long-term monitoring of human development in the Arctic.

June 24-25, Session 03.63: ASI – Arctic Social Indicators

Poppel, MarieKathrine (Ilisimatusarfik, University of Greenland): *Gender and welfare in Greenland - Status and Challenges*

The official statistics and several studies document women's increasing focus on education and work, but also large income differences. More and more women start and complete education and women's labor market participation has for years been increasing. Women with education and work need not be economically dependent on their husbands or partners, as was previously the case. It implies that women also - and often while performing traditional female tasks in the home - assume the role of breadwinners, along with a spouse or as a single parent.

Both the number and proportion of female members of the parliament (Landsting/Inaatsisartut) has, apart from the last election in 2009, increased in all elections since the first parliamentary election in 1979. The increased level of education among women and the increased labor market participation is not yet reflected in the elected assemblies, and women still constitute a smaller proportion than men in municipal councils and the parliament.

The Greenland welfare model is often seen in continuation of, or almost as a copy of the Danish welfare model. There are, however, differences – as Sundström concluded in her analysis of ‘the Greenland model’ (Eva Sundström: *Välfärdspolitiska förhållanden i Västnorden, Färöerne, Grönland och Island*. TemaNord 2006:520).

The presentation will outline a status of the Greenlandic women in education, employment and in relation to ‘gender equality’. Furthermore, the paper will focus on the challenges facing the Greenlandic welfare model after the introduction of Self-governance.

June 23-24, session 10:62: AHDR-II: Arctic Human Development Report: Regional Processes and Global Linkages

Povoroznyuk, Olga (Institute of Ethnology and Anthropology, Russian Academy of Sciences): *Reindeer Herders and BAM Builders: Shift Work and Competition in the North*

Northern Zabaikal'skii Region is an ethnically diverse territory populated by Evenk hunters and herders, Russians and labour migrants from the post-Soviet space mostly involved in public services, mining and transportation.

Soviet collectivization project led to sedentarization of nomadic population in "national" villages. The kolkhoz system generated the method of shift reindeer herding, with brigades consisting predominantly by men and only few female tentworkers who lived certain periods of time in taiga and then returned to villages to reunite with their families. The shift method adopted by post-Soviet indigenous enterprises has been aggravating the "gender split" of indigenous communities where women are generally not willing to live in taiga.

Large-scale industrialization of the region has been stimulating the inflow of multi-ethnic labour force from across the former USSR. In the 1970-80s, Baikal Amur Railroad (BAM), the largest transportation route in the Russian North and Far East and a national "construction project of the century" attracted specialists and construction workers from Ukraine, Belorussia and former Baltic and Caucasian republics. These labour migrants arrived to work on a contract, but often married local residents (especially, indigenous women) and settled down in the region.

The two groups of shift workers symbolizing the North as "male dominated harsh environment", presently compete with each other not only for women, but also for natural resources, which become polluted or depleted with the encroachment of the BAM transportation system on Evenk traditional lands

June 25, session 04.37: Commute Work and Mobile Labour in the Circumpolar North

Price, Jackie E. (Scott Polar Research Institute, University of Cambridge): *Accessing Agency through Movement of Place within Nunavut*

As arctic governance debates develop in intensity, tensions between national and international notions of land use, access and availability are revealed. Governance mechanisms and strategies are under intense scrutiny as means to alleviate these tensions. Inuit in Nunavut, the northeastern arctic territory of Canada, are mobilizing around these debates in a manner that reaffirms Arctic as homeland. This paper argues that Inuit wayfinding technique is an appropriate expression of Inuit Governance, as wayfinding supports movement through, and between, place(s). This paper also argues that the Inuit experience of relating 'the settlement' and 'the land' provides a necessary forum for formulating further governance lessons and strategies that reaffirm commitment to person building.

June 26, session 05.12: Indigenous and Nation State Land Attachment: Continuances and Assertions

Pullar, Gordon L. (University of Alaska Fairbanks): *Graduate distance education in the north: The first decade of the Rural Development MA program at the University of Alaska Fairbanks*

Is a distance graduate program primarily directed towards Alaska Natives living and working in rural Alaska a feasible idea? While some did not believe so, the faculty and administration at the University of Alaska Fairbanks believed it was not only feasible but needed. As a result, the Board of Regents at the University of Alaska approved the Master of Arts Program in Rural Development for the University of Alaska Fairbanks in June of 2000. The first students entered the program in September of that year and the first two students graduated in 2002. These first graduates were Anastasia Cooke Hoffman, a Yup'ik from Bethel, who is currently the President/CEO of the Bethel Native Corporation and Christopher Kiana, an Inupiaq from Selawik, who works for the Alaska Native Tribal Health Consortium who works in the Division of Environmental Health & Engineering at the Alaska Native Tribal Health Consortium. To date there have been 56 MA graduates with the majority being Alaska Natives. Many of the graduates are serving in key management and leadership positions with Alaska Native-owned corporations as well as other organizations and agencies. As the program enters its second decade, new opportunities and challenges have emerged for Alaska Natives and the need for well-educated people to face these is greater than ever. This paper will highlight the RD MA program and feature some of its graduates.

June 23-24, session 09.01: Schooling in the Arctic

Pulsifer, Peter L. (National Snow and Ice Data Center); **Gearheard, Shari** (University of Colorado); **Schweitzer, Peter** (University of Alaska Fairbanks): *Building a Network of Communities and Researchers in Support of Community Knowledge*

Stewardship

Community members and researchers with an interest in management of data generated from Arctic communities having been working to establish a collaborative geographically distributed network. These network-building activities have highlighted the need to understand the elements of successful network development in the age of the Internet. This paper presents a critical review of literature on various aspects of developing contemporary collaborative entities.

We establish common development themes among the interrelated concepts of the knowledge network, virtual organization, and community of practice. Key elements of success that emerge from the review include the development of shared vision and goals, establishment of effective communication, the understanding and management of scale within a network (e.g. from individual to collective), and fostering of trust and respect among participants. Success themes are grounded through discussion of established and emerging networks including the Exchange for Local Observations and Knowledge of the Arctic (ELOKA), the Indigenous Mapping Network, and Sustaining Arctic Observing Networks (SAON).

We conclude with commentary on how the literature and the development of existing and emerging networks can inform the establishment of a network of communities and researchers in support of community knowledge stewardship.

June 22-23, session 10.20: Data Management and Knowledge Stewardship: Perspectives and Practice from Communities and Researchers

Raaschou, Mette (Aarhus University): *Reaching for the World: Exploring the impact of globalization on identity making and worldview among university students in Nuuk*

Nicknamed "Nuuk York" by some of the young, Nuuk is, perhaps ironically, compared to a city that gives associations to a global world of opportunity and development. In Nuuk you can buy a packet of Burger King crisps in the local kiosk, even though there is no Burger King in Greenland. On TV the young watch "Friends", living in the very city that "Nuuk York" is referring to. The global flows are present, in some form or other. As youth all over the world today, the students in Nuuk imagine and plan their lives in both local and global contexts, and the nationalistic past of Greenland seems not to be as present in the student's lives today. Greenland has recently received self government, and in developing and shaping the future of the country, politicians often hail the students as "the future of Greenland".

But how do the young students imagine their own future and the future of Greenland? How do their relationship to Greenland and to the rest of the world influence their lifestories and narratives of the self? And how is a sense of identity and worldview created and recreated between local and global relations?

This summary is based on a fieldwork carried out in Nuuk in September-December 2010, and will be part of a MA thesis in Anthropology.

June 25, session 03.54: Arctic Children and Youth in a Global Perspective

Rasmussen, Rasmus Ole (Nordregio): *Institutional challenges when settlement structures are changing*

In spite of a general perception of Arctic settlement structures being persistent, the fact is that major changes are ongoing. These changes may contribute to some major re-organizations during the next decades, and such changes need the attention of the administrative structures in order to respond to the changes. On one hand to cope with the economic questions such changes are generating. And on the other hand to deal with the social consequences both in the places diminishing in size, and in the places where people are moving to. The paper will present some of the major changes which have taken place during the last 20 years, through that showing some of the major challenges for the communities, and presenting means and measures in response to the challenges which have been discussed at different planning levels.

June 25, session 05.28: Governing changes in the North

Rasmussen, Rasmus Ole (Nordregio); **Roto, Johanna** (Nordregio): *Applying Arctic Social Indicators to Westnorden (application of ASI)*

Based on the set of recommended Arctic Social Indicators, their application on the Westnorden region (Western Norway, Iceland, Faroe Islands and Greenland) has been attempted, and the results are presented. Problems, limitations and questions

of data availability are among the key questions discussed in the presentation.

June 24-25, session 03.63: ASI – Arctic Social Indicators

Rasmussen, Tina Dam (MIPI - Documentation Centre on Children and Youth's day-to-day operations, Greenland):
Presentation on MIPI – Documentation Centre on Children and Youth

We will give a short introduction to our institution and the work we do. We will give examples on MIPI's relevance for children and youth, and the society as a whole.

There will also be a short introduction to the publications we will distribute free of charge. We bring three memorandums, one of which will be the basis on MIPI's second presentation – Children's Standard of Living in Greenland. The other two memorandums deal with Suicide Ideations and Suicide Attempts Among Youth in Greenland, and Youth with a High Level of Well-Being.

June 25, session 03.54: Arctic Children and Youth in a Global Perspective

June 24-25, Poster Sessions

Rasmussen, Tina Dam (MIPI - Documentation Centre on Children and Youth's day-to-day operations, Greenland):
Children's Standard of Living in Greenland

This presentation describes how children understand and experience their surroundings and the conditions under which they live from a child's perspective. Their own experience of and coping with their family's economic situation will be discussed. As well as the various kinds of material and social deprivation that children experience as a result of the family's economic restraints.

We will also discuss the children's awareness of and coping with and coping with their family's restrained economy. This becomes apparent various ways, for example some children worry about the food situation in the household, or wish to have a job after school to help out their parents.

Children in Greenland are generally very aware of the connection between the financial situation of their family and their own standard of living.

June 25, session 03.54: Arctic Children and Youth in a Global Perspective

June 24-25, Poster Sessions

Rautio, Arja (Centre for Arctic Medicine, Thule Institute, University of Oulu); **Huusko, Antti** (University of Oulu); **Halonen, Heli** (University of Oulu); **Nieminen, Pentti** (University of Oulu); **Vähäkangas, Kirsi** (University of Eastern Finland): *Environmental contaminants and human health in the Arctic*

Human health and wellbeing are the result of complex interactions between genetic, social and environmental factors. Long-range transport of persistent organic pollutants (POPs) and toxic metals by air, sea streams and big rivers from the Southern parts of the world to the Arctic has been an important health risk for the Arctic human populations. Global climate change has the potential to remobilize environmental contaminants (e.g. permafrost melting and floods) and to alter contaminant exposure in humans. New chemicals are continuously being produced, and some of them may reach the Arctic. Although the concentration levels of the old "legacy" POPs will be decreased their effects on health may be seen in future generations.

The aim of the EU project ArcRisk (FP-ENV-2008-1, Grant Agreement Number: 226534, 2009-2013) is to study if climate-mediated changes in the environmental fate of contaminants will result in change in the exposure of human populations. The coordinator of this multidisciplinary research project is Arctic Monitoring Assessment Programme (AMAP) Secretariat, and there are 20 partners. One important task of the project will be comparisons of the present and future exposures in the Arctic to those in the Southern Europe, and provide a good source of information for the development of policies to reduce levels of environmental contamination to protect human health. This means also the development of processes and tools for risk assessment. International cooperation to assess the impact of climate change on human health is needed to develop regional scenarios and preventive programs.

June 22-23, session 06.40: Best practices for community engagement in health promotion research and population health practice - lessons from the North

Raymond-Yakoubian, Julie (University of Alaska Fairbanks): *Salmon and Well-Being in a Bering Strait Village*

This paper will review some of the preliminary results of my ongoing dissertation research in Elim, AK. Elim is an Inuit village of approximately 325 residents who rely upon salmon, as well as other animal and plant resources for subsistence. I will explore the different ways in which salmon is important to village residents such as: importance as a subsistence food, as a small-scale commercial fishery and source of employment, as a symbolic cultural resource, in maintaining social relations, and as it relates to sovereignty and other issues. The ways that salmon is valued by residents and how it contributes to well-being will be discussed. Community challenges, resulting from changes to salmon populations and participation in the subsistence harvest of salmon, are also discussed.

June 22, session 02.25: Salmon Fishing and Whaling Peoples of the North Pacific

Reedy-Maschner, Katherine (Idaho State University): *Flexible Networks: Managing Social Economies and Development in Fishing Villages of the southern Bering Sea*

Southern Bering Sea fishermen are vulnerable to fisheries alienation due to policy conflicts, permit loss, and the expense of fishing operations. They must continuously shape policy, collaborate across lines, and explore alternative economies in order to stay fishermen. Fisheries access anxieties have led to interest in energy development in, for example, petroleum and geothermal prospects. In advance of Alaska's proposed (and canceled) North Aleutian Basin offshore development, Idaho State University was contracted by the U.S. Bureau of Ocean Energy Management, Regulation and Enforcement to study the role of subsistence and commercial fisheries, land use, socioeconomic, and sharing networks in nearby Alutiiq and Aleut/Unangan villages. Through an exploration of these data using innovative social network database construction and analysis that preserves kinship, social stratification and other alliances in the maintenance of fisheries, sharing, trading, and revenue streams, this paper will demonstrate cultural value and vast socioeconomic interdependencies among and between villages.

June 23, session 02.36: Northern fisheries: managing income, nutrition and cultural values

Ries, Christopher Jacob (Dept. of Science Studies, Aarhus University): *Secretive Geologies: Rivalry and Cooperation in the Geological Investigation of Greenland, 1946-1958*

Between 1946 and 1958, Greenland geology was generally explored in three largely independent institutional contexts, each covering their region of the island, following their own agenda.

To the North, the U.S. Geological Survey investigated and mapped the topography and geology of large areas of northern Greenland as part of U.S. Cold War military projects, the outcome of which was initially confidential, and therefore relatively unknown.

South of this, Danish efforts were mainly concentrated on the Eastern and Western parts of the island. To the east the Danish geologist Lauge Koch carried out large-scale investigations on behalf of the Danish Greenland Administration with crews of international specialists, and no Danish geologists involved. To the west Danish geologists were running the Danish Greenland Geological Survey with its own international cooperative network. Directly reflecting deep hostilities within the Danish geoscientific community, there was very little cooperation and exchange between the two Danish operations.

This project seeks to identify important actors within each of these independent operations and sketch out the different agendas that guided their work. Further, it seeks to identify patterns of scientific cooperation or competition between the three operations, as they were shaped by the general climate of politically motivated secrecy that governed Greenland geology during the Cold War.

June 22-23, session 10.22: Claims on Sites and Knowledge in Cold Regions. Material and Immaterial Constructs of Nature, Nations and Industry

Rink, Elizabeth (Montana State University); **Montgomery-Andersen, Ruth** (Nordic Institute of Greenland); **Gesink, Dionne** (University of Toronto, Dalla Lana School of Public Health): *Inuulluataarnek: Sexually Transmitted Infections in Greenland*

Background: The objective of Inuulluataarnek is to utilize a Community Based Participatory Research framework to design, implement and evaluate a culturally relevant sexual health intervention to reduce sexually transmitted infections (STIs) among 15 to 19 year olds in Greenland. Methods: An exploratory study was conducted from July 2008 to September 2010 with 314 Greenlanders in Nuuk and Sisimiut who completed a sexual health survey with questions related to basic demographics, mental health, STI information and knowledge and access to STI health care services, sexual risk taking behaviors, sexual partners and relationships and partner dynamics, identity, culture and society. Research participants were also screened for STIs. Four focus groups were conducted as a follow-up to the sexual health survey in order to assist in the design of the STI intervention. Results: Nineteen percent of the participants tested positive for an STI. Sixty-five percent of the cases though they may have had sex with someone that had an STI, 58% thought they were at risk for an STI and 55% thought they might have an STI. Eighty-one percent of the cases trusted their partners enough to not use a condom during sex. Focus groups results indicated that youth were communicating with their friends about sex and did not feel comfortable talking with their parents about sex and trust played an important role in sexual relationships. Youth recommended a strengthen based intervention that focuses on self-efficacy and self worth. Conclusions: STIs in Greenland appear to be influenced by sexual health communication and trust.

June 22-23, session 06.40: Best practices for community engagement in health promotion research and population health practice - lessons from the North

Riseth, Jan Åge (Norut Tromsø); **Tømmervik, Hans** (Norwegian Institute for Nature Research, Tromsø); **Helander-Renvall, Elina** (Arctic Indigenous Peoples and Sámi Research Office, Arctic Centre, University of Lapland) **Labba, Niklas** (Moskavuona Sámi Language and Culture, Laksvatn, Norway); **Johansson, Cecilia** (Department of Earth Sciences, Uppsala University); **Malnes, Eirik** (Norut Northern Research Institut); **Bjerke, Jarle** (Norwegian Institute for Nature Research); **Jonasson, Christer** (Abisko Scientific Research Station, Sweden); **Pohjola, Veijo** (Department of Earth Sciences, Uppsala University); **Sarri, Lars-Erik** (Esrange, Swedish Space Corporation); **Schanche, Audhild** (Sámi); **Callaghan, Terry** (Abisko Scientific Research Station, Sweden): *Sámi TEK as a Guide to Climate Change Science: Impacts of Snow, Ice and Reindeer Pasture*

Scientific studies of climate change challenges could be improved by including other sources of knowledge, such as traditional ecological knowledge (TEK). This study focuses on: local variations in snow and ice conditions, effects of the first durable snow, and long-term changes in snow and ice-conditions as pre-requisites for understanding potential future changes.

Firstly, we characterised snow types and profiles based on Sámi categories and measured their density and hardness. Regression analysis showed that density can explain much of the variation in hardness, while snow depth was not significantly correlated with hardness. Secondly, we found that whether it is dry/cold or warm/wet around the fall of the first durable snow is, according to Sámi reindeer herders, crucial information for forecasting winter grazing conditions, but this has had limited focus within science. Thirdly, elderly herders' observations of changes in snow and ice conditions by "reading nature" can aid reinterpretation of meteorological data by introducing researchers to alternative perspectives.

Conclusively we found remarkable agreement between scientific measurements and Sámi terminology. We also learnt that TEK/science-cooperation has much potential for climate change studies, though time and resources are needed to bridge the gap between knowledge systems. In particular, TEK attention to shifts in nature can be a useful guide for science.

June 24-25, Poster Sessions

Rodon, Thierry (Carleton University/CIERA); **Stephan Schott** (Carleton University): *Toward a Sustainable Future for Nunavik*

In this paper, we are presenting an empirical analysis of available data about the Nunavik economy, social, health and well-being indicators. We analyze identified trends, critically examine data reliability and make recommendation about future data requirements. We then discuss sustainability in the context of Nunavik and its development opportunities and challenges. In addition to the reported data on Nunavik we also discuss the outcomes of the 2-day Nunavik Economic Summit that was held April 7-8 2010 in Kuujuaq and that was hosted by Makivik Corporation. The Economic Summit was attended by representatives of the Kativik Regional Government, Makivik Corporation, Mayors and Presidents of the Landholding Corporations from each community, local private business owners, and researchers. The purpose of the workshop was to provide an opportunity for regional and local stakeholders to obtain information on specific economic opportunities for

Nunavik and to discuss their merit for the communities. The Summit was also an opportunity to present principles of sustainable development and to discuss its implications for future development of Nunavik. This paper attempts to present key factors and opportunities for sustainable development of Nunavik based on data observations, presentations and comments from the most recent Economic Summit.

June 22, session 02.31: The Best Possible Northern Economy? Rethinking the Viability of Inuit Community in Canada

Rodon, Thierry (Carleton University/ CIERA): *Inuit Governance and Leadership: Youth Voices from Nunavut and Nunavik*

In Inuit regions, the public discourse has emphasized the importance of elder knowledge and wisdom. However, 50% of the population of these regions is under 25 year and youth voices are rarely heard.

In this project, we've collected youth voices in leadership workshops, conducted in Iqaluit, Inuvik and Kangiqsualujjuaq. These voices offer a different story on governance and Inuit leadership and show a new generation trying to bridge Inuit values and present realities.

In this presentation we will analyze the evolution of Inuit leadership in Nunavik and Nunavut and the characteristics of the emerging youth leadership. We will also reflect on the difference in the agency and the institutionalization of youth movement in Nunavut and Nunavik and their role the governance arrangements.

June 24, session 05.41: Inuit in Leadership and Governance in Nunavut and Nunavik

Romanyshyn, Iulian (Maastricht University): *Breaking the ice: the European Union policy in the Arctic*

The Arctic region represents a volatile ground where the constellations of actors and patterns of governance are not finally fixed yet. While the Arctic littoral states continuously reassuring their sovereign rights of control over the developments in the region, the reality points to increasing pressure to open up the exclusive decision-making structures to the outsiders. The European Union is one of a such players which recently started to raise its profile in the Arctic. Notwithstanding the latecomer status, its policy-makers in the Commission and the Council have already evolved in their rhetorics from the interests to the emphasis on responsibilities, while MEPs largely abandoned the notorious idea of the Arctic Treaty. On the other hand, the process of transformation of internal rules in the Arctic Council, including the review of the observer status, has commenced. The paper argues that the successful pursuit of the EU's objectives must satisfy two conditions: internal (availability of sufficient resources and capabilities) and external (international acceptance and trust). Thus, it differentiates, along the dichotomous line of interest- versus value-driven actor paradigm, between those policy domains where the EU may have interests at stake, but they are rather badly articulated and/or confronted by Arctic actors (energy, transport, fisheries, security) and those where the EU possesses advanced instruments and/or is largely welcomed by others (climate change, environment, indigenous people, multilateral governance). The paper concludes with an assumption that both the EU and Arctic states will benefit from the upgraded status of the EU in the Arctic Council.

June 22, session 05.74: The Future of the Arctic: Governance in an Era of Transformative Change

Ross Miller, Thomas (Curatorial Consulting/Berkeley College/New York University): *Virtual Presence: Long-Distance Creativity and New Media in the Making of Exhibitions*

This presentation will demonstrate how Internet communications, social networking, and new media technologies have enabled a transformation in the collaborative process of making exhibitions and related projects over the past two decades. I will present images and fragments from a series of exhibitions on northern cultures I have co-created in ethnographic museums, art galleries, and elsewhere to show how it has become increasingly possible to work with a creative team whose members remain widely separated in geographic space. Exhibition projects to be discussed include "Drawing Shadows to Stone: Photographing North Pacific Peoples, 1897-1902" at the American Museum of Natural History and Anchorage Museum of History and Art, "Schamanen Sibiriens: Magier, Mittler, Heiler" at the Linden-Museum Stuttgart Staatliches Museum für Völkerkunde, "On the Road of Bones: Ghosts of the Siberian Gulag Along the Old Kolyma Highway" at Kris Waldherr Art and Words Studio-Gallery, and "Ethnographic Terminalia," an ongoing series of site-specific group exhibitions with installments to date in Philadelphia, New Orleans, and Montréal. Related web exhibits with extended displays and interactive features will be shown.

June 24, session 08.23: Creative Circumpolar Collaboration across Cyberspace in the Arts and Sciences

Roto, Johanna (Nordregio): *Changing Scales & Regions – Reflections from Northernmost Europe*

The state and regional development trends of the Nordic regions can be interpreted in many different ways depending on the scale presented and analyzed. This scale or level of “seeing” can be visualized in many ways, and the scale can also influence what is seen. Therefore it is important to focus on the right regional level when measuring the state and planning actions for regions – and also to know which types of changes in regional structures and systems have occurred.

The presentation will treat the challenges to describe and illustrate regions. It will show some examples of these different types of interpretations of the regional state and trends with socio-economical indicators and maps. The geographical focus is on different types of spatial constructions in the Northernmost Europe, like national divisions, Sápmi (Sameland) and NSPA (Northern Sparsely Populated Areas network). Many of these regions are also challenged by unclear definitions that might vary after cultural, historical or political context and therefore the linkages between policies and ‘statistical development’ in these regions can be even more complex.

June 25, session 05.28: *Governing changes in the North*

Roto, Johanna (Nordregio): *How to see the change?*

The speed of physical and social change in the Arctic has been rapid. The way how one discovers and presents facts about the reality of regional characteristics and development indicators varies.

The presentation will treat the challenges to describe and illustrate the Arctic and the Arctic regions. In the light of some key political and demographical indicators related to human development the presentation will give a glimpse to arctic possibilities and show cartographical examples of how one visualises or “sees” reality, and how presentation modes, scale and definitions can influence what is seen.

Comparisons within countries and across countries will show how mapping can be used to argue for both similarities and for uniqueness.

June 23-24, session 10.62: *AHDR-II: Arctic Human Development Report: Regional Processes and Global Linkages*

Roto, Johanna (Nordregio); **ASI partners**: *Visualizing Arctic Social Indicators – ASI poster*

This poster presents the set of indicators that reflect key aspects of human development in the Arctic, as defined in ASI applications (Human health and population, material wellbeing, education, fate control, closeness to nature, cultural wellbeing). Comparisons across countries and regions in the Arctic will show how mapping can be used to argue for both similarities and for uniqueness – What are the possible common circumpolar trends and regional variations. The set of indicators behind the maps is based on the work done in the ASI-I and –II projects.

June 24-25, *Poster Sessions*

Royer, Marie-Jeanne S. (Canada Research Chair in Ethnoecology and Biodiversity Conservation, Université de Montréal, Canada); **Herrmann, Thora Martina** (Canada Research Chair in Ethnoecology and Biodiversity Conservation, UdeM); **Cucuirean, Rick** (Cree Trappers Association, Canada): *Cree observations on the impact of climate change on caribou and Canada goose in the Canadian sub-Arctic*

Global climate change is expected to transform the world’s biodiversity, with major impacts on livelihoods of indigenous northern communities. Based on a collaborative research project with the Cree Trappers Association of the Cree of Eeyou Istchee (the traditional homeland of the Cree located in the Eastern James Bay area), this paper will explore Cree observation on the impact of climate change in the Hudson Bay Lowlands of the Canadian sub-Arctic on woodland caribou (*Rangifer tarandus caribou*) and Canadian geese (*Branta canadensis*). This article describes the analysis of 30 interviews conducted with members of the Cree First Nation communities in the James Bay territory. Findings indicate that residents are concerned with a variety of changes in weather conditions, animal behaviour and migration patterns, impacting their ability to use the land, to maintain traditional subsistence activities. This research provides a better understating of current and future trends thus contributing to adaptive resource management and conservation strategies.

Key words: Climate change, collaborative research, Cree First Nation, Canada goose, Woodland caribou, James Bay, Canadian Sub-Arctic

June 22-23, session 03.57: Community Adaptation and Vulnerability in the Arctic Regions (CAVIAR): Lessons and directions for future research

Sabau, Gabriela (Memorial University, Grenfell Campus): *Fish: Both harvestable biomass and sustainable biotic asset. The Icelandic fisheries management experience*

Fish stocks have been traditionally managed for their direct consumption benefits, but fish stocks are also biotic renewable resources (Daly and Farley, 2004) or living funds that produce not only food for humans and other organisms but also provide ecosystem functions and services (Faber and Manstetten, 1998). The management of fish stocks requires that a minimum stock size be kept intact to maintain both the reproductive capacity of the stock and the ecosystem's functions and services (Doring and Egelkraut 2008). Ecosystem-based fisheries management (EBFM) approaches (Gislason, 2000; Kaiser and de Groot, 2000; Pikitch and Santora, 2004) try to solve the conflict between economic and ecological interests by focusing not only on maintaining strong stock levels but also on the acceptable level of fisheries impact on the ecosystem, though there is no consensus on a clear methodology for gauging acceptable ecosystem impact (Richerson, Levin and Mangel, 2010). Introduction of ITQs is considered to provide better incentives for a management that takes into account the ecosystem requirements (NRC, 1999) but it might have negative impact on employment and distribution of wealth (Macinko and Bromley, 2002). Using contextual research and a fisheries objectives framework (Mardle et al, 2002; Hilborn, 2007) this paper will assess the biological sustainability of Icelandic fisheries management and its economic, social and political implications.

June 24, session 02.58: Human Aspects of Fisheries in the Arctic Coastal Regions

Saha, Sujan (Who's Who in Polar Science, APECS): *Is Climate Change threat to culture and values? A Case from Norwegian Society*

Climate change is the greatest threat facing humanity today. Not only developing countries' societies have to adapt to new social setting in changing climate, countries in the north are not exception. The paper divulge into cultural dimension of climate change which seemingly underrepresented in climate change research. The point of departure is that of central to our understanding of human dimensions of climate change is the notion of 'culture'. It also can be understood as 'the common way in which a community of persons makes sense of the world'.

This paper is case study on Norwegian culture and associate values in changing climate. The paper is based on scientific data on snow fall and precipitation. Scientific data indicates that winter temperature increases of 2.5 – 4 °C by 2100; More winter precipitation in eastern Norway; 40% decrease in number of days with suitable skiing conditions by 2050 (compared to 1981-1999 period). The critically analysis scientific data, and Norwegian identity and culture, this paper shows snow cover is important to local and national identity in Norway. The paper argues that climate change is rapidly becoming a reality to which the society has to adapt in new cultural settings and values. The paper concludes that climate change is challenge to traditional cultural and values in the case of Norwegian society, therefore prioritized adaptations might preserve heritage, tradition, and identity (preservation of cultural landscapes and a sense of place).

June 22-23, session 07.49: Practice Power North

Schlosser, Kolson (Clarkson University): *Scales of Meaning within Ethical Diamond Commodity Networks: Kitikmeot Inuit Reactions to Global Discourses*

Discourses of 'fair trade' or 'ethical consumption' have become increasingly prominent in the global economy, and are typically seen either as the further commoditization of consumer anxiety or as an opposite movement to re-embed the moral concerns of a global society into the market. They are also being applied to the diamond industry, with Canadian diamonds often touted as ethical alternatives to so-called African 'blood diamonds.' The construction of 'ethical value' within commodity networks for diamonds, however, occurs at multiple points and across multiple scales. This research investigates the cultural economy of Canadian, non-conflict diamonds, in order to understand both how ethics in the diamond trade are understood by different people in different places, but also how the ethicalization of diamonds itself is often deployed toward stretching the very definition of ethical consumption. While this cultural economy is global in scale, it is crucial to also account for local responses amongst the Inuit of the Kitikmeot region of Nunavut. Inuit land and culture is not only frequently used to advertise and promote Canadian diamonds, but it is also amongst the most affected by diamond mining. The research to be presented here discusses the results of focus groups to be conducted in Cambridge Bay, Nunavut, in June 2011, prior to ICASS IV. Focus groups will be used to gauge how Kitikmeot Inuit (including elders) view the appropriation and representation of their land and culture toward the social construction of an ethical commodity.

June 22, session 02.31: The Best Possible Northern Economy? Rethinking the Viability of Inuit Community in Canada

Schovanec, Josef (L'École des hautes études en science social (EHESS)-Paris): *Power of spells and gods: mythical North in ancient Semitic and Indian religions*

Comparative studies of ancient India and the Semitic Middle-East are rather infrequent, as they seemingly belong to almost hermetically separated cultural areas. Nonetheless, they share, among others, surprisingly similar conceptions related to the points of the compass, both concretely (one always turned eastwards to find his bearings, the North was, therefore, associated with the left and the South with the right, e.g. Benjamin's tribe, "son of the right", dwelled in the South, and DakSiNaapatha is the "country of the right", South of India) and as regards related religious beliefs.

My study will aim at identifying common patterns of thought involved in religions and myths of the Semitic Middle-East (the Biblical Hebrew world and its Akkadian, etc, counterparts) and pre-Islamic Sanskrit-speaking India, speaking of the North. First, I will show that both of them shared the idea according to which their Northern neighbours had more powerful magic and spells. Magic formulas were often taken over from the North, and became part of the supposedly "higher" culture of the South (e.g. the mixture of Vedic enigmatic formulas from the North and Tamil poetry's patterns about love, feelings, etc, in classical Sanskrit literature, see G.-L. Hart). Names of gods were often drawn from Northern mythologies.

Next, my presentation shall attempt to give some explanation attempts. The North was associated with darkness and danger: the Semitic root S-p/f-n, tsafon, North, in modern Hebrew, initially meant "to hide", "to shroud in darkness". Classic Sanskrit heroes matured in the remote and harsh Himaalaya, "house of the snow", mountains, which also are the place of residence of countless wisdom-giving gods (like S'iva and his wife Paarvatii). Countries of oral, nomadic, mobile culture often threatened the more sedentary, institutionalized South, and at the same time were its major source of inspiration (Jakobson, Attali).

June 24-26, Session 07.32: Imagining the Supernatural North

Schram, Kristinn (ICEF/ Reykjavik Academy/ Edda - Centre of Excellence): *Obscurity, Heritage and the North*

Traditions and their performance are often judged by their alleged authenticity as well as their national origin. In this article tradition is discussed in relation to obscurity and transnational images of the North and how both may form the basis of the practice of heritage. In light of literary sources, visual media as well as folkloristic fieldwork the Icelandic traditions are the subject of analysis. Their practice and performance will be discussed in relation to prior research and debate and put into context with recent pre- and post-crises discourses in Iceland.

June 22-23, session 07.49: Practice Power North

Schweitzer, Peter (University of Alaska Fairbanks); **Bronen, Robin** (Resilience and Adaptation Program, University of Alaska Fairbanks): *Beyond Forced Migration: Agency and Powerlessness in Community Relocations*

It has long been customary to distinguish between voluntary and involuntary (or forced) migrations. While so-called voluntary migrations were supposedly driven by economic self-interest, the latter forms of population movements were categorized as 'forced' to achieve policy objectives in relation to the repeated refugee crises in the aftermath of World War II. Without denying the fact that 'forced' migrations have and continue to happen, this paper argues the agency of migrants in 'involuntary' migrations needs to be reassessed. This is of particular relevance for climate-induced community relocations that are projected to characterize the 21st century, where entire communities as opposed to individuals will move.

Based on case studies from Alaska and the Russian Far East, the paper explores the range of community responses to state-induced relocations. The authors argue that a major limitation to full recognition of community agency is the availability of sources, with the written sources of earlier relocations often muting the range of community reactions. Still, even where documentation is available, it is clear that agency does not necessarily entail political power; thus, the specific constellations of input and decision-making power need to be explored. The paper closes with a call for a refined typology and understanding of relocation events that goes beyond the simplistic dichotomy of forced vs. voluntary migrations.

June 26, session 04.66: Relocation: State Inducements and Ideologies versus Strategies of Resistance and Response

Schweitzer, Peter (University of Alaska Fairbanks); **Barnhardt, Ray** (Alaska Native Knowledge Network, University of Alaska Fairbanks); **Kaplan, Lawrence D.** (Alaska Native Language Center, University of Alaska Fairbanks): *The Inuit Regions of Alaska*

The Inuit regions of Alaska are defined as the North Slope Borough, the Northwest Arctic Borough, and the Nome Census

Area. Together, these three regions constitute the homelands of the Inupiat, situated in subarctic and arctic environments and inhabited by ca. 25,000 people in an area of over 420,000 km² (which is about the size of Germany, Belgium and The Netherlands taken together). One or more of the indicators for each of the domains developed in the Arctic Social Indicators report will be applied to the Inuit regions of Alaska. The paper will present some of the differences and similarities among the three regions and, wherever the data allow it, within the regions.

June 24-25, Session 03.63: ASI – Arctic Social Indicators

Scobie, Willow (University of Ottawa): *Mediating Organizations, Dynamics, and Processes: Inuit Youth and Post-Secondary Education*

Analyzing policies and programmes that variously foreground their status and needs as individuals and collectivities, this paper explores the complexities of institutional and organizational resources and hurdles Inuit students must negotiate in pursuit of post-secondary education in Canada.

June 23-24, session 09.01: Schooling in the Arctic

Sebastian, Ciara (University of Regina): *Evaluating Canada's Commitment to Arctic Governance*

The Arctic Governance Project's Final Report, "Arctic Governance in an Era of Transformative Change: Critical Questions, Governance Principles, Ways Forward" was released in April, 2010. The Report critically examines existing Arctic governance arrangements and recommends adjustments and new arrangements that will ensure the future of functional, co-operative Arctic governance. The Report recommends the increasing involvement of non-state actors in Arctic governance. However, it recognizes that international influence still rests with the sovereign state. Therefore, the Report relies on sovereign states taking up the recommendations of the Report and adjusting their arctic policy to improve Arctic governance.

The Government of Canada released a new comprehensive social, economic, and foreign policy document in 2009. "Canada's Northern Strategy: Our North, Our Heritage, Our Future" identifies four areas of importance to the Canadian North: "exercising our [Canada's] Arctic sovereignty, promoting social and economic development, protecting the North's environmental heritage, and improving and devolving northern governance." A "Statement on Canada's Arctic Foreign Policy", building on the "Northern Strategy" and suggesting means of promoting the Strategy internationally, was released in August 2010.

This study analyzes existing Canadian Arctic Policy to determine the extent to which Canada's current Arctic Policy aligns with the recommendations of the Arctic Governance Project Report. This study then seeks to identify areas where improvement is possible and to suggest alterations to Canada's existing policy that would bring Canada closer to meeting the recommendations of the Arctic Governance Project Report.

June 24-25, Poster Sessions

Seyfrit, Carole L. (Radford University); **Bjarnason, Thoroddur** (University of Akureyri); **Olafsson, Kjartan** (University of Akureyri): *Large-Scale Development and Migration Intentions of Icelandic Youth*

Regional development strategies in Iceland include building a large aluminum smelter and hydroelectric plant in the sparsely populated Eastfjords area aimed at revitalizing the rural region and creating employment, enabling youth to stay in home communities. Using surveys that span the pre-development, construction, and operation phases, this study compares migration intentions of Icelandic youth in Eastfjords, Westfjords far from the project, and the urban capital area of Reykjavik. Regardless of employment opportunities, rural youth increasingly want to move to urban areas or abroad. Gender differences that were apparent in the pre-development survey, disappeared in the later time periods. Findings indicate that large scale development projects are not sufficient to decrease rural youths' desire to leave their home communities.

June 24-25, Poster Sessions

Shadian, Jessica (Bodø Graduate School of Business): *Post-Sovereign Governance: An Inuit framework for Arctic Resource Management*

A central facet embedded in the recent debates over who owns the Arctic is the less than obvious assumed role of the Inuit in the future political architecture of Arctic governance. While the Arctic is owned and governed by 8 Arctic states it is equally governed by a myriad of local indigenous models from local villages to an entire island. Together, all of these political bodies,

state and non-state alike participate in the ownership and management of the Arctic's abundant resources. These interdependent levels of resource management and ownership that has come to constitute Arctic politics brings to question the efficacy of traditional IR theory which assumes that state as the sole creators and enforcers of resource management and policy.

This chapter will examine the contributions that Inuit indigenous co-management regimes in the Arctic impart on the ongoing debates over who owns the Arctic and who should decide. For social scientists interested in regional ecosystem management, instances of existing Inuit co-management practices are becoming an increasing norm in theoretical inquiry and practice and this extends well beyond the Arctic. Therefore, this chapter will situate practices of Inuit resource management within the broader literature on post-sovereign governance to explore the ways in which indigenous co-management can contribute to these ongoing academic discussions. Finally, this chapter will use these examples to engage the broader debates over who owns the Arctic and who decides in a milieu where politics is no longer the sole privilege of states. With the addition of new political actors from the local to the international and transnational level how can Inuit post-sovereign resource management practices be applicable for rethinking the traditional top down manner which global governance has for so long dominated policy practice?

June 23, session 05.67: Consultation in Arctic Extractive Industries Development: Lessons learned for Arctic resource governance from the local to the international level

Sigfússon, Ingólfur (Arctic Portal): *UArctic Atlas - Online Encyclopedia*

The UArctic Atlas is a comprehensive online encyclopedia on Arctic related information. Its main objective is to provide education and stimulate outreach of scientific Arctic related information in easily accessible and comprehensible visual form. Traditionally, only text based scientific information has reached a fairly narrow audience making the Arctic related information invisible for the non-scientific community. The Arctic Atlas aims at narrowing the gap between the scientific community and the public making the information more accessible to all levels in the society to the most current scientific information.

The Atlas uses the state of the Art online mapping technology to visualize originally text-based information. The research outcomes are presented in easily adjustable interactive graphical images enabling easier analysis as well as comparison of the data in connection to the Arctic as a whole or specific regions.

The research presentation in highly interactive graphical manner is a new approach to scientific material. The traditional installation of the research data in written form serves particular scientific community, but restricts the general distribution of information. In the times when the Arctic climate is increasingly changing having unforeseen impact on both Arctic and southern communities, it is highly important that the stakeholders in these communities have access to the most recent and relevant information available.

June 23-24, session 09.01: Schooling in the Arctic

June 24-25, Poster Sessions

Sigurðardóttir, Árún K. (School of Health Sciences, University of Akureyri): *Focusing education for elderly people with diabetes*

Background: Prevalence of diabetes is increasing. Type 2 diabetes is related to obesity and increased age. It is assumed that around 16% of 80 years old, Icelandic men have diabetes. Education is regarded as an essential part in diabetes care and clinical guidelines in diabetes care recommend using empowerment approach in diabetes education.

Methods: Instruments measuring knowledge, self-care, empowerment, well-being and distress were translated into Icelandic, according to internationally accepted guidelines. The questionnaires were tested in a cross-sectional study and used in an educational intervention study. Both studies received permission from the national Bioethical Committee.

Results: Participants were 143, 53 diagnosed with Type 2 and 90 with Type 1 diabetes. The mean age for people with Type 2 diabetes was 60.5 years and for Type 1, 38.2 years. Comparing groups with Type 1 and Type 2 diabetes showed that people with Type 2 answered fewer items right on the Knowledge Test ($p = 0.0001$), had less understanding of diabetes and its treatment ($p = 0.001$) and were less able to fit diabetes into their life in a positive manner ($p = 0.09$). Higher education was associated with better glycaemic control, when comparing university degree with elementary education.

Conclusions: In clinical practice health care practitioners should be aware of the needs of older people with Type 2 diabetes for increased education. It is argued that older people require more education and support to manage diabetes, as recall of newly encountered information seems to decrease with age.

June 22-23, session 06.40: Best practices for community engagement in health promotion research and population health practice - lessons from the North

Sigursteinsdóttir, Hjördís (University of Iceland/ University of Akureyri Research Centre): *Economic depression and its impact on living conditions and well-being of employees of municipalities in Iceland*

Employability and having a job is one of the major factors influencing quality of living conditions and well-being. The municipalities in Iceland play a significant role as employers, and municipalities, as a whole, are one of the biggest employers in the country. About 11% of the workforce in Iceland is employed by the municipalities. One of the largest singular expenditure for the municipalities is salary cost, with about 50% of their total expenditure. Many municipalities are now facing the fact that they need to reduce the salary cost and this can be achieved through various ways such as restructuring, voluntary retirement and lay-offs.

It is generally assumed that organizational downsizing has considerable negative consequences, not only for employees that are laid off, but also for those who remain employed. Due to the economic depression, the available alternatives in the labour market are poor and it also affects employability for the employees of the municipalities with unfavorable consequences of job insecurity for employees' well-being.

In my presentation I will report results from an online survey conducted in March 2010, among employees of 20 municipalities in Iceland where we asked e.g. about job insecurity and job satisfaction. The results from the survey suggest that job satisfaction is relatively high although almost half of the participants have experienced changes at workplace and most of them believe that they will not lose their jobs. The survey will be re-conducted next March and in my presentation I will also discuss changes in attitudes between surveys.

June 26, Session 03.75: Living conditions and well-being

Simonova, Veronika V. (University of Aberdeen): *Nocturnal fishery between memory and law in an Evenki village, North Baikal, Siberia*

Nocturnal fishery has a contradictory status both in local Evenki communities and in water law in the North Baikal region. Local residents in an Evenki village experience a nocturnal aquatic landscape during fishing, and in remembering nocturnal fishery as part of their customs. Furthermore, they accept nocturnal fishery as an emotional life since this practice involves experiences such as particular skills, social gatherings on the shore of the local lake (Irkana), and sharing a nocturnal aquatic landscape.

Although nocturnal fishery is officially forbidden by environmental law, local residents accept it as their ordinary life as long as they remember this activity belonging to their ancestors in the past. Local fishers hope to compromise its illegal status one day. In my presentation I would like to raise a question of correlation between social memory and water law in relation to Evenki nocturnal fishery. In this particular anthropological context memory and law collide in a specific way. If memories are important for local residents while constituting relationships with the environment, they mean nothing in front of the face of water law. The focus of this presentation is the collision between how local residents use memory to support their activity and experience of a nocturnal aquatic landscape and water law power which does not consider memories as a good evidence for recognising local practices on an administrative level.

June 23, session 02.36: Northern fisheries: managing income, nutrition and cultural values

Siragusa, Laura (University of Aberdeen): *Vepsian education: strengths and weaknesses*

The Vepses are a legally recognised Finno-Ugric minority of Russia and an indigenous group of Karelia, North-West of Russia. Since early 1990s, the Vepsian (and not only) activists with the assistance of the government institutions have promoted an educational program, which aims to develop and maintain their native language and culture. One of their main achievements is to have established formal Vepsian education at school. This means that children can study Vepsian language since their second school year and, if interested, can continue studying their mother tongue up to university. Although ideal on paper, the success of the program depends on a number of factors, which involve both the bodies in power and the

communities, where the Vepses dwell.

Three different levels of power are involved in the program, i.e. the Federal, the Regional and the Municipal powers. While university education is under Federal control, primary and secondary schools are subject to Regional educational institutions. The nurseries, instead, are controlled by Municipal administrations. This division of power, however, does not facilitate effective communication and/or guarantee educational continuity. Bureaucratic and even personal issues can at times interrupt the predetermined educational flow.

Since the Vepses dwell in a multiethnic territory, the attitude held by their neighbouring groups towards Vepsian language and culture, also play a determinant role in the success of the program.

With this paper, I aim to display where the Vepsian educational program has been successful depending on both social and governmental factors and where there is still room for improvement.

June 23-24, session 09.01: Schooling in the Arctic

Sköld, Peter (Centre for Sami Research, Umeå University): *The challenge of indigenous demography*

There is a range of notions embraced by indigenous peoples that include understandings of their number, of their geographical area, of their societal structure, of limitations and definitions, and of the foundation of identity that do not represent the indigenous reality. The result is sometimes exclusion, and sometimes alienation from the indigenous culture. Acknowledging the negative effects that can be associated with ethnocentric perspectives, there is an overwhelming need for inside perspectives when demographic categories are discussed. This qualitative dimension is not only a prospect for a more culturally correct understanding and description, but it also has the ability to bring changes into related contexts. This paper discusses the historical and contemporary context of indigenous demographic categorization, with an aim to improving our possibilities for comparison, revision, and development.

The intersectional structure related to demographic research of indigenous peoples has mainly three critical challenges. One is the complicated meeting between quantitative and qualitative methods, representing widely different research traditions. Efforts from both sides have resulted in innovative and complex research design where mutual strengths are promoted and the reduction of disciplinary limitations essential. Another is the relation between the historical and the contemporary context, with geographical variation as an additional complicating factor. A third challenge is the inside and outside understanding of complex indigenous societies. Externally produced censuses, surveys and administrative data are too often inaccurate when it comes to reflection of indigenous social structures.

June 23, session 04.11: Identity Making in the Border Regions of the European North

Smiarowski, Konrad (CUNY Graduate School): *Humans and Environment – Recent Zooarchaeological Investigations of the Norse Eastern Settlement in Greenland*

Recent archaeological excavations in the former Norse Eastern Settlement in Greenland resulted in new faunal collections from coastal and inland settlements. These new data sets add to the understanding of animal husbandry practices of the Scandinavian farmers, and for investigation into the natural resource use in this marginal environment. Seal, caribou, walrus, and sea bird hunting were an essential part of the Norse exchange economy and a critical addition to the pastoral farming, the integral part of Norse communal identity.

Seal hunting in particular played an important role in the colony's food procurement strategies since the earliest settlement phase, at both coastal and inland farms. A shift in ratios of local to migratory species taken by the Norse hunters, and sealing intensification starting around 1250 AD was observed in the zooarchaeological record. This change correlates with contemporaneous climatic alteration in Southwest Greenland that resulted in the increased amounts of summer drift ice that affected the local seal colonies and productivity of low lying Norse pastures significantly.

Changes in distribution of bones of various seal species in Norse middens can serve as a proxy climate indicator for reconstruction of the human-environment interactions through time. The seal archaeofauna reflects past human economic organization and communal management of natural resources, with a major change caused by a climatic fluctuation around 1250 AD.

June 24-25, Poster Sessions

Smith, Courtland L. (School of Language, Culture, and Society, Oregon State University): *Resource Variability, Community Stability, and Adaptive Capacity*

Adaptive capacity is the ability of a community to cope with changing situations. One of the concerns about peoples who depend on marine, particularly fish, resources is the relative stability of communities over time. Looking at what is known about salmon resource variability in the Northeast Pacific, especially the Oregon Coast, Columbia, and Fraser River basins, what might be the characteristics of communities that have lived for long periods with resource variability? One hypothesis is that they were culturally skilled in resource shifting and substitution. Another hypothesis is that spiritual practices, like the first salmon ceremony, limited fishing effort well below overall resource productivity. In addition, community stability may come from sovereignty over or ownership of resources. A fourth hypothesis is that community stability is a concept imposed by perspectives from societies that depend on agricultural stability and have an incomplete historical record. Data to test these and related hypotheses are scattered and fragmented in the archaeological record, contemporary examples, harvest and stock records, and data from fishery biology. Collaborations between archaeologists, ethnographers, historians, and fishery scientists to improve evidence available to test these hypotheses and could increase our understanding of community adaptive capacity.

June 22, session 02.25: Salmon Fishing and Whaling Peoples of the North Pacific

Southcott, Chris (Lakehead University; Yukon College): *Measuring the Impact of Resource Development: ReSDA and Baseline Indicators*

Funding has recently been announced for the Resources and Sustainable Development in the Arctic (ReSDA) project, one of the largest Arctic social science projects ever developed. In its initial stages one of the main types of research questions that ReSDA subprojects will be dealing with is how to measure the impact of resource development on Arctic communities. This objective mirrors the work of previous initiatives such as SI-AON and the Arctic Social Indicators project which attempt to find a series of indicators that would allow for an evaluation of impacts of social change in general. Building on the work of these earlier initiatives, one of the first initiatives that ReSDA is supporting is an attempt to respond to one of the main conclusions of the ASI project: the need for in depth case studies of the practical development and use of baseline indicators to measure social change in the North. Working with the Inuvialuit Regional Corporation (IRC), ReSDA researchers will examine a range of baseline indicators, including a series of in-house IRC research initiatives, in an attempt to develop a series of practical indicators to measure resource development impacts.

June 24-25, Session 03.63: ASI – Arctic Social Indicators

Southcott, Chris (Lakehead University/ Yukon College): *Barriers to the Social Economy in Canada's North*

Canada's North has undergone tremendous social, cultural, and economic change over the past 60 years. These processes have resulted in many unique challenges which require new approaches that serve to assist these communities ensure healthier and sustainable futures. One of these new approaches is that of the social economy. This paper is part of an ongoing attempt to provide a "portrait" of the social economy in the region highlighting the main problems these organizations face. It will summarize the results of two questionnaire surveys undertaken across the region during the period 2007 to 2010. Main findings include capacity issues within communities and capacity issues within territorial governments.

June 25-26, session 03.70: The Social Economy and Community Economic Development in the Circumpolar North

Sparrow, Elena B. (International Arctic Research Center, University of Alaska Fairbanks): *Research Partnerships in Science Education in the Arctic*

Engaging pre-college students in scientific investigations as a way of learning science is accomplished through partnerships: scientist - teacher, scientist- class, scientist –students; elder or local expert-class; class-class. Several ongoing place-based projects such as the EPSCOR Alaska Rural Research Partnership (ARRP) program, the Global Learning and Observations to Benefit the Environment program, the Schoolyard Long Term Ecological Research project, the Monitoring Seasons Through Global Learning Communities project exemplify these research partnerships. By conducting their own inquiries and investigations, students feel empowered to be just like scientists, making observations, asking their own questions, designing experiments to answer their questions, analyzing their results and communicating their findings. Students present their studies locally, statewide, nationally as well as internationally. Students from early primary through secondary school grade levels in urban and rural schools have successfully entered into research partnerships and conducted their experiments. Student assessments have shown increased science content knowledge and science process skills as well as increased interest in science. Long-term support for students and teachers includes mentoring, science equipment and supplies. Additionally, in the ARRP program, travel support and scholarships for postsecondary schooling are provided when a student successfully

conducts a study and presents it at a regional or state science fair or at the statewide high school science symposium. Majority of ARRP students graduate from high school and go to college. Teacher professional development workshops are provided on scientific measurements in different areas of investigation, learning activities, best teaching practices such as inquiry, and time for planning classroom implementation.

June 23-24, session 09.01: Schooling in the Arctic

Stammler, Florian (Arctic Centre, University of Lapland): *The challenge of finding, interpreting and not-finding useful data on Arctic Social Wellbeing in Yamal*

This presentation reports on work in progress on 'testing' each of the 6 preliminarily defined Arctic Social Indicators in Russia's Arctic region of superlatives: YNAO has the largest reindeer herding, the largest gas extraction economy, is among the richest Arctic regions (with a GDP per capita matching G8 countries). The available statistical data on the region shows a steady improvement of all principal indicators over the last decade, including cultural variables. However, revisiting this data shows how easy it is to give in to the impression that problems have been solved and challenges met. Fieldwork in the northernmost area of the Yamal Peninsula shows how far away nice-looking figures are from the lived reality of Arctic nomads, and how easy it is to forget those people who are NOT represented by the data that is available from statistical offices and authorities. The point where numbers and lived experience meet is in the narratives of those that gather data and the local level, who are in direct contact with those biographies from which data originate, as the Yamal example shows. Therefore we argue for a careful annotation of each proposed indicator not only for comparability of available quantifiable data, but also for the extent to which data may or may not represent lived realities of inhabitants in the Arctic.

June 24-25, Session 03.63: ASI – Arctic Social Indicators

Stammler, Florian (Arctic Centre, University of Lapland); **Shadian, Jessica** (High North Center for Business and Governance, Nordland University); **Wilson, Emma** (International Institute for Environment and Development): *EIWG between industry, local residents, and NGO's: where we come from, where we are, and where we want to be*

This presentation gives a short summary of how the extractive industries working group of IASSA has formed, how it was positioned, what were the main ethical, practical and academic problems involved and what main tasks stand before us. The presentation will be held as shortly as possible to enable ample time for discussion among all participants present. The crucial background for this discussion will be provided by explaining EIWG's charter that was extensively discussed among EIWG members as well as in the IASSA council, before it was approved in June 2010. Some of the ethical problems involved in positioning a group of scholars in close interaction with powerful lobby groups such as NGO's, politicians and companies will be introduced and suggested to the audience for discussion. Attempts to establish EIWG as an internet-based exchange network have failed so far, and possibilities for reviving that idea, e.g. under the umbrella of the Arctic Portal, shall be considered in the presentation. Finally, possibilities to link EIWG member's expertise more closely for exchanging experience with consultation in industrial project shall be explored.

June 23, session 05.67: Consultation in Arctic Extractive Industries Development: Lessons learned for Arctic resource governance from the local to the international level

Stammler-Gossmann, Anna (Arctic Center, University of Lapland): *Linking Arctic natural resources, environmental changes and economies: Fishery in the Murmansk region*

The Northwest Russian fishery complex encompasses different components of the value chain: harvesting, processing, production of fishing gear, construction and repair of fishing vessels, grid organisations, education, research and retail consumer use. The Soviet economic sector principle in the fishery, as other industries, integrated various support branches with the core economic activity. This included even health and child care for the sector's employees and their families. The significance of the fishing industry has been severely reduced in the post-Soviet period, but also nowadays the Barents Sea fishery constitutes one of the backbones for the economy of the Murmansk region. The paper investigates the northwest Russian fishery sector of the past and present in the reflexive context of social, political and economic changes in human-environmental interaction that go beyond the resources. The study analyses the intersection between environmental and human systems with concern over the ways in which biophysical changes have been perceived and negotiated in the Russian fishery sector. This paper is based on fieldwork carried out in the Murmansk region and in the Northern Norway.

June 24, session 02.58: Human Aspects of Fisheries in the Arctic Coastal Regions

Stammler-Gossmann, Anna (Arctic Centre, University of Lapland): *Pleasure with profit or profit with pleasure: The concept of travelling abroad in Russia*

After the fall of the Soviet Union travelling abroad has gradually become a common place among ordinary Russian citizens. However, taking the possibilities of spending holiday in another country is still associated with the ‘justifying’ of the travel costs. The contemporary ideas of leisure time are traced back to the Soviet concept of the ‘useful’ holidaymaking. It can imply the combining of berry picking with the ‘sauna’ pleasure in Finland or ‘shub’/shopping tour (shuba: mink coat) in China or Greece, summer/winter sale tourism with visiting places other than home as well as sightseeing with immaterial ‘profits’ like of visiting children studying abroad or with medical treatment. This paper analyses the post-Soviet travel mobility of the Northern residents as a powerful idea of balancing profitability with the new impressions in the outgoing tourism. In doing so, I examine different types and dynamics of travel mobility in the context of wider regional and global forces.

June 24, session 04.34: Movement for Pleasure – the Pleasure of Moving

Steinberg, Philip E. (Florida State University): *The Slippery Nature of Arctic Ice: UNCLOS' Article 234, Canada's Arctic Waters Pollution Prevention Act, and the Challenges of Arctic Exceptionalism*

In Canada, as throughout the world, policy makers have tacked between constructing the Arctic is officially designated as an unexceptional space. Like the rest of the world, it is designated as consisting of a patchwork of land parcels bounded into state territories, interspersed with marine regions governed by the framework established under the United Nations Convention on the Law of the Sea. However the history of Arctic governance initiatives is laced with perspectives that implicitly (or, in some instances, explicitly) recognize the Arctic as an exceptional space whose unique characteristics – including its geophysical properties, its distance from southern capitals, its indigenous population, and its environmental fragility – mandate alternative management regimes.

This paper focuses on how the icy-covered nature of the Arctic is used to construct a mediated version of Arctic exceptionalism. Although proponents of this view seek only mild adjustments to the norms of the state system, these exceptionalist narratives strike at the heart of some of the core geophysical and conceptual underpinnings of sovereignty and thus may have a number of unanticipated consequences.

June 25-26, session 05.35: The Political Organization of Arctic Space

Stepien, Adam (Northern Institute for Environmental and Minority Law, Arctic Centre, University of Lapland/ ARKTIS Graduate School): *Arctic indigenous peoples as development aid donors. Responsibility, legitimacy and capacity within the indigenous-to-indigenous cooperation*

Within the last two decades, indigenous peoples in the Arctic have undergone the process of empowerment and acquired organizational capacity. Simultaneously, indigenous population in the Global South became a distinctive target group for the development aid interventions. These two processes brought about also the phenomenon of indigenous-to-indigenous assistance. The Northern peoples provide the Southern indigenous groups with their experience, act as the implementers of aid projects and even as financial donors. Themes such as land claims, organizational development, relationship with governments, and the best practice exchange dominate the field, but the cases of humanitarian aid or the support for cultural and economic activities are also present. From the perspective of indigenous to indigenous cooperation, the issues of Northern indigenous capacity, legitimacy and responsibility will be discussed. What are the rationalities behind the Arctic indigenous involvement in the sphere of development assistance? How do they see their role in the development aid undertakings and how is it perceived by others? Are Arctic peoples perceived still as peers or rather already as representatives of developed nations? Various studied examples from Nordic states and Canada show great diversity in the assistance provided and in the historical evolution of the idea for the indigenous to indigenous assistance. The relationship between the cooperation on international level (e.g., within UNPFII) and the provided assistance is also visible.

June 23, session 05.53: Polar Law, Human Rights and Social Sciences

Strauss, Hannah (Thule Institute, University of Oulu): *Resource exploitation and the negotiation of legal procedures in the Arctic – a research proposal*

This presentation outlines a research plan that involves empirical research and that seeks collaboration among researchers in the circumpolar North in order to facilitate a discussion on the question of how legal procedures are negotiated in the Arctic. More specifically, it will be argued that the siting of large scale mining projects and oil and gas development in the North,

which have a significant and long-term impact on local communities, broadly adopts legal cultures which are not genuinely indigenous. While these “borrowed” (Wiener 2001) regulations and procedures may satisfy “southern” and a global environmental conservation interest, conflict may arise from movements that wish to establish culturally, politically and regulatory autonomous regions in the North. It will be hypothesised that the recognition of indigenous legal order(s) may largely be incommensurable with current efforts to build a common legal architecture for the Arctic that allows for the securitisation of resources and environmental protection at the same time.

This projects aims to study the conceptualisation(s) of an Arctic legal culture, its institutional system, and the geopolitical conflict over access, territory and resources. In the following, conceptualisations will be scrutinised against the background of ongoing and past mining projects. Here, focus will lie on the interaction between industrial companies and local people. This requires the conduct of a number of interviews with key actors in the Arctic, i.e. policy makers, legal experts, representatives of extractive industries, local communities and indigenous NGOs. A more specific research agenda will be presented and opened for discussion at the conference.

June 23, session 05.67: Consultation in Arctic Extractive Industries Development: Lessons learned for Arctic resource governance from the local to the international level

Strokanov, Alexandre (Lyndon State College): *Hyperborea and the Golden Age: ancient myths, modern historiography and new data*

In my paper (presentation) I will analyze both myths: Hyperborean and the Northern Golden Age. I believe that combining together both these myths we can better understand their origins and distinguish a “rational grain,” if such may be found in these legends that in one or another form may be found in different cultures (ancient and contemporary) in area from the Northern Europe to Iran and India.

My research begins with analysis of texts of Ancient Greek and Roman authors, identification of different versions of the Hyperborean myth and placing the Hyperborean land on the map of Eurasia. Already this textual analysis as well as purely geographic approach provides us with some interesting discoveries and gives birth to several hypotheses regarding this mythical land. Geographical approach will be further developed through analysis of several ancient, and early modern maps like Mercator’s maps of the Northern parts of the world as well as the Northern polar areas.

The second part will be devoted to a modern revival of the legends of Hyperborea and the Golden Age, and historiography of it through analysis of works of Jean-Sylvain Bailly (1736-1793), William Fairfield Warren (1833-1929) *Paradise Found—The Cradle of the Human Race at the North Pole* (1885), Bal Gangadhar Tilak (1856-1920) *The Arctic Home in the Vedas* (1903), Hormusjee Shapoorjee Spencer *The Aryan Ecliptic Cycle: glimpses into ancient Indo-Iranian religious history 25628 BC-292 AD* (1965), Timothy P. Bridgman *Hyperboreans. Myth and History in Celtic-Hellenic Contacts* (2005) and several others.

The final part will be based on contemporary toponymic researches conducted in the northern regions of the European part of Russia, archaeoastronomic research made on site of Arkaim also known as “Swastika City” which was discovered in Southern Urals in 1987. There also will be discussed results of a number of expeditions conducted by Hyperborean enthusiasts in north-western regions of Russia.

June 24-26, Session 07.32: Imagining the Supernatural North

Suslov, Mikhail D. (Russian Institute for Cultural Research (Moscow)): *Constructing the ‘Hyperborean Identity’: Genre of the ‘Slavic Fantasy’ in Modern Russia*

This paper discusses modern uses of the Hyperborean myth in Russian science fiction and ideology. I examine mostly the relatively new genre of ‘Slavic fantasy’ and its interrelationship with the new ideological developments in the Russian society towards nationalism. The Hyperborean myth reverberates in the ideas of the so called ‘Russian Doctrine’ (aka ‘Sergius Project’), elaborated by such heavyweights of political journalism as Alexander Dugin, Mikhail Leont’ev, Egor Kholmogorov, Mikhail Iur’ev, and Natal’ia Narochitskaia. These ideologists try to mold a new Russian identity, larger than a national one, utilizing the following intellectual practices: 1) representing the Russian people as more ancient than any European nation whatsoever; 2) representing the Russian people as the most racially pure, untainted posterity of the ‘Arian race’; 3) equating the Russian nation with the ‘Russian civilization’, supposedly possessing the most universally human and even supernatural qualities.

These strategies and ideas were eagerly picked up by the authors of the ‘Slavic fantasy’, which is a balm to the hurt pride and great-power expectations of the average Russian reader. Such authors as Valerii Demin, Alexander, Anatolii Abrashkin, and Iurii Nikitin closely associate Russia’s past with mythical Hyperborea, which is pictured as a cradle of the humanity, peopled

by extraordinarily tall, mighty and crafty super-humans. In my paper I inquire into the ways in which the ideological construction of the 'Hyperborean identity' of Russia influences the 'Slavic fantasy' and forms an 'imaginary community' of millions of its readers.

June 24-26, Session 07.32: Imagining the Supernatural North

Sveinbjörnsdóttir, Sigrún (University of Akureyri); **Porsteinsson, Einar Baldvin** (University of New England, NSW, Australia); **Lingam, Gowinda** (University of the South Pacific, Fiji): *Comparative, cross-cultural youth studies: Adolescent coping in Iceland, Australia and the Fiji islands*

How young people react to and solve general hassles is believed to affect their health and well-being. Thus, in adolescence, adaptive coping may function as a protective factor and maladaptive coping as a risk factor on daily basis. Consequently, in constructing coping-related evidence based prevention approaches or programs, it is important to understand the nature of adolescent coping. Comparative cross-cultural studies on adolescent coping, including more than 10.000 Year 7 and Year 10 students of Iceland (homogenous population) and Australia (multicultural population) revealed through exploratory factor analysis and verified through confirmatory factor analysis an adolescent coping scale, Measure of Adolescent Coping Strategies (MACS), a five factor model of coping (seeking social support, stoicism, self-care, rumination and acting out), comprised by two dimensions (adaptive versus maladaptive). For further cultural studies on adolescent coping, and in less economically advanced countries (developing) than Iceland and Australia, the MACS was administered in Fiji, to 900 adolescents, age 13 through 17 years. In this paper, the MACS will be presented and similarities as well as differences in adolescent coping across the three countries.

June 25, session 03.54: Arctic Children and Youth in a Global Perspective

Tasch, Jeremy (Towson University): *Beyond Sovereignty? Constituting the Arctic in a Re-Politicizing North*

The Arctic is increasingly moving from the periphery to the mainstream of global politics. Arctic stake- and rightsholders are consequently considering opportunities as well as challenges to maintain, transform, disregard, or adapt to a state-centric Arctic. As the Arctic is more broadly perceived as impermanent, changing, and accessible, state territorialization in the Arctic region is clearly not given, but rather constituted through complex, overlapping, and in some cases contradictory practices. Numerous practices operate in the formation of territorial sovereignty, including the stabilization of state boundaries, consensus on the process of delimiting state boundaries, the recognition of territory as sovereign, and the conferring of rights and responsibilities onto sovereign territory.

The success of sovereignty as an organizing regime in the Arctic has much to do not only with its territorial underpinnings, but also through the coincidence of boundaries with spheres of authority. The boundaries, for example, between Circumpolar First Nations and territorial nationalism, or between Westphalian and international heritage reserves (cf. Antarctic System Treaty) are not straightforward and require multilateral consideration and negotiation. Consequently, while territorial sovereignty is important, it is one among several competing principles for state relations in the Arctic. This paper, by exploring strategies deployed by Arctic stake- and rightsholders to construct Arctic governance options, thus contributes to better understandings of how the state-territorial ideal is coalescing in the Arctic.

June 25-26, session 05.35: The Political Organization of Arctic Space

Tejsner, Pelle (University of Aberdeen): *A whaler's "CATCH 22"*

In Qeqertarsuaq, west Greenland, local disagreements about the assignment of annual whale quotas for beluga and narwhales often feature as a source of conflict between full-time and pass-time groups of hunters. Catch entitlements are based on a complex set of legal definitions, which has created subgroups among otherwise, commonly unified whalers, since focus is exclusively on user, access and distribution rights. The quota scheme is based on biological research methods which local hunters often express grievances about while arguing that daily forays as opposed to aerial surveys remain the critical foundation for knowing the size of relevant whale populations. In seeking to negotiate customary flensing and sharing practices, as opposed pre-designated assignment of quotas, conflicts often ensue about the newly imposed rights associated with respective groups of hunters and recently the Self-Rule authorities have aired exclusive access to the quotas for fulltime hunters. This paper explores how Qeqertarsuarmit whalers and fishermen seek to navigate and accommodate decisions of a whaling regime alongside traditional values and beliefs in a time where Arctic coastal communities are already faced with numerous other challenges such as the experiences of rapid weather changes and dwindling ice conditions. I argue that the differing, often conflicting, views about whales and whaling as these are expressed among local and non-local interest groups, inform many of the rudimentary differences found in contemporary wildlife management regimes and that a more holistic

approach to whale management should be pursued.

June 23, session 02.36: Northern fisheries: managing income, nutrition and cultural values

Tejsner, Pelle (University of Aberdeen): *The wind is stronger now': Kalaallit Inuit counter-narratives about sea ice in Disco Bay*

Kalaallit Inuit harvest has centred around use of seasonally occurring ice for access to renewable resources across many generations. In Qeqertarsuaq, Disko Bay, the ice is of particular significance to local households because it represents an essential platform from which to gain everyday access to important hunting grounds. Recently, however, a crisis-narrative has gained international currency although it often portrays local residents as vulnerable, exposed or 'at-risk' communities and essential obscures local voices. Based on data collected from working alongside local hunters on everyday hunting and fishing forays over a one-year period of fieldwork, I discuss use of the ice among Qeqertarsuarmit as a source for maintaining subsistence livelihoods. Local voices range from expressions of concern about changes to seasonal ice conditions to not being so worried about the effects of environmental change and how these affect shorefast and floe edge harvest routines. But what are we, as researchers, to make of contradictory observations as they arise during fieldwork and more importantly, how do we create counter-narratives to the otherwise dominant crisis-narrative about climate change, through our work with local informants? I argue that everyday interactions with sea ice rests on an ontology of openness and seasonal flexibilities in harvest strategies, which present us with rich and diverse counter-narratives. Finally, I ask whether the vocabulary of risk, often associated with crisis-narratives about Arctic climate change, remains applicable to such diverse settings as international climate change forums and local arctic communities, while still remaining meaningful to the latter?

June 24, session 01.27: The Human Dimensions of Change to Arctic Sea Ice

Tennberg, Monica (Arctic Centre, University of Lapland); **Sinevaara-Niskanen, Heidi** (Faculty of education, University of Lapland); **Stammler-Gossman, Anna** (Arctic Centre, University of Lapland); **Vuojala-Magga, Terhi** (Arctic Centre, University of Lapland); **Rakkolainen, Maria** (Arctic Centre, University of Lapland): *Governing the uncertain: a practice theory approach to climate change adaptation*

This paper discusses adaptation governance for climate change from the perspective of practice theory and applies it to two very different cases of Finnish and Russian Arctic. Both regions, their peoples and environments, are considered to be vulnerable to impacts of climate change, but these regions might also benefit from new development opportunities made possible by warming climate. This paper suggests that the uncertain future of climate change and its impacts in the Arctic is made through practices "governable" and "governed". Through practices of governance "at distance", a range of societal actors become involved in adaptation governance, with varying relationships to the state, through plans and strategies of adaptation. In addition to "distant" governance, "intimate" governance works by dispersing involvement in adaptation governance into the communities by everyday interactions between local decision-makers and other actors. There are also emerging practices of "close" governance. Through ethical self-creation, as practices of the self, people make themselves subjects and objects of climate change adaptation and its governance. These political processes of adaptation governance will be discussed in a study made by a group of political scientists and anthropologists at the Arctic Centre, University of Lapland. Since adaptation governance is to larger extent based on national traditions and cultures of governance comparative studies will increase our understanding of complexities in governing adaptation.

June 22-23, session 03.57: Community Adaptation and Vulnerability in the Arctic Regions (CAVIAR): Lessons and directions for future research

Terpstra, Tekke (Arctic Centre, University of Groningen): *Mobility and Immobility in Narratives of Inuit: Stories of Greenlanders about living in Denmark*

The migration of Inuit out of the Arctic has only received marginal attention in academia. But today approximately 15.000 Greenlanders live in Denmark. In this presentation the focus will be on migration of Greenlanders to Denmark. I will do this by reflecting on interviews I conducted with Greenlanders in both Denmark and Greenland in 2009 and 2010 as part of my PhD project on Inuit outside the Arctic.

Due to historical ties, Denmark is a logical destination for Greenlanders. The migration of Greenlanders to Denmark can be defined as (post-)colonial migration. But which personal reasons do Greenlanders have for migrating to Denmark? And how do they narrate their migration to Denmark? By highlighting specificities and agency in individual migration stories, I wish to illustrate different migration experiences.

In addition to the focus on migration to Denmark by Greenlanders, return migration to Greenland and non-migration will also

be taken into account. During fieldwork I discussed migration to Denmark with both Greenlanders in Denmark and stay-behinds, amongst whom family members of Greenlanders in Denmark, and those stories are helpful in order to present a nuanced picture of migration to Denmark, but also of mobility and immobility in and out of the Arctic in general.

June 22, session 04.01: Mobility and Immobility in the Circumpolar North

Tesar, Clive (WWF Global Arctic Programme): *Voices from the wilderness: source credibility on indigenous environmental messengers*

A dominant discourse has arisen in response to mainstream public perception of Indigenous peoples' use of their environments, and their spiritual and cultural ties to the land. I used qualitative research methods to examine how this discourse affects the source credibility of Indigenous spokespersons who give pro-environmental messages. I looked at this question through the experience of one campaign where representatives of Arctic Indigenous peoples' organizations toured the United States, meeting the public and political figures to speak about climate change. Through interviews I examined the intentions and assumptions of the participants, and the perceptions of the audience members. I found that audience credibility judgements of the Indigenous speakers seemed to be affected by a stereotypical image of indigeneity. I concluded that in this case the audience's perceptions of the spokespersons' credibility were mediated to some extent by the Indigenous identity of the spokespersons.

June 23, session 01.33: Narratives of vulnerability, resilience and adaptation among circumpolar communities in the era of climate change

Tester, Frank (School of Social Work, University of British Columbia): *Socio-political Legacies of Mining in the Eastern Arctic: Mining at Rankin Inlet and Nanisivik*

There have been few operational mines located within what is now Nunavut Territory. They include the North Rankin Nickel Mine, the Cullaton Lake gold mine, the Polaris project in the High Arctic, the Nanisivik lead-zinc mine near Arctic Bay (Ikpiarjuk), and the currently operating Meadowbank gold mine near Qamani'tuaq. My remarks concern the aftermath of operations at Rankin Inlet, a mine that operated from 1957 until 1962 and the Nanisivik mine that operated from 1976 to 2002. They are based on my reading of archival records, interviews with Inuit who worked at these operations and various reports assessing their aftermath. These operations are located in very different moments of history in the movement of Inuit; from a predominantly hunting and land-based culture to a society characterized by industrial development and a Westminster-style of public administration. While there are differences in the communities these operations impacted, common themes bind them. These include: limited legacies in the development of social and human capital and alternative economic opportunities; limited contributions to physical infrastructure; and a common list of social problems, notable among them, alcohol abuse and alcohol-related domestic violence. These experiences highlight the tension between the drive for capital accumulation and the reality of social costs borne by a population with limited means. In this social and cultural context, limits to conventional liberal responses to addressing the social costs of development merit serious consideration.

June 26, session: 02.65: Collaborative scenario building regarding mining, tourism, climate change and local livelihoods in the Arctic and sub-Arctic regions

Thibault, Martin (Université du Québec en Outaouais): *Aboriginal governance of protected areas: a circumpolar perspective*

Arctic territories are since two decades the object of major initiatives aiming to protect the environment. As a result, it is in the Arctic that we find the greatest concentration of large National Parks. In several countries like Canada, Alaska, Norway, Sweden Aboriginal populations are now invited to contribute to the governance of these protected areas. For example, in Canada, an Aboriginal Affairs Secretariat was created in 1999 within Parks Canada (the national institution responsible for the creation and administration of protected areas) to facilitate the participation of Aboriginal people in the governance of Canada's natural and cultural heritage places. Since they are increasingly involved in the planning and governance of protected areas, Aboriginal communities take advantage of this situation to bring forward new initiatives aiming at promoting their cultural heritage, and that demonstrate the relationship that exists between their territory and their way of life. In this paper we will compare how Aboriginal people from the circumpolar are successful in promoting their vision of "protection", and how they try to articulate the protection of the territory with the protection/transmission of their culture.

June 22, session 07.52: «Patrimonialisation» of Arctic Aboriginals' Territories. Promoting cultural heritage within protected areas

Thomas, Annie (Interuniversity centre for aboriginal studies and research/Canada Research Chair on Comparative Aboriginal Condition); **Duhaime, Gérard** (Canada Research Chair on Comparative Aboriginal Condition, Université Laval): *Commodification of Inuit culture in arctic tourism*

In the last decades, the Inuit communities of northern Québec (Nunavik) have undergone fast and major changes notably regarding their social structure and their relationship to the world economy. Among other things this has resulted in marginalization, poverty as well as in a complexification and stratification of their collective identity. As an industry, cultural tourism addresses those issues. This makes it a rich source of information on the special interaction between Inuit culture and global modern economy, based on symbols and experience. As a matter of fact, my work illustrates and explain this interface. Furthermore, a special concern for the sense assigned by the actors to signs, representations and practices underlies my questioning.

While giving a particular attention to the paired concepts of authenticity and representation, I examine the use of Inuit culture as an economic object: its staging and packaging and its marketing. Thus, I will give a specific analysis of the arctic tourist, the touristic entrepreneur and the product itself as well as the dynamic interrelations between the three. To do so I will largely refer to empirical data collected by interviews and direct observation. The results will hopefully summarize the question by proposing large trends characteristic of the situation.

June 24, session 02.26: How can small, peripheral places profit from the booming tourism in the Arctic?

Thórarinsdóttir, Kristín (University of Akureyri): *Is action research a feasible method for improving the quality of life of residents in care homes?*

Background: The British, My home life programme, aims to support care home practitioners to optimize the quality of life of older people in care homes. The programme was launched by report of literature review relating to quality of life which was divided into eight themes

One of these themes is, the maintenance of identity.

Aim: To explore current practices in care home focused on helping residents to maintain their identity and to explore ways in which these practices can be improved.

As this was a pilot study an underlying aim was to explore the feasibility of the research method employed.

Method: Participatory action research (PAR) was chosen for the pilot study. Data was gathered in focus groups consisting of personnel in The Akureyri, care homes who entered an educational session regarding maintenance of identity. All together 44 participated.

Results: Due to many participants and time limitations the researcher could not encourage and follow up the group discussions as needed in focus group data collection. Yet that voice of residents and their family members were really heard in the groups. In general the residents and their family members felt that the care in the care homes was person centred, but could be improved.

Conclusion: The care in the homes was experienced in general as person centred by residents and their family members but could be improved. Action research is considered as a feasible method for exploring and improving person centred care in and quality of life in the respective care homes

June 24-25, Poster Sessions

Thórarinsdóttir, Kristín (University of Akureyri); **Björnsdóttir, Kristín** (University of Iceland); **Ingimundarson, Jón Haukur** (Stefansson Arctic Institute and University of Akureyri): *Usefulness and development of self-assessment in rehabilitation*

Background: A health related self-assessment based on empirical studies of patient preferences and person-centred care has been developed in Iceland and is applied in three health institutions in the country.

Aim: The main aim of the study is to develop knowledge on how the use of health related self-assessment shapes the participation of patients in rehabilitation and helps them to acquire well-being and cope with conditions and difficulties in daily life.

Method: The study is based on the ideology of person-centred approach and theories of logic of care as reflected in the practice of professionals. Ethnographic methodology will be applied in the study which will be conducted in February –April, 2011 at a rehabilitation unit at the Hospital in Akureyri where the researcher will observe interactions and activities of health care professionals and patients particularly in relation to the use of the self-assessment. Furthermore the researcher will

conduct unstructured and semi-structured interviews with patients and professionals during the study. The self-assessment which the patients write on the self-assessment formats will be a part of the data collection. Participants will be around 10 patients, 2 physicians, 7 nurses, 10 nurse assistants, 2 physiotherapists and 4 occupational therapists. Data will be analysed according to traditional ethnographic methods.

Results and conclusion of the study will be presented at the IASSA congress

June 22-23, session 06.40: Best practices for community engagement in health promotion research and population health practice - lessons from the North

Thórarinsdóttir, Kristín (University of Akureyri); **Kristjánsson, Kristján** (University of Akureyri): *The centrality of the human connection in an ideal patient participation revealed*

Background: Patient participation is one of the ideals of contemporary health care. Results of earlier concept analyses of terms integral to patient participation strongly indicate that ideal patient participation is at the same time person-centred. Yet studies show that patient participation is not always ideal. It can be constrained (and, hence, non-person-centred) when it involves communication struggles between patients and health care professionals and who do not allow the participation patients prefer.

Aim: The aim of this colloquial analysis was to analyse critically the concept person-centred patient participation from patients' perspective through a review of qualitative research.

Method: Data were retrieved from data bases and analysed and synthesised according to the integrative review method, by which the diverse attributes of person-centred patient participation were identified and contrasted both with constrained patient participation and non-patient participation.

Results: Person-centred patient participation is based on patients' experiences, values, preferences and needs in which respect and equality is central. It manifests itself via three intertwined phases/core attributes: the human connection phase, the phase of information processing and the action phase. The phases are further divided into sub-attributes/sub-stages where each presents a different degree of patient participation. The results challenge in many aspects earlier concept analyses of patient participation.

Conclusion: The human perspective is an ideal central to patient participation. This colloquial analysis could contribute the first step towards a new theoretically-grounded definition of patient participation, where not all such participation is seen, ex hypothesi, as person-centred.

June 22-23, session 06.40: Best practices for community engagement in health promotion research and population health practice - lessons from the North

Thornton, Thomas F. (University of Oxford): *How Resilient and Adaptive are Alaska Native Corporations?*

Among the most influential institutions created in the arctic are Alaska Native corporations. These hybrid institutions, spawned by the 1971 Alaska Native Claims Settlement Act, manage more than 40 million acres of land and hundreds of millions of dollars, and constitute a primary vehicle for generating dividends, investment, employment and other material, social, and symbolic benefits for their tens of thousands of shareholders and the region as whole. They are also second-generation institutions which have both shaped local and regional economies and been shaped by them. While Native corporations have proven resilient within Alaska's traditionally unstable, boom and bust natural resources economy, there are doubts as to how successful and adaptive Alaska Native corporations have been in creating sustainable livelihoods and improvements in critical areas of well-being. This paper assesses Alaska Native corporations as adaptive institutions in terms of their relationships to key livelihood assets and capital, measures of well-being (including indigenous cultural models), linkage to other levels of the resource governance system and responsiveness to socio-ecological change. Finally, it compares Alaskan Native corporations to other forms of indigenous economic organization in the arctic with an eye towards identifying the key conditions necessary to build resilient and adaptive institutions.

June 25-26, session 03.70: The Social Economy and Community Economic Development in the Circumpolar North

Thorvaldsdóttir, Thorgerdur (The Reykjavik Academy): *Situating Iceland within the Gender Equal North*

The paper explores the somewhat imaginary notion of the gender equal north which signifies a crucial element of national identity in the Nordic countries. Attributes of this are various attempts to export the Nordic gender equality model. It has even

been suggested that there is an unofficial competition going on regarding which of the Nordic countries is the most gender equal, although there is no agreement on what exactly gender equality means or how it should be put into practice. One of its trademark is the notion of the 'decent' Nordic man or the caring father, but a negative spin-off is that gender equality is increasingly being used as a marker to create divisions and draw lines between "us" – 'the-gender-equal-of-Nordic-ethnic-decent' and "others" – 'the-gender-unequal-immigrants'. It will then zoom in on Iceland where I propose a three phase division, based on prevalent but often contradictory gender images and correlated discourses on equality. I name the period from 1970-1999 'A women's/feminist era, during which Iceland made some noteworthy contributions in terms of women's empowerment. I label the era from 2000 to October 2008 'The era of masculinity'. Its defining features are two conflicting images of masculinity; the caring father and the risk taking 'Business Viking'. As for the period, post-October 2008 and the economic crash, it is tricky to pick a defining label. In terms of visible gender images, it is nevertheless tempting to pinpoint the nation's most prominent figure, i.e. Iceland's Prime minister, a lesbian woman in her sixties.

June 22-23, session 07.49: Practice Power North

Timm, Kristin (Arctic Research Consortium of the United States (ARCUS)); **Warburton, Janet** (ARCUS); **Larson, Angela** (Goldstream Group Inc., Fairbanks): *Advancing Polar Literacy through PolarTREC Teacher Research Experiences*

PolarTREC—Teachers and Researchers Exploring and Collaborating, is a National Science Foundation-funded program of the Arctic Research Consortium of the U.S. The program, which started in 2007 as part of the Fourth International Polar Year, matches K-12 teachers from across the USA with scientists for 2-8 week teacher research experiences across the arctic and in Antarctica. The goal of PolarTREC is to advance polar science education through improved teacher content knowledge and instructional practices, expand researcher understanding of the education system, and to enrich the outreach and dissemination of polar research across all disciplines.

PolarTREC is one of the most comprehensive programs of its kind. The PolarTREC model was conceived and organized according to current best practices including: pre-research training, mentoring, support for classroom transfer, and long-term access to resources and support.

In evaluation data from 2007-2009 PolarTREC teachers reported significant increases in their knowledge and understanding of numerous topics related to the polar regions, and they reported the most significant change in their knowledge, understanding, and preparedness to teach scientific methods and inquiry skills. Teachers reported using their new knowledge when they returned to the classroom. Not surprisingly teachers' use of new science practices and polar research in their classrooms increased their students', especially female students', self-reported knowledge of a range of polar science topics.

When interviewed, researchers were also overwhelmingly positive about their PolarTREC experience and over half indicated that they would, or already had, applied for another PolarTREC teacher or funded a teacher through their own grant.

June 23-24, session 09.01: Schooling in the Arctic

Tkachev, Anatoly (The Milton H. Erickson Institute of West Siberia); **Mayer, Boris** (Novosibirsk State Pedagogic University); **Topeshko, Inga** (The Milton H. Erickson Institute of West Siberia); **Bekkerov, Petr** (The Union of Itelmen Families); **Churikova, Victoria** (The Union of Itelmen Families): *Value hierarchies as a tool to outline cultures (an experience of application to the Itelmen culture, Kamchatka)*

At the moment to outline and index and then restore cultural heritage of indigenous peoples is especially urgent task. With this purpose it is possible to use different tools how to characterize different forms of human activity. In our opinion, the new innovative instrument of this formal process may be the method of co-called value hierarchies.

It's trivial to characterize this or another culture as behavioral programme. It usually includes life values, behavior norms and cultural artifacts – material works. It's assumed that life values express the most important concepts and imperatives, which are the foundation of any culture. As for norms, they describe what and how a person should or shouldn't do in different situations.

Life values and behavior norms became crucially important for conservation of indigenous and minor peoples cultures.

This method gives a data matrix as an output. It includes:

- couples of alternatives of definite human activity.

This activity may be the inner one – one or another feeling, or it may be made of elements of outside behavior;

-key perceptions;

-words-values.

This matrix is convenient to be kept in computer data bases in digital form, which enables to compare it with similar matrices

of other cultures.

June 24, session 08.23: Creative Circumpolar Collaboration across Cyberspace in the Arts and Sciences

Todd, Zoe (University of Aberdeen); **Thrasher, Anne** (Community representative, Paulatuk): *Mining, Women's Fishing Activity and Food Security in Paulatuk*

This presentation will investigate some of the historical data on women's subsistence fishing in the context of proposed mining activity in the Inuvialuit community of Paulatuk and will propose a methodology for incorporating women's environmental knowledge into broader discussions of environmental change, non-renewable resource development and human-environment relationships in the Arctic. In the community of Paulatuk, NT, store-bought foods are three times more expensive than in urban centres in southern Canada, while average household income is considerably lower than in larger centres like Inuvik. In a community that faces many pressing food security concerns, subsistence fishing serves as a way to secure household food security. Subsistence fishing also reinforces health and well-being by allowing Paulatuk residents to spend time on the land and by enabling individuals to reconnect with memories of deceased relatives. With charismatic megafauna, such as caribou and polar bears, dominating much of the discourse regarding northern land use and contestations over appropriate use of resources, women's subsistence fishing is a relatively 'invisible' activity to regulators and researchers. Research conducted in the community in 2008-2009 illustrates the importance of subsistence fishing in light of wildlife quotas, shifting environmental conditions and the current wage economy. Historically, anthropologists, geographers and others have ignored the role of women's subsistence fishing in the overall household economy. Currently Paulatuk is the site of proposed mining development that may impact fishing activity – yet little attention has been paid to how it may affect women's subsistence fishing practices or household food security. How might a focus on women's subsistence fishing better inform approaches to socio-economic impact assessments and ensure that issues such as food security are given attention?

June 23, session 02.36: Northern fisheries: managing income, nutrition and cultural values

Tommasini, Daniela (NORS- Roskilde University): *Tourism experiences in peripheral and small scale communities of Greenland*

Abstract: In a rapid changing world the Arctic, a very attractive, unique and fragile environment, has become a fashion destination. Surveys of tourist's motivation confirm the tendency to experience faraway places and have a once in a life time experience, consequently the demand for new forms of tourism is increasing. On the other hand communities peripheral and of small scale struggling for their economic situation and for population decreasing, are trying to find other development options and ways to bring in revenues. Tourism has proven to be one of the options, but not all places respond in an equal way.

I will present here first hand examples, resulting from field work, showing three different experiences.

- A successful experience, in Ukkusissat, in the West-North of Greenland, where cruise ship visits are welcomed in the village, offering a variety of activities, involving in turn several of the inhabitants.
- The next example is Narsaq in the South of Greenland, where a promising and well organised restaurant café and souvenir shop has been declining due to external factors.
- The third example involves the village of Qaanaaq in the High North of Greenland, where tourism is a recurrent issue on the community discourse but so far, except for very few and limited exceptions, it is still at level of hopes and dreams.

The three cases will be analysed and achievements and drawbacks discussed, from the role of the focus person to the lack of information and access to resources, from the aspirations tourists put in the experience to the goals set by the community, often too ambitious and therefore difficult to achieve.

June 24, session 02.26: How can small, peripheral places profit from the booming tourism in the Arctic?

Turcotte-Seabury, Catherine (University of New Hampshire): *Factors Influencing Lifeways and Aspirations among Iñupiaq and Yup'ik Men and Women*

The subsistence and wage employment practices and patterns of Iñupiaq and Yup'ik men and women living in Northwest Alaska differ considerably. Previous study has shown that males and females diverge in their aspirations for education, employment, and outmigration due, in part, to gendered constructs of the benefits of education, subsistence, and wage labor - findings suggesting that the region could face increasing social pressures in coming decades as women are more likely than men to leave small communities in favor of post-secondary educational opportunities and professional work.

This presentation uses data from the Survey of Living Conditions in the Arctic (SLiCA) in conjunction with interviews of residents in the Northwest Arctic Borough communities of Kotzebue and Kivalina, Alaska to investigate the level of variation in factors affecting four dependent variables across gender: the number of subsistence activities respondents report participating in, the number of hours worked in wage employment, whether Iñupiat and Yup'ik had considered moving elsewhere within the previous five years, and lifestyle aspirations for wage work only or characterized by both wage and subsistence work.

Findings indicate that ties to Native and traditional lifeways, attitudes toward one's community, and community-level characteristics such as poverty and unemployment level affect males and females distinctively.

June 26, Session 03.75: Living conditions and well-being

June 24-25, Poster Sessions

Usenyuk, Svetlana (Ural State Academy of Architecture and Art): *The Arctic Transport: Design and Beyond It*

The rapid development of sciences and technologies enables humans to active exploration of areas, which have been inaccessible before, i.e. territories of environmental extremes, i.e. interplanetary as well as terrestrial. But the reality is always more complicated than laboratory testbeds, i.e. the behaviour of those environments unpredictably differs from computer-based simulation and the total control is unachievable.

In Arctic Case Study, i.e. in the situation of a narrow-focused commercial development of natural resources, we should consider the habitability of the "Arctic Planet". Its chronicles already contain the experience of successful adaptation to environmental extremes. Indigenous peoples inhabited the land many centuries ago: such a long period of their comfortable existence indicates the total fitness: from physical to social features as well as from one mindset to whole material environment.

Artifacts are the real evidence of the harmony of indigenous lifestyle. The amount of artifacts of Arctic nomads is strictly determined by the evolution. Their material environment is an embodiment of the expression "people do not need things, but their functions".

Every artifact is of eco-friendly origin: it emerges from nature and disappears in nature completely, when it reaches the end of its service life. And beyond these characteristics every thing is full of life, i.e. gifted with the soul during the making; therefore it is human-kindred "by default".

In terms of design process it means that the borrowing from the indigenous culture should be undertaken on the level of intangible images, instead of tangible surfaces.

For the case study of the research it is suggested to examine the most problem sector of artificial environment (technosphere), i.e. transport. In the case of extreme environment transport becomes a "lifestyle basis": the way and the means by which we can get to a hard-to-reach territory will determine our future lifestyle.

June 22, Session 07.21: Living in the Arctic: a Creative Providence for the Global Challenge & Session 07.29: Arctic Creative: Building Arctic Futures through culture, innovation, and creativity

Vakhtin, Nikolai B. (European University at St. Petersburg, Russian Federation): *The Future of Arctic Social Research in Russia*

Telling the future is an unrewarding task unless by "future" one means a careful description of the current situation in a branch of knowledge, and analysis of potential for growth in various promising initiatives that may contain in them the seeds of future development.

Of course, given the uncertain future of Russia itself one can hardly make any predictions about *Russian* research in the Arctic, but if one speaks about Arctic research *in Russia* then the answer is clear: yes, Arctic social research in Russia does have a future – for purely geographical reasons: about three quarters of "the Arctic" is currently Russian territory.

In this talk, I will discuss (if not give definite answers to) some questions relating to the topic: what are the trends of today's research in the Russian Arctic (Siberia, "North" etc.); which of them, in my opinion, contain the seeds of future development, and which do not; who will be those scholars who will do social research in the Russian Arctic 20 years from now and where they will come from? who will pay the piper – and, respectively, call the tune in anthropological research in the area in the next two decades? what may the object of research look like twenty years from now? and what should we coach our students for?

June 24, Keynote presentation

Valtýsson, Hreiðar Þór (University of Akureyri); **Arnarsson, Sigmar** (The University of Akureyri Research Centre); **Bogason, Erlendur** (Sævör - Diving company specialized in underwater research and photography): *Eyjafjörður underwater*

In this project we will create a web portal with information on underwater biological diversity in Eyjafjörður. This will be based on regularly updated visual information on the underwater environment. The aim of the project is to make the underwater environment more accessible for the public as well as for scientists. At this stage the focus group will be tourists, as marine related tourism, such as sport diving, sea angling and whale watching is increasing in Iceland. The project has a scientific basis as some areas, such as the underwater hydrothermal chimneys will be selected for regular monitoring for visual changes. Hopefully establishing time series that will show any changes in the environment. It is our hope that we can link up with other partners to be able to monitor the changes in the marine environment in other areas around the Arctic.

June 24-25, Poster Sessions

Valtýsson, Hreiðar Þór (University of Akureyri); **Jóhannesson, Hjalti** (University of Akureyri Research Centre): *Fishermen's fisheries knowledge*

The Marine Research Institute in Iceland publishes annually a report with estimates of the status of the fish stocks around Iceland based on extensive research. Many fishermen criticize this report as not showing the true status of the environment. However fishermen have different backgrounds, many have extensive experience and detailed knowledge of the ocean while others do not. It is therefore difficult to include their knowledge when quotas are set. The aim of this project is to acquire and analyse statistical information on the knowledge of fishermen about the amount of fish and state of the sea. The objective is that this information will be used in setting the TAC for each year.

June 24, session 02.58: Human Aspects of Fisheries in the Arctic Coastal Regions

Van Klaveren, Rosanne (Catholic University Leuven, Belgium): *FOOD RELATED: an online platform to invigorate the social and cultural experience of food in the Arctic*

FOOD RELATED is an online platform on which food related experiences, recipes, news items and opinions are collected for and by the arctic people. As a virtual meeting place, the platform tries to build bridges between the different peoples: a bridge that can overcome physical distances through virtual contact; a bridge that can overcome language problems through automatic translation software; a bridge that can support transitions and changes through exchange of experiences and discussions; and a bridge that can strengthen dignity and self-respect through positive cultural display and attention for contemporary issues. All bridges are built around the topic of food. Besides its indispensable nutrition, our food tells us who we are. Not only the food we eat, but also the way it is gathered or hunted, prepared, shared and consumed, has meaning. Those, whose food habits change, change themselves. Diet changes are experienced in almost all arctic communities and are usually endured fast, unprepared and often unwanted. People of the arctic can express their experiences and discuss their needs on the FOOD RELATED platform. If the social and cultural experiences of food among the different peoples become comparable, the arctic peoples might feel 'food related'.

With FOOD RELATED, I research the artistic value, function and possibilities of narrative inquiry and participatory design for the locative media art within the Circumpolar North. My artistic approach and media use turn this online platform into a nice place to explore and make it enjoyable to contribute.

June 22-23, session 07.49: Practice Power North

Vance, Tiffany C. (San Francisco State University/U.S. National Oceanic and Atmospheric Administration (NOAA)); **Moore, Sue E.** (NOAA/NMFS); **Metcalf, Vera** (Eskimo Walrus Commission); **Overland, James E.** (NOAA/OAR/PMEL); **Eicken, Hajo** (University of Alaska Fairbanks); **Hufford, Gary** (NOAA/NWS): *Customizing the Sea Ice for Walrus Outlook (SIWO) for local communities by developing interactive GIS-based tools*

The Sea Ice for Walrus Outlook (SIWO), an activity of the SEARCH Sea Ice Outlook, is a resource for Alaska Native subsistence hunters, coastal communities, and others interested in sea ice, weather and walrus. The 2010 SIWO was updated weekly from the beginning of April through the end of June with information on sea ice and wind conditions relevant to walrus in the Northern Bering Sea and southern Chukchi Sea regions of Alaska.

This talk will describe a project in 2011 to create local maps based upon the SIWO datasets for walrus hunters in the Bering Strait Region. A geographic information system (GIS) was used to combine data layers to produce a map customized for the needs of the hunters. In an effort to make the map an interactive tool, methods for enabling the local residents to annotate the map and send the results back to the project team were explored. Challenges such as limited Internet bandwidth, the best methods for annotating the maps, and choosing the optimal spatial and temporal scales were anticipated and our preliminary solutions will be discussed.

June 22-23, session 10.20: Data Management and Knowledge Stewardship: Perspectives and Practice from Communities and Researchers

Vasilieva, Yulia V. (Association of Indigenous Peoples of the North of the city of Petropavlovsk-Kamchatski); **Vladimir Saturin** (Association of indigenous peoples of the North in the city of Petropavlovsk-Kamchatski): *Life of aboriginal fishermen of Kamchatka: poaching or survival?*

In looking at the dynamics of the development of indigenous peoples of Kamchatka during the past 100 years, one can observe a large number of small villages, stability of the households and their population. Elimination of most of the native villages took place mostly in the 1950s and 60s of the XXth century. The main reasons for the closings were: collectivization of production, a policy of concentration and specialization of collective farms and soviet farms as well as implementing the theory of «promising» and «unpromising» villages. Alienation of indigenous peoples from homeland had tramandouse surcumstances: the destuction of traditional subsistence activities (especially fishing, hunting and reindeer herding), loss of ethnic culture in all its diverse aspects including the loss of native languages, destruction of familial ties, creation of psychological distress which led to social passivity, loss of interest in living, alcoholism, suicide, low level of living, and a transformation to urban life where people from the North usually find themselves at a lower social position.

In the modern conditions of development of capitalistic relationships in Russia, global problems of aboriginal survival have appeared. Which actions, decisions and laws can lead to a civilized development of indigenous peoples of Kamchatka and their escape from their critical situation? These questions and preliminary answers form the basis for this presentation.

June 22, session 02.25: Salmon Fishing and Whaling Peoples of the North Pacific

Vergunst, Jo (University of Aberdeen): *Creative connections: fieldwork through art and anthropology in Greenland*

This paper provides an ethnographic account of two visits made by a group of artists from Edinburgh College of Art, Scotland, to the town of Ilulissat, Greenland in 2010. It explores the nature of fieldwork and the potential for art to enable collaboration in field research. While the Edinburgh artists began with ideas about the Arctic situated within Western art history, local residents soon shaped the course of the encounter in distinctive ways. The artists learned through sharing their skills and in turn both 'non-artists' and members of the art scene in Ilulissat responded through discourse and their own art practice. Using examples of art made by all these people and myself too, the paper reflects on the categories of indigenous and contemporary art and the value of artistic practice in carrying out anthropological fieldwork. Where social and natural scientists often design fieldwork to collect specific information or study a research object, for these artists fieldwork became a process of engagement with local inhabitants and the environment.

June 26, session 07.42: Contemporary circumpolar art: vehicles of indigenous knowledge

Vesteinsson, Orri (University of Iceland); **Dugmore, Andrew** (University of Edinburgh); **Arneborg, Jette** (National Museum of Denmark); **Simpson, Ian** (University of Stirling); **Madsen, Christian Koch** (University of Copenhagen); **Aldred, Oscar** (University of Iceland); **McGovern, Thomas H.** (City University of New York); **Woollett, Jim** (Université Laval); **Roberts, Howell M.** (Institute of Archaeology, Iceland); **Harrison, Ramona** (City University of New York); **Hambrecht,**

George (City University of New York); **Smiarowski, Konrad** (City University of New York); **Brewington, Seth** (City University of New York): *IPY and the Longue Durée: New Perspectives on Human Ecodynamics in the North Atlantic*

The 2007-10 IPY provided the NABO cooperative (North Atlantic Biocultural Organization, www.nabohome.org) with resources to conduct a coordinated program of interdisciplinary investigations in the Faroes, Shetland, Iceland, and Greenland. NABO was able to better investigate these diverse cases of island ecodynamics and bring the North Atlantic portion of the circumpolar north more fully into the global change archaeology discourse; making use of directly comparable methods of excavation, survey, recording, and sampling. We were able to share field crews and specialists between islands and provide multiple opportunities for direct cross island comparisons by experienced teams. We were able to expand cooperation with local schools and make full use of the educational opportunities for local residents as well as graduate and undergraduate archaeology students. The project built upon prior NABO collaborations but achieved major breakthroughs in data management and display and in effective “transdisciplinary” coordination across social science/ natural science boundaries. We are now in a position to provide major revisions to the picture of human ecodynamics provided in Diamond’s *Collapse* (2005) and draw sharper comparisons between the very varied outcomes of the Viking Age North Atlantic migration. This presentation will highlight new findings and provide an overview of the NABO IPY effort.

June 24, session 10.73: Global Human Ecodynamics and the Circumpolar North: The GHEA initiative

Viitanen, Leena-Kaisa (Arctic Portal); **Jóhannsson, Halldór** (Arctic Portal); **Hallsson, Húni Heiðar** (Arctic Portal); **Karlsson, Ævar** (Arctic Portal): *Virtual Learning Tools for the Arctic*

The Arctic is known of its sparse population and vast distances, which reduces the educational opportunities of the Arctic rural inhabitants. To be able to provide inexpensive educational and networking opportunities within the Arctic, these activities need to be relocated to a different venue, into the virtual world. A Virtual Classroom is a venue where distance learning can take place online, inexpensively and without geographical hindrances. The Virtual Classroom is an internet-based distance learning solution that enables the students to participate in higher education activities from remote locations across the Arctic and beyond.

An extensive virtual survey was conducted among the University of the Arctic member institutions to identify the main user preferences and technical requirements. The results indicated a high interest among Arctic residents to attend virtual education that allows the flexibility of a traditional distance learning, but offer also real-time interactive features making the learning experience closer to a traditional classroom experience.

The project indicates that the geographical hindrances that exist in the Arctic in many instances force Arctic residents who intend to seek higher education to relocate if they wish to obtain higher education. Often these individuals do not return, having a negative affect on rural development. This can be overcome and the negative demographic development typical to rural Arctic communities partially mitigated by offering new technological solutions.

June 23-24, session 09.01: Schooling in the Arctic

June 24-25, Poster Sessions

Vitebsky, Piers (Scott Polar Research Institute, University of Cambridge): *Pleasures and sorrows of movement among nomadic reindeer herders in northeast Siberia*

Mobility in the Arctic is not simply something imposed on humans by the mobility of animals, but gives a specific quality to human life. A long-term study of cyclical movement among Even reindeer herders in northeast Siberia reveals an alternating build-up and release of a tension which surrounds each onward migration and binds humans and animals in a shared ecology of mood.

Movement emerges as the foundation of nomadic aesthetics and a focal point for feelings of beauty. Each site is activated by human habitation and engagement with its spirits, and then becomes dormant until the same time the following year. Participation in this beauty is the foundation for the herders’ own personal fulfilment and happiness. This happiness is rooted in transience, because one is constantly detaching oneself from one’s present site and anticipating one’s attachment to the next site, and is also associated with a complex sense of sadness.

By contrast the village, developed during Soviet times, imposes an immobility which seems all the more intense for the vastness of the surrounding nomadic space which many villagers never experience. The paper will also explore the contradiction by which people can now become addicted to life either in the forest or in the village, and regard the other domain as unbearable. Fulfilment in either setting can be fragile, and the pleasures associated with place are often tempered by

pain and depression.

June 24, session 04.34: Movement for Pleasure – the Pleasure of Moving

Vlasova, Tatiana (Institute of Geography Russian Academy of Sciences): *Socially-oriented observations in the Russian North in the context of the Arctic Human Development Report development*

Socially-oriented observations (SOO) in the Russian North have been designed within Arctic Council Sustainable Development Working Group (SDWG) as a follow-up of the Arctic Human Development Report (IASOS project) at the 2006 SDWG meeting in Salekhard. SOO in the Russian North have been carried out within multidisciplinary IPY PPS Arctic project under the leadership of Norway and supported by the Research Council of Norway as well as Russian Academy of Sciences IASOS project. The main objective of SOO is to increase knowledge and observation of changes in quality of life conditions (state of natural environment including climate and biota, safe drinking water and foods, well-being, employment, social relations, access to health care and high quality education, etc.) and - to reveal trends in human capital and capacities (health, demography, education, creativity, spiritual-cultural characteristics and diversity, participation in decision making, etc.). SOO have been carried out in industrial cities as well as sparsely populated rural and nature protection areas in observation sites situated in different biomes (from coastal tundra to southern taiga zone) of Murmansk, Arkhangelsk Oblast and Republic of Komi. SOO approaches based both on local people's perceptions and scientific information help to identify main issues and targets for life quality, human capital and environment improvement and thus to distinguish key indicators in order to evaluate trends in human development vital to be discussed in the AHDR.

June 23-24, session 10:62: AHDR-II: Arctic Human Development Report: Regional Processes and Global Linkages

Votsis, Athanasios (University of Helsinki): *The Hyperborean myth in Ancient Greek culture: its supernatural aspects and frameworks of meaning*

The proposed paper discusses the particular frameworks of meaning through and within which the supernatural element of the Hyperboreans was perceived in Ancient Greece. The analysis is based on primary sources from Pindar, Homer, Herodotus and Aeschylus, and is informed methodologically and theoretically by Algirdas Greimas', Umberto Eco's, and Yuri Lotman's semiotic studies of European cultural and mythological systems.

The examined sources provide stimulating and culturally rich references to the Hyperborean people and their supernatural quality. These references revolve around three main areas: sacred architecture and smaller artifacts, discourses, and a number of binary oppositions that operate on both previous areas. Thus, such frameworks of meaning infused into the mythological, cultural and value system of the Ancient Greek word the people that live beyond the North Wind and whom, according to the myth, one can reach neither by foot or boat.

June 24-26, Session 07.32: Imagining the Supernatural North

Wachowich, Nancy (University of Aberdeen): *Video-cameras and focused pasts: tales of The 1921-1924 Danish Fifth Thule Expedition in Iglulingmiut lands*

This paper will explore Inuit filmmaking and the politics of historicity in the Canadian Eastern High Arctic. It's focus will be on Inuit re-castings of the well-documented 1922 visit by the Danish Fifth Thule Expedition to the Northern Foxe Basin. More than 80 years later, the cast and crew of Igloodik Isuma Productions began creating their own contact tale, holding script-writing workshops with local elders and traveling to traditional campsites to re-enact and digitally record historical events documented in expedition journals and remembered in local oral histories. In 2006, after three years in production, Isuma Productions and their Danish co-producers released a feature film *The Journals of Knud Rasmussen* for international audiences.

The proposed paper is based on fieldwork with Igloodik Isuma Productions during the research, writing, filming and post-production phases of the project. It will draw parallels between the two expeditions, critically examining notions historical agency, the dialogue between oral and written sources, and the impact of new communications media on local historical processes.

June 26, session 07.42: Contemporary circumpolar art: vehicles of indigenous knowledge

Walter, Brian (St. Louis College of Pharmacy): *A Distant Northern Land: Nabokov's Zembla and Aesthetic Bliss*

According to Vladimir Nabokov, the final sentence of his tantalizing 1962 novel *Pale Fire* – “Zembla, a distant northern land” -- signals that the protagonist, Charles Kinbote, has committed suicide immediately upon invoking, for the last time, the beloved polar country from which he has been exiled. This final reference to Zembla therefore serves not only to make the narrative’s end correspond exactly with the end of the protagonist’s life (a frequent coincidence in several of Nabokov’s novels), but also to add another layer of complexity to the exiled commentator’s selectively romanticized portrait of his geographically and historically remote homeland.

Critics of *Pale Fire* have long characterized Zembla as an ingenious manifestation of Nabokov’s resolutely solitary, exquisitely imbalanced, and rigorously self-marginalized artistic imagination, galvanizing psychological desperation with artistic exuberance. My paper expands on the traditional understanding of Zembla by showing how its geographical remoteness crucially informs its unlikely redemption of the besieged imagination. To illuminate this aspect of Zembla’s complicated work within the novel, the paper draws on several of Nabokov’s other works (including *Invitation of a Beheading*, *Invitation of a Beheading*, *Invitation of a Beheading* and *Lolita*) in which polar geographies specifically underwrite the achievement of Nabokov’s ‘aesthetic bliss,’ both the elusive substance and the reward of authentic artistic inspiration in the author’s characterization. The paper finally shows how Kinbote’s distant northern land advances Nabokov’s polemical aesthetic, endearing the artistic imagination precisely insofar as it poignantly isolates itself from the world.

June 24-26, Session 07.32: Imagining the Supernatural North

Wawrzynski, Wojciech (Professional secretary for scientific cooperation / MARCOM+, International Council for the Exploration of the Sea): *Good practices in interdisciplinary research governance in Europe – the MARCOM+ initiative*

The International Council for the Exploration of the Sea coordinates and promotes marine research on oceanography, the marine environment, and the marine ecosystem. ICES is the prime source of scientific advice to the European Commission and to Marine Conventions in the North Atlantic and it maintains some of the world’s largest databases on marine fisheries, oceanography, and on the marine environment. ICES is the coordinating party in the ‘Towards an integrated marine and maritime science and technology community’ (MARCOM+) initiative. This project (2010-2012) aims at bringing together different stakeholders with various backgrounds in order to establish a sustainable and long-lasting Partnership Forum (called ‘The European Marine and Maritime Science and Technology Forum’). Keeping in mind that marine and maritime research is by its nature interdisciplinary since as it uses elements of all basic, applied, earth and social and economic sciences, the initiative’s consortium groups stimulate interdisciplinary cooperation among major users of the sea. Once established, the MARCOM+ Forum will have brought together research managers, scientists, entrepreneurs and civil servants from cultures that are very different. It will contribute to more integrated research agendas for Europe and will serve as a new bottom-up governance model of marine and maritime research in Europe.

The initiative’s findings, especially in relation to the MARCOM+ ‘Interdisciplinary Dialogue Across Science Expert Panel’ will be presented.

June 24, session 02.58: Human Aspects of Fisheries in the Arctic Coastal Regions

June 24-25, Poster Sessions

Weikkolainen, Eva (University of Oulu); **Saarinen, Jarkko** (University of Oulu): *Tourism, climate change and adaptation: the community perspective?*

Tourism activities are relatively new in Arctic but the past and current levels of tourism in the region indicate that the number of visitors is already substantial and growing. As a result, many places and communities in the Arctic are increasingly involved with tourism, which future will be heavily influenced by the global climate change. The implications of climate change in Arctic communities with emerging or already occurring dependency relationship with nature-based tourism are multi-layered.

This paper aims to identify the need for more holistic approach in tourism related climate change impact and vulnerability studies in the Arctic. The purpose is to discuss how the current tourism research literature focuses on the climate change and its impacts and what are the main themes and perspectives in research. Based on the literature review the main themes and perspectives are analysing the impacts of climate change to tourism industry and its vulnerability, and on the other hand studies focus on the impacts of climate change to consumer behaviour (e.g. tourists’ travel patterns and preferences) and their changes. However, changing climate is causing impacts not only in the characteristics of Arctic tourism and but also for

tourism dependent communities, e.g. community structures, livelihoods and income levels. Related to this, the paper demonstrates the importance of social change and community views in the other fields of climate change studies and concludes how the further emphasis on community perspectives and tourism-community nexus would bring additional value to tourism and climate change vulnerability assessments.

June 25, session 02.56: Tourism, People and Protected Areas in Polar Wilderness

Wheelerburg, Robert P. (Elizabethtown College): *Tiger Burch - on Top of the World: The National Geographic Society's "Peoples of the Arctic" Map*

This paper details effort by Ernest Burch, Jr. to produce a map for National Geographic Society's (NGS) 1983 Peoples of the Arctic issue and the contributions that map made to Arctic social science. Archival materials like editorial memos and correspondence and interviews with former NGS editors indicated Tiger worked to present indigenous Arctic peoples as living societies, countering the view that Arctic peoples were mere remnants of Western expansion, with few remaining traditional characteristics. As such, the map represents an enduring contribution to the study of indigenous Arctic peoples in the late 20th century.

The map reversed a century of stereotyping of Arctic peoples by NGS publications to its then ten million members, which referred to Saami as "elves" and suggested all were reindeer herders. NGS Arctic peoples stereotyping was exacerbated by other popular publications like *The Saturday Evening Post* that portrayed "Eskimos" as static entities that wore parkas, hunted whales and lived in igloos. Instead of a relatively uniform, pan-Arctic culture, the 1983 map presents the diversity of societies even within particular cultures. For example, the map illustrated differences between the various populations previously referred to as "Eskimo", dividing the Inuit into local groups like "Polar", "West Greenland", and "Baffin Island". Thus, Tiger's work is an important contribution that documented Arctic peoples in the early 1980s, depicting them as modern peoples with their own names and possessing a variety of traditional languages, economic pursuits and material cultures.

June 23, session 07.47: In the Footsteps of the Giants – Honoring Ernest S. (Tiger) Burch, Jr., 1938–2010

White, Graham (University of Toronto); **Hicks, Jack** (Ilisimatusarfik): *Government Decentralization in Nunavut*

In developing the design for the Government of Nunavut (GN) in the 1990s, the Nunavut Implementation Commission proposed a far-reaching and innovative decentralization of government 'headquarters' (offices normally located in a jurisdiction's capital). In addition to the goal of spreading the economic benefits of stable, white-collar jobs widely across Nunavut's communities, the decentralization initiative had important political objectives. One objective was to 'bring government closer to the people' by locating higher-level bureaucrats with real authority in small communities rather than concentrating them in the capital city. Another objective was to encourage Inuit participation in the GN bureaucracy (and by extension to enhance the use of Inuktitut in the GN) by offering Inuit interested in middle- and senior-management positions the possibility of advancement without the necessity of moving to the capital.

Decentralization has generated extensive comment and criticism in Nunavut and opinions are sharply divided as to how successful it has been. This paper begins by setting out the rationale for decentralization and the key debates surrounding its acceptance and implementation. It then turns to an exploration of the success of decentralization in meeting the political objectives its designers set for it.

June 24, session 05.43: Governance in the Canadian Arctic: reconciling indigenous experience and western governance models?

Wishart, Robert (University of Aberdeen): *Mackie Bashing and Hunting Codies: Nearshore Rights to Catch Sea Fish in North East Scotland*

In North East Scotland there has been a traditional divide between fresh and salt water resources. Access to fresh water resources are governed by individual or corporate title and those of the sea are held under title of the crown but are open to all users on a non-commercial basis. The outcome of this divide has been a stratification in the population between those with privilege of access to fresh water and those who harvest resources from the edge of the sea—generally those who primarily use the foreshore and very nearshore waters. There has also developed a strong social relationship between many people in North East coastal Scotland and the sea edge. This relationship maintained through knowledge and practice, is often indexed by what they consider to be their "rights" to harvest resources from the sea edge for personal use. In other words, one often

hears how anyone has the right to catch a fish or set a trap to put food on their table when conditions allow. People will contest any regulatory system that is understood to impact this right and those that would seem to clarify, or make specific, particular user groups. For instance, Article 55 of Regulation 1224/2009 of the UN common fisheries policy is aimed at trying to bring “recreational” sea-fishing in line with the quota systems governing commercial catches, strictly define what recreational use is, and define stakeholders. Sea-fishers in NE Scotland resisted this Article based on an argument of heritage, subsistence, and the economic benefits of this type of fishing to the wider economy. In a response to these actions, the UK found the latter argument to be a concern but did not adequately address the spirit of the two arguments about heritage and subsistence. Not surprisingly some have wondered if there are other avenues to have these arguments recognized but these have other consequences that will be explored in this paper.

June 23, session 02.36: Northern fisheries: managing income, nutrition and cultural values

Wolsko, Christopher (University of Oregon): *Cultural Identity, Conceptions of Wellness, and Health Behavior: Reflections on Data from the Center for Alaska Native Health Research (CANHR) Study*

This presentation summarizes and integrates major findings from extensive mental and behavioral health research among the Yup'ik of the Yukon-Kuskokwim Delta region in western Alaska. Focus groups, ethnographic interviews, and surveys were conducted over several years with individuals in 6 rural villages. The bulk of the quantitative data comes from a survey completed by a total of 488 participants (284 women and 204 men; aged 14 to 94, mean \pm SD = 38.50 \pm 17.18). Yup'ik narratives on wellness have emphasized the importance of living a traditional lifestyle, seeking creative solutions to manage drastic cultural change and the accompanying stress, and fostering connection within communities and the native landscape. Variability in local patterns of tobacco use, physical exercise, and strategies for coping with stress is examined in terms of complex relationships with enculturation – the process whereby individuals learn about and identify with their culture's traditional norms and values. Enculturation is contrasted with acculturation – the process by which an ethnic minority individual assimilates into the majority culture. In general, participants who reported living more of a traditional Yup'ik way of life (as assessed by a multidimensional measure of enculturation) reported greater happiness, more frequent physical exercise (assessed via self-report and pedometer records), less frequent smoking, more frequent use of religion and spirituality to cope with stress, and less frequent use of drugs and alcohol to cope with stress. Discussion focuses on health promotion specific to this cultural context and on the broader issue of documenting intrinsic strengths of indigenous worldviews to stimulate positive transformations in community health.

June 22-23, session 06.40: Best practices for community engagement in health promotion research and population health practice - lessons from the North

Wood-Donnelly, Corine (Brunel University): *The Foundations of Arctic Governance: States, Nations and National Interests*

Arctic Governance is primarily explained by two opposing discourse frameworks. The first views the Arctic Basin from a realist perspective of security dilemmas and Cold War generalisations; the second from a liberalist cosmopolitan paradigm that focuses on decades of cooperation between the Arctic states. Today, states face a dichotomy of decision making dilemmas as they attempt to increase the strength of their geopolitical borders while simultaneously conceding sovereign rights to international governance. This makes neither of these interpretive frameworks entirely suitable for understanding the challenges of Arctic governance in its contemporary context of changing security threats, globalisation and the growing importance of indigenous populations. Through an examination of the foundations of the rationale that led to the creation of existing forms of Arctic governance, such as the Arctic Council and UNCLOS III, this paper will discuss the national interests of States and the growing importance of the interests of indigenous peoples in developing new forms of Arctic governance to meet the emerging needs of the circumpolar Arctic.

June 25-26, session 05.35: The Political Organization of Arctic Space

Woollett, James (Université Laval, Centre d'études nordiques); **Gísladóttir, Guðrún Alda** (Fornleifastofnun Íslands); **Ævarsson, Uggi** (Fornleifavernd ríkisins, Minjavörður Suðurlands); **Dugmore, Andrew** (University of Edinburgh); **Dupont-Hébert, Céline** (Université Laval): *Svalbarð through the longue durée: Initial perspectives on the settlement and economy of a North Atlantic farm*

Researchers working from a diverse set of multidisciplinary studies have recently argued that the history of rural settlement in

Iceland has involved cycles of colonization and expansion linked to internal demographic and socio-economic trends, external markets and environmental change. The farm of Svalbarð, Svalbarðshreppur, Þistilfjörður, offers a valuable opportunity to examine the interplay of these variables through time in a focused case study. In terms of its sprawling territory, economic production and population, the farm of Svalbarð is historically one of the most significant estates of the Þistilfjörður region of northeastern Iceland. The estate consisted a central farm complex with a chapel, coastal sheilings and boat landings and a number of auxiliary farms stretching from the coast 35 km into the interior. These dependencies were used in varying ways as semi-independent farms, as sheilings and as pastures and were periodically abandoned as well. Svalbarð's central farm was the subject of one of the first large-scale midden excavations in Iceland, one that supported pioneering studies of faunal and plant macrofossil assemblages. This paper presents initial results of new fieldwork at Svalbarð undertaken by Icelandic, Canadian and British researchers since 2008. This work examines the farm as a whole and includes a re-evaluation of the midden stratigraphy, geomorphological survey and the survey and testing of all of Svalbarð's outlying farms and sheilings. A new chronology for the Svalbarð midden is proposed and initial analyses of a new Viking age farm at Hjálmarvík are presented. Finally, the sheiling site of Thorvaldsstadasel, excavated in 2010, is discussed.

June 24, session 10.73: Global Human Ecodynamics and the Circumpolar North: The GHEA initiative

June 24-25, Poster Sessions

Wråkberg, Urban (The Barents Institute): *Geopolitical Discourses in North European Cross-border Travels and Research*

The presentation will contribute to the study of borders by applying critical geopolitical thought to the study of micro-social and local experiences at the Norwegian-Russian border, during travels between Kirkenes and Murmansk, and in a sample of scientific field research in the Barents Region. A post-structuralist discourse concept will be used in order to demonstrate the tendency of individual participants in such activities to become "subjects" in a certain discourse, in turn given the character of the activity, which constitutes a typical set of roles, messages and behaviours for the individuals in their sequence of place-enactments. It is epistemologically motivated to apply the methodology of cultural studies of contemporary ethnology, as well as an eye for the elements of dramaturgy and aesthetics in the constructing of knowledge and witness during the border passage of a group and the individual experiences of the process.

June 22-23, session 10.22: Claims on Sites and Knowledge in Cold Regions. Material and Immaterial Constructs of Nature, Nations and Industry

Xia, Liping (School of Political Science and International Relations, Tongji University, Shanghai, China): *Strategic Impacts of Environmental Change of the Arctic Region and Governance: Chinese Views*

With the warming of the Arctic region, which speed has been faster than what people expected before, the ice sheet of the Arctic Region has been melting. The sea lanes of the Arctic region will be open and the environmental change of the Arctic region has been under way. The change will have important impacts on global security. The Arctic region will become one of the new strategic competing arenas in the world. The countries of the Arctic region have been competing for the sovereignty and natural resources of the Arctic region. The global ecological security has been faced with serious challenges. The impacts of the environmental change of the Arctic region on national security of China will be very complicated. The melting of the ice sheet of the Arctic region will cause more adverse weather in China, which may lead to more natural disasters, having negative impacts on the ecological security and food security of China. The openness of the sea lanes of the Arctic region will benefit the international transportation and foreign trade of China. China has been also faced with the opportunity of exploitation of the natural resources in the Arctic Region. The environmental change of the Arctic region is of importance to future existence and development of the human beings, and also of importance to the national security of China. China, as a country near the Arctic region, must pay attention to the environmental change of the Arctic region and its impacts on the common interests of human beings and national security of China. China should have proper policy towards the environmental change of the Arctic region and its impacts.

The concept of Harmonious Arctic Region should become the fundamental thinking of governance of the Arctic. There are three levels of the concept of Harmonious Arctic Region, including:

- Harmony between human beings and nature
- Harmony between countries concerned.

- Harmony between people and people.

Improvement of Governance in the Arctic Region: To improve the international mechanisms related to the Arctic region will be very important in terms of governance in the Arctic region. There are three levels of the mechanisms of international governance related to the Arctic region:

- On the global level of the mechanisms of international governance related to the Arctic region.
- On the regional level of the mechanisms of international governance related to the Arctic region.
- The Arctic Council should accept China as a full Observer.
- On the bilateral level of the mechanisms of international governance related to the Arctic region.

June 22, session 05.74: The Future of the Arctic: Governance in an Era of Transformative Change

Yamin-Pasternak, Sveta (University of Alaska Fairbanks): *Is This For Subsistence or Pleasure? The Necessary Enjoyment of Tundra Traveling*

Whether it is connected with fishing, collecting, procurement of freshwater ice, or drinking tea on the tundra, mobility is an inherent part of life in the Arctic, especially for the residents of rural and bush communities. To this day, tundra traveling in Chukotka is accomplished predominantly by walking. While emphasizing the goal-oriented nature of traveling on foot local residents attach considerable value to walking itself, as an activity that at once encompasses exercise and recreation, meditation and impulsiveness, ways of being keenly attuned to one's environment, engaged in a perpetual study of it, and at the same time be consciously absent and absolved from a range of incessant preoccupations. Paradoxically, many individuals in Chukotka who claim to use walking to nurture both their body and spirit also speak enviously of the snow-go and all terrain vehicles that eliminate the need to walk for their neighbors in Alaska. This paper explores the embodiment and the virtue of walking constructed from the perspective of Chukotka residents. It considers the views arising in the local day-to-day experiences and in comparative Bering Strait contexts, paying particular attention to the confluence of the desire for access to a motorized vehicle and the glorification of "the legs that feed." Arguing that the experience of transporting oneself, whatever the means, should not be reduced by social scientists to a mere process of getting oneself to a resource, the paper asks what it means to be moving for pleasure in a subsistence culture.

June 24, session 04.34: Movement for Pleasure – the Pleasure of Moving

Yashchenko, Oxana (University of Alaska Fairbanks): *Does a young reindeer herder, sea mammal hunter, skin sewer, or ivory carver from Chukotka, Russian Far East, have a chance to be a part of the Russia*

The Seliger Youth Forum takes place every summer near Lake Seliger, located 360 kilometers west of Moscow. It lasts for one month and hosts 30000 people from all regions of the Russian Federation, as well as some international participants. The event's motto is "Find your place among the best." The forum includes educational sessions, conducted by nationally and internationally recognized experts in the fields of contemporary art, business, leadership, technology, and others. For the participating youth, the sessions are an opportunity to present and receive professional feedback on their projects, and as a result to become part of a global youth network. Despite the semi-wilderness setting, it is the prefix "nano" (as in "nanotechnology") rather than "nature" that lingers most prominently in the Forum's discourse. In order to be considered for participation, one must complete an online application, demonstrate sufficient knowledge of English, and provide a certification of one's accomplishments. From the outset, the process presumes that prospective applicants will possess certain assets, such as access to the Internet and higher education, thereby excluding those living in small remote communities of the Russian North and working in traditional occupations like sea mammal hunter or reindeer herder. Using the author's experience as a Chukotka schoolteacher and a delegate of Chukotka at the 2010 Seliger Youth Forum, this paper examines the ability and questions the need of the Chukotka contemporary youth to find their "place among the best" on the Russian and global stages.

June 25, session 03.54: Arctic Children and Youth in a Global Perspective

Yuliya, Zaika (Khibiny scientific station of the Faculty of Geography Moscow State University); **Vikulina, Marina** (Khibiny educational and scientific station of the Faculty of Geography M.V.Lomonosov Moscow State University): *Dynamics of nival processes in the Khibiny Mountains (NW Russia) and human adaptation to contemporary and possible climate changes*

For the last 30 years at Khibiny educational and scientific base regular observations on snow cover, avalanche activity and meteorological conditions are being carried out as the one of general indicators of climatic changes. We analyzed changes of snow cover evolution, avalanche activity and temperature conditions during this period in the light of climate changes processes.

Together with this objective information (periodical observations) we carry out subjective information (semi-structured interviewing). Such interviewing is based on the methodology of Integrated Arctic Socially-oriented Observation System (IASOS network). The main goal is to collect valuable evidences on people's adaptation to new living conditions for all residents of Arctic (local and indigenous). As a result climate changes registered at Khibini station (objective information) show that although seasonal temperatures vary extremely from year to year, winters are becoming more snowy and warmer and summers are getting slightly colder.

Changes in climate and biota may become an add factor in accelerating or influencing social and economic changes and they are needed to be observed in order to understand how these changes impact the quality of life and the overall capacity of people to adapt to contemporary and possible climate changes.

June 24-25, Poster Sessions

Zaika, Yuliya (Khibiny scientific station of the Faculty of Geography Moscow State University/ APECS Council); **Vlasova, Tatiana** (Institute of Geography Russian Academy of Sciences): *Socially-Oriented Observations on Quality of Life of People at Khibiny Mountains, Kola Peninsula (NW Russia)*

Socially-oriented observations (SOO) have been carried out in Apatity and Kirovsk cities of Murmansk Region according to the methodology of Integrated Arctic Socially-oriented Observation System (IASOS network) construction developed by Institute of Geography, Russian Academy of Sciences in cooperation with Norwegian, Canadian and the UK researches within PPS Arctic IPY project under the leadership of Norway. SOO in the cities of the Russian North are of special significance as urban areas concentrate the majority of population of this region. Economic activity of northern cities is based mainly on natural resources exploitation and tackle mostly the same QL problems with some important local peculiarities. The aim of SOO is to determine the issues and targets for QL improvement which helps to distinguish main indicators for further monitoring. The most important issues are: low wages, unemployment, bad physical health, bad mental health, pollution of the environment and climate change.

Although main indicators in rapidly changing socio-economic situation are time dependent and have different rate during the observation time cycles, a "flexible" list of most important indicators for further monitoring is produced.

June 25-26, session 03.70: The Social Economy and Community Economic Development in the Circumpolar North

Zeller, Suzanne (Wilfrid Laurier University): *Humboldt's Analytical Empire: Science in the British North American Arctic, 1819-84*

Although the Prussian scientific traveller and author Alexander von Humboldt (1769-1859) never visited British North America, his influence upon its northern regions was immeasurable. Humboldt's "cosmic" approach to the study of nature as a new form of "global geophysics" directly inspired British scientific explorers in their renewed search for a Northwest Passage after the end of the Napoleonic Wars in 1815. In particular, Sir Edward Sabine, R.A. and Sir John Richardson, R.N., who served on arctic expeditions led by Sir Edward Parry (1819-20) and Sir John Franklin (1821-23, 1825-27), respectively, applied Humboldtian insights into the interconnectedness of meteorological and geomagnetic phenomena, including the aurora borealis, to develop cutting-edge scientific assessments of the northern territories in which they sojourned. Sabine went on to direct the British Imperial "Magnetic Crusade" that included both Sir John Henry Lefroy's (1817-90) magnetic survey of the British American Northwest as well as the establishment of Toronto's Magnetic and Meteorological Observatory as Canada's first permanent scientific institution (1839); while Richardson went on to recruit Hudson's Bay Company fur traders and

others in his longterm investigation of the habitability of arctic lands. These Humboldtian networks, the first scientific forays into the arctic regions of British North America, deployed coordinated scientific instruments and analytical techniques, both statistical and visual, to appropriate these territories for imperial purposes.

June 22-23, session 10.22: Claims on Sites and Knowledge in Cold Regions. Material and Immaterial Constructs of Nature, Nations and Industry

Zuev, Denis (Centro de Investigação e Estudos de Sociologia (CIES-ISCTE), Portugal): *Computer-mediated hospitality networks in Siberia: investigating reciprocity, trust and social connectivity*

Computer-mediated hospitality networks are the Internet-based platforms that allow people to host each other for free in their private homes. In Russia one specific network - CouchSurfing currently counts approximately 10.000 members, among which 6 thousand reside in Moscow and St.Petersburg, and around one thousand members in Siberia regularly hosting “couch-surfers” in their homes or using this network to travel within the country or abroad. The number is likely to grow thus generating new ways in which spatial practices unfold within tourism and other fields of spatial mobility.

Existing Western perspectives (Bialski and Batorski 2009, Molz, 2007) view the phenomenon of hospitality networks in terms of cosmopolitanism and intimacy values, excluding the possibility of variety of social meanings of the practice to different groups with different sociocultural backgrounds and in different sociogeographical contexts. This study adopts sociospatial theoretical perspective (Lefebvre, 1991, Teo&Leong 2006, Zuev, 2006, 2008, 2009) which views CouchSurfing as a spatial practice with different underlying values and varying degree of emotional charge for participants.

The study uses data collected from participant observation in Krasnoyarsk and Irkutsk and interviews conducted with Siberian couchsurfers to provide answers to the questions: Do young people in Siberia travel more with the emergence of the CS network? Do they still feel the “core-periphery” divide in the digital era? Do they travel more within their own country or abroad? Is practicing CouchSurfing physically and emotionally draining or charging?

June 24, session 04.34: Movement for Pleasure – the Pleasure of Moving

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c/o Stefansson Arctic Institute
Borgir, Nordurslod
600 Akureyri, ICELAND
Phone: +354 460 8980
Fax: +354 460 8989
E-mail: iassa@svs.is
Website: www.iassa.org

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International Arctic Social Sciences Association, IASSA, 2008-2011
c/o Stefansson Arctic Institute
Borgir, Nordurslod
600 Akureyri, ICELAND
Phone: +354 460 8980
Fax: +354 460 8989
E-mail: iassa@svs.is
Website: www.iassa.org