

**Alcantara, Christopher** (Wilfrid Laurier University); **Davidson, Adrienne** (University of Toronto)

## **Explaining Divergent Outcomes: Inuit Land Claims and Self-Government Negotiations in the Inuvialuit Settlement Region**

In 1973, the federal government of Canada invited Aboriginal groups to enter into comprehensive land claims negotiations to settle any outstanding claims not addressed by historical treaties. In 1984, the Inuvialuit became only the second Aboriginal group in Canada to sign a modern treaty. However, missing from that agreement was a chapter on self-government, which was not open to negotiation at that time. In 1996, the Inuvialuit, along with the Gwich'in, jointly began self-government agreement negotiations with the Crown. In 2006, the Gwich'in and Inuvialuit agreed to negotiate separate agreements. Almost 18 years since negotiations began, the Inuvialuit have yet to sign a final agreement on self-government. What explains the Inuvialuit's rapid completion of a modern treaty? And why have they yet to complete a self-government agreement? This paper uses a historical institutionalist perspective to explain these divergent outcomes, analyzing data gathered from elite interviews and other documents.

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**Allemann, Lukas** (University of Lapland)

## **Memories of Yesterday, Discourses of Today: The Struggle of Russian Sámi People to Construct a Meaningful Past**

As oral historians we have to be aware that "hard facts" (as for example the fall of an empire) and subjective recollections of individuals are inextricably linked. In this paper it is argued that ruptures as the collapse of the Soviet Union (but also any individual experiences) can have a great influence on meaning-giving constructions and thus on what informants tell us and how they do it. When formerly active mental blocks, such as an ideology, become obsolete, this can uncover formerly repressed or denied recollections. But ruptures can also make meaningless formerly valid and commonly accepted motivations for acting in a certain way. A life history narration serves to secure the social and personal identity and cultural tradition, i.e. it serves the narrator to give meaning to his past actions. Every ego is constantly evolving, trying to adapt to the changing environment and, if necessary, explaining itself anew. When new discourses appear they can cause a certain pressure to search for new meaning of past action and therefore even change recollection. In terms of a whole community during a period of discursive transition these processes of memory evolution can cause serious social rifts. These rifts as well as the evolution life retrospectives are shown on the example of the Sami people of Russian Lapland.

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**Ammosova, Helena Petrovna (Elena)** (Scientific Director of Research Group of Children Diseases of NEFU Health Research Institute; Health Research Institute of North - Eastern Federal University named by M. K. Ammosov); **Nespanova, Svetlana Evgenievna** (Scientific Associate of Research Group of Children Diseases of NEFU Health Research Institute; Health Research Institute of North - Eastern Federal University named by M. K. Ammosov); **Khandy, M.V.** (Head of the Propedeutics of Children's Diseases Department; Medical Institute of North - Eastern Federal University named by M. K. Ammosov)

## **Outcomes of Rheumatic Fever Among Children in the Republic of Sakha (Yakutia)**

We was made a retrospective analysis of medical histories and outpatients' cards of 82 children diagnosed with acute rheumatic fever, rheumatic heart disease at the age of 5 to 18 years, who had examinations and treatment from 2004 to 2013 in the hospitals of Yakutsk.

We was analyzed data of 52 (63.4 %) children who applied for specialized care for the first time and 30 (36.5%) patients who have repeated their examinations and treatments. It should be noted that 41 (78.8 %) of 52 already had rheumatic heart disease when appealed. Complete medical histories of in 59 (71,9%) children were known and 23 histories were unknown. Acute debut had 17 (28.8 %) of 59 patients. 25 (42.4%) children had a subacute onset. 17 (28.8%) patients onset was regarded as a primary chronic or latent. 10 children had recurrent disease. Rheumatic heart diseases have been formed among 70 (85.4%) of 82.

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**Amundsen, Helene** (CICERO Centre for Climate and Environmental Research - Oslo); **Hovelsrud, Grete K.** (Nordland Research Institute)

## **Perceptions of High Resilience to Climate Change in Northern Norway: Consequences for Community Adaptation?**

It is increasingly understood that cultural values, beliefs and world views drive, facilitate, and are shaped and affected by climate change. Perceived resilience can affect a community's ability to adjust and engage available resources in a community, and may cause complacency and the systems to remain in an undesirable state (Nelson et al., 2007). Our long term field studies from northern Norway show consistencies across a number of communities that people perceive themselves to be resilient and able to adapt to the challenges they are faced with, because they always have. We will discuss how the perceptions of being resilient may be problematic. Resilience is not a static property, so even if a community is resilient today, resilience in the future cannot be assumed. Furthermore, we cannot assume that the changes that are adapted to today will be the same ones that require adaptation in the future.

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**Amundsen, Helene** (CICERO Centre for Climate and Environmental Research - Oslo); **Hovelsrud, Grete K.** (Nordland Research Institute)

### **Well-being in Adapting to a Changing North**

Communities in Northern Norway are faced with rapid changes in interlinked climatic, environmental, demographic and social conditions. Dimensions of community resilience, including community resources and networks, institutions and services, people-place connections, are activated in processes and activities to respond to changing conditions. Research in Northern Norway shows how communities adapt to sustain a way of life and to improve their well-being. Aspects of well-being specific to two municipalities in Northern Norway are nature, community, activities, connectivity. Of particular relevance in this context is the importance of nature and natural resources, most importantly for employment, but also as a significant aspect of relational and subjective dimensions of well-being. It is found that attachment to place acts as a motivation to maintain aspects of well-being. This paper will discuss how a well-being approach may provide an analytical approach to understand adaptation processes in communities.

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**Andersen, Astrid** (Roskilde University)

### **Contemporary Travel Practices and Cultural Encounters in Postcolonial Greenland**

The PhD project investigates contemporary travel practices and cultural encounters in Greenland with special attention to how these practices and encounters are related to the historic Danish colonisation of Greenland. Historically, 'foreigners' travelling to and in Greenland have almost exclusively been Danes. During colonial times as colonial administrators, after the formal end of colonialism (1953) as civil servants, temporary work migrants and tourists, a pattern still prevalent today. Cultural encounters in Greenland can be read as a meeting between Danes and Greenlanders inscribed within a colonial and postcolonial relationship. This pattern has however in recent years been contested due to an intensified international attention to the Arctic and Greenland by a number of factors, not least climate change, and the possibilities and dangers it has produced. Tourists, business investors, politicians, civil servants and temporary work migrants are increasingly travelling to Greenland from diverse parts of the world, which gives rise to altered/new forms of travel practices and cultural encounters. The paper will examine the interrelations and overlaps between contemporary Danish travel practices in Greenland as tourist and as civil servants and other forms of work migration.

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**Andersen, Oddmund** (Árran Lulesami Center)

### **Changes in the Use of Landscape as a Result of Various Government Actions: A Description of Reindeer Husbandry in the Lule Sámi Area From the Late 1900s Onwards**

The main focus in this presentation is on the reindeer herder's summer land in the Lule Sámi area. Around 1900's various government actions led to several changes in reindeer herding culture, changes which are possible to document in the cultural landscape. During the 18-1900s the closing of the borders for the reindeer herders between the Nordic countries led to less space for the reindeer herders. Some of the reindeer herders who got their pastures bounded moved south and found vacant land in the Lule Sámi area. The new reindeer herding groups introduced a new type of reindeer herding in the area. Later new government action constrained these Sámi reindeer herder's land. These pastures therefor were opened for coastal Sámi reindeer herding groups. We therefore see that a reindeer herding area in the mountains may exhibit considerable variation in use within a short time period as a result of government actions.

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**Anderson, David G.** (University of Aberdeen)

### **Arctic Animal Pedigrees: Towards a Pragmatic Understanding of Domestication**

Circumpolar fauna are often seen to be iconic of a rugged and uncontrolled landscape. However, in contrast to the stereotype, most local Arctic residents perform careful, cultured and controlled relationships with the animals that guarantee their lives. This paper surveys attempts by both local hunters and laboratory scientists to develop local breeds – where 'breeds' are understood as long-term, stable, 'natural' relationships with non-human animals. The fieldwork data is taken primarily from reindeer herding families in Siberia and Fennoscandia with occasional reference to human-caribou relations in Canada and various 'translocated' species such as muskrat and muskoxen. The paper criticizes the idea of a pure pedigree and instead shows the complex or 'messy' way that breeds are concocted either in a laboratory or in the taiga. The paper calls for a study of the 'pragmatic science' of human-animal relations which is specific to Arctic settings. This science will be characterized as contingent, flexible and deeply personal in contrast to the authoritative genealogies dictated by genetic science or the most common general theories of domestication.

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**Anderson, David G.** (University of Aberdeen)

### **Emerging Indigeneities in the Russian North**

The claim of indigeneity is often thought to be confined to settler states overseas. However, many scholars have been astounded by the growth of indigenous claims where they 'should not' exist. Rather than being trapped in time, limited to strictly enumerated groups, or being spatially encapsulated in 'salt-water' post-colonies overseas, vibrant claims to indigenous status can be found today among 'recent' African pastoralists, urban mestizo populations, and in heavily urbanized areas such as the Russian North. This paper will investigate emergent indigeneities in the urban Russian North, with special reference to how these new movements articulate new collective identities transcending traditional national narratives. The paper will compare how identity may have been experienced in isolation from state and market actors, how identity came to be standardized through concepts of „ethnos“, „sub-ethnos“, or „sparseness“. Finally the paper will compare how these authorize identities compare to other identity complexes in Canada or Scandinavia.

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**Andrews, Mary Ellen** (College of Nursing, University of Saskatchewan)

### **Rural and Remote Health Professionals: Gaps and Challenges in Northern Health Human Resource Planning**

The gap in health professional demand and health professional supply in rural and remote communities is well known. The status quo of an inadequately staffed and itinerant nursing model is expensive and can lead to inconsistent and/or culturally inappropriate care, high turnover, and burnout.

This paper will address the challenge of northern health human resource planning through both an examination of northern Saskatchewan's health professional planning activities, and through the results of the National Rural and Remote Nursing Survey and what it tells us about nursing practice in northern Canada.

It will conclude with observations on the role of the nursing workforce, as the most common health providers in remote settings, in addressing some of the health issues plaguing northern communities and improving our northern health care structure.

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**Antomarchi, Véronique** (Université Paris Descartes- INALCO); **Mahieu, Marc-Antoine** (INALCO)

### **The Notion of Survival in the Inuktitut Language and Family Albums from Kangirsujuamiut (Nunavik, Northern Quebec)**

This communication presents fieldwork done in July 2012 in the community of Kangiqsujuaq in the framework of a research project on Inuit imaginability. The project involved about ten inhabitants who chose to comment some photos from their family albums. The first part of the talk focuses on the concept of "survival" in the Inuktitut language, the second part analyses our corpus of photographs in family albums to see whether they bear on death and survival. Therefore, we analyse the comments the inhabitants make about their own pictures. What do the chosen pictures say? We observe that the concept of well being

seems to be central. It turns out that the Inuit live with their environment and not against it. That 's why we can ask whether survival belongs more to the conceptual framework of the Qallunaat (White people) than to that of the Inuit.

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**Arakchaa, Tayana** (University of Alaska Fairbanks)

### **Reindeer and Dogs in Tozhu Mixed Economy (Republic of Tyva, Russian Federation)**

Tozhu reindeer herders, one of the last remaining nomadic peoples in southern Siberia, have always relied on reindeer, dogs, and horses for food, transportation, and hunting. During the Soviet era, however, large-scale reindeer herding was promoted and reindeer became the primary domesticated animal (followed by horses). This paper explores how dogs once again have to play a very important role in the post-Soviet, mixed economy of the Tozhu. Today, Tozhu herders rely on laika dogs, a Russian breed that was introduced for hunting purposes, and on mixed breeds (dvorniagi) in their quest for sable and musk deer whose products (furs and glands) are highly valued in Russian, Western and Asian markets. In this paper, I examine the changing relationship that Tozhu herders-hunters create with dogs, horses and reindeer within Tyva's "taiga ecology".

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**Argounova-Low, Tatiana** (University of Aberdeen); **Prisyazhniy, Mikhail** (North Eastern Federal University)

### **Biography of the M56 Road**

This paper is based on the study of M56, a federal road in Yakutiia, Siberia. This road with a distinctive extractive profile, has been built and used for access to gold, uranium and coal deposits. We investigate the term 'development' in historical perspective: from gold-prospecting activities in the 1920s; the extraction of uranium by GULAG prisoners; and coal-mining in the 1960s. We analyse the socialist rhetoric that the road development has been saturated with throughout the Soviet era. We suggest the study of roads that incorporates a biographical approach that aims to bring the lives of people and the existence of the road together and highlights the agency of people who worked and lived along the road.

Key words: roads, development, biography.

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**Arzyutov, Dmitry V.** (University of Aberdeen)

### **Towards an Anthropology of Speed: Living with Reindeers and Dogs in Northern Yamal**

This paper provides an interpretation of 'wild' and 'tame' animals among Nenets through the concept of speed. Within social studies, speed tends to be closely connected to modernity. It is often interpreted as a turbulent time which has re-framed the perception of space. Yet, speed plays an important role among Nenets during their domestication activities, surfacing the boundaries between 'wild' and 'tame' animals. This paper exams tools and different cultural ways to regulate the speed of the animals during the process of training and domestication (N. ёрколăвă – reindeers training).

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**Aslaksen, Iulie** (Statistics Norway, Research Department); **Barstad, Anders** (Statistics Norway, Research Department); **Garnåsjordet, Per Arild** (Statistics Norway, Research Department)

### **Living Standard, Well-Being and Poverty in the Arctic as Conditions for Climate Adaptation Capacity – Resilience Narratives in a New Survey of Level of Living in Finnmark**

More knowledge is needed on how capacity for adaptation to climate change depends on socio-economic conditions, in particular on poverty. The paper considers adaptation to climate change in the context of a survey of level of living. In 1980, just before climate change became a policy issue, Statistics Norway carried out a special survey of the level of living for Finnmark, with additional questions about language, weather and winter darkness. The paper outlines a proposal to carry out a new version of the survey, with additional questions on adaptation to climate change. We reflect on how survey questions may be developed to explore perceptions and narratives of resilience that may affect the adaptive capacity of individuals and communities. This will contribute to make visible the issue of poverty and its consequences for individual well-being and for the capacity of society to deal with the urgency of societal and climatic change.

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**Avango, Dag** (Royal Institute of Technology)

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## **Constructing Svalbard and Its Natural Resources: Industrial Futures in a Contested Arctic Space**

The Arctic is often envisioned as a future supply area for fossil energy and shipping, a development bound to occur because of the decreasing Arctic Ocean sea ice. In the Assessing Arctic Futures project we have challenged this deterministic future vision, arguing that natural resources are social constructions, constructed within networks of actors who ascribe value to them. Based on a theoretical model developed in this project, I will present cases on the construction of resources in the Svalbard coal mining industry (1898-present). How and why have actors envisioned Svalbard as a place for settlement and extraction? How did they build influence for their visions and why were some of those visions realized? The paper will suggest that explanations of why resource utilization in the Arctic occur (or not) is far more complex than the relative amount of sea ice on the Arctic Ocean.

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**Avard, Ellen** (Université Laval)

### **Greenhouses in Nunavik: A Growing Trend**

Agriculture, specifically horticulture, is not usually the first thing that comes to mind when discussing food security in the Arctic. However, as the idea of augmenting local food production capacity in northern villages gains ground, more and more greenhouse projects are emerging in the Circumpolar World. In Nunavik (the Inuit region of the province of Quebec, Canada), the community of Kuujuaq has supported the development of a greenhouse project that currently encompasses nine horticultural micro-projects. Three other villages in this region are also currently planning greenhouse projects. The general consensus is that community horticultural projects that are developed as multifaceted, comprehensive initiatives can not only produce fresh, healthy food, but also create opportunities for education, employment, social-reintegration, waste management (through composting), reduction of carbon footprint (by reducing “food-miles”), and pride in being able to provide food for oneself and one’s family.

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**Baikie, Gail** (Dalhousie University)

### **The Dislocation of Indigenous Women From ‘The Land’: The Downside of the Lower Churchill Hydro-Electric Development Labrador, Canada**

Initiatives such as the Lower Churchill hydro-electric development in Happy Valley-Goose Bay, Labrador, Canada, do not adequately account for the voices, interests, and impacts on local and predominately, Indigenous/Aboriginal women. ‘Claiming Our Place: Women’s Relationship with Rivers’ explored the connection between women and the natural environment along with the potential implications of the natural resource economic development agenda to their well-being. One finding from using the ‘Creative Action Circle©’ methodology was that due to factors such as the construction of social and economic infrastructure; physical, social and economic barriers prohibiting accessibility to land outside the community; and changes in social relations, that many women and their children are increasingly becoming disconnected from ‘the land’ and thereby, a vital means to their individual and collective wellbeing. These women fear the social, economic and cultural future for themselves and their children given that they are prohibited from belonging to and with the land.

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**Balanoff, Helen** (NWT Literacy Council); **Kudlak, Emily** (Inuvialuit Cultural Resource Centre)

### **Living Inuinait Literacies**

The living literacies of Ulukhaktok, NWT sustain people in the present, connect them to the past and ensure a future for this generation and beyond. These literacies are living. They involve skilled practices requiring care, judgement and dexterity. They are pattern-based and embedded in a whole system of relationships. These literacies are learned through practical, hands on experience and combine the generation and transmission of knowledge, skills and language by skilled practitioners in creative processes. These approaches differ from Western dimensions of literacy, which tend to be print-based and context independent. The Ulukhaktok Living Literacies Research Project demonstrates that increasing community capacity for research and using the findings to inform practice produces more appropriate and culturally relevant programs that engage people who may not normally engage in formal learning approaches. The researchers will illustrate this with examples of community-based workshops that embed Inuinait approaches to skill development.

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**Balanoff, Helen** (NWT Literacy Council); **Kudlak, Emily** (Inuvialuit Cultural Resource Centre); **Kitekudlak, Helen** (NWT Literacy Council)

### **Waking Up Sleeping Words and Stories: The Role of the Past in Inuinnait Cultural Survival Today**

Today, the Inuinnait of the Central Arctic struggle to survive in two disparate worlds. They want to develop the skills they need to live in Canada in the 21st century in a wage-based economy. At the same time, they want to retain the essential characteristics that make them Inuinnait – in other words, the characteristics that form part of their social identity and enable them to maintain their culture in the modern world. In a recent research project, researchers visited old Inuinnait clothing and tools stored at the British Museum in London, UK, for over 150 years. There they documented Elders' stories, songs, and knowledge about the items. In this session, two members of the team will show participants how "sleeping words and stories" were "woken up" through their research, and how these contribute to Inuinnait cultural survival, which is seen as an integral part of sustainability for the Inuinnait.

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**Banjac, Sanjin (Sonny)** (Sea Breeze Power, Manager of Northern Projects)

### **Solar Power at Old Crow: Bringing Renewable Energy North**

Our Vision is to reduce the reliance on diesel-generated power by islanded (off-grid) communities by providing environmentally sound and economically viable energy alternatives. The current Old Crow power system is dependent on three Diesel Generators with all fuel being flown in from the south having to be off loaded and then transferred to onsite storage.

We are proposing to build a 300kW Photovoltaic Array (Solar Panels) with Storage Technology (Battery) to supplement current Diesel-generated Power. Wind and solar resources were thoroughly reviewed to determine if either energy source is strong enough to provide a sufficient amount of electricity to fill the community's power needs.

These energy resources were modelled in combination with storage technologies (batteries) to establish an optimum system configuration would be the most financially sound option for the community.

Our analysis indicates that the optimal solution is a 300kW photovoltaic system (solar), with the possibility of a storage component. Wind-generated energy was determined to not be feasible at this time due to difficulties with transporting and erecting wind turbines on top of Crow Mountain (otherwise the ideal location for wind turbines due to strong wind patterns).

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**Bay-Larsen, Ingrid** (Norland Research Institute)

### **Knowledge and Management – On the Co-production of Validity and Legitimacy in Norwegian Area Management**

Knowledge based management is upheld as a strong ideal in Norwegian environmental and spatial planning. The significance of various knowledge systems (e.g. scientific and traditional knowledge) when assessing species, ecosystems and human use has been acknowledged in order to ensure legitimacy and quality of area plans. The need for multiple and diverse knowledge systems are also reflected in new governance institutions like the Nature Diversity Act and the Intergovernmental Panel on Biodiversity and Ecosystem Services (IPBES). These institutions thus demand and contribute to new forms collection, assessments and integration of knowledge in area management. This article focuses on the role of knowledge in Norwegian spatial planning, with particular emphasis on natural and cultural landscapes. Using examples from a recently presented doctoral thesis and concepts from the sociology of science, the article describes the characteristics of knowledge systems, their generation and integration throughout the planning processes. The paper furthermore discusses how limitations to knowledge creates challenges to decision makers, and how the integration of different knowledge systems requires an awareness of how political legitimacy and validity are being co-produced throughout area planning processes.

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**Bay-Larsen, Ingrid** (Nordland Research Institute); **Didyk, Vladimir** (Kola Science Center, Luzin Economic Institute); **Skorstad, Berit** (University of Nordland)

### **Mapping Ecosystem Services and Values in Local Communities - The Case of Mining in Greenland, Russian and Norway**

This presentation seeks to scrutinize the connection between the development of mining activities, knowledge politics and valuation of landscape, and how this best can be approached in a new funded research project. New investment in mining is now taking place, and the industry is foreseen to become a major driver in the high north. These industrial projects have substantial impact on social-ecological systems; the subsistence, livelihoods, demographic patterns and welfare of human populations, as well as environmental conditions and on the ecosystem services of the northern regions. The ARCTICFRONT project aims at enhancing awareness about how knowledge generated and applied through political decision making processes enables the considerations of acceptable versus non-acceptable changes in social-ecological systems of the north. Our hypothesis is that these many stakeholders generate a multiplicity of knowledge traditions which are not favored in the decision making process. Through a multi-national comparison including four cases of mining projects in Norway, Russia and Greenland, the social processes connected to the production and knowledge application in area management are scrutinized with the help of analytical concepts derived from three theoretical approaches; sacrifice zones, ecosystem-services and a broad value concept (including economic, environmental, social and cultural value creation).

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**Bekkerov, Petr** (Union of Itelmen Families, Kamchatka)

### **Creating a New Type of Social Protection and Adaptation Institutions for Aboriginals in the Market Conditions - "Center of Polar Social Technologies"**

The main Project Objective is to move from training of hired labor professionals to general training of artisans for the tourism sector of the regional economy. According to our concept they should hold not only the speciality, but also their own production areas (workshop or just workplace for homeworkers) and most importantly, the results of their labor. For this purpose the sustainable net of Centre branches will be created in the region in the nearest future. At the moment we are working on creating the enterprises that combine the availability of jobs (Plants, workshops, etc.) for graduates of Center (20% of the area) and commercial lease of the remaining areas for the trading enterprises and mini- micro-businesses.

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**Bennett, Mia** (UCLA - University of California Los Angeles)

### **After the Flood: Socioeconomic and Environmental Impacts of Iceland's Kárahnjúkar Megaproject**

This paper explores the socioeconomic and environmental consequences of Iceland's development of its aluminum sector through the lens of the Kárahnjúkar Hydroelectric Power Plant and associated Aluminum Company of America (Alcoa) smelter in east Iceland. The study argues that the government, finance, and energy sectors co-opted narratives of a "wild," "pure" landscape to attract resource development. Environmentalists opposed to Kárahnjúkar, however, also marshaled a narrative of environmental purity despite Iceland's history of anthropogenic degradation while missing an opportunity to collaborate with local stakeholders. An investigation of Kárahnjúkar's regional and national impacts reveals that although government, finance, and energy elites initially promoted the project's widespread economic benefits, they disproportionately profited from it. The paper also finds that Kárahnjúkar has caused detrimental environmental changes in east Iceland. Findings suggest that the national government's plans for additional aluminum projects may precariously increase the sector's preponderance within the economy while causing further environmental degradation.

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**Berlina, Anna** (Nordregio – Nordic Centre for Spatial Development)

### **The Role of Cross-Border Cooperation in Regional Development – The Case Studies of Kiruna and Narvik**

Kiruna and Narvik are the towns, which lie in Sweden and Norway above the Arctic Circle in close proximity to the border. Both towns rely on the iron ore production and trade. As all border regions, there are a number of specific challenges that these regions face related to peripherality, brain-drain, etc. At the same time these regions benefit from increased cooperation with the neighbouring states. The paper and presentation is based on the EUROBORDERREGIONS project - the case study of Kiruna- Narvik cross-border regions. It investigates the role of the border as a resource for economic and cultural exchange, as well as the impact and consequences of increasing cross-border cooperation on the regional development. The study is largely based on the perception and interpretation by the local authorities and businesses.

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**Berman, Matthew** (University of Alaska Anchorage); **Kofinas, Gary** (University of Alaska Fairbanks); **BurnSilver, Shauna** (Arizona State University); **Meek, Chanda** (University of Alaska Fairbanks)

### **Defining and Measuring Community Adaptive and Transformative Capacity in the Arctic Context**

Community adaptive capacity (AC) plays a prominent role in the vulnerability literature. The related concept, transformative capacity (TC), describes a set of tools for human responses to change from the resilience paradigm. While the literature appears to agree generally on the meaning of AC and TC, operational definitions vary widely in empirical applications. We view AC and TC as forms of capital, as distinct from flows (i.e., ecosystem services, well-being). This paper presents a framework for comparative studies of community AC and TC in the arctic context. We explore case studies in measuring community AC and TC to understand how community AC and TC differ qualitatively from household AC and TC beyond mere aggregation of household capacities. We outline the key challenges in measuring AC and TC for small communities, and propose a set of indicators which we apply in a comparative analysis of several communities in arctic Alaska.

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**Berman, Matthew** (University of Alaska Anchorage Institute of Social and Economic Research); **Martin, Stephanie** (University of Alaska Anchorage Institute of Social and Economic Research)

### **The Injury Death Rate as an Indicator of Collective and Historical Trauma for Arctic Communities and Regions**

Turning collective and historical trauma (CHT) from explanation of a set of social pathologies to a documented public health condition requires developing a quantitative indicator of severity that may be used for monitoring over time, comparative analysis, and hypothesis testing. We explore population injury death rates -- accidental deaths, homicides, and suicides -- as such an indicator of CHT, discussing advantages such as relatively consistent measurement and geographic and social scalability, and disadvantages such as reductionism. Large and persistent variation in injury death rates among arctic communities raises questions about whether some communities experienced less trauma, that the symptoms are expressed differently, or that some communities may have recovered faster than others. If these questions can be resolved, testing hypotheses about variation in injury death rates might reveal community protective factors against CHT symptoms, or suggest strategies to accelerate community healing.

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**Bertelsen, Rasmus Gjedssø** (Aalborg University)

### **The Development of Icelandic Higher Education from Independence Politics and State-building to Globalized Digital Learning in Small Communities**

Arctic societies are natural resource-based economies based on marine and terrestrial biological resources, mineral resources and fossil and renewable energy resources. The well-being of Arctic societies is deeply dependent on the ability of these communities to capture the value of their natural resources, which is intricately linked to human capital. Iceland is a case of a highly successful Arctic society, whose well-being is much based on human capital. The development of higher education coupled with brain circulation is important for the development of an Icelandic knowledge-based economy. This paper will look at the long-term development of higher education in Iceland since the independence struggle of the 1800s to the development of Reykjavik as a university city in the 1900s to the expansion into the countryside with the University of Akureyri in the 1980s to decentralized online and hybrid learning in localities as the West Fjords.

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**Bertelsen, Rasmus Gjedssø** (Aalborg University); **Justinussen, Jens Christian Svabo** (University of the Faroe Islands); **Smits, Coco** (Royal Haskoning DHV)

### **Local, Globally Connected Knowledge-Based Sectors as Key for North Atlantic Societies to Capture Value and Benefits of Natural Resources**

Building local, but globally connected knowledge-based sectors around natural resources is key for socio-economic development in the Arctic and the North Atlantic. Greenland is currently pursuing development of mineral resources for economic development. Creating local capacity and human capital will be crucial for capturing the value and benefits of these resources. So far, the development of the mineral sector is less developed. However, there is in the North Atlantic (Faroe Islands, Greenland and Iceland) much experience with the creation of local, globally connected knowledge-based sectors around natural resources, namely energy, which is very relevant for mining in Greenland.

Iceland has succeeded in creating a strong domestic, but globally connected knowledge-based sector around its renewable energy resources in hydro and geothermal power. It is now pursuing a similar development in hydrocarbons, where it is at a very early stage. This Icelandic sector is based on local human capital development. This human capital development is therefore of the greatest importance. It is based on a strong local primary, secondary, vocational and some tertiary education combined with a very successful tradition of brain circulation of going abroad for study or professional experience and returning while keeping strong relations with foreign leading universities, institutions and companies. Iceland has managed to create a sector, which both harvests its own energy resources, but also sells know-how around the world. Iceland is currently seeking to develop such a capacity and human capital in hydrocarbons.

The Faroe Islands have over a couple of decades managed to create an offshore hydrocarbon sector with much skills and knowledge. Therefore Faroese society has captured much value and benefit from the offshore hydrocarbon search, which has not yet yielded results and is driven by expectations. This sector is again based on strong local human capital and brain circulation. Greenland is faced with greater challenges creating local, globally-connected knowledge-based sectors in its offshore hydrocarbon and hydropower sectors (as well as mining). These challenges severely hampers Greenland's capture of the value and benefits of its natural resources. The reason for these challenges appear to be issues in local education and brain circulation, which are key to overcome for Greenland to capture the value and benefits of its natural resources.

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**Bertelsen, Rasmus Gjedssø** (Aalborg University); **Højris Gregersen, Mette** (Aalborg University)

### **Navigating Constitutional and Political Complexity: The Kingdom of Denmark and Asia**

The Kingdom of Denmark stretching Continental Europe and the North Atlantic with the two self-governing nations of the Faroe Islands and Greenland seeking greater and eventually full independence is perhaps the most complex actor in the Arctic Council. With aspirations for greater and full independence, the Kingdom will be an increasingly complex actor for decades to come. In light of Asia's increasing interest in the Arctic and the Arctic areas of the Kingdom of Denmark, the Kingdom of Denmark and countries as China, India, Japan, Korea and Singapore must find ways of political, economic and people-to-people relations navigating the constitutional and political complexities of the Kingdom of Denmark. For especially China, engaging self-governing minorities as the Faroe Islands and Greenland on the path to independence opens up a range of interesting research questions. Both sides must rethink well-established political and economical relationships to include the Faroe Islands and Greenland.

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**Black, Kelly** (Carleton University); **Kennedy Dalseg, Sheena** (Carleton University); **Abele, Frances** (Carleton University)

### **An Institutional and Social History of Post-Secondary and Adult Education in the North**

Our research contributes to the history of post-secondary education in the Northwest Territories and Nunavut from approximately 1960 to 1999. In this paper we explore our findings regarding the programs and initiatives offered to provide post-secondary and adult education (to Inuit) in the Northwest Territories and Nunavut. We also address the evolving ideas and debates surrounding the establishment of a university in the territorial North. Historically, post-secondary and adult education programs offered in the North have tended to mirror the political and economic priorities of their time, often responding directly to short-term labour force needs in the resource development and government sectors. The discussions and debates, dating back to the 1960s, point to the fundamental relationship between education, self-determination, and democratic development. The debate around a 'bricks-and-mortar' northern university is ongoing and our research brings attention to the questions and concerns of the past in order to inform present and future dialogue around post-secondary education in the north.

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**Blangy, Sylvie** (CEFE, CNRS); **Philie, Pierre** (KRG, Kativik Regional Government); **Bernier, Monique** (INRS)

### **Collaborative Research in the Arctic: How to Address Community Concerns in a Changing Environment?**

We will base this presentation on the Nunavik OHMI project, the 8th CNRS labeled OHM (Observatoire Hommes Milieu) a network of observing networks around the world. The OHMI is a collaborative effort between the Kativik Regional Government (KRG) in Nunavik, the Nordic Study Centre (CEN) at Laval University, and the French National Research Centre (CNRS) in France and is located in the Inuit community of Kangiqsujuaq In Northern Québec. French and Canadian academics have joined forces to address community concerns, looking at major issues such as mining and tourism impacts, ice safety,

environmental changes, health and well being. Projects are designed together through a collaborative approach, comparative studies and cross cultural research programs are developed with other Arctic and sub Arctic communities through a web site. Our talk aims at raising questions related to the status of participatory action research and its relevance for indigenous peoples dealing with environmental changes.

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**Blangy, Sylvie** (CEFE, CNRS); **Deffner, Anna** (Agro Paris Tech)

### **Mining Impacts and Sustainability in Baker Lake, Qamanittuaq, Nunavut**

Mining impacts in the Arctic are not well studied and understood yet. Baker Lake in Nunavut is the only Arctic community to have a gold mine in operation, a uranium mine soon to be opened and several other sites in exploration. Through participatory workshops with local residents, we looked at the social, economical and environmental impacts of the gold mine. The mine is generating positive and negative impacts on caribou livelihood, human health and well-being. Salaries and revenues bring wealth. Families and women are however greatly affected by the stay at the mine. Questions about the uranium mine remain unanswered. Baker Lake residents are looking at more balance ways to preserve their traditional activities, their family ties and the income from the mine. Researchers are teaming up to develop Community based research programs, comparative studies between arctic communities, negotiation tools, guidelines, equitable partnerships.

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**Bocharnikova, Alexandra** (Saint Petersburg State University)

### **Co-operation Between Institutional Organizations of Indigenous Peoples and Industrial Companies as Way of Adaptation to Changing Conditions**

Institutional approach which is widely used in researches in the sphere of economy, sociology can be also applied for study of problems of adaptation of indigenous peoples to changing conditions in political geography. Institutionalism of the participation of indigenous peoples in regional policy is carried out in the regions of active industrial exploitation of oil and gas companies in the regions of High North. At the territory of Yamalo-Nenets Autonomous okrug administrative structures, agricultural cooperatives, structures of the indigenous peoples and oil and gas companies tended take part in the regulation of the traditional nature use. Government and oil companies tended to make agreements in the spheres of policy of indigenous peoples in some regions. The most successful examples of this co-operation exist in Yamalo-Nenets autonomous okrug and Sakhalinskaya oblast.

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**Bocharnikov, Vladimir** (The Pacific Institute of Geography Far Eastern Branch of the Russian Academy of Sciences);  
**Bocharnikova, Alexandra** (Saint-Petersburg State University)

### **The Udege People and the Bikin Valley Territory for Traditional Nature Recourses Use**

This report gives an overview of the environmental and historic background for the Central Sikhote-Alin World Heritage Site in the Far East of the Russian Federation and its proposed extension into the basin of the Bikin River (Primorsky krai). It will look specifically into its impact on the rights of the Udege, one of the indigenous peoples of Russia. The Udege's struggle against commercial logging in the early 1990s is one of the defining moments in the development of Russia's indigenous rights movement, however even more than two decades later, they still lack adequate recognition and protection of their rights to land, subsistence and culture. Among others, the authors will explore the question as to whether or not the World Heritage process has had any impact on this situation. The creation of Nature Park or Territory of traditional Nature Recourses Use are discussed.

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**Bodenhorn, Barbara** (Dept Soc Anth, Cambridge University)

### **Teaching Without Borders; Learning Across Boundaries: An Exploration of Educational Alternatives in Northern Alaska and Southern Mexico**

One of the legacies of colonialism in what Europeans called 'the new world' has been young people's conviction that their own roots are 'backward'; and that 'value' comes from elsewhere. In a recent academic interchange (supported by the NSF) students from three indigenous regions in Alaska, Oaxaca, and Michoacan spent time in each others' communities, learning

from elders, scientists, families, and each other. One Alaskan student noted, I always thought the exciting stuff came out of Fairbanks or Anchorage. But now I see how important our region is. 'How cool is that?' The present paper explores two distinct educational strategies through which it is hoped that participants will think, 'how cool is that?!?' – about their regions, their local expertise, their own capacities and their hopes for the future. One is the international scientific/cultural interchange already mentioned; the other is a new initiative of the University of the Sierra Juarez promoting truly collaborative research. We thus explore multiple ways in which education may be both 'colonising' and liberating.

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**Boltokova, Daria** (University of British Columbia)

### **"Safety in Numbers?" Language Vitality and Problems of Enumeration**

The 2003 UNESCO report on Language Vitality and Endangerment uses the "absolute number of speakers" as one of six major measures of language vitality. The report admits that it is difficult to determine the absolute number of speakers of an endangered language. Yet the absolute number of speakers continues to be used as a viable measure of language vitality. In this paper I analyze enumeration practices that are used in measuring language vitality and examine its ideological implications in language revitalization efforts. I ask: How many speakers are required for a language to be considered "safe"? Who determines that number? And, finally, how fluent must speakers be to be counted? Based on my fieldwork with the Dene Tha First Nation of northern Alberta in Canada, I examine how success is measured within a paradigm of language revitalization. I argue that enumeration practices in measuring language vitality are, first, based on ambiguous notions of "speaker" (or native speaker) and, second, do not capture hybrid linguistic practices not bound to standard notions of language purity. Language fluency in hybrid linguistic practices is not a rigid category that can be easily measured and, as such, may not be accounted for by simple measures of absolute number of speakers.

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**Bowles, Paul** (University of Northern British Columbia)

### **'Globalizing' Northern British Columbia: A Framework for Analysis**

Resource-dependent regions have long been integrated into global markets. This is evident in the case of northern British Columbia, a region now experiencing a new phase of globalization as the importance of Asia, and China in particular, grows. This new push for global integration in a region long been shaped by global economic forces invites analysis. I argue that it is useful to distinguish between two distinct meanings of 'globalizing'. The first is 'globalizing' as an adjective, as a descriptor of increasing global economic integration and measured by trade. The second is as a verb, with agents actively 'globalizing' the region through a distinct set of actions and policies. The paper demonstrates how the two meanings of 'globalizing' lead to different interpretations of the same historical periods. The paper contributes to our conceptual understanding of the multiple meanings of globalization and demonstrates more precisely how one resource-dependent region is globalizing.

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**Brady, Michael (Mike)** (Rutgers University)

### **Energy Infrastructure Development in the Arctic: Planning and Decision making Scenarios for Local Communities**

In Alaska's North Slope, fly-in-fly-out (FIFO) oil and gas enclaves provide limited development opportunities, and the alternative mining town model is less desirable as complete integration would likely convert permanent Native settlements into temporary company towns.

This paper creates and compares a set of coastal impact scenarios for the City of Wainwright in Alaska's North Slope, the likely landfall site for offshore oil and gas support infrastructure and operations expected within a decade. While onshore development at the distant Prudhoe Bay oil field and neighboring sites have operated largely in isolation for decades, future offshore development could bring unprecedented spatial integration as onshore support activities could locate within proximity to permanent settlements. Even with high spatial integration, negotiation outcomes would determine levels of project integration with existing communities. This paper could guide integration decisions with offshore projects to support North Slope sustainability.

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**Briones, Jesika; Daitch, Sarah** (University of Victoria); **Dias, Andre; Li, Julia Fan; Lajoie, Martin; and Schwann, Alyssa**

## **A Question of Future Prosperity: Developing a Heritage Fund in Canada's Northwest Territories**

On April 1, 2014 the transfer of responsibilities from the Government of Canada to the Government of the Northwest Territories (GNWT) takes effect. Through the Devolution Agreement, the GNWT will be able to capture a percentage of resource royalty revenues. In 2012, new legislation created a Heritage Fund for the territory, to serve as a mechanism for transferring a portion of these resource revenues collected for the benefit of future generations. A report launched in February 2014, authored by a group of young public policy researchers, supported healthy political debate and decision making amongst Northerners on how to manage these new royalties. Members of the Legislative Assembly tabled this policy report in the NWT Legislature, to press the Finance Minister to commit a significantly higher proportion of revenues to the fund. This paper will present an ongoing case study of a public policy research initiative that supports citizen decision-making on resource governance. It further outlines how the next steps of effective fund governance, oversight, and accountability will require meaningful public engagement with the people of the Northwest Territories.

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**Buchanan, Astri** (School of Environment and Sustainability, University of Saskatchewan); **Reed, Maureen** (School of Environment and Sustainability, University of Saskatchewan); **Lidestav, Gun** (Swedish University of Agricultural Sciences)

## **The Influence of Gender on Adaptive Capacity: A Case Study from Swedish Reindeer Herding Communities**

In Sweden, the Sámi have exclusive rights to reindeer ownership and husbandry, however, they have faced longstanding economic, political, social and environmental challenges to exercising these rights. While much research has been conducted on the contribution of “adaptive capacity” (AC) to the resilience of communities, there is relatively little attention given to Sámi populations in Scandinavia and to the differing contributions that men and women make to AC. Therefore, the purpose of this paper is to understand the respective contributions of women and men to the AC and transformation of a reindeer herding community in northern Sweden to inform gender-sensitive policy and practice. We use a capitals approach to analyse data collected from a survey of herders and personal interviews. Results suggest that the AC of reindeer herding communities is weakest in relation to institutional capital and strongest in relation social and cultural capital, where women make the greatest contributions.

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**Buhmann, Karin** (Department of Intercultural Communication and Management, Copenhagen Business School; Department of Communication, Business and Information Technology, Roskilde University)

## **A Public Governance Look at CSR: CSR as a Modality for Governments to Encourage Contributions to Public Policy Objectives in the Exploitation of Arctic Natural Resources**

Natural resource exploitation in the Arctic generally does not encounter the problems associated with weak public governance that have marred several resource-rich countries elsewhere in the world and led to calls for CSR as private governance. This paper posits that in Arctic states CSR offers interesting potential for public regulators to steer private/public-private resource exploitation towards increased contributions to public sustainability and welfare state objectives. The significance of CSR policies and practices as private governance modalities towards risk management and as competition parameters combine with normative guidance based on CSR norms (e.g. the UN Global Compact, OECD's Guidelines for Multinational Enterprises, the UN Guidelines on Business and Human Rights). Focusing on debates concerning resource extraction operations in Greenland and the pertinent policy framework, this paper discusses the potential which CSR may hold as a governance modality for public regulators to encourage contributions of extractives industry operators towards sustainable Arctic development.

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**Burke, Tracey** (University of Alaska Anchorage); **Durr, Cara** (Alaska Food Coalition/Food Bank of Alaska)

## **The Role of Local Foods for Pantry Users in Rural Southcentral and Southeastern Alaska**

The discourses of food security in the North focus on subsistence hunting/fishing and “locally grown” products that need not be imported. However, food security is also associated with economic security, and low-income people suffer the most when subsistence or locally-grown food resources are limited.

This study was conducted with rural users of the Alaskan charitable food system. We interviewed people who use food pantries - people who by definition cannot access sufficient food in other ways. What do people eat; what people would like to eat if they could; how do they think about acquiring food for their families? To what extent do they participate in subsistence

or local agriculture? How do local foods enhance their food security and how can we support engagement with local foods? As we work to improve the amount and quality of local foods, we must insure genuine access to those who are most vulnerable.

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**BurnSilver, Shauna B** (Arizona State University); **Magdanz, Jim** (University of Alaska Fairbanks); **Kofinas, Gary** (University of Alaska Fairbanks)

### **Ties that Link Us Together: Using Social Network Analysis to Reflect the Role of Sharing and Cooperative Relationships in Offsetting Household Vulnerability to Change**

Numerous arctic ethnographies have highlighted qualitatively the contribution of sharing and cooperative relationships to household well-being and community cohesion. Quantitative social network data from three northern Alaska communities (2 coastal Iñupiaq and 1 interior Gwitch'in) representing flows of food, labor and equipment between households also suggests that a range of nuanced social relationships continue to be important for offsetting household vulnerability to climatic, land use and socio-economic changes. Prior results indicate that 60-75% of all wild foods flowing between households stems from these social relationships. We develop a metric of household vulnerability that integrates social network metrics (network multiplexity, in and out degree ties) with magnitude of food flows, and socio-economic data. The metric illustrates highly heterogeneous profiles of household vulnerability within and across the three communities. Results highlight the significant strengths and potential limitations of sharing and cooperative relationships to contribute to sustainable arctic livelihood under conditions of change.

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**Burton, Peter** (Dalhousie University); **Daley, Angela** (Dalhousie University); **Phipps, Shelley** (Dalhousie University); **Rosenblum, Daniel** (Department of Economics, Dalhousie University)

### **Measuring Poverty in Northern Canada**

Poverty in the Territorial North (i.e. Yukon, Northwest Territories, Nunavut) has traditionally been approximated using thresholds derived from data pertaining to Southern Canada. We provide the first direct measures of poverty in the North compared to elsewhere in Canada using new estimates of differences in cost of living.

We employ the Engel methodology upon which Statistics Canada's Low Income Cut-Offs are based. Specifically, we estimate differences in the income needed for otherwise similar households to devote the same share to necessities such as food, shelter and clothing (i.e. equivalence scales). Using multivariate techniques and microdata from the Survey of Household Spending, we find that income needed to purchase a similar material standard of living is approximately 63 percent higher in the North. We use these estimates to measure incidence, depth and distribution of poverty in the Territorial North compared to Southern Canada over the period 1997 to 2009.

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**Burton, Peter** (Dalhousie University); **Daley, Angela** (Dalhousie University); **Phipps, Shelley** (Dalhousie University)

### **The Well-Being of Children in Northern Canada**

We use the Canadian Community Health Survey to create a portrait of child well-being in the Territorial North (i.e. Yukon, Northwest Territories, Nunavut) relative to Southern Canada. We examine seven domains of well-being with 23 indicators by region and Aboriginal identity for children aged 12 to 17. We include objective and subjective measures, reflecting the importance of children's perspectives in studies of their own well-being.

We find negligible differences among the non-Aboriginal population; while most indicators are substantially worse for Aboriginal children, especially in Northern Canada (e.g. income, poverty, household education, family structure, crowding, food insecurity, school enrolment, smoking, sexual activity, obesity and overweight, mental health, overall health). However, there are exceptions (e.g. physical activity, fruit and vegetable consumption, stress, belonging). Nevertheless, Aboriginal children in the North are generally less satisfied with life. This is not surprising since they fare worse in most well-being indicators considered in this study.

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**Butler, Lorna** (College of Nursing, University of Saskatchewan)

### **Remote Presence Technology: Pathways for Healthy Northern Communities through Improved Access**

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This presentation will highlight the dynamic relationships that have developed between nurse educators at the University of Saskatchewan and the North Eastern Federal University that has led to the creation of a Summer Institute. The Summer Institute was designed to link global communities for students and faculty to share expertise, knowledge and insights to address the challenges facing Indigenous people in achieving optimal health and well-being in the circumpolar north. Creating a high degree of synergy among global partners, from north to north and north to south, will enable learners to expand beyond traditional thinking and health practices through shared learning. Four pillars represent the guiding principles and values underlying an interprofessional approach to health education that will realize our vision for global leadership in Indigenous health:

- **Collaboration:** seeks to broaden our understandings and approach from the traditional; we can embrace the context of health and health education with our global communities to facilitate shared learning and scholarship. Relationships established globally will serve to broaden and strengthen indigenous health.
- **Complementation:** is the process of integration, of equity in achieving common goals and of respect for global diversities that are culturally bound. In addition to creating cultural awareness, an obligation exists to build global citizens and trusting relationships across boundaries.
- **Transformation:** is the ability to include indigenous knowledge in curricula. Transformation will occur as educators become skilled in using indigenous pedagogies and knowledge systems within and among our intellectual communities.
- **Health Quality:** Transparency is fundamental to creating quality. Collaborative efforts among involved global communities will be essential to select and develop quality indicators as the standard outcome measures for student and faculty engagement in the Summer Institute.

To lead transformational change that will inform policy decisions for safe, healthy communities an evidence-based approach is essential. Learning and understanding the contextual and social determinant indicators that are contributing to both poor health and community engagement across circumpolar regions provides relevant comparators to influence policy and practice level change. Integrating the various ways of measuring the complexities of social, economic and environmental determinants leads to evidence-based, best practices for creating programs for safe, healthy communities.

The inclusion of international, northern nursing sites in this initiative simultaneously increases research capacity across the regions and positions circumpolar (north to north) comparisons for quality indicators. Building capacity at the learner level (students) is transformative in creating high quality, knowledge intensive environments for vulnerable populations living in rural and remote communities.

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**Butler Walker, Jody** (Arctic Institute of Community-Based Research); **Friendship, Katelyn** (Arctic Institute of Community-Based Research); **Jackson, Suzanne** (Dalla Lana School of Public Health, University of Toronto)

### **Unpacking “Working Together”: Intersectoral Collaboration in a Four-Year Healthy Lifestyles Project in Northern Canada**

AICBR is leading a four-year community-based project involving both Yukon and Northwest Territories. It has an overarching theme of inter-sectoral collaboration from a rural, remote and Northern perspective, with an objective to build a network of inter-organizational partnerships from multiple sectors in YT and NWT linked to healthy eating, active living, and health literacy. The project will work to enhance and strengthen collaboration and networking between and within non-government and government agencies, local businesses, and communities in both YT and NWT, with a focus on fostering healthy lifestyles in communities. As lead and support for the project, AICBR will follow a Collective Impact approach, working with those who share a common agenda, offer mutually reinforcing activities, and will facilitate continuous communication between partners. We anticipate outcomes from this project will shed new light on the importance of inter-sectoral collaboration for translating knowledge to action in Northern Canada.

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**Caron, Andrée** (Canada Research Chair on Comparative Aboriginal Condition, located in Université Laval); **Duhaime, Gérard** (Canada Research Chair on Comparative Aboriginal Condition, located in Université Laval)

### **Prices and Food Security in Nunavik**

The main objective of this study was to monitor changes in consumer prices in Nunavik in the context of the implementation of the Nutrition North Canada (NNC) program. Six data collection operations were performed between April 2011 and April 2013 in nine grocery stores in Nunavik and in one control store in Québec City. This

study compares the price of 163 products, based on the form adapted for the purposes of the study entitled Nunavik Comparative Prices Index 2011.

Results suggest that NNC program appears to have achieved its objective of improving access to healthy, nutritional food in regard to the price of fresh perishable products. But it has failed to achieve its objective in regard to the price of frozen perishable products and products subsidized at level 2. The delisting of certain products under NNC appears to have contributed to an increase in the prices of these products. All in all, discrepancies continue to be considerable between Nunavik and Québec City.

During NNC implementation phase, internet campaigns, open letters in newspapers, even street demonstrations have occurred. They all expressed a major concern of the residents. However, the high cost of living has not been changed. Predictable changes in NNC, due to its rules such as a capped budget, will not improve the overall food security in the Arctic.

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**Cater, Tara** (Carleton University)

### **Work/Journey/Home/Journey: Exploring Resource Development-Related Migration in the Baffin Region, Nunavut**

Mineral development has become the greatest driver of socio-economic change in the territory of Nunavut, bringing uncertain opportunities and challenges to northern communities. Inuit populations in Nunavut are daily adapting to new realities of resource industries, including: employment and training opportunities, landscape change, and fly-in-fly-out mining camps, which bring workers from southern Canada into arctic environments for short work terms, separate from northern communities. Northern development initiatives espoused by the federal and territorial governments have encouraged Inuit employment and training to stimulate expanded opportunities for northerners to participate in mineral development projects, yet there is little research on how Inuit workers experience this work. In this presentation, I will provide ethnographic insights into the work experiences of Inuit and non- Inuit workers involved in mineral development in the Baffin Region. I will describe coping strategies, motivation for, and objection to long-distance commuting, across the multiple spaces of work/travel/home.

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**Chen, Joseph (Joe)** (Indiana University at Bloomington)

### **Impacts of Tourism in Norwegian Arctic Destinations: Perspectives from Tourism Stakeholders**

This research aims to explore the perceptions of tourism development in the Arctic from key groups of tourism stakeholders. In light of the lack of in-depth tourism impact literature pertaining to the Arctic, this research deploys a host of qualitative studies entailing personal interview and focus group survey, as a first research step, to disentangle the complicity of perceived impacts associated with the interaction among tourists, local residents and host businesses. The study site is in a Norwegian Arctic region—Finnmark, which is considered as the most visited Arctic destination in Europe. The study population includes three groups of tourism stakeholders: (1) local residents, (2) the tourists and (3) tourism professionals from hotels, tour operations, restaurants, tourist information centers and tourism planning agencies within the study region. Consequently, six thematic views surface as perceived impacts of tourism from the perspective of the three stakeholders.

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**Cheng, Baozhi** (Shanghai Institutes for International Studies)

### **The Opening of Northern Sea Route and the Potentiality of Sino-Russian Arctic Cooperation**

As the acceleration of global warming and the retreats of ice caps, the opening of the Northern Sea Route (NSR) is becoming more and more possible. Since its most energy import and foreign trade rely heavily on maritime transportation, China's interest in the "short-cut" passage of the arctic shipping is rather natural. Last September, a COSCO cargo ship has just completed the country's first commercial transit of the NSR from Dalian to Rotterdam. China will become one of the frequent navigators of the NSR like European countries by 2030. Moreover, the updated large-scale Arctic regional development plan advocated by President Putin will also promote the development of the NSR. Levering with the comprehensive strategic partnership with Russia, China may reach some realistic and concrete cooperation with its Russian counterparts along the NSR, ranging from ship-building and satellite monitoring, to port facilities construction, and capacity training for search & rescue.

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**Christensen, Suna Møller**

### **Situating Education: Relations Between Environment and Pedagogy in North and West Greenland**

This presentation emerges from comparative fieldwork in different educational sites in north and west Greenland on cultural dilemmas in education. In 2010 and 2012 I conducted fieldwork among caribou hunters at the family camp Angujaartorfik in west Greenland where I studied education as an everyday cultural practice.

On the basis of this fieldwork, I suggest that children as well as community is objectified differently whether from within a hunting community or within a state-based society. Within this process, education is situated and conceptualized differently. In conclusion, I suggest that the relationship between Angujaartorfik and education is social and twofold; periodically taking up livelihood as hunters, affords senses of continuity and belonging in an arctic homeland not open to all children, while indigenous practices of pedagogy challenge standard forms of education.

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**Collignon, Beatrice** (University Bordeaux-Montaigne)

### **21st Century Inuit Ordinary Mobility: First Results from an Exploratory Survey**

Canadian Inuit do not travel only on the land. Nowadays, many of their travels are done by airplane, last seldom more than a week and bring them to other Inuit communities, Southern Canadian cities or places abroad. These trips are taken for a number of reasons: health treatment (including childbirth), meetings, sports tournaments, festivals and jamborees, temporary jobs, training, visiting, but also shopping and holiday breaks. This form of mobility has greatly increased in the last 20 years. It has become an important part of Inuit lives, for those who do travel as well as for those who do not, or very rarely. Yet, there is hardly any data available on these movements, which appear to be overlooked by anthropologists, cultural geographers and demographers alike. This paper will discuss the geographic and ethnographic data gathered on this topic with the Inuit of Ulukhaktok (NWT, Canada) in Feb-March 2013.

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**Collignon, Beatrice** (University Bordeaux-Montaigne)

### **A Critical Approach to the Concept of Survival: Theoretical Basis for a Discussion**

Introductory paper to the session.

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**Collignon, Beatrice** (University Bordeaux-Montaigne)

### **Living or Surviving: What Difference Does it Make?**

Looking at Arctic literature, one cannot but notice how widely used the word "survival" is. Such use is particularly striking in two very different fields: Inuit stories published in English and recalling their life on the land, and climate change impact on the Arctic environment and societies.

Reflecting on the importance given to the notion of survival in these texts, this paper will introduce to the issues this raises, particularly in relation to our understanding of Inuit knowledge and of Arctic environments. This will lead to a presentation of what can be expected from a critical approach of "survival" as a concept that has framed, and still frames, Arctic studies.

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**Cost, Douglas** (University of Alaska Fairbanks)

### **Deliberative Democracy and Scenarios Planning for the Future in Arctic Communities**

This paper explores the literatures on deliberative democracy and scenarios planning to evaluate its role in successful futures planning for Arctic communities. It is research tied to a multi-year grant project, the North Slope Arctic Scenarios Project (NASP): Envisioning Futures and Strategizing Pathways for Healthy Communities. My focus is the deliberative engagement of stakeholders in the public education systems of the North Slope and Northwest Arctic Boroughs - educators, administrators, and students. I am most interested in understanding how the different stakeholders view the multi-decade approach to planning for healthy sustainable communities from their standpoint. For example, what values do they think should persist, and when they consider problems in advance, what they anticipate should be avoided or at least mitigated? What key uncertainties are most important to those in the education system and are they the same for each borough? Additionally how will other actors (non-education) perceive the participation of students and school staff? How and from what do students

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consider and express their priorities and visions for the future? This research develops expected outcomes from the “planning” literatures and compares them to education research related to critical rural, indigenous, minority, and economic thinking.

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**Cost, Douglas** (University of Alaska Fairbanks)

### **The Role of Public Education in Governance for Resilience in a Rapidly Changing Arctic**

Social-environmental systems (SEs) have been problematized as frequently having a poor fit between environmental change and policy solutions (Young 2002). In Alaska and other Arctic countries, the role of public schools in improving this fit has been largely overlooked. This paper hypothesizes that, as extensions of governments, public schools in the North American Arctic and other locations offer an opportunity to create better linkages between societies and environments through governance. Secondly, I argue that education is a vital component of resilience, but such education must embrace multiple perspectives in its curriculum in order to honor and access the diversity offered by both traditional ecological knowledge and Western methods. Lastly, schools are an untapped resource to meet the challenge of bolstering SES resilience in a time of transformation for Arctic societies. As a highly regulated and insulated system, public schools taught information that built barriers rather than bridges to understanding of local conditions.

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**Crate, Susan A.** (George Mason University)

### **Beginnings of a Rural Sustainability Paradigm: The Arctic as Case in Point**

Developing sociocultural, economic, and environmental strategies for sustainability is a major challenge facing the world's rural and urban populations alike. However, rural areas lag severely behind their urban counterparts in addressing sustainability milestones yet, as nexuses of biological, cultural and ethnic diversity, they play a crucial role in planetary sustainability. Therefore, there is great need for rigorous research with rural communities to define issues, exchange necessary knowledge and synthesize nascent initiatives exploring rural sustainability. This paper begins this necessary exploration via analysis of long-term research in the Arctic in two case contexts, Viliui Sakha settlements of northeastern Siberia, Russia and Nunatsiavut settlements in Labrador Canada. Despite their location on opposite sides of the Arctic, both area communities struggle with contemporary issues of a changing climate, an unpredictable economic basis, outmigration of their young people to the urban areas and issues of environmental contamination from past and projected resource extraction.

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**Cruikshank, Julie** (University of British Columbia)

### **Alaska Highway: Beyond the Gravel Magnet?**

Anticipating trans-northern pipeline construction in the 1970s, the Yukon Native Brotherhood investigated human impacts of previous corridor development in Yukon Territory, specifically Alaska Highway construction. My role (with anthropologist Catharine McClellan) was to interview senior Yukon Aboriginal men and women who had experienced consequences of that 1942-43 road-building project. We concluded that this 'gravel magnet' drew indigenous families to discrete roadside settlements, relocations that had two profound implications: first, for human relationships with land and animals; and second, for longstanding social institutions associated with kinship. By mid-1980s, the highway had become a well-traveled corridor, enabling documentation of knowledge embedded in indigenous place-names that might contribute evidence for upcoming land claims negotiations. Senior women participating in that project documented intense personal memories of connection with places fanning outward from this artery. My presentation centres on how the relationship between these two projects may illuminate complex, inevitably partial, histories of roads.

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**Cruikshank, Julie** (University of British Columbia)

### **Oral History Along the Arctic Shores: Memories, Representations, Disruptions - Discussion**

Prof Cruikshank shall discuss the common ground which the papers in this session share, as well as explore possible contradictions evolving out of the presented case materials. This may lead to a discussion on the connection between the individual and the collective in the study of memory, as well as on the changing role of oral history as a collaborative field of

performance and sense-making between social scientists and Arctic residents. The discussion may (hopefully) inspire all paper authors to explore common ground when revising their papers for the publication of an edited volume that shall be the main result of this session.

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**Cunsolo Willox, Ashlee** (Cape Breton University); **Shiwak, Inez** (Rigolet Inuit Community Government); **Baikie, Marilyn** (Rigolet Inuit Community Government); **Flowers, Juliana** (Hopedale Inuit Community Government); **Groves, Myrtle** (Makkovik Inuit Community Government); **Jacque, Greg** (Postville Inuit Community Government); **Nochasak, Noah** (Nain Inuit Community Government); **Baikie, Marilyn** (Rigolet Inuit Community Government); **Wolfrey, Charlotte** (Rigolet Inuit Community Government)

### **Climate Change: An Emerging Challenge for Mental Health in the Circumpolar North?**

Emerging evidence indicates that climate change and associated environmental degradation are causing impacts to mental health. These climate-sensitive mental health impacts are expected to be widespread, cumulative, and unequally distributed. Recognizing this, the five Inuit Community Governments of Nunatsiavut, Labrador, Canada conducted a regional study on the impacts of climate change on mental health. This research followed a community-based and community-led participatory framework. Data were gathered through 120 in-depth interviews and 18 digital stories. Participants reported: intense emotional reactions associated with loss of activities, identity, and sense of place (grief, anxiety, stress, distress); real and potential increases in consumption of drugs and alcohol; potential increases in suicide ideation; and potential aggravation of acute anxiety disorders and major depression. These findings contribute to the emerging research on climate change and mental health, and provide a baseline of potential pathways through which climate change may continue to impact on mental health.

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**Daitch, Sarah** (University of Victoria)

### **An Ethical Space for Dialogue About Difficult History: Program Evaluation of a Residential School Education Unit in Canada's Northwest Territories and Nunavut**

How can Northern Canadian youth connect difficult history with their identity, and become capable of and committed to community and civic engagement in their own lives? This study was conducted in collaboration with the territorial departments of education in the Northwest Territories and Nunavut. The territorial education departments developed a mandatory curriculum module regarding the history and impacts of residential schools, piloted in high schools during the 2012-2013 academic year. The module aims to teach difficult history of the attempted assimilation of Indigenous students through residential schools. This research explores how the new education module influences student thinking and behaviour, including the development of critical thinking skills and sense of community and civic engagement. Because it is a region undergoing rapid development, fostering critical citizenship amongst students is vital not just to the North, but to all of Canada.

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**Dale, Brigit** (Norland Research Institute); **Skorstad, Berit** (University of Nordland)

### **ARCTICFRONT: Presenting Analytical Concepts for Understanding and Interpreting consequences of Arctic Mining**

This paper will investigate development of mining activities and valuation of landscape in Russia, Greenland and Norway. Mining processes necessitates intervention in natural landscapes and also lead to contamination of the environment. Thus, mining potentially degrades traditional and/ or alternative ways of utilizing landscape. These potential multiple and combined effects on socio-ecological systems makes the industry a good case for investigating political and managerial decision on the exploitation or protection of mineral and landscape values are being established. Two theoretical frameworks will be presented: a broad valuation concept including economic, cultural, social and biological aspects of nature and natural resources, and the concept "ecosystem services", supporting the notion of a continuum between the ideal types "sustainable landscapes" and "sacrifice zones" when analyzing consequences of exploitation of landscape through mining. Using data from the ARCTICFRONT project, we discuss the applicability of these concepts in the analysis of mining in the Arctic.

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**Dale, Brigit** (Norland Research Institute)

## **A Creative Alternative: Escaping the Trap of Absolute Natural Resource Dependency in Small Urbanized Communities in the Arctic**

Following recent work on post-industrial growth and creativity in rural areas, this paper explores the possibility that lies in broadening concepts and notions originally associated with mega-city development (Florida 2002). Bell and Jayne (2010) has shown how current policies in GB failed to acknowledge the potential also in creative industries in rural areas. Drawing on preliminary investigations in the project THROUGH JOY into the utilization of nature-given premises and advantages in promoting joyful activities which in turn enhances the attractiveness of places, this paper presents the basis for a “de-urbanization” of creativity, instead focussing on connectivity and wide spaces as basis for sustainable, meaningful life in smaller urbanized clusters in rural areas of the Arctic. The paper presents a case from Lofoten, Norway, where creative and entrepreneurial development of skiing enhances local self-image and provides income and development through sustainable usage of landscape and nature.

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**Dale, Brigit** (Norland Research Institute)

## **Governance as Governmentality in Norwegian Marine Resource Management: The Inclusion/ Exclusion Processes of the Ecosystem Based Approach**

During the first half year of 2011, the Norwegian Ecosystem-based Management Plan for the Barents and Lofoten Seas was presented to the public, debated and finally approved by the parliament, This paper will claim that this process is an example of a technology that governs individuals and population, as outlined in the Foucauldian concept of governmentality (Foucault 2004, Bevil 2010). An analysis of ethnographic data is presented where specific inclusion/ exclusion processes and criteria are exposed, showing that the notion of what is to be considered as relevant knowledge for politics is hegemonized in Norwegian resource management practices. It rests within a particular nexus of power/knowledge (Foucault 2007; Foucault 2008) My main concern is the way arguments based on a specific ‘culture of science’ is taken as the only acceptable frame of reference when arguing for relevance and even rationality when deciding what knowledge is to be the basis for a political decision, and that an ethnographic methodology for examining the processes through which this power/ knowledges are re-established AND the other «cultures of knowledge» upon which individuals and communities rely when securing a meaningful future will provide a better basis for politics concerned with management of marine natural resources.

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**Dannevig, Halvor** (Western Norway Research Institute); **Bay-Larsen, Ingrid** (Nordland Research Institute); **Keskitalo, Carina** (Umeå University); **van Oort, Bob** (CICERO)

## **Assessing Adaptive Capacity to Changes in Ecosystem Services in Northern Regions in Norway and Sweden**

This paper presents an ongoing study that investigates the interrelations between changes in ecosystem services and adaptive capacity among users of outfields resources in northern regions of Sweden and Norway. Little knowledge exists on the societal consequences of climate change effects on terrestrial ecosystems in this part of the world. The study presents a framework that utilizes scenarios for projected changes in ecosystem services under climate change in combination with qualitative interviews with users of outfield resources in order to assess the adaptive capacity to the projected changes. Adaptive capacity is assessed by a set of determinants: Financial-, human- and social capital, information, infrastructure, technology and institutions. Results indicate that the observed changes in ecosystem services is well within the coping range of the affected users, but future changes in conjunction with other drivers of change can pose limits for adaptation.

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**Dannevig, Halvor** (Western Norway Research Institute); **Hovelsrud, Grete K.** (Nordland Research Institute)

## **The Perceived Need to Adapt to Climate Change in a Natural Resource Dependent Community in Northern Norway**

If society is to adapt to climate change, then the need for adaption must be seen as a salient issue among decision-makers. This is a perspective that is lacking in the adaptation literature. The paper presents how actors in a natural resource dependent community in Northern Norway respond to changes in weather and resource conditions, as well as projections for future climate. This paper argues that the need to adapt is felt differently between different actors in the North. This illustrates the gap between the urgency to adapt conveyed in the climate change literature and peoples experiences. Perceptions of risks and the need to act on the basis of scientific knowledge hinge on whether scientific knowledge is viewed as salient and legitimate and on the individuals’ risk perception, values and livelihood. By drawing on the concepts from cultural theory of risk

and science technology studies, the paper seeks to explain this divergence in perceptions and responses between different actors.

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**Davis, Karen D.** (Defence Research and Development Canada, Director General Military Personnel Research and Analysis);  
**Juillet, Cedric** (Trent University)

### **Impact of Military Operations on Arctic / Northern Communities**

As the Canadian Arctic gains prominence as a security frontier, Canadian military activity makes an important contribution to the objectives set out by the Government of Canada. With increasing sovereignty-related activity taking place, there is associated risk that practices impacting the lifestyles and cultures of the resident peoples of the north will be introduced. Notwithstanding efforts already in place to mitigate impacts of military activity on Arctic and northern communities, there is a paucity of documented knowledge to enhance such efforts. This paper provides a synopsis of defence research that is being developed to increase understanding of the impact of military operations on human capital in Arctic/Northern communities with emphasis on the relationship between culture and the environment. Particular focus is placed on the theoretical, conceptual and methodological approaches that have been engaged, including the intersection of social and natural science paradigms.

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**Davydov, Vladimir** (Peter the Great Museum of Anthropology and Ethnography (Kunstkamera), Russian Academy of Sciences, St. Petersburg, Russia)

### **From 'Wild' to 'Tame': Reindeer Domestication in Southern Yakutia (Russia)**

Even though reindeer domestication was perceived as a fact that occurred in the remote past, the ethnographic examples from Evenki reindeer herders' camps in southern Yakutia show that it is an on-going process. Reindeer herders continuously invest a lot of efforts to make these animals closer to them. Moreover, human-reindeer relations are embedded into a set of interspecies relations where 'wild' and 'tame' are relative categories and the degree of remoteness or closeness of animals to people is constantly changing. In many cases researchers neglected how human-animal relationships were embedded in the landscape. Domestication is never attributed to one certain place. Rather it is a process which involves movements between particular places and structures and should be described as domestication-in-practice. This paper is focused on how people employ particular parts of landscape and architecture in reindeer domestication process and which strategies they use to get reindeer back to the same places.

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**Davydov, Vladimir** (Peter the Great Museum of Anthropology and Ethnography (Kunstkamera), Russian Academy of Sciences, St. Petersburg, Russia)

### **Human-Animal Relations in the Dark: Defense of Reindeer Herds From Predators in Zabaikal'e**

Nocturnal component of reindeer herders' practices was misrepresented in ethnographic literature. In many respects, anthropologists stressed internal or embodied quality of animal temporality, e. g. 'cattle clock' (Evans-Pritchard) where domestic animals themselves know how and where to move. However, they often missed multiple external agents such as, for instance, predators. Animal's nocturnal behaviour and ecology shapes both predators', domestic animals' and people's movements and relations with the landscape. In my presentation I will focus on temporality of wild animals' movements and behaviour and discuss how Evenki reindeer herders adapt to those changes in Zabaikal'e. The closeness and remoteness of people and animals are not static; they are different during day time and nighttime. I will pay special attention on how predators' closeness and remoteness to domestic reindeer and people changes and explore the structures Evenkis use during night and nocturnal ethno-ethological knowledge they employ to defend reindeer from predators.

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**Dawson, Jackie** (University of Ottawa); **Pizzolato, Larissa** (University of Ottawa); **Howell, Steve** (Environment Canada);  
**Derkson, Chris** (Environment Canada); **Johnston, Margaret** (Lakehead University); **Copeland, Luke** (University of Ottawa)

### **Economic Activity in Arctic Canada: Exploring Shipping Trends, Patterns, and Policies**

Climate change, globalization, and a global demand for natural resources are all influencing an increase in marine-based activity in the Arctic region. Across the Canadian Arctic there has been a rapid increase in ship traffic volume and additional

growth is expected considering the increasing number of mines, tourism enterprises, and construction projects underway. The increased volume of marine traffic poses considerable challenges for governance and sustainability. This paper outlines growth patterns by vessel type (bulk carriers, cargo, passenger ships, pleasure craft, etc.) between 1990 and 2012, established through analysis of NORDREG data collected by the Canadian Coast Guard. Factors influencing growth and the spatial distribution patterns of vessels are explored including the impact of climate change and sea ice change.

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**de la Barre, Suzanne** (Vancouver Island University)

### **Tourism Entrepreneurs' Perspectives on Tourism and Mining in the Heart of Lapland, Sweden**

A renewed interest in mining in the north of Sweden juxtaposes “Europe’s last wilderness” with what is proposed to be “Europe’s strongest mining region.” Meanwhile, tourism is promoted even though it is characterized as a precarious and unpredictable strategy for meeting regional and community economic development goals. In the context of recent mining development in Norrbotten, Sweden’s northernmost county, understanding the perspectives entrepreneurs have of tourism and its development is crucial for its planning and sustainability. For this qualitative case study, semi-structured interviews and survey data were collected from entrepreneurs in the Heart of Lapland, a regional tourism destination area located along the Torne River and on the Finish border in the eastern-most part of Norrbotten. Findings discuss the challenges faced by tourism entrepreneurs, their perspectives on mining, and their views on how tourism contributes to economic diversification, and to regional economic and community well-being.

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**Desjardins, Sean P.A.** (McGill University); **Hazell, Sarah M.** (Alaska Department of Fish & Game)

### **A Tradition Revived: The Contemporary Walrus Hunt at Round Island, Bristol Bay, Southwest Alaska**

Archaeological evidence indicates people have been hunting Pacific walrus (*Odobenus rosmarus divergens*) on the beaches of Round Island, Bristol Bay, Alaska for at least 5,000 years. This hunting tradition continued until the early 1960s, when the establishment of the Walrus Islands State Game Sanctuary effectively outlawed walrus hunting in the area. Multiple government and Alaska Native stakeholders negotiated a revived annual hunt at Round Island, beginning in 1995. The hunt had never been observed by researchers prior to October 2013, when the authors accompanied a successful Yup’ik hunting party to the island. In this paper, we present in detail our observations, including 1) the logistics of contemporary walrus hunting at Round Island; 2) the ways in which walrus are butchered and resources are distributed, and 3) opinions—gleaned through semi-structured interviews with hunt participants—about the importance of the revived hunt as a local cultural tradition.

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**Devlet, Ekaterina** (Institute of Archaeology of the Russian Academy of Sciences, Moscow)

### **Rock Art of Russian Arctic: Petroglyphs of Pegtymel Rock Art Site (The Circumpolar Context)**

The petroglyphs of the Kaikuul bluff on Pegtymel river are the only polar rock art site in the Asian part of Russia. Recent research by team from the Institute of Archaeology, Russian Academy of Sciences has revealed new groups of images, which vary in theme and style. The tundra and the sea are the two inseparable themes in the rock art of the Pegtymel, as well as in the traditional bone-carving craft of the Chukotka. The site near Kaikuul bluff reflects a long-term story of rock art engraving and probably was and still is related to calendar feasts of the region inhabitants.

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**Diachkovsky, Nikolay I.** (North-Eastern Federal University); **Zakharova, Elena** (North-Eastern Federal University); **Gryaznukhina, Natalia** (Yakutsk Municipal Centre of Healthcare)

### **Perspectives of Indigenous Peoples of the North in the Development of Higher Education for Nurses [on the example of the Sakha Republic (Yakutia)]**

One of the strategic tasks that the regional health care system faces is providing nursing of high quality. Solution of the problem is directly connected with training of highly qualified nurses. In the conditions of the Far North nursing education at University level plays a special role in reforming of training of highly qualified nurses, and also in increase of prestige and a

role of nurses in the society. More than 11000 nurses and nurse practitioners work in the system of public health care in the Sakha Republic (Yakutia). Annually, more than 2000 nurses need professional development. The Department of Nursing was founded in Medical Institute in 2003. At present 359 students are trained at the Department of Nursing of the North-Eastern Federal University. The majority of students are from rural places, among them there are 18 students from the Arctic areas.

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**Dietrich, Sophie** (University of Aberdeen)

### **Who is Hiding in the Twilight? - Deep Northern Woods as Home of Trolls and Other Creatures**

When we talk about threatening aspects of the North the importance of the Northern forest can't be underestimated. In Europe the idea of deep woods as places of horror can be traced back to Tacitus (AD 56 - 117). Later on Northern fairy tales such as the tales collected by the Brothers Grimm (1782 - 1787) propagated the concept of the forest as a sinister place inhabited by specifically Northern monsters such as goblins. Caused by the twilight typical for Northern conifer forests a blurring of the boundaries between reality and imagination takes place. Imagination turns stones and roots of trees into trolls and other creatures. I aim to investigate how visual arts illustrate this process. Among others, the work of the Swedish fairy tale illustrator John Bauer (1882 - 1918) will be considered. The analysis is centered on Art History, but will also take into account insights from History and Literature.

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**Din, Herminia** (University of Alaska Anchorage)

### **Junk to Funk: Sustainable Art in the Arctic Region**

Direct involvement in "closing the loop" by reducing consumption and reusing waste materials has become a critical topic in the Arctic recycling movement. In Anchorage, Alaska, community action for conservation was directed toward the separation of recyclable materials. After a review of available recycling programs in our community, no art programs were found in supporting such efforts. The "Junk to Funk" project, created in 2008, is a community-based art series using recycled materials to create beautiful yet finished functional artworks in an open studio art environment. This presentation will describe how to redesign a traditional art education course to combine a community-based learning experience with making and creating sustainable art. It addresses strategies for course development, project design and implementation, building community partnerships, student participation and engagement, and assesses learning outcomes and impact on teaching while strengthening collaboration with the UA Thematic Network on Arctic Sustainable Arts & Design.

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**Dinero, Steven C.** (Philadelphia University)

### **Formal Education as Forced Acculturation: A Case From Native Alaska**

The use of formal education in Alaskan Native society as a process of assimilation and acculturation to "White" values has been documented in the literature for some time. Teachers who were brought in from the "Outside" not only sought to acculturate their students to new ideals but also pursued a process of "de-acculturation" – that is, to aggressively, purposely, and with wanton cruelty strive to "de-Nativize" their young charges. Formal education in Native Alaska therefore was by definition embedded with certain ethnocentric, colonialist and other racist and prejudicial attitudes. In this paper, I discuss this process among the Nets'aii Gwich'in of Arctic Village. Using unpublished sources from the 1960s/70s, I will show how the teacher/pupil relationship well-reflected dimensions of uneven power differentials and class structures. I will show too that parents served as "bridges," pressing their children to become educated at school while seeking simultaneously to embrace indigenous culture at home.

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**Doering, Aaron** (University of Minnesota); **Henrickson, Jeni** (University of Minnesota)

### **Intersections Between Education and Sustainability: An Arctic Case Study**

Education for Sustainable Development (ESD) has increasingly taken on importance worldwide, in part due to the growing awareness of environmental concerns such as climate change, and in part due to the challenge set forth by UNESCO's Decade of Education for Sustainable Development initiative. There is, as a result, a growing body of ESD literature. However,

ESD case studies have rarely been drawn from the Arctic. Earthducation is a project that is examining intersections between education and sustainability around the world. In this paper we provide a case study of ESD in the Arctic that draws on communal narratives collected by Earthducation researchers during field expeditions to Baffin Island, Canada; the Northwest Arctic Borough, Alaska; and northern Norway. These narratives illustrate the types of challenges formal education faces when inherited cultural relationships to the natural environment are not paralleled within educational settings, and how education might influence sustainability in the Arctic.

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**Doering, Aaron** (University of Minnesota); **Henrickson, Jeni** (University of Minnesota)

### **Narratives from North of Sixty°**

This paper examines the history of educational initiatives in the Arctic, focusing on the importance of traditional knowledge, the role of indigenous culture in the educational curriculum, and how and why technology might be used to enhance and preserve traditional knowledge, language, and culture. We then share implementation examples of one technology-enhanced design model, adventure learning, that blends a predesigned curriculum with local culture and collaboration using a combination of online and mobile technologies; authentic narratives; multiple media artifacts; and scaffolds for teachers and learners alike. We conclude with a set of principles that elaborate on the topic of designing educational initiatives for remote communities through a focus on reflective presence, motivation, educator support, and simplicity of design. These principles are illustrated through a narrative centered on the design of the North of Sixty° project, through which we are collaborating with schools in remote communities throughout the circumpolar Arctic.

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**Dolgolyuk, Aleksey** (Institute of History, Siberian Branch of the Russian Academy of Science)

### **The Experience of Economic Development of the Eastern Siberia Northern Territories (e.g. the Middle Angara Region)**

In this research the historical experience industrial's development of the Irkutsk North was analyzed. Shown its contemporary significance and applicability for the economic development of the Northern territories. In the Middle Angara region in 1955-1980 a highly complex of industrial enterprises based on the unique Angara River's hydropower resources, the enormous reserves of wood and large deposits of iron ores was created. It seamlessly blended into the USSA economy. Bratsk-Ust-Ilimsk territorial industrial complex (BUI TIC) became the example of simultaneous involvement in the economic turnover of all major types of natural and labor resources. In 1980 it was composed 70 large enterprises, including the Bratsk and Ust-Ilimsk hydroelectric power station, the most powerful in Russia aluminum plant, the Bratsk and the Ust-Ilimsk timber industrial complexes. Many of these enterprises continued to function stably even during crisis of 1990s in Russian economy. Intensive economic development accompanied by the growth of population and significant changes in its dispersal. Scientific study the unique experience of BUI TIC needs for create concepts of economic development of new territories and forming the strategy of sustainable development of the North economy.

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**Dolgolyuk, Aleksey** (Institute of History, Siberian Branch of the Russian Academy of Science)

### **The Investment Process in Siberia During the Soviet Period**

For years of the Soviet power the economic capacity of Siberia grew repeatedly. Here from 1917 to 1991 some large investment projects of nation-wide value were realized. More than 70 years the constructive labor of builders allowed changing extensive edge. The share of Siberia in the total amount of investments of the USSR increased twice. The priority was given to production construction. Only for the 1940th in Siberia the accelerated rates fixed assets grew in manufacturing industry branches. Since the second half of the 1950th and until the end of the XX century the most part of capital investments went to the branches, connected with production and primary processing of raw materials: in the fuel and chemical industry, ferrous and nonferrous metallurgy, in power industry. In the region there were thousands new industrial enterprises, many of which became leaders in the branches. The special attention was paid to development of fuel and energy complex and other branches on production and primary processing of the richest natural resources of Siberia. Within article the assessment of the state economic policy, governmental actions in relation to Siberia is given. How adequate, corresponding needs of the country and the solution of geopolitical tasks there was a contribution to development of the extensive region? The author tries

to find answers to these questions in this article, analyzing available statistical data on development of capital construction in Siberia.

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**Donecker, Stefan** (Working Group Arctic and Subarctic)

### ***In hoc tractu sunt cynocephales: Dog-Headed Men in Northern Europe***

*Cynocephali*, dog-headed men, form part of the classical canon of monstrous races, the “Marvels of the East” which, according to ancient and medieval sources, inhabited faraway India. However, there is also a parallel tradition that associates the *cynocephali* with northern Europe. In the presentation, I intend to survey medieval sources which deal with these Scandinavian dog-heads, most importantly the Carolingian cosmography attributed to Aethicus Ister, the correspondence between Saint Rimbart and Ratramnus of Corbie, the chronicle of Adam of Bremen as well as various missionary reports.

The paper addresses the importance of the *cynocephali* for a medieval *imaginatio borealis*. Do such tales of dog-headed men offer insights on the way the North was perceived during the Middle Ages? Is there some continuity between the medieval *cynocephali* of the North and the Baltic werewolves that became notorious during the 16th and 17th centuries? Despite substantial differences between the medieval *cynocephalus* and the early modern werewolf, a certain continuity of human-canine hybrids associated with northern Europe can hardly be denied.

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**Dorais, Louis-Jacques** (Université Laval)

### **Caring Power: Combining Educational, Political and Religious Leadership in a Small Nunavik Community**

When studying Inuit governance, the ethics and practice of caring are more visible at the local than at the regional or national levels. In March 2013, in the context of the CURA project Inuit Leadership and Governance in Nunavut and Nunavik, I conducted an autobiographical interview with Rev. Eva Deer from Quaqtaq (northern Nunavik), tasiurti (“guiding hand”) of the local Full Gospel congregation, founder and director of the Aarqitauvik Healing Centre, former school principal, and current mayor of this small (ca. 350 h.) fully Inuit community. The paper will outline some points in Rev. Deer’s life as told by herself, focusing on the role progressively played by caring, during a career in governance that started with heading a community school, was continued in the mayoralty of Quaqtaq, took a spiritual turn when she became an ordained Christian minister, and is culminating in her creation of a pan-Inuit healing centre.

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**Dranaeva, Irina** (North-Eastern Federal University)

### **Northern Universities as a Key to Arctic Sustainability**

In this paper I want to discuss the modern, innovative and important issue in Education. Education for northerners, who live, work in the North and interested in the North. It is obvious that one of the problems in arctic and northern territories is the weak infrastructure: roads, sea roads, communication. Also the sparsely population, lack of job for northern indigenous people, unqualified staff makes the arctic territories dangerous. We still need doctors, teachers, mining engineers and strong local management. We believe that only the higher interdisciplinary education can push the northern territories to sustainability. For example, since 1998 the North eastern federal University starts to work with University of Arctic. We include Bachelor of Circumpolar studies to University study program; later BCS 100 was adapted to Russian language and become a compulsory discipline. Today we work on two programs: BCS and BNS. It means that the every NEFU student in addition to a basic specialty has possibility to get the second diploma in Northern/Circumpolar studies. This certification gives an opportunity to get job in companies which work on northern territories and deals with arctic issues. Moreover UArctic members offer different study programs for BNS/BCS graduates.

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**Dudeck, Stephan** (University of Lapland)

### **‘Once the Boozing Starts you might as well Cut the Last Cucumber.’ Drinking as a Social Catalyst in a Siberian Native Community**

There are so many stereotypes that link vodka and Siberia and the Siberian natives that it seems almost impossible to grasp something real behind all those clichés repeated constantly not only by travellers, intellectuals, oil workers, journalists, and bureaucrats but also by the indigenous peoples themselves. My ethnographic experience of alcohol consumption in a community of reindeer herders didn't fit in all these narratives and my informants tried a lot to hide drinking from any public scrutiny. In the following paper I will juxtapose the black and white pictures of the local narratives with the thoroughly veiled applications of alcoholic beverages in everyday life. A careful ethnographic description of the manifold drinking practices and discursive practices around them including hiding and perpetuating stereotypes should allow me to come to a more adequate understanding of the ambiguous role alcohol plays in everyday life. Anthropological theory gives us few instruments to analyse practices that seem only socially destructive from the point of view of even local stories not to speak about the scientific discourse. In the following paper I'll try to use George Batailles ideas about transgressive behaviour and its socioeconomic role as well as its moral condemnation to understand the relationship of everyday drinking practices and the way people talk about the drinking reindeer herders. An understanding of alcohol as a catalyst for the transgression of morality and rationality allows me to see how important drinking is for the moral economy of the community. It also reveals the different moralities and rationalities that interact on unequal terms in these communities. Such an approach allows to put into question predominant views about alcohol consumption in Northern communities.

There are so many stereotypes that link vodka and Siberia and the Siberian natives that it seems almost impossible to grasp something real behind all those clichés repeated constantly not only by travellers, intellectuals, oil workers, journalists, and bureaucrats but also by the indigenous peoples themselves. My ethnographic experience of alcohol consumption in a community of reindeer herders didn't fit in all these narratives and my informants tried a lot to hide drinking from any public scrutiny. In the following paper I will juxtapose the black and white pictures of the local narratives with the thoroughly veiled applications of alcoholic beverages in everyday life. A careful ethnographic description of the manifold drinking practices and discursive practices around them including hiding and perpetuating stereotypes should allow me to come to a more adequate understanding of the ambiguous role alcohol plays in everyday life. Anthropological theory gives us few instruments to analyse practices that seem only socially destructive from the point of view of even local stories not to speak about the scientific discourse. In the following paper I'll try to use George Batailles ideas about transgressive behaviour and its socioeconomic role as well as its moral condemnation to understand the relationship of everyday drinking practices and the way people talk about the drinking reindeer herders. An understanding of alcohol as a catalyst for the transgression of morality and rationality allows me to see how important drinking is for the moral economy of the community. It also reveals the different moralities and rationalities that interact on unequal terms in these communities. Such an approach allows to put into question predominant views about alcohol consumption in Northern communities.

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**Dudeck, Stephan** (University of Lapland)

### **The Place of Pleasure and Poisoning - Excitement and Danger at the Edge of the Land - The Seashore as a Destination for Reindeer Pastoralists**

Reindeer herding as an economic activity and basis of the lifestyle of arctic pastoralists seems not at all linked to maritime resources. I was therefore quite surprised during my fieldwork with the Nenets when talks about the seashore started to dominate the days while approaching with a group of reindeer herders the coast of the Barents sea on the Kanin peninsula. Even if almost all of them do not fish, cannot swim, and do not relax on the beach, the shore became the biggest attraction during the midsummer. It is the point after which the whole migrations turns southwards. The imagination grew on the possibilities to find valuable flotsam like golden coins and alcohol. I was told oral history about German submarines, burned witches and the orthodox chapels established by the Nenets and robbed by strangers equipped with helicopters and stories about poisoned alcohol and frightening phantoms. Driftwood on the shore becomes an important resource for the reindeer herders in the treeless tundra and also the remains of the fishing equipment of the industry can be used for variable purposes. The seashore becomes in this way the place for imagination and desire as well as for real events and resources that are linked by their deeply ambivalent nature representing the coexistence of risk and aspiration. Based on stories, talks and practices linked with the seashore I will provide a general understanding of risky situations and dangerous circumstances that let explore the positive value of places of vulnerability.

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**Dudeck, Stephan** (University of Lapland)

### **Reindeer Returning from Combat - War Stories Among the Nenets of European Russia**

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Oral history interviews recorded among the indigenous inhabitants of the European Tundra regularly contain stories about war. In most of the cases these are stories about the Second World War but they are embedded in a tradition of remembering war that reach from myth to quite recent military conflicts like the Hungarian uprising in 1956 or the wars in Afghanistan and Chechnya. As a historical event the Second World War plays an important part in the public historical discourse and the participation of Nenets reindeer herders is commemorated and celebrated as part of the antifascist heroism of the Soviet people. The personal life stories of Nenets elders touching war episodes show striking differences to the public narratives of war. The proposed paper tries to understand and conceptualize these differences and develop insights into some general features of Nenets oral history. The stories circle around traumatic memories of the confiscation of reindeer, the poisoning by toxic flotsam, the encounters with the enemy on the coast, the loss of grandfathers and fathers in the war, labour duties, the scarcity of goods and miraculous return of men and reindeer. They take unusual incidents as starting points and tell how the reindeer herders managed to survive in these harsh circumstances or how they coped with the loss of members of their families and livestock. The stories are told without clear expressions of emotional or moral evaluations despite the thematisation of violence and trauma. An analysis informed by the anthropological fieldwork and knowledge of Nenets folklore tries to make sense of the ostensible neutrality of the narrative and the lack of authoritative voices. Thus, in sometimes contradicting messages of the stories, individual recollections and collective state-forming identity-performance of an empire meet.

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**Eerkes-Medrano, Laura** (Department of Geography, University of Victoria); **Atkinson, David E.** (Department of Geography, University of Victoria); **Eicken, Hajo** (Geophysical Institute and International Arctic Research Center, University of Alaska at Fairbanks); **Nayokpuk, Bill** (Shishmaref, Alaska, USA); **Sookiyak, Harvey** (Shaktoolik, Alaska, USA)

### **Western Alaska Ice Berm Formation Using Community Observations**

“Ice berms” are a linearly-arranged pile of sea-ice on the coast that form rapidly, typically during freeze-up, are affected by tide currents and range in height from 10cm to almost 20m. They are important to coastal communities: they can limit coastal access, but they can also save a community from a storm surges. A project was undertaken to develop a conceptual physical model of their formation. Investigation of this phenomena is not possible with standard instruments deployed by the National Weather Service, and must instead involve direct partnership with the community. This project is working with community observers and ad-hoc recollections from photographic and log-based evidence to construct chronologies of ice-berm occurrences. These are related to archived weather data available from NOAA. The communities of Shaktoolik, Gambell, and Barrow, Alaska, were the focus communities. Local manifestation of a berm could vary greatly along the community coastal zone.

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**Eilmsteiner-Saxinger, Gertrude** (University of Vienna)

### **To You, To Us, To Oil and Gas: Symbolics of Materiality and Relations to Mineral Resources in the Russian Far North**

When people from Novy Urengoy or Raduzhny sit together, at some point they toast To you, to us, to oil and gas! This is true for incomers who have come from all over the Soviet Union in order to develop oil and gas fields of Western Siberia. However, not only this settled population has developed a strong sense for the rich mineral resources, but also the contemporary mobile workers who live temporally in mobile camps. For both groups the North – as place – as well as crude oil and natural gas – as materials – contain strong meanings such as hardship that is overcome through personal strength and collective efforts. This effort is rewarding. The mineral resources feed people and the nation, as many of my interlocutors point out.

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**Epstein, Graham** (The Vincent and Elinor Ostrom Workshop in Political Theory and Policy Analysis); **Sandberg, Audun** (University of Nordland); **Cox, Michael** (Dartmouth College)

### **A Process Oriented Approach to the Study of Adaptation to Climate Change**

As the international community continues to engage in protracted negotiations over how to implement reductions in greenhouse gas emissions, the likelihood that society will face disturbances from extreme events and prolonged warming has increased. There is therefore a need to better understand the process by which individuals and communities respond to environmental disturbances, and the ways in which policies can be designed to increase the likelihood of more favourable social-ecological outcomes.

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This paper draws upon the social-ecological system and community adaptation to vulnerability in Arctic regions framework to develop a process oriented approach for the study of adaptation. This joint framework allows for better correspondence between the inherently dynamic adaptive processes and the ways in which policies affect choices in complex social-ecological systems.

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**Eriksen, Sarah Bienko** (Háskoli Íslands)

### **The Battle of Grettir and Glámir: An Investigation of Grettir's Monstrosity in the Medieval Christian Context**

An investigation of Grettir Ásmundarson as a figure rendered monstrous by the writers of Grettis saga due to his association with the old ways of the North. Grettir's genealogical background contextualizes the cultural shift in Iceland from raiding to trading: Grettir's great-grandfather wins great renown as a viking while his father finds success as a merchant and man of the law. However, Grettir's disregard for authority distances him from his father and denies him proper social integration; instead, he remains linked with his mother, a symbol of the old ways in saga tradition. Grettir's chthonic nature only furthers his social liminality, making him resemble the very monsters he fights. Grettir's battle with Glámir is therefore not a victory of man over beast, but a symbolic meeting of equals that lays bare Grettir's monstrosity. That the saga ends as a Medieval romance only emphasizes the Christian disavowal of Grettir's Northern anti-heroism.

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**Espíritu, Aileen A.** (Barentsinstituttet / The Barents Institute, HSL-Fak / Faculty of Humanities, Social Sciences, and Education, UiT Norges Arktiske Universitet / UiT The Arctic University of Norway)

### **Measures of Sustainability: Urban Life in the Arctic**

Seventy percent of those who call the Arctic home live in spaces of urban development that provide a core of centralized services expected by city-dwellers: efficient and affordable public transportation, health care, high-tech service options, diverse meeting spaces for social engagement, etc. The Arctic has already experienced dramatic shifts in population and development, and is facing some of the attendant social problems extant in larger urban centres. How can municipalities ensure a good quality of life and prosperity among its residents? Can measures of city prosperity defined by "productivity, infrastructure development, quality of life, equity and social inclusion, and environmental sustainability" be a way towards achieving Arctic urban sustainability? This paper aims to situate Arctic cities within the larger context of other cities globally in order to find nuances of comparison to enrich our understanding of urban life in the Arctic.

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**Fabbri, Cindy** (University of Alaska Fairbanks)

### **A Sustainability Science Model: Conducting Research, Facilitating Learning, and Enhancing Community Adaptive Capacity**

Climate change, population growth, land use changes, and a society more tightly connected at a global scale are impacting natural resources and are forcing some communities to respond to their changing environment. Communities that want to plan for a more sustainable future require the following: 1) fundamental information about social-ecological systems; 2) a scientifically and sustainability literate population who can use information for decision-making; and 3) high levels of adaptive capacity (i.e., access to and ability to mobilize human, social, natural, and financial capital). This work began as an effort to build a model that institutions of higher education could use to help communities acquire these three things. The model demonstrates how society, through its educational systems, can integrate research, learning, and community to work in the field of sustainability science and foster sustainability in social-ecological systems.

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**Ferguson, Jenanne** (University of Aberdeen/University of Arizona)

### **litiliibit lje Tylbyt: Sakha "Spirited" Language, Sustenance, and Sustainability**

This paper explores the transformations of Soviet-era language ideologies focusing on the rodnoi iazyk (native language) and the concept of the 'mother language' in recent years among Sakha-Russian bilingual speakers in the city of Yakutsk. It seems that the ideologies that circulated prior to 1990 have not been replaced; rather, they have been reinterpreted and re-appropriated to support the maintenance of Sakha language. I discuss the interplay of these ideologies with Sakha beliefs

about the nature of language and the relationship between a speaker and their language(s), which involves concepts of mutual sustenance and protection; in other words, speakers 'sustain' their language, and language can also 'sustain' its speaker. I delve into the effects of these types of language ideologies on the maintenance of Sakha ways of speaking in the city as well as in rural areas, focusing on speakers' attitudes toward and relationship with the Sakha language.

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**Ferrazzi, Priscilla** (Queen's University)

### **An Interdisciplinary Exploration of Criminal Court Mental Health Programs for the Arctic**

In remote communities in the Canadian Arctic, the capacity of the criminal justice system to deal with offenders with mental illness is taxed by limited available resources and the absence of criminal court mental health programs. This research examines how the underlying rehabilitative principles that guide these programs in larger Canadian communities and elsewhere—principles derived from the theoretical concept of “problem-solving courts” that look to the underlying causes of crime—can be used in the absence of the resources usually associated with these courts to achieve their rehabilitative objectives in remote, mainly Inuit communities in the Arctic. This study straddles the traditional boundaries between law and health sciences to combine legal theories of therapeutic justice and contemporary scholarship in mental illness recovery to develop a sustainable approach to improving mental health at the interface of the criminal justice and health systems in Arctic communities.

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**Finnegan, Greg** (Yukon College/SDC Software Inc.)

### **Canadian Interprovincial Employees in the Canadian North: A Case Study in Employment Metrics; 2004-2009**

One of the ongoing debates in Arctic labour research is the impact of the fly-in worker populations on local labour markets. However, we have rarely had as unique a data base to look at as that deriving from the Alberta Shadow population studies that Statistics Canada (StatCan) is carrying out using Canada Revenue Agency data. The first publication of this data appeared in Statistics Canada's 'Economic Outlook' in 2013. In this preliminary paper the StatCan published an overview of Receiving Employees by Canadian province and territory which gives us an annual count of the number of fly-in workers being received by each territory for 2004 -2009. This data allows us to explore the impact of this fly-in worker population on local labour markets, especially in Nunavut where there appears to be a strong correlation between increasing dependency on Receiving Employees and the rising number of disaffected workers as measured by the not-in-labour force population (NILF) and the number people unemployed. We ask: Is this an indicator of internal colonialism.

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**Finnegan, Greg** (SDC Software Inc. / Yukon College); **Coates, Peter** (SDC Software)

### **The ReSDA E-Atlas, E-Library Prototype Design, and the Dissemination of Arctic Research for the ReSDA Community**

The intent of this prototype was to verify a design for a Geo-located Document Library. The primary design elements to be verified were:

- 1) Verify that Google Maps be used as the primary, dominant interface
- 2) Refine some aspects of the map use in this context
- 3) Validate the key aspects of the user interface, both for end users and administrators
- 4) Prove the concept of search fan out
- 5) Investigate the state of art of geo-enabled databases

The prototype was initially implemented in PHP on a MySQL database running in an Apache web server on Linux. This was chosen as it is the ubiquitous base level web server and if the design works in this environment it is portable. However, the GIS features of MySQL are rather primitive, and the current prototype uses Posgres with the postGIS extension for the GIS features enabling ReSDA researchers to upload, access, download and exchange information online through a web portal tool. Future work will enhance the design and look of the site as well as add a relational data warehouse for data storage and access.

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**Finner, Kaitlyn** (McGill University); **Shiwak, Inez** (Rigolet Inuit Community Government); **Flowers, Charlie** (Rigolet Inuit Community Government)

### **Including the Intangible: Photo-Cards as a Method for Analyzing the Social and Cultural Importance of Food in Rigolet, Nunatsiavut**

Many Inuit communities are experiencing increasing challenges to accessing their traditional foods from the land due to climate change as well as complex social and economic changes that culminate in food insecurity. In order to address these complex changes and to ensure food secure communities, the social and cultural importance of food must be considered. Focusing on a community based participatory research project with Rigolet, Nunatsiavut, this presentation will discuss the value of photo-cards as a tool and method for food systems research. Drawing from and adapting data collection methods such as card sorts and conversational interviews, photo-cards have played an important role in Rigolet's food system assessment. The presentation will demonstrate how photo-cards have been used as a means of eliciting community members' emotions, preferences, experiences and affinity to certain foods in a way that was not available with the research methods traditionally used in food research.

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**Fitzhugh, Ben** (University of Washington)

### **Building an International Human Ecodynamics Research Community in the Remote North Pacific from the Perspective of Archaeology and Paleoecology**

This talk discusses recent research in insular Japan, Russia, and the United States focused on understanding the long-term history of human-environmental dynamics of North Pacific subarctic island ecosystems. Interdisciplinary, international research in the insular North Pacific has built to unprecedented levels. Recent examples include the Central and Western Aleutian Archaeology Projects, the Kuril Biocomplexity Project, the Baikal-Hokkaido Archaeological Project, and the Sanak Project each of which has fielded research teams of natural and social scientists to better understand human and environmental history of the regions. New interest is also growing to understand marine ecology of the region to better understand and mitigate the vulnerabilities of coastal communities and industries. These efforts seek greater understanding of the human dimensions of these systems. The timing is right to develop an integrated North Pacific Biocultural research organization with strong international participation and attention to the long-term human ecodynamics.

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**Forbes, Bruce C.** (Arctic Centre, University of Lapland)

### **Cultural Resilience of Social-ecological Systems in the Nenets and Yamal- Nenets Autonomous Okrugs, Russia: A Focus on Reindeer Nomads of the Tundra**

Empirical data on resilience in social-ecological systems (SEEs) are reviewed from local and regional scale case studies among full-time nomads in the Nenets and Yamal-Nenets regions. The focus is on critical cultural factors contributing to SES resilience. In particular, this work presents an integrated view of people situated in specific tundra landscapes that face significantly different prospects for adaptation depending on existing or planned infrastructure associated with oil and gas development. Factors contributing to general resilience are compared to those that are adapted to certain spatial and temporal contexts. Environmental factors include ample space and an abundance of resources, such as fish and game (e.g., geese), to augment the diet of not only the migratory herders, but also residents from coastal settlements. In contrast to other regions, Yamal Nenets households consist of intact nuclear families with high retention among youth in the nomadic tundra population. Accepting attitudes toward exogenous drivers such as climate change and industrial development appear to play a role in how people react to both extreme weather events and piecemeal confiscation or degradation of territory. Consciousness of their role as responsible stewards of the territories they occupy has likely been a factor in maintaining viable wildlife populations over centuries. Institutions administering reindeer herding have remained flexible, especially on Yamal, and so accommodate decision-making that is sensitive to herders' needs and timetables. This affects factors such as herd demography, mobility and energetics. Resilience is further facilitated within the existing governance regimes by herders' own agency, most recently in the post-Soviet shift to smaller, privately managed herds that can better utilize available pastures in a highly dynamic environment experiencing rapid socio-economic, climate and land use change.

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**Franckx, Erik** (Vrije Universiteit Brussel)

### **Northern Sustainability and Increased Navigation: The Northern Sea Route Shipping Season 2013**

The Arctic has recently been catapulted from the back burner of international attention to the forefront of the global agenda. Shipping has been at the heart of these developments, especially since the physical opening up of the two possible sea routes connecting the Atlantic and Pacific Oceans. But it is the Northeast Passage, or the Northern Sea Route as the Russians prefer to call it, that is developing first. A marked increase in through navigation has been noticed ever since 2010. But it is the shipping season 2013 that deserves special attention because it was the first shipping season under the newly established legal framework. It is the purpose of the present paper to have a closer look at this new legal framework, how it has been applied in practice and what impact it has had on foreign shipping using this route to link the Atlantic and Pacific Oceans.

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**Friendship, Katelyn** (Arctic Institute of Community-Based Research); **Butler Walker, Jody** (Arctic Institute of Community-Based Research); **Jackson, Suzanne** (Dalla Lana School of Public Health, University of Toronto)

### **Working Together to Achieve Healthier Lifestyles in Yukon and Northwest Territories Communities**

AICBR is leading a four-year community-based project involving both Yukon and Northwest Territories. Objectives are for Northerners in YT and NWT to work together to support healthy lifestyles in communities, thereby reducing the prevalence of chronic disease, and in particular obesity; and for communities, organizations, government departments and businesses in the two Territories to work in partnership together to foster healthy eating and active living. Chronic disease prevention, particularly obesity, is a complex problem influenced by many different factors; a cohesive, multi-faceted, inter-collaborative approach is essential. The overall framework we are using and the key aspects that will be evaluated will be presented for discussion. Anticipated outcomes include community members being more knowledgeable, having more opportunities, and being more likely to engage in healthy eating and active living activities across the two Territories. This will in turn lead to reduced prevalence of unhealthy weights beyond the end of the project.

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**Fritz, Stacey** (Bureau of Land Management)

### **On the Road Again: Environmental Justice, Sustainability, and Oil Development on Alaska's North Slope**

The oil rich lands around the Colville Delta in Alaska's Arctic constitute the home territory of the Kuukpikmiut, the Inupiaq Eskimos of the Colville River. After the Kuukpikmiut secured title to their homelands, oil development in the region was allowed with unprecedented restrictions - primarily that it be roadless - that ostensibly made it more sustainable. Development is now continuing westward but it is back to building roads and conflict surrounding it has reached new levels. The roadless option may still hold sway for some, but there is very little support for roadless from industry, from the federal agencies that analyze the impacts of development, and from the people of Nuiqsut who live with the consequences of oil development encroaching on their subsistence lands. The story of how a new and seemingly more sustainable oil development method failed for stakeholders is a lesson for other development in the Arctic

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**Gabryś, Marcin** (Jagiellonian University, Krakow, Poland)

### **Polish Adventurers in the Northwest Passage**

For centuries the impenetrable Northwest Passage has been one of the world's 'holy grails' for adventurers and many died trying to forge a way through this hostile environment. After Roald Amundsen completed the first navigation in 1906 in the next 50 years only Henry Larsen made the transit. Despite the fact that the palm was already given, adventurers' interest did not wane. Explorers, seeing that scarce traffic in the Passage was composed only of icebreakers or special ice-strengthened vessels, became wondering of the toughest achievement - navigation the Passage in a sailing yacht or even single-handed. Until the end of 20th century merely 13 captains of small sailboats succeeded in that. Even though none of the vessels was registered in Poland, Poles have a prominent place in history of Arctic sailing (Poland is ex aequo on 6th place, with Germany and Sweden, among countries that sent the highest number of ships through the Passage). The paper presents stories of Polish pioneering sailors in the Northwest Passage starting with a 1975 voyage of a yacht "Gedania".

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**Gabryś, Marcin** (Jagiellonian University, Krakow, Poland)

### **Yachts in the Northwest Passage: A 21st Century Perspective**

No more than 30 years ago navigating the Northwest Passage in a yacht was considered as one of the toughest achievements. Nowadays global warming and thawing of sea-ice in the Arctic makes sailing through the Passage relatively easier even in a small sailboat. A rising number of adventurers from around the world keen to explore the Arctic waterway is drawing by the extraordinary media attention on the Arctic, and 'last opportunities to see' syndrome. Exactly half of 102 vessels that sailed the Northwest Passage between 2001 and the end of 2012 sailing season were small yachts (less than 30 meters). The paper tries to analyze this phenomenon. In the first part it shows statistical information about sailboats transited the Passage since 2001 and presents some motivations laying behind a decision to sail the Northwest Passage. The second parts examines opportunities and challenges posed by increasing traffic of private yachts, explores attitudes of residents of communities along the Northwest Passage and presents regulations and policies adopted by the Canadian government.

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**Gartler, Susanna** (University of Vienna)

### **Networks, Stories, Habits and Infrastructure' - Yukon Communities Between Extractive Industries and Subsistence**

The ReSDA project 'Labour mobility and community participation in the extractive industries: case studies in the Canadian North' centers around indigenous/local communities and their involvement in extractive industries in Canada's North. Livelihood is based in parts on wage labour, subsistence activities and social welfare. My scientific contribution will consist in dealing with the question of how mineral resource extraction and associated working conditions of mobility affect subsistence activities today. It will look into what role 'subsistence' plays in the negotiation of the development paradigm of employment plus entrepreneurship. Besides an in-depth ethnographic account other methodology is visual documentation of mobile commuting and subsistence activities and video workshops for youth. This paper will discuss leading research questions and methodology for this forthcoming research project.

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**Gartler, Susanna** (University of Vienna)

### **Subsistences and the Development of Sustainabilities**

Systematically analyzing term 'subsistence' from a trans-disciplinary view point the paper shows that competing concepts of development are played out in this semantic field. The term is widely used in debates concerning new sustainabilities in rural as well as urban communities in the Arctic and in alter-globalization studies around the world. Often associated with 'mere survival', the paper looks at the role of 'subsistence' as an ideological tool to justify the supremacy of market capitalism on the one side and its potential to subvert the underlying power relations on the other. Central findings include the identification of an ethnic, a gender and a spatial bias which adhere to the term. The paper also analyzes differences in English and German language use, includes critical view points and develops a concept-map illustrating the different aspects to be taken into consideration when using the term.

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**Gearheard, Shari** (University of Colorado Boulder); **Kielsen Holm, Lene** (Greenland Climate Research Centre); **Huntington, Henry P.** (Huntington Consulting); **Mello Leavitt, Joe** (Barrow, Alaska, USA); **Mahoney, Andrew R.** (University of Alaska Fairbanks, USA); **Opie, Margaret** (Barrow, Alaska, USA); **Oshima, Toku** (Qaanaaq, Greenland); **Sanguya, Joelle** (Kangiqtuqaapik, Nunavut, Canada)

### **The Meaning of Ice: A Book Project Exploring the Meaning of Sea Ice at Three Arctic Communities**

The Meaning of Ice (published by the International Polar Institute, 2013) is a book created with contributions from over 40 Inughuit, Iñupiat, and Inuit from three different Arctic communities: Qaanaaq, Greenland; Barrow, Alaska; and Kangiqtuqaapik, Nunavut. The book celebrates Arctic sea ice as it is seen and experienced by the Inughuit, Iñupiat, and Inuit who for generations have lived with it and thrived on what it offers. With extensive details offered through their own original drawings and writings, this book describes the great depth of Inughuit, Iñupiat, and Inuit knowledge of sea ice and the critical and complex role it plays in their relationships with their environment and with one another. There are stories, original artwork, hand-drawn illustrations, maps, family photos, and even recipes. Professional and historical photographs, children's artwork, and innovative graphics add more to the story of The Meaning of Ice.

This presentation will provide an overview of The Meaning of Ice, offering a selection of views and perspectives on the multiple meanings of sea ice from different contributors from different Arctic communities. The material represents an important contribution to understanding the Arctic and its people at a time when the region is undergoing profound change, not

least in terms of the frozen seascape. It takes readers beyond what sea ice is, to broaden our appreciation of what sea ice means.

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**Gerkey, Drew** (Oregon State University)

### **Social Networks and Cooperation in Mixed Cash-Subsistence Economies of Kamchatka and Alaska**

Arctic communities are experiencing unprecedented challenges caused by global forces of climatic, economic, ecological, political, and cultural change. The mixed cash-subsistence economies of rural villages reflect the complex interplay among these forces, so understanding the relationship between contemporary practices and accumulated cultural values, norms, and institutions can guide efforts to assess individual adaptability and community resilience. Research throughout the arctic suggests that social networks play a key role in mixed economies and may be essential for enduring forces of change. I present analysis of social networks in two locations in the North Pacific—Kamchatka, Russia and the Kuskokwim region of Alaska—in order to: (1) illustrate useful new methods for collecting and analyzing social network data and (2) explore directions for future research.

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**Germano, Christine** (Constant Arts Society); **Crump, John** (Grid-Arendal); **Kelman, Ilan** (University College London); **Wensing, Enrico**

### **Portraits of Resilience: Our Common Humanity and Shared Futures**

Rapidly melting ice is radically changing life in the Arctic community of Pangnirtung, Nunavut and raising the waters that threaten the Caribbean Island of Barbuda. Climate change is affecting Arctic and Small Island communities worldwide. Sponsored by GRID-Arendal through the Government of Norway and part of the Many Strong Voices programme, the Portraits of Resilience project documents the experience of climate change through the photographs and stories of young people who are some of the most affected. Based on our experience, it appears that for many that have viewed the Portraits of Resilience it is more meaningful than simply a documentation of climate change. In this paper we argue that, perhaps like no other research data presented to the public to date, Portraits of Resilience evokes a heuristic experience of our common humanity, our shared future (sustainable or otherwise), and a responsibility that resides in our identity as global citizens.

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**Giles, Audrey R.** (School of Human Kinetics, University of Ottawa); **Darroch, Francine E.** (School of Human Kinetics, University of Ottawa); **Brooks, Lauren** (School of Human Kinetics, University of Ottawa)

### **Cultural Safety in Health Promotion in Canada's North**

Cultural safety is an approach currently used in healthcare that is meant to address health disparities between Indigenous and non-Indigenous Peoples and colonizing practices in healthcare. It has been found to empower patient decision-making and result in a relationship where patients and providers work together towards effective care. We argue that such an approach needs to be employed in health promotion as a way of addressing health disparities that continue to exist between Aboriginal and non-Aboriginal peoples in northern Canada. Further, we assert that cultural safety can address the critiques that have been made of attempts to use cultural sensitivity, cultural relevancy, and cultural competency training in health promotion. We will provide an overview of two programs, Elders in Motion and the NWT Aquatics Program, to illustrate the importance of culturally safe health promotion. Ultimately, we argue that cultural safety in health promotion is not only an ethical practice, but also one that has the potential to significantly improve the health of Aboriginal peoples, which could lead to related improvements in quality of life, lowering rates of morbidity and mortality, and result in considerable savings to the health care sector.

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**Gjørnv, Gunhild Hoogensen** (UiT The Arctic University of Norway)

### **Do Values and Politics Trump Science? The Security of Energy, Environment and Economy**

The following paper takes its departure point in the so-called "ethical oil" argument which has played a significant role in debates about the oil sands developments in Alberta, Canada, and examines the linkages between notions of ethics, values and perceptions of security (particularly energy and environmental security) in the context of the oil and gas industry. The

paper will examine the extent to which "ethics" informs policy and in relation to the values to be secured. These values appear to be based in types of knowledge and power of knowledge about linkages between energy needs and use, and the environment (not least in relation to climate change). The end result is a contested space between knowledge, land, and ethics/values which find different political expressions. I explore the ways in which the contested spaces around oil and gas development are being negotiated in Canada and in Norway using a multi-actor security framework, showing how ethics/values affect the competing ideologies that inform how northern states and communities are talking about their future.

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**Gnatenko, Alexander** (European University at St. Petersburg, Russia); **Vlakhov, Andrian** (European University at St. Petersburg, Russia)

### **From Politics to Policies: How Political Regime Influences Cooperation in the Barents Euro-Arctic Region**

The heated debate over the Arctic and its futures is taking its place in the world political and economic agendas and in the regional level agendas. The puzzle of our research has been developed around the question of how does the regional governance influence the visions of the Arctic futures? We argue that the visions of the Arctic futures depended on the windows of opportunities provided for the Russian regions participating in the BEAR. These windows in turn depended on the key factors, such as governance structure, natural resources and voices. We trace the trajectories of governance, voices and changes in the resource extraction structure in two Russian regions — Republic of Karelia and Murmansk oblast — in the 1990s and 2000s. To trace these changes, we consider the trajectories of governance on the regional level and take the look on the local voices using interdisciplinary approach (political science and social anthropology).

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**Goelman, Nadav** (Simon Fraser University)

### **Mining for a Better Future: Approaching Economic Growth and Sustainable Communities in Context of Mining in Nunavut**

Resource development near isolated communities in Nunavut exacerbates preexisting social problems that are insufficiently ameliorated by the policy frameworks addressing them. Data from Baker Lake shows rising crime rates correlating with the mine's arrival; and failure to ameliorate stagnant, declining education outcomes. The current framework of policy is comprised of loosely coordinated efforts by the federal and territorial governments. Supplemental community-driven research was found to identify additional interventions that garner renewed local support and heightened efficacy. Economic modeling of estimated costs and benefits of these interventions within three alternatives: a local, regional, or territorial rollout, revealed plausible net benefits at various discount rates. Additional qualitative evidence of pros and cons for each alternative supported recommendation of up to three local pilot project(s) to assess efficacy of these interventions to mitigate, ameliorate, and prevent the negative side effects of resource development in Nunavut, and remove barriers to equitable sustainable economic growth.

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**Goldhar, Christina** (Nunatsiavut Government); **Sheldon, Tom** (Nunatsiavut Government); **Bell, Trevor** (Memorial University); **Pain, Isabella** (Nunatsiavut Government)

### **An Affordable, Secure Heating Source is a Fundamental Requirement for Healthy Homes in Nunatsiavut**

Nunatsiavut is embarking on an ambitious plan to build healthy homes for Nunatsiavummiut in northern Labrador. Current housing is failing within the first ten years of construction and inadequately heated homes are leading to frozen water pipes and a high prevalence of mould. The failure of the local utility to meet existing power demands has encouraged a continued reliance on wood stoves, the primary heating source of 55% of homes in Nunatsiavut. Access to sufficient firewood is threatened by increasingly unpredictable sea ice conditions, leaving many homes inadequately heated in winter months. An affordable, secure heating source is needed to reduce mould accumulation, decrease housing repairs, enhance air quality, ensure reliable water system performance, improve the health and well-being of residents and meet basic human rights. In addressing these needs, the Nunatsiavut Government is currently developing a sustainable energy plan as part of a new housing strategy.

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**Gordon, Heather J.** (University of Wisconsin-Madison)

## **Building Relationships in the Arctic: Indigenous Communities and Scientists**

Inuit Greenlanders and North American researchers understand how to build relationships in research. Both agree to respect one another, work together, and be constantly vigilant about nurturing relationships. Greenlanders take this one step further and stress being polite, sharing meals, and smiling. This presentation examines results from a project on relationship building conducted in a remote community in Greenland and at the National Science Foundation-Office of Polar Programs. The results inform researchers of actions they can take to build trusting relationships with communities: knowing extensive community history, developing strong local contacts, behaving culturally appropriately, having manners associated with the culture, acting ethically beyond the academic world, exchanging knowledge to build social capital, communicating through the entire project, and giving back project results beyond just a presentation. This project speaks to funders, communities who are or will engage with researchers, and researchers wishing to work in or with these communities.

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**Graczyk, Piotr** (UiT The Arctic University of Norway)

### **Arctic Council's External Relations: The New AC Observer Rules in the Context of Arctic Governance**

At the May 2011 Arctic Council ministerial meeting in Nuuk the Arctic states were able to find a consensus on criteria for admitting new observers and their role at the forum, which were formally incorporated into the AC's Rules of Procedure at the May 2013 ministerial meeting in Kiruna. This presentation examines the role and place of observers within the AC and in a broader landscape of Arctic governance. First, it explores observer dynamics and identify major factors behind the impetus for external interest in the AC. Second, focus is on the actual change introduced by the new observer rules and their implementation as well as developments after the admittance of new observers. Third, the presentation addresses further implications of these rules for the AC's place in the broader setting of circumpolar cooperation.

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**Graczyk, Piotr** (UiT The Arctic University of Norway)

### **Institutional Interplay in Arctic Shipping Governance: The Arctic Council and International Maritime Organization's Work on Safe Arctic Shipping**

This presentation examines how the Arctic Council (AC) interacts with the International Maritime Organization on shipping and oil pollution issues in the Arctic. It discusses the key features of the interaction mechanisms between a regional soft law body and an UN specialized agency. Following a brief account on the hitherto activities related to shipping in Arctic waters and implementation of the AMSA recommendations, it focuses on both formal and informal possibilities for interplay between the two institutions. In this endeavor theoretical concepts of regime (institutional) interplay and regime complexes in governance of an issue area are employed. Furthermore, the AC's ability to influence Arctic states' actions and policies in other institutions are characterized. This, in conclusion, forms a more general picture of the AC's role in governance of shipping in the Arctic and its broader consequences for international relations in the Arctic.

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**Graham, Amanda** (Yukon College)

### **Seeing for Ourselves: The University Urge in Northern Canada, 1960–2014**

Sometime in the next five or so years, Yukon College will become the Canadian North's first university. This event has been a long time in the making. Since the 1960s, northerners have floated ideas of a university north of 60°, and created opportunities for collaboration with academic friends of the North who added their own voices to the call for a northern university. We see a sporadic but consistently expressed desire for an institution that would allow us to see the intricacies of the North for ourselves and to explain it in terms that make sense to us. This paper maps the path we've taken to reach a northern university, and explores the several points when the desire to understand northern conditions and to do something about northern problems created a surge of interest and discussion of how to do just that.

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**Grenoble, Lenore** (University of Chicago and ICC Canada); **Palluq-Cloutier, Jeela** (Inuit Tapiriit Kanatami)

## **An Indigenously-Defined Metric for Assessing Arctic Language Vitality**

In this paper we discuss ongoing work to develop an indigenously-defined metric for assessing the vitality of Arctic indigenous languages. Our proposed framework is based on an overarching principle that the development, implementation and reporting of the assessment must be indigenous-driven and relevant to indigenous communities. It includes both quantitative and qualitative data, ranging from demographic information to language attitudes. Assessment comes from interviews and questionnaires with individuals and in-group settings, stemming from the frequent practice in Arctic indigenous communities of collaborative discussion and consensus-building. The tool aims to be fine-grained to local particulars to capture differences in vitality from village to village, home to home, as well as larger-level aggregate statistics. Finally, we discuss the implementation of a set of processes that allow for community input and feedback into the development of the tool, collection of data, and an indigenous, community-based peer review mechanism.

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**Greve Harbo, Lisbeth** (Nordregio – Nordic Centre for Spatial Development)

## **Monitoring Demographic Changes in Light of Administrative Restructuring – The Case of Kujalleq Municipality in Greenland**

Monitoring socio-economic changes is relevant for acquiring evidence of the development patterns as well as the effectiveness of implemented policies and other measures. However, reviewing demographic changes in light of administrative restructuring can also reveal significant information about how certain settlements have moved up in the urbane hierarchy - at the cost of others – in the recent restructuring of the Greenlandic municipalities. This paper will zoom in on Kujalleq Municipality in the South of Greenland and explore how the recent amalgamation of the former three municipalities in South Greenland have altered the governance structures between the involved settlements and which consequences these administrative changes have had for the demographic profiles of each settlement.

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**Grimwood, Bryan S. R.** (University of Waterloo); **Yudina, Olga** (University of Waterloo); **Ljubicic, Gita J.** (Carleton University)

## **An Assessment of Community Engagement Methodologies: Decolonizing Research Processes and Practices**

Picturing the Thelon River is an extended, community-based case study that engages different knowledges of the Thelon River watershed in (sub)Arctic Canada to cultivate enhanced understanding of, and responsible relationships to, a significant place within contexts of social-ecological change. Employing participatory and visual methodologies, the study's first phase (2008-2011) involved Inuit inhabitants and river tourists in a) documenting stories, uses, and experiences of the Thelon and b) dialoguing these knowledges to mobilize collective, place-based, and values-centred visions for positive nature-society transformation. Phase two (2012) emphasized outreach activities and led to a third phase (2013-2015) involving new research relationships with a northern First Nation. This paper reflects critically upon research carried out to date from a non-northerner/non-Aboriginal researcher perspective, with particular emphasis on evaluating methodological processes for engaging responsibly with northern Aboriginal communities. The paper illustrates how past research experiences shape ongoing efforts to decolonize methodology and practice decolonizing methodologies.

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**Grove, Alan** (University of British Columbia)

## **Melting into Shape: Changing Ocean Space and Shipping in the Canadian Arctic**

The Arctic Ocean's uniqueness is due to the historical presence of sea ice. With the melting and thinning of the summer ice, the Arctic Ocean can be understood similarly to the other ocean spaces of the world. In the Canadian Arctic, one feature of this transforming ocean space is the opening of the Northwest Passage and the accompanying perception of the ocean as an empty space to be crossed. I argue that the disappearing ice reveals significant challenges to this perception of ocean space in the Canadian Arctic. I draw on interviews conducted with policy makers in Ottawa and Iqaluit to highlight the challenges of shipping in the Canadian Arctic, as well as the current and future uses of the ocean space. I highlight destination shipping in the region as an alternative perspective to the Northwest Passage as the focus of policies and perceptions of ocean space.

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**Hansen, Anne Merrild** (Aalborg University)

updated May 12, 2014

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## **Baffin Bay Oil Exploration and the Vulnerable Young Males of NW Greenland**

Oil Industry has made its first entrance in Baffin Bay, offshore NW Greenland.

Four operating companies are presently planning for exploration drilling and the level of activity in the area is increasing. As a part of the preparation process for exploration drilling, operating companies are legally required to undertake social impact assessments and enter Impact Benefit Agreements with the local communities.

A present problematic social development trend in the area is a decreasing number of women. Young females tend to educate and move away from the area while young males stay in the settlements and struggle to uphold a livelihood by fishing and hunting. The paper discusses the challenge for oil operators to identify and manage the potential social consequence of their activities in this context, stressing the need for a discussion in Greenland around under which circumstances settlements shall continue their existence. What it is that locals want to protect and when it is wanted to keep and uphold the life in the small settlements.

Part of the Nordic Group

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**Hansen, Klaus Georg** (University of Greenland)

### **Aspects Legitimacy in Political Decision Processes: Examples from Greenland**

Social changes are often linked to specific political decisions. Through empirical analysis of three different levels of legitimacy during the process of political decisions the degree of public empowerment can be illustrated.

The presentation will give examples of the formal, the factual and the public legitimacy in the decision processes of historical as well as of recent decisions which have had influence on social changes in the Greenlandic society.

The different patterns of legitimacy which can be seen in historical discussions on kayak dizziness, through recent discussions on the implementation of ICT, to present discussions on implementation of large scale industrial projects will be discussed.

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**Harcharek, Pausauraq Jana** (North Slope Borough School District)

### **Honoring Indigenous Epistemologies and Pedagogies in Education**

The reclamation of indigenous educational philosophies is a growing trend amongst indigenous peoples. As the trend spirals upward it is paramount that researchers, indigenous and non-indigenous alike, be grounded in indigenous epistemological and pedagogical philosophies if indigenous research paradigms are to be manifested in the compilation and presentation of research results. The example from Alaska through the implementation of the Iñupiaq Learning Framework in the North Slope Borough School District exemplifies how Iñupiaq epistemologies and pedagogies can and are being honored and serves as a basis from which to proceed in the conduct of research associated with analyzing success as defined by an indigenous interpretation of success and is deeply rooted in indigenous inquiry and philosophy.

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**Harlan-Haughey, Sarah** (University of Maine)

### **Uncanny Cetology in the Icelandic Sagas**

In the sagas, men scramble to control the precious fat and bone of beached whales. Scholars read whale beaching in sagas for signs of resource management in Iceland, something that generates feud cycles. According to this logic, saga whales are "little more than medieval roadkill"—while valuable and contested resources, they are dead as dead can be. But whale apparitions in the sagas do something beyond generating feud. They suggest a complex of magical or pagan demonic influences, and lead men away from Christian behavior because they hearken back to an atavistic time of need and magic and penetrate to the harsh core of human life in the North Atlantic. They are cross-temporal signs of great cultural anxiety. Like the draugar lurking at the margins of a Christian world, the whales' monstrous bodies haunt the saga narratives in their iconic connectedness with a past about which the audience feels ambivalent.

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**Harper, Kenn** (Independent Scholar)

### **From The Eskimo Book of Knowledge to the Q-Book: Imparting Secular Wisdom to the Inuit 1931-1964**

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In 1931 the Hudson's Bay Company published The Eskimo Book of Knowledge to "arm the Eskimo with vital knowledge." It was published in the Labrador Inuktitut dialect and orthography; a planned Syllabic version never appeared. In later years, the Government of Canada took over initiatives to inform Inuit of what one may broadly term the duties and responsibilities of Canadian citizenship. The apogee of these efforts (in this researcher's opinion) was the publication in 1964 of Qaujivalliruttissat, familiarly known as the Q-Book. This paper looks at the evolution of these publishing ventures, their nature and purposes, successes and failures, and how they influenced subsequent secular efforts to educate Inuit adults.

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**Heikkinen, Hannu I.** (University of Oulu / Faculty of humanities); **Lépy, Élise** (University of Oulu / Faculty of humanities); **Sarkki, Simo** (University of Oulu / Thule institute); **Komu, Teresa** (University of Oulu / Thule Institute / Sami Parliament)

### **Social Licence to Mine in the Glocal Arctic**

In the past decade mining industry has expanded to new areas in the Arctic and sub-Arctic regions, driven by global discourses on climate change, potential new resources and improvement of seafaring conditions. Another driving force is the global economy: mineral markets, multinational mining companies and financing. Mining has also multiple positive and negative local impacts on society and environment. In current mining discussion a concept of social licence to mine (SL) has raised. In short it refers to local unofficial acceptance of a mine and to undeniable right to operate. In our research, we examine acquiring and keeping up SL in two mining projects in Finnish Lapland. The main results emphasise the importance of transparency and the continuity of communications with local level. We will end our presentation to discussion what kind of new possibilities and challenges glocal setting creates for developing long term sustainability of local mining operations.

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**Heleniak, Timothy** (George Washington University)

### **The Arctic Goes Urban: Population Concentration within Arctic Regions**

The world achieved a milestone recently when more than half of the planet's inhabitants now reside in urban areas. Most regions of the Arctic passed this threshold long ago. The trend across the Arctic is toward increased population concentration in the larger urban settlements and depopulation of rural areas through a combination of economic, demographic, and environmental factors. This paper examines trends across the Arctic and over time of urbanization in the Arctic, the factors contributing to this trend, and the consequences for both the larger settlements who receive large numbers of migrants and the sending regions from where they originate. The author is the lead author of the chapter "Population and Migration" in the forthcoming Arctic Human Development Report. This paper is an extension of the research done for that chapter.

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**Heleniak, Timothy** (George Washington University)

### **International Migration in the Arctic**

People have been migrating to the Arctic regions from outside for centuries. However, in recent decades there has been an increase in international migration into the Arctic states because of globalization defined as increased and lower-cost transportation and communications. Megaprojects aimed at the extraction of Arctic resources have drawn in large numbers of foreign workers. This paper starts by examining the size, origins, and destinations of international migrants in the Arctic. This is based on information from a variety of different data sources. It then looks at the labor market and other roles played by international migrants and the social impact that they are having. The author is the lead author of the chapter "Population and Migration" in the forthcoming Arctic Human Development Report. This paper is an extension of the research done for that chapter.

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**Hendriksen, Kåre** (Technical University of Denmark, Arctic Technology Centre)

### **Management of Living Resources as a Key Factor in the Settlement Patterns**

Discussing how resource management interacts with socio-economic and socio-cultural sustainability and the settlement patterns based on studies in Upernavik district, Greenland.

Upernavik with barely 3,000 inhabitants is a traditional hunting district, where most of the population live in the 10 small settlements scattered across the 400 km of coastline. The district was considered as poor and without development potentials,

but because of the halibut fishery that developed in the 1990s, the district has gained a crucial role in Greenland's export income. However this has had little impact on the average taxable income in the district. Most of the population has continued the hunting of marine mammals as the primary livelihood, while fishing for most forms a secondary occupation. As the income from hunting is rarely included in the official financial records the local people are perceived as poor by the central government. In a combined effort to maximize tax income from fishing for halibut and provide labor for the expected mining industry the governance has changed the allocation of quotas for halibut in favor of larger boats. This promotes the boats typically coming from the southern districts, and challenges the district's socio-economic balance and thus the existing settlement patterns.

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**Hendriksen, Kåre** (Technical University of Denmark, Arctic Technology Centre)

### **Settlement Patterns and Sustainability**

This paper discusses settlement patterns and sustainability. Generally urbanization is recognised as an inevitable development driven by job opportunities, better service supply, education, and health services, and it is argued that this is the main driver for centralisation. Research based on economic and demographic studies and a large series of interviews problematize this. In Greenland the historical correlation between settlement pattern and livelihood has been decoupled, so that distributions of jobs and potential earnings to a growing extend is a consequence of political and/or administrative decisions. Based on traditional economic approaches centralization has been implemented to reap the rewards of expected large-scale benefits. However the positive effects on the island economy are limited. The centralization has left regions with limited livelihood and resulted in a lack of utilization of local resources and trade opportunities. Furthermore the growing towns are struggling with an un-sustainable economic situation manly based on public financed jobs or welfare payments and with limited export oriented value creation.

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**Hermann, Victoria** (Carleton University and Fulbright Canada)

### **Aesthetic Codes, Indigenous Agency, and Climate Change Discourse in the Arctic**

This research aims to demonstrate how images and aesthetic codes have created and sustained contested visions of indigenous agency in the Arctic post World War II. The project primarily examines the extent to which the visual narrative constructed by states and increasingly non-state actors have conditioned domestic and international perceptions of indigenous community's legitimate power and place in climate change debates. This research project contributes to the theoretical literature on the political importance imbued in visual imagery to post-structuralism in international relations theory, by refining the hypothesis that aesthetic codes create and sustain disputed values and identities within the global structure. It does so by asking how different actors have used visual representations in different historic periods to construct and sustain contested visions of native agency in the Arctic, and how did these visuals engender political decision-making? In an era of ecological change that necessitates urgent action, it is important to understand native Arctic visual narrative and its validity as an active factor in affecting political orders in the circumpolar region.

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**Hervé, Caroline** (CIÉRA, Laval University)

### **From Personal to Political Autonomy: The Source of Leadership in Nunavik Inuit**

In Nunavik Inuit, the quest for personal autonomy is a fundamental process in the construction of personhood and in the maintenance of social order. By accumulating wealth and relations, mastering knowledge and competencies, people are not only able to manage their own affairs and assure their survival but they can also help their fellows. Although it maintains equality in the access of resources, the action of helping implies some social constraints on both sides. The ones who are autonomous and who can redistribute their wealth gain a certain degree of power upon the others who have to follow. In that sense, autonomy appears to be the basis of leadership in Inuit societies. This dynamic can also be read in the relations Nunavik Inuit have with political institutions. The attempts to achieve political autonomy in Nunavik Inuit during the last 50 years can be understood in the light of personal autonomy.

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**Hervé, Caroline** (CIÉRA, Laval University)

## **"We just help each other". Altruistic Legitimacy in Contemporary Nunavik Relations of Power**

In the discourse of Nunavik Inuit, whether they are political or religious leaders, regional or local representatives, the legitimacy of their power appears to be based on their altruistic interest. This type of legitimacy, that we can qualified as being extrinsic, is first and foremost expressed through a terminology of power that focuses more on the followers and their needs than on the leader and his motivations. This dynamic is obvious in daily life where personal ambitions are hushed up and accumulation of power (material or immaterial such as knowledge) is limited although tolerated. This altruistic legitimacy in contemporary Nunavik relations of power brings a clearer understanding of the nature of power itself in Inuit societies that appears to be flexible, situated and distributed.

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**Hicks, Jack** (Child Studies, Carleton University)

### **Implications of a 'Historical Trauma Framework' for Development of a National Inuit Suicide Prevention Strategy**

This paper will advance the hypothesis that historical trauma, transmitted intergenerationally and between peers within communities, is a key social determinant underlying the rapid increase in suicide behaviour among young Inuit in Nunavut. The paper will then discuss how suicide prevention initiatives in a population with deeply embedded historical trauma may need to contain measures that go beyond the measures contained in suicide prevention strategies developed for populations without significant historical trauma.

At the World Suicide Prevention Day gathering on Parliament Hill on September 10, 2013, National Inuit Leader Terry Audla committed the national Inuit representative organization Inuit Tapiriit Kanatami to the development of an evidence-informed Inuit-specific suicide prevention strategy. This paper will offer thoughts on the implications of a 'historical trauma framework' for development of a National Inuit Suicide Prevention Strategy.

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**Hillmer-Pegram, Kevin** (University of Alaska Fairbanks); **Lovecraft, Amy Lauren** (University of Alaska Fairbanks)

### **A Synthesis of Oil and Gas Infrastructure and Commercial Transportation Development in Arctic Alaska: What is the Role of Corporate Social Responsibility in Adaptation?**

This paper analyzes possible scenarios of development for both industrial activities and commercial transportation in combination with multiple time horizons for their impact to arctic Alaska. Concepts of "corporate social responsibility" are used to address the issue of adaptation. Considering the potential effects of development in each intensity and timescale combination, what is the level of expected corporate responsibility by any single private entity given the combined externalities of multiple actors? Who is able to make these claims and how do they make them? This paper stems from a recent (2013-2014) University of Alaska Fairbanks research project that was a comprehensive study of the existing, planned, and proposed oil and gas infrastructure on Alaska's arctic coasts and in the surrounding region. Its goal was to help key actors to understand and coordinate activities to mitigate any negative effects of expanded industrial activity on arctic Alaskan social-ecological systems.

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**Hirshberg, Diane** (UAA Centre for Alaska Education Policy Research); **Hill, Alexandra** (UAA Center for Alaska Education Policy Research); **Kasemodel, Craig** (University of Wisconsin, Madison)

### **Will They Stay or Will They Go? Teacher Perceptions of Working Conditions in Rural Alaska**

Teacher turnover in rural Alaska schools has been a significant problem for decades. Efforts to address this problem have included signing bonuses, financial incentives for teachers who stay for a certain period of time, construction of new teacher housing, and financial support for earning teaching and administrative degrees. However, there is a lack of systematic information on why teachers leave rural schools or stay. Previous work looked at the rate of teacher turnover in Alaska and the reasons exiting teachers left Alaska but none systematically looked at how all teachers perceive their working conditions, regardless of whether they are stayers or leavers, and whether perceptions differ dramatically between teachers who stay and those who choose to leave. We will present the results of a survey of over 260 rural teachers on their perceptions of their working conditions, and the factors contributing to their decision to leave their school or stay.

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Hjortfors, Lis-Mari (Ethnologist, Árran Lulesami Center)

### **Rádjelbálges is an Historic Road / Trail Between Sörfjorden in Norway and Ritsem in Sweden: A Description of a Historic Trail in the Lulesami Area, that has been Used since Ancient Times and is Still Used Today**

This presentation is about Rádjelbálges or Gränsleden a historic road / trail between Sörfjorden in Norway and Ritsem in Sweden. The trail has been used since ancient times and is still used today. The population of the area has had good contact with each other. The Sámi people in the area lived by trapping, fishing and reindeer herding. Today, one can see traces in the landscape and in the various ancient sites in the area and that gives us a clue about how the trail and the area has been used. Reindeer husbandry has also shaped the landscape, you can clearly see in settlements and vegetation. The landscape was a border area, but in 1751 came the border between Norway and Sweden. During World War II had the trail an important function as an escape from the Germans. Approximately 3,000 people fled during the war from Tysfjord to Sweden. Many of these were assisted by locals in the area.

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Hodgkins, Andrew P. (University of Alberta)

### **Is Resource Development Creating a New Class of Northern Capitalists?**

Often overlooked in the Arctic social sciences are issues relating to the maldistribution of wealth resulting from the imposition of neoliberal forms of governance. Rather than using class analysis to inform social stratification in northern regions, there remains a tendency to problematically situate social groups within postcolonial binaries which effectively obscures differences and tensions occurring within and between communities as they compete for limited resources. Drawing from case study research in northern Canada (NWT and Alberta) that examined aboriginal-industry-state relations from the standpoint of public-private partnerships, regulation theory is used to theorise political and economic changes accompanying land claims agreements that have emerged within the current era of “post-Fordist” capitalism. Despite rhetoric to the contrary, findings indicate the brokerage of agreements with resource extractive industries has resulted in significant overlap in interests occurring between different partner groups, which in turn helps facilitate increased exploitation of non-renewable resources. Implications of these findings include ways of improving partnership agreements so that purported benefits are more evenly distributed.

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Hodgkins, Andrew P. (University of Alberta)

### **Mining Aboriginal Labour: Turning Protests into Partnerships in Canada’s Northern Labour Market**

As noted in Prime Minister Stephen Harper’s funding announcements made during his annual visit to the three territories last summer, central to the federal government’s northern and aboriginal policies are training-to-employment partnership programs involving non-renewable resource extractive industries. At the same time, legislation designed to expedite resource extraction has sparked national grassroots protests over abrogation of aboriginal and treaty rights. Using recent case study research of vocational education and training partnerships in the Northwest Territories and northern Alberta, this presentation critically examines the paradox of partnerships and protests. In particular, the efficacy of the present provision for training and employment in the skilled trades is examined from the perspectives of program participants and participants as they transitioned from learning into the world of work. Findings presented will be of use to policy makers and aboriginal groups involved in brokering agreements with both industry and government.

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Holen, Davin (Division of Subsistence, Alaska Department of Fish and Game)

### **Modern Subsistence Patterns in Alaska: Mobility in the Harvest of Wild Resources in Southcentral Alaska**

The hunting and fishing pattern of a rural community in Alaska traditionally occurs in a local area surrounding the community. In Southcentral Alaska harvest patterns, such as fishing for salmon and hunting moose, once occurred almost entirely nearby the community. As resources decline locally residents are increasingly taking advantage of road-connected opportunities throughout Alaska. This is due in part to fishing and hunting opportunities that are part of the management structure in Alaska. These opportunities mainly occur in urban areas but residents of rural communities are increasingly taking advantage of these popular “urban” activities to fill their freezers. This paper details a recent harvest assessment study that included

detailed mapping in Southcentral Alaska. Included in this study was how harvesters access resources. A comparison between past and present patterns using spatial data will show the increasing mobility of residents in the present.

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**Holen, Davin** (Division of Subsistence, Alaska Department of Fish and Game)

### **Monitoring Wild Resource Harvests: Accessibility of Harvest Data in Alaska**

The Division of Subsistence, Alaska Department of Fish and Game currently has a system accessible via the web that allows users to query harvest information from a searchable database. 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. This data is available via the Community Subsistence Information System. This database provides communities in Alaska with a valuable resource to understand subsistence harvest and use trends in their own community and region. To make this user interface more accessible a map version is currently being developed to make this database more user friendly for residents of Alaska as well as agencies seeking to utilize the data for development projects and other land use planning.

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**Horstkotte, Tim** (University of Turku, Department of Geography and Geology, Finland); **Kivinen, Sonja** (University of Turku, Department of Geography and Geology, Finland); **Käyhkö, Jukka** (University of Turku, Department of Geography and Geology, Finland)

### **Towards an Integration of Ecological and Administrative Scales to Foster Sustainable Livelihoods**

People and nature form closely coupled social-ecological systems (SES), shaped by mutually influencing processes. Lacking perception of this connection has increasingly caused resource overexploitation, environmental degradation and loss of biodiversity. These threats may expose traditional livelihoods to multiple stressors at several scales, as they rely on availability of and access to natural resources. Keeping these livelihoods environmentally and socially sustainable therefore requires practical actions regarding decision making and equity in trade-offs between them and other forms of land use. As decision-making spans a wide range of institutions and stakeholders, they might disagree in their different perceptions of the environment and the scales that matter, as well as the conceptions of scales between administrative-political and ecological settings lack conformity. Better stewardship of natural resources requires an understanding of the different conceptions of scale that control the way that natural resources are managed.

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**Hovelsrud, Grete K.** (Nordland Research Institute); **Bay-Larsen, Ingrid** (Nordland Research Institute)

### **Understanding Adaptive Capacity and Resilience: Applying Institutional Analysis and Development (IAD) Framework to Coupled Social-ecological Systems**

The perceptions of high resilience towards climate risks are emerging in a number of studies from northern regions and are expressed in narratives that reflect particular cultural values and worldviews, such as the Northern Norwegian expression "vi står han av" (the strong ability to handle hardship). Such narratives clearly reflect perceptions of own resilience and an ability to cope with high variability in resources, climate and socio-economic conditions. We surmise that these perceptions influence the communities and individuals ability to cope and respond to change. In this paper we will examine whether and how perceptions of resilience are instrumental in shaping adaptive capacity. In particular we will investigate the perceptions of own resilience among users of (terrestrial) ecosystem services in Northern Norway, and explore how the institutional analysis and development framework (IAD) may add to how we understand and analyze perceptions of own resilience in the context of these coupled social-ecological systems.

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**Huang McBeath, Jenifer** (University of Alaska Fairbanks); **Stougaard, Peter** (University of Copenhagen)

### **Arctic Agriculture--A Joint Committee Project of the United States, Greenland and Denmark**

Agriculture is essential for food security in the Arctic and subarctic regions. Because of environmental differences, knowledge about agriculture and plant protection developed in temperate regions may not necessarily be appropriate for the subarctic. In recognition of this, the governments of the U.S., Greenland and Denmark acknowledged that there is a need for further

research and approved a project on Arctic agriculture. The overall goals of the Joint Committee project on Arctic Agriculture are to: 1) strengthen research on beneficial microorganisms for the development of cold adapted biological control of plant diseases that are environmentally benign and safe for human and animals, 2) disseminate research results to the general public and transfer these technologies to industries, and 3) encourage people in the Arctic and subarctic to increase agriculture production at all scales. A conference was held in June/July 2013 at Qaqortoq, Greenland to promote international collaboration and scientific information exchange.

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**Hudson, Heather E.** (University of Alaska Anchorage, Institute of Social and Economic Research)

### **Communication Policies for Arctic Aboriginal Social and Economic Development**

Communication has been a critical component in the struggle for indigenous self-governance and control over social and economic development. Aboriginal organizations have sought to gain access to, and control over, communications technologies in their regions. They have also used these technologies to share information, develop collective strategies, strengthen Aboriginal cultures and use of Aboriginal languages, and to deliver services such as health care and education. This paper examines communication policy in Canada's North, focusing on the role of Aboriginal organizations. It reviews the policy interventions that led to the establishment of Inuit Broadcasting Corporation, the Nunavut Broadband Development Corporation, and Taqramiut Nipingat. It also examines current efforts by Aboriginal organizations to achieve universal access to broadband in the Canadian North. (The author has extensive experience in communications policy for remote and indigenous regions in the Canadian North and Alaska, and testified on behalf of Aboriginal communications organizations at a CRTC regulatory hearing on northern telecommunications in Whitehorse in June 2013.)

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**Humrich, Christoph** (University of Groningen, Department for International Relations/Arctic Centre)

### **Sustainable Development in Arctic International Cooperation: A Conceptual Dead End Street?**

The paper looks at the concept of Sustainable Development (SD) in the Arctic Eight's cooperation. Rather than tracing conceptual change, the paper analyses the functional role of SD as a regime principle.

I first provide a brief historical sketch of SD's integration into Arctic cooperation. In the main analytical part I then show how SD served the function of a generative idea helping issues on the Arctic agenda not covered by the initial environmental focus of cooperation. Yet, becoming a conceptual catchment basin, SD in the Arctic did not achieve the much needed policy integration. I finally consider two challenges emerging from that: Keeping the functions SD serves in regard to the Indigenous Peoples' and stakeholders' concerns – while eliciting a more coherent commitment of the Arctic Eight to SD's environmental and social ideals. The question is: (How) can SD or other concepts meet both challenges?

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**Humrich, Christoph** (University of Groningen, Department for International Relations/Arctic Centre)

### **Towards a Better Institutional Model for Arctic Sustainability Governance**

Guided by the insights of institutional design literature in IR the paper discusses four models of institutionalized international cooperation in the Arctic, present in the debate on the future of international Arctic sustainability governance: The Antarctic model, the OSPAR model, the Baltic model and the model implicit in emerging Arctic Council cooperation. After introducing my theoretical perspective and briefly considering specific institutional requirements for Arctic sustainability governance, I go through each model and scrutinize their potential to institutionally accommodate the sustainability requirements as well as the systemic pre-conditions for their effective functioning. I hope to achieve three things with this comparison: lay bare the bones of contention in the international Arctic sustainability governance debate, show the inadequacy of each model, as well as elucidate which insights from each model's unique combination of legal and political institutional forms can feed into a better model for the institutionalization of Arctic sustainability governance.

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**Huusko, Svetlana** (University of Oulu)

### **Well-Being and Identities Among the Indigenous Adolescents in the Northern Buryatia**

This study investigates the factors affecting the development of Evenk adolescents' identities. Author uses the biographical approach to identity in terms of ideas of locale, network and memory. In this paper I also attempt to cross the notion of identity with the concept of subjective well-being, which is in turn connected with adolescents' capabilities to be and do things as perceived by indigenous young people. Main research question is to study how the ways of living and livelihood of local communities are interlinked with the well-being of indigenous adolescents. The case is built upon Evenk communities in the Northern Buryatia. Data is gathered mainly from face-to-face interviews and participant observation.

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**Hvenegård-Lassen, Kirsten** (Roskilde University)

### **Greenland: The White Archive of Science**

On the University of Copenhagen (The Niels Bohr department) webpage, a series of documentaries entitled The secret of the ice are uploaded. The documentaries aim at informing the (Danish) public about the department led international research project The North Greenland Eemian Ice Drilling project or NEEM. The five documentaries are introduced as follows: "Follow the scientists' fieldwork in Greenland. The ice offers us detailed knowledge of the climate of the past. This knowledge is valuable as a resource for modeling the climate of a future influenced by global warming." [my translation]. Greenland thus emerges as a global archive that (potentially) allow us to predict the future - and as such Greenland becomes a universal space. In this paper, I use the five documentaries to raise some questions about how the colonial and post-colonial condition of Greenland is erased, how global science is depicted as the frontier hero who - aided by advanced technology and American Hercules airplanes - manage to wrestle with the secrets of the ice under extreme conditions.

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**Ingimundarson, Jón Haukur** (Stefansson Arctic Institute and University of Akureyri, Iceland)

### **Adaptive Responses to Changing Economic and Climatic Conditions and Extreme Events in Present-Day Icelandic Agriculture**

This presentation portrays the development of Icelandic agriculture in recent decades, then focusing on production intensification since the financial crisis in 2008 and on the impacts of climate change. Icelandic farming has emerged, in part by virtue of strong state-support, as an increasingly viable and diverse economic sector. The current period of expensive imports has seen particularly rapid developments such as a major increase in cultivation of various grains; increasingly efficient production of livestock; initiation of mega projects whereby "waste water", electricity and CO<sub>2</sub> from a geothermal steam power plants will be utilized for cultivating vegetables; the Iceland Forest Service providing industries with wood shavings and chips and planting shelterbelts with farmers; intensified use of manure as fertilizer; and the increased craft-production and tourism involvement of farms. This paper evaluates these processes and furthermore describes Icelandic farmers' particular, rapid adaptive responses to changing overall climatic conditions and extreme weather events.

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**Ingimundarson, Jón Haukur** (Stefansson Arctic Institute and University of Akureyri, Iceland)

### **The Political Ecology of Social Formation, Farming Systems and Changing Climate Conditions in Medieval Iceland**

Medieval Iceland with its extensive vernacular literature offers a unique opportunity to study frontier colonization, development of social, economic and political systems, and impacts of and adaptation to climate change, on an island where no indigenous people previously existed. Firstly, this paper examines 10th to 12th century chiefdoms in terms of the economic rule of merchant-farmers, integration of a broad-based subsistence economy supporting specialized sheep production and yielding surplus wool for export, and freeholder production intensification in context of mercantile activity, rural credit systems and Medieval Warm Period conditions. Secondly, the paper explores subsequent disintensification and a change to a farming system emphasizing sheep reared for efficient milk and meat production, the rise of rent-tenure, communal property rights and tributary systems, as well as emphasis on fishing in context of developing ecclesiastical institutions, colonial relations with Norway and the onset of "Little Ice Age" in the 13th and 14th centuries.

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**Ingram, Verina** (Wageningen UR, LEI); **Valeeva, Natasha** (Wageningen UR, LEI); **Klostermann, Judith** (Wageningen UR, Alterra); **Breeksema, Wies** (Wageningen UR)

## **Towards Understanding Impacts on Arctic Communities: Socio-Economic Impact Indicators**

Climate change and technology development are making the Arctic more accessible. This is leading to increased interest in mining, oil and gas exploration, shipping, and forest exploitation in often highly sensitive and fragile areas, both environmentally and socially. Millions of people live within the Arctic circle, around 10% belonging to ethnic groups, often using indigenous knowledge and culture as the basis for subsistence upon renewable resources. Younger generations in contrast long for different life styles. To meet sustainability requirements of the Arctic nations, environmental and socio-economic impact assessments are increasingly required. But are the diverse impacts of individual and cumulative environmental and social developments experienced by arctic communities and stakeholders integrally mapped? To feed into international dialogues, evidence based impact indicators are proposed based on primary and secondary research, upon which joint decisions and planning can be made for more sustainable development.

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**Irlbacher-Fox, Stephanie** (University of Alberta, Canadian Circumpolar Institute)

### **Economic Sustainability and Indigenous Governments in the Canadian North**

In Northern Canada, small Indigenous communities are often characterized by economic statistics indicating low employment, high dependence on government transfer payments to individuals, and stagnant economies. In response, governments promote large-scale resource extraction projects as a basis for developing such economies, often to small and unsustainable effect. This paper reviews existing literature focusing on Northern economic development, and builds on the notion of the household as a micro-enterprise (Usher, Duhaime and Searles 2003) informed by culturally based economic practices, to argue that rather than being failed versions of urban capitalist economies in need of solutions suitable to that model, small community economies constitute unique economies requiring a mixture of policy and governance strengthening and intervention, to ensure inhabitants may enjoy sustainable long-term economic security. This paper will draw on a case study of the Inuvialuit Settlement Region, as the basis for understanding how specific governance policies and economic interventions can achieve outcomes promoting community economic wellness and sustainability.

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**Jacobsen, Katja** (Metropolitan University College, Copenhagen, Denmark); **Riber Nordby, Johannes** (Royal Danish Defence College, Copenhagen, Denmark)

### **Contemporary Understandings of Sovereignty and Future Challenges for The Kingdom of Denmark**

Various changes in the Arctic region bring about a new set of challenges and opportunities for The Kingdom of Denmark. Environmental changes, for example, open up new potentials for the fishing industry, the tourist industry, new shipping routes, and new possibilities for extraction of resources.

These changes also generate new challenges: How to handle maritime catastrophes, survey merchant and air traffic or enforce effective control mechanisms to ensure that resource extraction is carried out in line with national and international legalization?

This paper will discuss contemporary understandings of sovereignty (beyond the classical understand of monopoly on jurisdiction and security). This conceptual clarification is subsequently engaged in an analysis of the case of Greenland – including a discussion of future demands on enforcement of sovereignty and of potentials as well as complications if using technology as a means to enforce sovereignty.

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**Jacobsen, Petter** (Tlicho Government); **Judas, Joseph** (Tlicho Government)

### **Challenges for Sustaining the Hunting Economy in a Time of Increased Development**

The challenge for indigenous peoples in Northwest Territories, Canada, lies at the interface between two economies: the traditional harvesting economy and the modern mining economy. A challenge for the Tlicho nation is the sustainability of their hunting economy as modern large scale mining increases its development on their hunting grounds for barren-ground caribou. The changes on the landscape from mining exploration and the establishment of large-scale diamond mines, impacts the balance of hunting between caribou and people. During 2013, traditional knowledge (TK) was documented to investigate these impacts. The TK demonstrate (1) a decrease in quality of forage areas around the mines and increasing observation of unhealthy caribou, causing a concern around consuming possibly polluted country foods, and (2) a separation of the caribou

migration routes to avoid the mines, and thus away from Tlicho hunting grounds. The question remains: how can there be sustainability for both economies?

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**Jakobsen, Uffe** (University of Copenhagen)

### **Arctic Climate Change, Asian Interests in Greenland and Relationships within the Realm of the Kingdom of Denmark**

Climate changes, including a prospective seasonal ice-free Arctic Ocean, have generated increasing Asian interests in the Arctic due to a belief in the viability of new shipping routes and accessibility of raw materials. Especially China but also other Asian states have strived for obtaining the position as permanent observers in the Arctic Council that was, finally, granted at the Arctic Council meeting in May 2013. This has lent more legitimacy to all member states of the Arctic Council in dealing with geopolitical issues of the circumpolar North, but especially to the Nordic member states and not least to Denmark due to the salient interests of the rising Asian powers in the promising raw materials deposits in Greenland as a semi-autonomous territory within the realm of Denmark. On this background, the paper analyses whether this interest in Greenland also creates tensions between Denmark and Greenland on its road to further autonomy.

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**Jardine, Cindy G.** (University of Alberta)

### **Participatory Health Risk Communication: Using Community Generated Visual Messages to Effect Change**

Although the tenets of effective risk communication include the incorporation of participatory dialogue on health issues, 'official' risk messages are usually generated through government or other health agencies. However, messages conceived and delivered by community members are often more trusted and effective in conveying information and promoting healthy lifestyle choices. Visual community messages were generated through several PhotoVoice and participatory video projects in various Indigenous communities in Canada's north. Adults and youth were involved in examining overall community risks, tobacco use, food security and physical activity through community based participatory research projects. This presentation explores the effectiveness of these messages as a means of portraying different risk perspectives, and encouraging community discourse and action. It also explores the efficacy of this form of risk communication in promoting individual and community empowerment through giving people a 'voice' and the ability to take action.

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**Jasiuk, Linnaea** (University of Guelph); **Pearce, Tristan** (University of Guelph / University of the Sunshine Coast)

### **Inuit Traditional Knowledge and Adaptation to the Health Effects of Climate Change**

The effects of climate change are impacting human health directly and indirectly. Inuit communities experience dramatic impacts resulting in the emergence or exacerbation of health concerns (Ford 2012; Furgal and Seguin 2006). There is an expressed urgency for efforts to identify specific vulnerabilities and adaptive capacities to develop effective health interventions (Ford 2012; Lesnikowski et al. 2011).

Traditional knowledge is a key determinant of a community's adaptive capacity (Pearce et al. 2010). Incorporation of Inuit traditional knowledge in vulnerability assessments is promoted to help capture culturally specific social, biophysical and biomedical determinant interactions; specifically Inuit conceptualizations on/approaches to health are important to articulate to identify relevant health risks, prioritize adaptations and design culturally responsive interventions (Ford 2012; Furgal and Seguin 2006).

This work examines Inuit conceptualizations of/approaches to health and the development of culturally responsive, effective adaptation strategies for climate related health-stresses, in a case study of Ulukhaktok, NT.

Ford, James D. 2012. "Indigenous Health and Climate Change." *American Journal of Public Health* 102(7):1260–66. Retrieved September 25, 2013 (<http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=3477984&tool=pmcentrez&rendertype=abstract>).

Furgal, Christopher, and Jacinthe Seguin. 2006. "Climate Change, Health and Vulnerability in Canadian Northern Aboriginal Communities." *Environmental Health Perspectives* 114(12):1964–70. Retrieved September 20, 2013 (<http://ehp.niehs.nih.gov/docs/2006/8433/abstract.html>).

Lesnikowski, A. C. et al. 2011. "Adapting to health impacts of climate change: a study of UNFCCC Annex I parties." *Environmental Research Letters* 6. Retrieved December 1, 2013 (<http://stacks.iop.org/1748-9326/6/i=4/a=044009?key=crossref.22759703011af465afde3cad0eb7d7cc>).

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**Jensen, Lars** (Roskilde University)

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## **Climate Change as Disaster or Icing on the Cake?**

My paper looks at how climate change has dramatically altered not only the political climate between Greenland and Denmark, but also within Greenland itself. In a book published in 2012 in Danish, *Denmark: Rigsfællesskab, Tropical Colonies and the Postcolonial Aftermath*, I looked at how Denmark has understood itself through its relationships with its former colonies in the North Atlantic, the tropics, as a reluctant emerging multicultural society, and through international intervention (development aid). After completing this book, I have turned the gaze to Greenland, to see how it understands its position in an Arctic that has emerged as a focus for neoliberally driven resource extraction, geopolitical power games, and science (climate change, ecology etc). The paper will investigate how climate change is produced as a local, national, inter-Rigsfællesskab, regional and global Greenlandic narrative.

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**Johnson, Noor** (Postdoctoral Fellow, Environmental Change Initiative, Brown University, Providence, RI, USA)

## **Mobilizing Inuit Knowledge in Global Science and Multi-Level Governance**

Knowledge mobilization—the movement and translation of knowledge from one location or context to another—plays a critical role in Arctic science and multi-level governance. In this paper, I draw on ethnographic fieldwork and perspectives from science and technology studies to discuss the infrastructures, practices and technologies involved in mobilizing Inuit knowledge. These include written artifacts, cultural symbols, and media tools and technologies. Bureaucratic and technological infrastructures limit the mobility of certain cultural forms, such as Inuktitut language, while spokespersons facilitate mobility by translating and advocating for Inuit knowledge. I argue that a focus on how knowledge is mobilized is critical to understanding contemporary knowledge politics and practices, as well as offering a dynamic lens through which to explore the themes of mobility and globalization in the Arctic.

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**Johnson, Noor** (Postdoctoral Fellow, Environmental Change Initiative, Brown University, Providence, RI); **Pulsifer, Peter** (Exchange for Local Knowledge and Observations of the Arctic, National Snow and Ice Data Center, University of Colorado Boulder, Boulder, CO)

## **Arctic Data Management Infrastructures and Knowledge Networks: A Role for Critical Social Science?**

Across Arctic research disciplines, there is an increasing emphasis on developing data management infrastructures and networks for coordination. These infrastructures are animated by the important goal of cross-disciplinary communication and knowledge integration in support of sustainability. Drawing on recent work in anthropology and science and technology studies, we consider these infrastructures and the encounters among stakeholders they support as spaces of creative engagement that have the potential to alter research and knowledge production practices in significant ways. We lay out a vision for how critical social science research could contribute to this process by helping make the politics and practices of data management infrastructures more transparent. This may include examining the various ethical visions that motivate stakeholders to participate in these networks, mapping the different possible network structures and examining the kinds of communicative work and action they support, and asking the question: who benefits from these infrastructures and networks?

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**Jones, Jen** (University of Anchorage Alaska); **Bradshaw, Brad** (University of Guelph)

## **Stakeholder Engagement in HIA: The Stakeholders' Perception**

Northern jurisdictions in Canada and Alaska are increasingly relying on health impact assessments (HIA) to assess health impacts of proposed resource development projects. While stakeholder engagement is a key component of HIA, ensuring fair and equitable representation in the engagement process, in addition to capturing the unique sense of place northerners have with their landscape may challenge the effectiveness and public acceptance of HIA. A recent study of stakeholder perceptions of an HIA stakeholder engagement process characterizes perceptions to shed light on stakeholder expectations and interpretations of the engagement process and how this affects confidence in the findings of an HIA. Key stakeholder issues explored in this paper include: access to the engagement process, value accorded to participant knowledge and the ability of the engagement process to capture and translate cultural information that informs health outcomes. The research offers recommendations to support stakeholder engagement in the north.

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**Jorgensen, Ulrik** (Department of Development and Planning, Aalborg University); **Hoffmann, Birgitte** (Department of Development and Planning, Aalborg University)

### **Building Local Competences to Cope with Global Mining Companies – Historic and Contemporary Experiences and Challenges in Greenlandic Mining Projects**

In Greenland, mineral extraction is seen as a key to overcome the contemporary economic challenges, and ongoing governmental strategies aims at restructuring the workforce towards the mining industry and related businesses. However many mining companies envisage potentials for a fast extraction of the resources using immigrant and migrant laborers that work intensively over a period of time while living in shantytowns. Past Greenland experiences with this type of work organization is not particularly positive.

In preparing for large scale mining activities legal, social and environmental impact assessments are mandatory and needed for the public, political decision making concerning licenses for the initiation, operation as well as closing down of mines. These impact assessments are embedded in wider socio-technical regimes framing the conditions for operation and the ways mining is integrated into the development of knowledge, skills, economy and social living conditions and practices. EIA and SIA have predominantly in relation to potential mining activities in Greenland been carried out on basis of norms and practices handled by international consultants and the specific topics lack important impacts related to the speed of economic exploitation and the options for social and educational development for the local population. International experiences also demonstrate that the legal and ownership condition for operation are crucial for the economic and developmental outcomes of mining operations in small societies with only limited regulatory capacity and economic strength.

The paper and presentation explores these basic conditions for mining operations based on historic and contemporary examples from Greenland and other societies that have experienced a recent and fast modernization and still operates with a limited knowledge and experience base. The paper deals with the challenge of how to organize mining projects to involve the local workforce and support the potentials of mining projects for sustainable development in Greenland.

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**Kaden, Ute** (University of Alaska Fairbanks); **Healy, Joanne** (University of Alaska Fairbanks)

### **Factors Related to Teacher Retention in Arctic Alaska**

High rates of teacher attrition threaten the provision of quality education in rural communities. This study examines indicators to teacher retention in small rural Arctic schools. Specifically, it explores, using a concurrent triangulation mixed methods approach, topics of teacher integration in communities, impact of education policies, living conditions, preparation, support, and other factors that may contribute to staying or leaving. Teachers from 10 Arctic Alaska school districts were surveyed for the study. Additionally, community members, administrators, and teachers were interviewed individually or within focus groups regarding their perspectives. Archival data from State workforce, census, labor, and school district databases were used for triangulation. Preliminary results indicate that teacher retention rates in schools and districts vary widely over time, however, they are also correlated to school size. Shared responsibility between school and local communities during hiring, training, mentoring, and evaluation of teachers is needed. To develop and retain effective teachers a collaborative approach to creating and sustaining a multifaceted support structure reflecting the local context is also needed. This study will help to inform education policy for teachers working and living in rural, Indigenous communities.

This study received funding from NSF, Arctic Social Sciences, grant #1203132

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**Kaiser, Brooks** (University of Southern Denmark)

### **Marine Invasive Species Management: Adapting in the Arctic**

The rapid pace of climate change and increased human disturbance of ecosystems in the Arctic is bringing urgency to concern over non-native species introductions and their potential threats to the marine environment and its economic productivity, where before environmental conditions served as a barrier to their establishment. The same characteristics that have previously made the Arctic less open to the establishment and spread of invasive species are ones that make the potential problem so expansive. At stake are unique species and co-evolved systems that have taken millennia to develop. Small perturbations in the fragile Arctic ecosystems are likely to have outsized impacts both ecologically and economically. This paper discusses the optimal management of invasive species threats as a process that begins before the arrival of any

species, with prevention, and continues in an integrated fashion through phases of biological invasion to minimize overall damages and costs.

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**Kankaanpää, Paula** (Arctic Centre, University of Lapland); **Smieszek, Malgorzata** (University of Lapland/Arctic Centre); **Stepien, Adam** (Arctic Centre, University of Lapland); **Banul, Karolina** (Arctic Centre, University of Lapland); **Koivurova, Timo** (Arctic Centre, University of Lapland)

### **Appraising the Role of the Arctic Council's Recent Assessment Work**

Arctic Council's assessments are considered to be among the key policy-shaping tools in the Arctic governance, being at the core of regional cooperation and identity. Since milestone mid-2000s reports, such as Arctic Climate Impact Assessment or Arctic Human Development Report, the assessment work of the Council has evolved towards new themes (e.g. adaptation or new industrial developments), approaches (e.g. resilience) and focus (e.g. biodiversity). The paper aims at enhancing our understanding of the policy-shaping role and potential of regional environmental assessments in general and the new Arctic Council's activities in particular. For this purpose, Arctic-specific criteria for assessments' effectiveness, credibility, saliency and legitimacy are identified and applied to the recent Arctic Council's activities. Both internal, design elements and external factors affecting the influence of these documents on policy-making are discussed. The paper is based on the results of the EU-funded project 'Strategic environmental impact assessment of development of the Arctic'.

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**Kankaanpää, Paula** (Arctic Centre, University of Lapland); **Smieszek, Malgorzata** (University of Lapland/Arctic Centre)

### **New Voices of 'Old' Observers to the Arctic Council: Comparative Analysis of Policy Frameworks of Germany and the United Kingdom Towards the Arctic Region**

The increasing importance of the Arctic arouses interest of non-Arctic actors in works of the Arctic Council. As the number of players raises, Observers to the Council set out their policies to detail their priorities and objectives in the region. Next to growing aspirations of Asian states also 'old' observers to the Council search for an enhanced and appropriate to their capacities and aspirations role in the North. Among them the United Kingdom and Germany have recently published their Arctic policy frameworks. In light of debates on a role of the Arctic Council, including Observers, in the future system of regional governance, countries' documents can reveal a lot about their goals and concerns regarding challenges and opportunities in the region. The aim of this presentation is to use them as an analytical tool for enhanced understanding of potential British and German contributions to processes of sustainable development in the Arctic.

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**Karlsdóttir, Anna** (University of Iceland); **Bitsch, Sören** (University of Roskilde)

### **Urbanization as an Effect of Internationalization and Resource Development**

The last three years a comparative project on Urbanization and the role of housing in three Arctic cities: Murmansk, Nuuk and Reykjavík aimed at understanding changes in the housing structure and socio-economic characteristics of the Urban Arctic. Market characteristics, community development and the role of the public and the private sector along with globalization processes impacts life in the Arctic due to changes in i.e. economic relations and communication structures. The housing sector mirrors the political, the economic and the social implications of the changes, and thereby epitomizes as well the challenges. Identifying the role that the housing sector plays in relation to issues regarding community development was crucial.

The fast changes occurring more recently creates a demand for examples of good practice for other regions, to be considered entries into a discussion of what may be the future safe and sustainable development of human settlements in the region. This meant identifying common concerns and differences in what could be key directions of the sustainable social and economic development of an Arctic urban lifestyle.

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**Kassi, Norma** (Arctic Institute of Community-Based Research); **Friendship, Katelyn** (Arctic Institute of Community-Based Research); **Mullinex, Kent** (Kwantlen Polytechnic University)

### **Indigenous Community Food Security in Yukon Territory**

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Vuntut Gwitchin Elders of Old Crow, Yukon Canada have been advising the community for some time that hard times are coming and that it is time to plan for long-term changes related to food security. Over three years, the community worked in partnership with the Arctic Institute of Community-Based Research on addressing climate change and food security issues and developed a food security adaptation strategy. The project was guided by the principles of community-based research and involved extensive youth engagement and capacity building. Key outcomes included recommendations for creating a long-term storage facility, exploring the feasibility of animal farming, developing land-based skills, increasing opportunities for gardening, promoting traditional value systems of sharing, and building health literacy. Outcomes from this project are now further supporting a Territorial-wide food system design project by Kwantlen Polytechnic University and the Yukon Agriculture Association, in which AICBR is contributing to the community engagement component.

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**Kazakevich, Olga** (Research Computing Centre, Lomonosov Moscow State University)

### **Monsters of Selkup Folklore Texts and Shamanic Incantations**

In the paper a vast spectrum of monstrous creatures encountered in Selkup folklore texts and shamanic incantations describing shaman's travels to the other worlds will be presented: giants-men-eaters, devils without navel, one-legged, one-eyed people – they all have abnormal features, and that's a sign of their belonging to the other worlds, dangerous for ordinary people. Selkup monsters will be regarded in the broad context of the monsters of folklore traditions of neighbouring peoples whereby we'll try to trace parallels and pick out borrowings. It should be mentioned that the Selkups residing right under the Arctic Circle; regard the North as an equivalent of the Lower World, the land of the dead ruled by the maim devil whom it is dangerous to mention and whose appearance is never described.

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**Kazakevich, Olga** (Research Computing Centre, Lomonosov Moscow State University)

### **Indigenous Languages in Urban Surroundings**

In the paper I am going to present some results and share some experiences of a series of sociolinguistic surveys done in the last decade as a part of projects on language documentation in indigenous communities of six district centres – two cities and four small towns – situated in oil and gas extracting areas of West and Central Siberia. Analyzing our data I'll focus upon the role of ancestral languages in preserving and/or constructing indigenous identity in urban surroundings. Though the indigenous residents of district centres use their ancestral languages essentially less than in small settlements, their symbolic value here appears to be higher: the use of indigenous languages in non-traditional spheres – radio, TV, press – is predominantly connected with the urban surroundings, language preservation and revitalization activities are also concentrated in district centres, so that for some people ancestral language disappearing from their private life becomes an essential part of their jobs.

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**Keeling, Arn** (Memorial University)

### **Cumulative Impacts and Environmental Legacies of Historical Extractive Development in the Arctic**

Considerable research activity in recent years, whether independent scientific studies or research undertaken for assessment and regulatory processes, has focused on the planning, construction and operational phases of large-scale extractive developments in the Arctic. Less frequently addressed are the long-term environmental legacies of such developments, whether concluded or continuing, particularly the extent to which local knowledge and indigenous perspectives are included in environmental assessment and remediation processes. Drawing on examples from around the circumpolar Arctic, but particularly Canada, this paper suggests how historical-geographical studies of extractive development can contribute to a richer examination of the cumulative effects of past, present, and projected developments, and their connection to socio-ecological change at a variety of scales. Addressing these issues will provide insight into the ongoing environmental and social challenges associated with historic resource development, particularly extractive industries, and help guide decision-making around the sustainability of extractive industries in the future.

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**Keil, Kathrin** IASS - Institute for Advanced Sustainability Studies); **Wiertz, Thilo** (IASS - Institute for Advanced Sustainability Studies)

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## **The Politics of Arctic ‘Sustainability’**

There is broad agreement that development of the Arctic region ought to be ‘sustainable’. However, there has been little discussion about the various possible meanings of the concept of “Arctic sustainable development”. While often taken as self-evident, what sustainability means in a specific social context is usually controversial and involves trade-offs. Often, the questions “sustainable development for whom, by whom, and crucially, defined by whom?” remain unasked. This is a serious neglect, given that the authority to define sustainability is powerful as it legitimizes certain policies while excluding others. We argue that current discussions around sustainable development in the Arctic predominantly serve as a justification to economic and geopolitical territorialization, while disguising the conflictive character of the concept and foreclosing discussions about alternative development pathways. We discuss examples from different contexts and scales and suggest that critical engagement with the politics of sustainability is needed in discussions about Arctic futures.

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**Kerttula de Echave, Anna** (US National Science Foundation)

### **Arctic Social Science Data: Archiving and Visualization**

The Arctic Social Sciences Program at the US National Science Foundation has for over a decade been encouraging researchers to archive their data and make appropriate data publicly available. In 2011 the National Science Board of the US National Science Foundation released new merit review criteria requiring that all applications be reviewed, in part, on the basis of their data management and archiving plan. Dr. Anna Kerttula, Program Director of the Arctic Social Sciences Program at the US National Science Foundation, will discuss the obligations of the researchers to their data, to their disciplines, and to their host communities and how these obligations can be met through new and exciting technologies and potential funding opportunities.

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**Keyte, Lawrence** (Trent University)

### **Energy Resilience in Northern Communities: Critical Success Factors for Sustainable Northern Energy**

Energy resilience – the ability of a population to adapt and thrive when undergoing unexpected transformation, disruption or crisis related to its energy provision – is a critical issue when applied to vulnerable northern communities largely dependent upon fossil fuel energy. A current gap exists in the literature as to how northern communities can succeed in achieving greater energy resilience, and to understanding success factors which might aid them in approaching more sustainable energy scenarios. This project addresses the gap by examining the social, economic and environmental drivers which have best supported a northern community’s transition from fossil fuel dependence to a more resilient, locally-sourced, clean and autonomous energy future. This case study focuses on the remote northern village of Fort McPherson, NWT. The research aims to provide success factors which might aid northern communities in the transition towards sustainable energy, and to help inform policy about northern energy planning.

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**Kharlampeva, Nadezhda** (Saint-Petersburg State University)

### **The Metahistorical Concept in Formation of Social-Ecological System Policy of the Russian Arctic**

The Arctic and the Russian Arctic came under the spotlight of world politics. Climate change, hope for technological capabilities cause historical value of the Arctic. How to create optimum model on using of resource and human potential in the conditions of global transformations? How the metahistorical concept of Social-Ecological System policy of Russia is formed? The minimum methodological requirements were formulated by the academician V.A. Chereshev and professor V. N. Rastorguyev (2008) for formation of the state strategic planning on Social-Ecological System policy. The first part of methodology concerns a method of work of government institutions in an open mode with local governments, and also stimulations of growth of the competent civil society, capable to assume responsibility for social and ecological safety of territories. In the second part of methodology search and the critical analysis of alternatives of comparison of possible scenarios and competing schemes in the field of social and ecological policy is offered. Quality of the metahistorical concept in formation of Social-Ecological System policy is made by the following criteria: accounting of reaction to contemporary global problems, and also principle of equity. What role of Russia in the solution of this complex intellectual and moral challenge?

**Kim, Jong-Deog (Justin)** (Korea Maritime Institute)

### **Korea's Arctic Policy Development**

Since Korean government established the Dasan Arctic Scientific Research Station one of the on-site station in Ny Alesund, Svalbard in 2002, it has constantly carried out Arctic researches. Its Arctic research activities were expanded with the establishment of the first research icebreaker "Araon" in 2009. Korea recently conducted socioeconomic analyses, including throughput predictions for Arctic shipping routes, and announced the Arctic Policy Advancement Direction in 2012. And last May 15, six countries, including Korea, gained observer status on the Arctic Council. The addition of six permanent observers will strengthen the capability of the council and help to have a balanced discussion on various issues. Along with this circumstance, on July 25 of this year, the Korean government developed the Comprehensive Arctic Policy Framework Plan, the basic direction for its systematic Arctic cooperation policies. The framework plan was pan-governmentally prepared with the Ministry of Oceans and Fisheries at the center. Its core principle is cooperation with the Arctic Council and Arctic states, as well as with global and regional communities. The purpose of the plan is sustainable development of economic opportunities, such as the Northern Sea Route (NSR), while contributing to international society through cooperation in climate change response, marine environmental protection and scientific research. In this session, I'd like to introduce the major achievements of Korea's past Arctic policy and future direction based on the findings and analysis of relevant research.

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**King, Alexander D.** (University of Aberdeen)

### **Plan B: Documenting Unsustainable Languages Before They Disappear**

Linguistic diversity is dwindling in the arctic as people are shifting to a socially dominant "world" languages. Many speech communities are working hard to sustain their heritage languages, but not all will prove to be sustainable over the long term. Now is the time to execute alternate plans in case arctic languages prove unsustainable. One example is a project to document the Koryak language, which wide dialectal variety. It is a collaboration between an American linguistic anthropologist (King) and a native-speaking linguist (Valentina Dedyk). Most recordings were made during a 9-week expedition in the winter of 2013 to small villages in Kamchatka. While Dedyk engaged speakers in conversation and invited them to tell stories, King ran the equipment. Very little Russian was used in order to provide the widest possibility for recording Koryak in its own terms. I will end with suggestions for ways to incorporate language documentation into nearly any kind of research project involving speakers of arctic languages.

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**King, Alexander D.** (University of Aberdeen)

### **Raven Stories Across the North Pacific: A Comparative Literature Approach to North Pacific Orature**

It has long been pointed out that the character of Raven is found on both sides of the Pacific. Discussions of this continuity were usually connected to diffusionist arguments attempting to trace the movement of folklore motifs. This paper takes seriously Boas's 1905 call for the collection of "the literary documents" of a culture and goes the next logical step. The oratures of NE Asia and NW America should be addressed from a comparative literature framework. The text collections of oral narratives from both sides of the North Pacific provide a window into "the very quintessence of the genius of a civilization" as Sapir argued for art. Taking inspiration from Sapir's ambitions to look for the patterning that can emerge from large scale comparisons, I argue that NE Asia and Northwest Coast American Indians can be seen as two civilizations with very different understandings of the person and the place of the individual. This paper will demonstrate how a comparative examination of satire uncovers differential cultural values and explains the sense of humour in the genius of a civilization.

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**King, Leslie** (Royal Roads University); **Ogilvie, Astrid** (Universities of Colorado and Akureyri)

### **Northern Knowledge for Sustainable Coastal Communities**

Northern Knowledge for Resilience, Sustainable Environments and Adaptation in Coastal Communities is an inter-disciplinary, international research project investigating the role of knowledge and governance in promoting sustainability, resilience and

adaptation to rapid environmental change in Arctic and northern coastal communities. Research partners in Iceland, Norway, Scotland and Canada work with indigenous and non-indigenous coastal communities to identify and communicate promising practices in responding to climate change. The goal is to increase knowledge concerning the consequences of climate and other changes for northern societies with a special focus on connecting and integrating social-ecological changes and governance responses. The geographical focus is on coastal communities in Arctic and sub-Arctic regions in Norway, Iceland, Scotland and Canada to understand present and potential future linkages between climate processes and social adaptations. The paper presents emerging findings about effects of that linkage on settlement patterns, ecosystems and landscapes, livelihoods (fishing, marine-mammal harvesting, tourism and changes in reindeer herding practices) and the sustainability of indigenous and non-indigenous coastal peoples and communities.

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**Kitching, Knut** (McGill University); **Ford, James** (McGill University)

### **Tuktu and Climate Change: Inuit Hunting on Southern Baffin Island**

This paper presents the findings of a study of the caribou-human relationship in Iqaluit, Nunavut. This study aims to develop a baseline understanding of the sustainability of caribou harvesting in the Iqaluit region in-light of multiple stresses including climate change, government policy, population growth, changing hunting patterns, and caribou population dynamics. Working closely with community members, we are examining how hunters are adapting their behaviors to changing access to harvest areas and variations in caribou populations. By addressing community interactions with caribou on Southern Baffin Island in the context of changing access, climate-driven caribou population changes, and management frameworks, this project fills key gaps in the caribou, co-management and community vulnerability literatures, developing a baseline from which to monitor future stresses. This study will help to refocus attention on sustainable harvesting and co-management as a key adaptation and resiliency strategy in the face of a rapidly changing Arctic.

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**Klimova, Tatyana Mikhailovna** (Research Institute of the Health of the North-Eastern Federal University named after M.K.Ammosov); **Fedorova, Valentina Ivanovna** (Research Institute of the Health of the North-Eastern Federal University named after M.K.Ammosov); **Baltakhinova, Marina Egorovna** (Research Institute of the Health of the North-Eastern Federal University named after M.K.Ammosov)

### **Anxiety and Depressive Disorders Among Population of Yakutsk**

Health of the indigenous population of Yakutia in the last decade continues to deteriorate. Prevalence of metabolic risk factors studied among 190 indigenous people (yakuts, evens, evenks) in village Zhigansk (66° N, 123° E). The average age of the sample was 44±12 years. Hypercholesterolemia by NCEP ATP III criteria was identified in 15% of men and 14% of women ( $p=0.79$ ), a reduced content of high density cholesterol in 19 and 6% respectively ( $p=0.01$ ), hypertriglyceridemia for 11% of sample ( $p=0.90$ ). Hypertension was found of 44% men and 42% women, obesity — 29% and 38%, abdominal obesity in 17 and 55%, respectively. Metabolic syndrome by NCEP ATP III criteria established in 22 and 33 % respectively ( $p=0.197$ ). Metabolic syndrome was observed in 58% of individuals with abdominal obesity and 6% of those with normal waist circumference ( $p<0.001$ ). Good nutrition and optimization of physical activity can reduce the risk of major chronic non-communicable diseases.

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**Knapp, Gunnar** (University of Alaska Anchorage)

### **Trends in Alaska's Statewide and Regional Economics**

This paper presents an overview of trends in Alaska's statewide economy and regional economies (at several regional classifications), the factors driving these trends, and how and why these economies may change in the future. Both statewide and regionally, Alaska's economies may be thought of as combinations of subsistence activities, "basic" industries/activities (whose markets are outside Alaska and/or which bring money into the economy), and "support" industries/activities (whose markets are inside Alaska and/or which are driven by the spending and taxes of Alaska businesses and households. Major basic industries/activities include federal spending, resource industries (primarily oil and gas, the fishing and mining), tourism, and investment earnings (public and private). Major support industries/activities include state and local government, trade, services, transportation and construction. Different basic industries are driven by different economic and political factors and in turn affect different support industries/activities in different ways—all of which vary over time and between regions. This

paper illustrates the factors driving the statewide and regional economies by showing first the types of economies which would result from each basic industry/activity alone, and then showing their combined effects (as modified by effects of scale). The analysis highlights (a) the critical importance of federal and state spending to Alaska's statewide and regional economies—and the corresponding likelihood that growth will slow as federal spending and state oil and gas revenues decline; (b) changes over time and regional differences in other basic industries, and the extent to which growth in these industries can offset effects of declining federal and state spending. The contribution of the paper is less in the technical methodology for modeling the statewide and regional economies than in the approach to explaining the complex combinations of factors driving the real economies of Alaska and the Arctic to policy makers and the public.

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**Koester, David** (University of Alaska Fairbanks)

### **Discursive Paths to “Eureka”**

Mathematics is an esoteric, lofty, Western/Near Eastern conceptual construct realized in abstract traditions based on symbolic representations. Mathematics is basic to all human experience of symmetry and number as part of the fundamental spatial (visual) and temporal (mnemonic) apparatus of the human mind. These two seemingly oppositional statements—that math is a peculiar cultural/historical construct and that it is founded on basic elements of human experience—are not absolutely incompatible. The MCC project has sought to explore the cultural nature of mathematical experience by working with skin sewers, boat builders, navigators and other practitioners to understand the mathematical foundations of practical activity. Getting to “mathematical foundations” from oral accounts of activities proceeds by a discursive process that invokes metaphor, symbols, and various forms of discursive displacement. This paper analyses the discursive processes which lead to “Eureka” moments in which apparent connections between practical ideation and mathematical ideas are realized.

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**Korkina, Varvara** (State Polar Academy)

### **Perspective Intercultural Space of Indigenous Peoples of the North, Siberia and Far East of the Russian Federation: The Economic Potential or State Problem**

Development of cultural space in the Russian Federation - the underlying problem that has existed since the collapse of the USSR. At the moment it is very difficult to talk about the general cultural space of the country as a whole, but such a devastating impact on the development of the whole country does not have to. And that is why, often not always clear why indigenous peoples is very important that part which related to cultural heritage.

We are convinced that sustainable development of indigenous peoples of Russia is possible only with the full participation of the people themselves in this process, and the preservation and development of culture, traditional management.

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**Korneeva, Yana** (Northern (Arctic) Federal University & Northern State Medical University); **Simonova, Natalia** (Northern (Arctic) Federal University & Northern State Medical University)

### **Adaptation in Professional Activity Shift Workers in the Arctic**

Arctic regions are characterized by extreme climatic factors and life conditions, so in these areas used shift work. Shift workers professional activities in the Arctic have high requirements for the conditions creation for the physiological, psychological and socio-psychological adaptation. Despite great efforts to reduce the impact of negative factors, professional activity in the Arctic remains one of the most extreme activities. The researcher's attention is not only directed at ensuring the necessary conditions, but also to study the adaptation of human resources. In our studies have been studied especially psychological and professional adaptation of shift workers in the Arctic, identified types of adaptation strategies specific to workers in these activities. There are determined the psychological characteristics of shift workers in different occupational groups that need to be taken into account when adapting them. We have developed a shift workers psychological support, aimed at the development of environment and personal resource.

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**Kristoffersen, Berit** (University of Tromsø); **Jensen, Leif Christian**

### **Authorizing Oil and Gas Development in the European Arctic: The Norwegian Approach**

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After the peaking of Norwegian oil and gas production a decade ago, there have been intensified efforts by the petroleum industry and the government to materialize strategies and visions for expanding exploration into Norway's polar seas. This has involved a re-scaling of security interests in the so-called Norwegian 'High North' and new state-based resource governance practices. The 'High North' is however a political intervention and not a geographically demarcated area where petroleum extraction is the 'main driver'. This paper examines how environmental perspectives and climate policy is framed as virtually congruent with Norway's geopolitical and economic interests in the 'High North', and political debates and the identity about Norway's role in Arctic resource governance.

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**Kuligina, Elena** (European University at Saint - Petersburg)

### **The Development of the Soviet North in the Mainstream Interest of Canadian Scientists and their Interaction with the Soviet Scientific Institutions in 1950s - 1960s**

During the Cold War period Canadian scientists recognized the primacy of the Soviet Union in the process of development of the northern territories. Since the mid-50s they tried to establish contacts with Soviet scientific institutions to exchange information, but the interaction progressed very slowly. Because of this Canadian scientists used the information received by British scientists. Despite the difficulties in establishing contacts and information exchange one of the Canadian scientists Dr. Trevor Lloyd was able to visit the Soviet Union. Despite the Cold War Canada managed to interact with the Soviet Union on the broad subjects of studies of the northern territories of the USSR. The information in which the Canadian scientists were interested in was directly related to natural resources of the North, their production and development. The extent of knowledge was impressive and concerned not only the resource base, but also strategic transport routes both marine and terrestrial.

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**Kvidal, Trine** (Norut Alta)

### **Gender, Inclusion, and Sustainability: Discursive Constructions of Reindustrialization Processes in the North**

Globalization dynamics in resource peripheries are important to follow during times of industrial restructurings, especially for scholars interested in power structures. Such restructuring processes are not neutral and integrate women and men in distinct ways, but much globalization research has addressed gender in limited ways (or not at all), thus masking gendered aspects of regional globalized restructurings.

In this paper, I deal with a Northern Norwegian arctic resource periphery during a time of globalized restructuring. I present discourse analyses of articles dealing with industrial developments in the region, which have been published in local newspapers. Examining local public discourse associated with industrial developments is a useful way of understanding materialization of globalization processes. Furthermore, discourses are fundamental to understanding gender inequality; they define spaces that men and women can occupy and possibilities within these spaces. Based on the analyses, I discuss discursive gender relations and gendered sites of tension in this context.

(Paper is part of the NORDIC TEAM)

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**Langgård, Karen** (Ilisimatusarfik, University of Greenland)

### **Modernization and Heritage in Children's Literature in Greenland**

The paper will address issues like the following ones: is there a critical mass of literature for the parents to show and read aloud from for their small children? What choices do they have? How about children who start reading in the low grades at school? Greenlandic literature for young people and adolescents is intertwined to a large degree with nation building, but has not made much use of the Inuit / Greenlandic old and rather well documented oral tradition contrarily to what is found in most post-colonial cultures of the world. How about children's literature? Is it tainted with ethnic-national themes? Have the old oral stories found their way to children's books? Whether or not they do so, we face the question whether or not Greenlandic literature ought to be explicitly ethnic and focus on Inuit cultural roots?

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**Lankshear, Jessica** (University of Saskatchewan, School of Environment and Sustainability); **Lokken, Nils** (University of Saskatchewan, School of Environment and Sustainability); **Hausner, Vera** (University of Tromsø); **Broderstad, Else-Grete** (University of Tromsø); **Clark, Douglas** (University of Saskatchewan, School of Environment and Sustainability)

### **Challenged by Corporations: Local Perspectives on Land Use and Natural Resource Management in Churchill, Manitoba**

Local perspectives on land use and natural resource management in Churchill, Manitoba were investigated through TUNDRA between September and November 2013. A problem definition was formulated from quotes and direct responses to questions that addressed: (1) factors that affect people's enjoyment of the land and water, (2) importance of management topics, (3) level of trust, and (4) how residents are informed and involved in decision making processes. Results indicated that local people are affected financially due to high costs associated with freight through companies owned by OmniTRAX: the Port of Churchill and Hudson Bay Railway. The Churchill River diversion by Manitoba Hydro in the 1970's resulted in ecological challenges caused by unnatural water levels and a loss of important resources. Participatory forums do not currently exist in Churchill. Therefore, participatory forums would be mutually beneficial for corporations and residents of Churchill to address the above challenges.

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**Länsman, Anni-Siiri** (University of Oulu, Finland); **Kortelainen, Terttu** (University of Oulu, Finland)

### **Distribution of Attention to News on an Ethnic Radio Website and Facebook in Finland**

The study focuses on the news released by the ethnic radio YLE Sapmi of Finland's national public service broadcasting company, in November 2013, and the attention the news have received on the discussion forum of the radio and Facebook site, exploring (1) which contents in the news are commented, which not, (2) do anonymous comments differ from comments with a name, and (3) which new are "liked" on Facebook. Attention data means digital footprints reflecting attention that the users of different web services have allocated on them, such as commenting, liking or sharing a posting on Facebook or a website. The results of the study reveal an active discussion, focusing on ethnic contents and culture, especially controversial topics concerning ethnic relations, while other topics receive less attention. Comments on the Facebook are mostly neutral or positive, while more controversy is visible on the discussion forum of the radio website.

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**Laptander, Roza** (University of Lapland)

### **Collective Suffering and the Expression of Individually Hidden Pain: Nenets Ruptures from Soviet Collectivisation Policies**

In the literature the Nenets are portrayed as one of those nations of the Arctic known to accommodate external changes flexibly within their life without abandoning their own traditional livelihood basing on nomadism. However, Soviet time collectivization of the 30's and 60's damaged nearly every family of the newly built country. All nations were under pressure for being taken under the total control of the strong Soviet power. Nenets were no exception, and the memory of these events has become part of a national trauma. What could old people say about this time? It was difficult for them to understand what Russians wanted from them, even though many tried their best. Of course, protests occurred, but those in opposition to the regime were severely punished. Thus, reindeer herders gave their reindeer to the newly formed state reindeer breeding brigades. Hunters were trying to give to the state as many polar fox furs as possible. Fishermen were fishing, even though on large scale this occupation was new for reindeer herders, while for former fishermen herding reindeer was new. Such changes were experienced as ruptures where everything was turned upside down, resulting in changing living conditions, often including dislocations. This paper approaches collective suffering and individual technicalities of expression and hiding, by exploring whether the many resembling stories point to a common experience of destiny and fortune of the Nenets nation, or whether this commonality reveals a deliberate hiding of pain and sorrow. Is there a common interest in telling instead of a sad story one which is good for listening? Is it this hidden pain that made people change their view to their life and contribute to slow but steady russification of their children? Narratives also point to the influence of the most recent radical changes brought about by the advancing gas industry on Nenets lands that expose them to new assimilation pressures. The paper combines the interpretation of all these aspects into a common framework for explaining how Nenets oral history is nested within the memory of radical social, political, economic and environmental change in the Russian Arctic.

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**Larson, Colleen** (University of British Columbia Okanagan)

### **Current Concerns and Trends in Education for Aboriginal Students**

In this paper, I will discuss themes in the international literature about Education for Aboriginal students. First, I will elaborate upon common concerns about education for marginalized students as identified by scholars from Canada, New Zealand, Australia, and the U.S.A. Then, I will present current trends in education, which have been developed to address concerns about education for marginalized students. Finally, I will present my response to the literature and how my readings will impact my doctoral research project with the Taku River Tlingit First Nation and School District #87, Stikine. My project, Creating a Sense of Belonging for Aboriginal Students in British Columbia, conducted in partnership with the Taku River Tlingit First Nation, hopes to support Ministry of Education recommended Aboriginal Education Enhancement Agreements by providing input from students and members of the Taku River Tlingit First Nation about the meaning and nature of sense of belonging in school.

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**Larson, Colleen** (University of British Columbia Okanagan)

### **Conducting Research “In a Good Way”; Theory into Practice**

This paper will discuss important aspects to consider when conducting research about Education with Indigenous peoples in the North. First, I discuss Indigenous worldview, Indigenous knowledge, Indigenous epistemologies, Indigenous methodologies and the connections between these concepts. Then, I discuss the importance of including Indigenous research paradigms or conceptual frameworks in research with Indigenous peoples. Next, I describe principles that must be considered and implemented in research conducted in partnership with Indigenous peoples. Finally, I will present my research project with the Taku River Tlingit First Nation and the Stikine School District in Northern British Columbia as an example of research which attends to an Indigenous research paradigm. In particular, I will discuss Phase I: Establishing Partnerships of my research project, Creating a Sense of Belonging for Aboriginal Students. and my goal to work in partnership with Taku River Tlingit First Nation for every step of the research project.

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**Larsson Blind, Åsa** (University of Lapland)

### **Constraints and Opportunities in Saami Reindeer Herding**

The Sámi people are the indigenous people of northernmost Fennoscandia. Sámi reindeer herding are dependent on relatively undisturbed pasture over large territories and in today's modern society this claim is often disputed. In contact with authorities and industrial companies reindeer herders, as an indigenous minority, often have difficulties getting their views regarded in a meaningful way. The focus of this study is to explore constraints and opportunities experienced by Sámi reindeer herding people related to their use of their traditional lands. What do experienced constraints/opportunities consist of and what consequences do they lead to in the daily life of reindeer herding. The study also aims to explore how Sámi reindeer herding people view the issues of control and success in their everyday life. The main data material will be derived from participant observation and interviews with Sámi reindeer herding people in Sweden, Norway and Finland.

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**Lasserre, Frédéric** (Laval University); **Huang, Linyan** (Laval University); **Alexeeva, Olga** (UQAM)

### **Is China's Interest for the Arctic Motivated by Arctic Shipping Prospects?**

The interest of China for the Arctic, articulated by academics and diplomatic gestures since 2007, is often interpreted by analysts as resting on a desire to gain access to resources and shipping routes. If Arctic shipping routes are indeed shorter, their access remain difficult and risky, even in the summer time. To what extent is the Chinese government's interest motivated by Arctic shipping? Are Chinese shipping firms really interested in Arctic shipping? The paper will draw from an analysis of declaration, speeches and direct interviews with government, research and shipping firms officials.

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**Lautensach, Alexander K.** (School of Education, UNBC); **Lautensach, Sabina W.** (Human Security Institute, Canada)

### **Curriculum Innovation for Sustainable Arctic Communities**

The transition towards a sustainable future calls for radical changes in education. Unfortunately education worldwide has contributed more to the problems than to the solutions. Despite some universal drivers (e.g. peak oil, climate change) the transition takes very different forms in different biogeographical regions. Arctic educators share with others the challenge to overcome the longstanding failure of education by selectively enhancing positive learning outcomes and by empowering learners. Six major educational aims were identified in earlier work. The second challenge is to adapt their innovations to the Arctic context. This paper focuses on affective learning outcomes (e.g. values, attitudes, beliefs), in what ways they help or hinder the transition, and how curriculum facilitates them. Other obstacles include systemic inertia and lack of proactive government support. Teacher education represents a promising avenue for reform because of its potential for self-reinforcement. Strategies are discussed in the light of practical experiences at UNBC.

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**Lempinen, Hanna** (Arctic Centre, University of Lapland, Finland)

### **Silenced and Sidelined: The Elusive Social in the Barents Energyscape**

Growth in energy demand, dwindling resources, warming climate and technological developments are pushing energy extraction activities towards the previously inaccessible Northern areas. In this process, also the Barents region, home to an estimated fifth of the world's remaining hydrocarbon resources, has gained international attention. The projected increase in energy-related activities is expected to dramatically alter the regional economic landscape, the local environment and lives of the local populations.

This paper takes an explicit theoretical and empirical focus on the social dimension in the energy sustainability debate through a case study focus on the Barents energyscape. The 'social' in the sustainability debate remains undertheorized as social dimensions remain silenced or sidelined by economic and environmental concerns. Through projecting the case study against a theoretical backdrop of the social as situated and 'more-than-human', the paper draws attention to the limitations of existing understandings of the 'social' in the (regional) energy sustainability debate.

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**Lempinen, Hanna** (Arctic Centre, University of Lapland); **Tennberg, Monica** (Arctic Centre, University of Lapland)

### **Salla, Finland "In the Middle of Nowhere": Local Community, Socially Sustainable Development and Cross-Border Cooperation**

This paper takes a focus on Salla, a small and remote northern municipality at the border of Finland and Russia. Amidst declining population and high unemployment rates, the municipality's hopes and plans for future prospects and sustaining local communities rely heavily on the development of mining and tourism sectors through cross-border cooperation. Although there is no single widely accepted definition of sustainable communities, a sustainable community can be seen as able to cope with various economic, social and environmental changes in less drastic and more equitable ways while maintaining social cohesion than unsustainable communities could. The salient question is how local economic development, ideas of sustainability and neoliberal practices of governance meet in community development in the case study context of Salla in a situation where especially the relationships between neoliberal governance and social aspects of sustainable development are problematic.

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**Lennert, Mitdlarak** (Ilisimatusarfik, University of Greenland)

### **Greenland's Legal Framework for Non-renewable Resource Exploitation: The Challenges of Creating Transparent Public Consultation Processes**

Greenland is a young democracy within a nation-building process facing challenges associated with governance and sustainability related to the development of a mining industry and the obligations that come with it. One of these challenges is to ensure a democratic process involving the public on an informed background in discussions prior to decisions that potentially might lead to major changes in livelihoods, living conditions and everyday life.

By looking at the legal framework and public consultation processes, the paper emphasizes challenges in resource governance, the steep learning curve for creating institutions and practices with capacity to take on all the tasks associated with sound resource governance.

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**Lévesque, Sébastien** (Laval University); **Duhaime, Gérard**

### **Economic and Social Inequities in Inuit Nunangat**

This presentation focuses on social inequalities in Inuit Nunangat from a sociological perspective. With a theoretical framework built upon selected concepts from colonialism, dependency and Bourdieu's social stratification perspective, we explore social inequalities between Inuit and non-Aboriginal resident of the Inuit homeland in Canada. As a first step, we attempted to statistically depict the socioeconomic conditions of these two groups from the 2006 Canadian Census master data file, especially in the field of education, work and income. In a second step, by the mean of crosstabs between studied variables, we tested for relationships in order to find ways of explanation to the unequal distribution of resources between these two groups. As suggested by the sociological literature, results show mutual influences between variables at play; this suggests that inequalities, far from being anecdotal, are systemic. Inuit Nunangat residents are submitted to the same reality. More than ever before, they have to earn a living in an economy where wage labor prevails, where school degrees promote access to better jobs and higher incomes. We finally propose a sociological interpretation of the cleavage in the Inuit Nunangat that divides the Inuit and the non-Aboriginal.

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**Lindroth, Marjo** (Faculty of Social Sciences, University of Lapland); **Sinevaara-Niskanen, Heidi** (Unit for Gender Studies, University of Lapland)

### **Indigenizing Resilience: Critical Reflections on Resistance**

The current views on indigenous peoples and indigeneity suggest that empowering global developments have taken place. We argue that resilience, in particular, has taken over indigeneity, for example, in the Arctic Council and the UN, and in the common perceptions of indigeneity. These perceptions foster an ideal of indigeneity as persistent and adaptive life. For us, this presumption of resilience manifests the "loving embrace" of biopower. Power might have changed from brutal to more subtle, but the aim to direct indigenous lives still persists. In sum, there is no less power used over indigeneity than in the past. In this paper, we discuss the ways in which the biopower that works distinctively through resilience could be resisted. We offer a critical reflection on indigeneity, resilience and resistance with the aim of opening up space for alternative representations.

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**Lipka, Jerry** (University of Alaska Fairbanks); **Andrew-Ihrke, Dora** (University of Alaska Fairbanks)

### **Yup'ik Cultural Practice and Cognition as a Foundation for Teaching Elementary School Mathematics**

Despite epistemological differences between everyday Yup'ik cultural practices and mathematics we find that Yup'ik ways of knowing and thinking provide an alternative pathway to teaching elementary students rational numbers. Math in a Cultural Context is a long-term project working collaboratively with Yup'ik elders and teachers. Through this collaborative work we have identified a "cultural code" that enables Yup'ik men and women to perform a variety of cultural practices. Yup'ik elders have stated that "what was once hidden is now revealed." The elders' stated the symbol "+" signifies "the beginning of everything." From transforming irregular uneven material into precisely made beautiful patterns to navigating across the tundra, elders' use of symmetrical measuring and halving can be applied to the teaching of elementary school mathematics. These few generative concepts support teaching of rational number reasoning, measuring, geometry, and early algebraic thinking. This project represents a "first" to generate mathematics from Indigenous Knowledge.

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**Loginova, Julia** (University of Melbourne); **Rochev, Valerij** (Izhma Sport School)

### **Traditional Komi Sports: Promoting Sustainable Community and Business Development based on Komi-Izhmetsy's Traditional Values**

The research describes the role of traditional sports in rural community development process and its perspectives for sustainable business development based on a case study of Izhma region, a northern remoteness and rural area of the Komi Republic, Russia. The historical past shows that desire "to be better than others", close connection with nature, respect for traditions as well as great responsiveness to innovations are distinctive characteristic of the indigenous Komi-Izhmetsy. Moreover, it is a phenomenon that the region of 19 thousand people is famous for three Olympic champions. Review of Olympic champions' biography and coaches' findings indicate that sportsmen having reindeer herding background more often

shows better results. Traditional sports originated within the region mainly as preparation of young generation for labor activities such as hunting and reindeer herding were and are still extremely important for Komi-Izhemtsy. The role of traditional sports in community development process in Izhma region consists in reinforcing Komi-Izhemsty' identity, formation of a regional "trademark", bridging social capital as well as solving social problems, improving public health and contributing to personal development. However, the potential that the traditional sports could have for the sustainable business and community development in the region is underdeveloped. The R&D project for local and regional development partnerships and business school initiated in the Izhma region in 2010 detected potential spheres of further community development based on existing and new productive and social projects in the sphere of traditional sports. Innovative approaches, networking and identity formation are considered as the key strategies for promoting sustainable community and business development in the Izhma region based on people's traditional values.

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**Loovers, Jan Peter Laurens (Peter)** (University of Aberdeen)

### **'Hard Times Are Coming': Indeterminacy, Prophecies, Apocalypse, and Dogs**

Building on Gwich'in elaborations on the Biblical End of the World, and incorporating vernacular prophecies of such indeterminate ending, the frequently expressed statement 'hard times are coming' – by Gwich'in (Elders) in Northern Canada – sheds different insights into human-animal relations. Thus to counteract these apocalyptic hardships, the Gwich'in have emphasized their reliance on "working dogs". The argument follows that whilst snowmobiles depend on monetary funds for gas and mechanical parts, the "working dogs", and subsequently Gwich'in, can live off the land without such dependency on the broader economic system. In this paper I exemplify how the revitalization of the use of "working dogs" by a number of Gwich'in can be understood as a possibility made by Gwich'in with dogs to break away from the uncertainties and indeterminate collapse of the capitalist system.

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**Losey, Robert** (University of Alberta)

### **Exploring the Life Histories of Dogs in the Circumpolar North Through Archaeology**

Sled dogs are often described as a fundamental part of many traditional northern societies, but their long-term history in this region remains very poorly understood. While dogs were present in the arctic for many thousands of years, how such animals were interacting with their human counterparts is unclear. For example, it is unknown if these early dogs were pulling sleds, carrying burdens on their backs, or assisting in hunting, nor is it clear how such practices could be identified in the archaeological record. Our project is developing the archaeological tools necessary for better understand ancient dogs' life histories. Using skeletons from northern dogs and wolves with known life histories, we investigate 1) how dogs' skeletons respond to the stresses of pulling sleds; 2) how experiences of trauma and disease differ between northern wolves and dogs; and 3) intensive practices of controlling dog behavior such as intentional tooth removal.

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**Loukacheva, Natalia** (University of Northern British Columbia)

### **Arctic Governance, Law, and Sustainable Development**

The increasing importance of the Arctic at several levels suggests further inquiry in the scope of Arctic governance and solutions for sustainable development of the region. By outlining the key pillars of the Arctic governance framework, related challenges and opportunities, and its linkages to the concept of sustainable development and its evolution in international law, at the outset, my presentation shall explore contemporary dimensions of Arctic governance and its nexus with major geo-political trends and legal developments. As an example, it shall further look at the normative concept of sustainable development in relation to Arctic energy governance.

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**Lowe, Marie** (University of Alaska Anchorage)

### **Education and Community Viability in Western Alaska**

This paper examines post-secondary educational and training outcomes across the Bering Sea region as facilitated by the Western Alaska Community Development Quota (CDQ) program. The study assesses whether accessible educational

opportunities help or hinder rural youth in fulfilling new social roles and/or in directing the formation of legitimate opportunity structures contributing to the future sustainability of coastal communities. It highlights the extent to which development driven post-secondary education initiatives can contribute to the viability of Bering Sea communities when “viability” is defined by the degree to which a community can balance in- and out-migration, sustain a context of livelihood diversification, and create bridges to resources external to the community. It helps elucidate how the CDQ model could potentially have wider arctic or global applicability in other regions where there is large scale, industrial resource development juxtaposed to rural communities struggling with economic development.

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**Lukin, Karina** (University of Helsinki)

### **Recollections and Silences around the Soviet Nuclear Testing in Novaya Zemlya**

The Soviet Union established the Novaya Zemlya nuclear test site in 1954 and the actual testing of the weapons begun in 1955. At the time, Novaya Zemlya was still populated mainly by the Nenets, who were subsequently moved to the nearby areas and Nenets communities. Few Nenets families were resettled to the island of Kolguyev, situated to the west of Novaya Zemlya. Nuclear testing and the dumping of nuclear waste happened in the Soviet Union before the eyes of the people living in the North, yet it was neither commented nor opposed publicly until the late 1980s and post-Soviet years. In the Soviet images the testing was set in the wider frames of Soviet cold war success and the public discourse on the subject was dominated by the authorities. During my own field works among the Nenets in the Kolguyev Island I came across the Novaya Zemlya Nenets' private memories, which are naturally in contradiction with the public images. Still, The Nenets told their histories in many different tones. In this paper I discuss my interviews with the Novaya Zemlya islanders settled in Kolguyev but also recollective texts about Novaya Zemlya testing ground found in the Internet. I will concentrate on the silences of performance and interpretation produced within the two communicational situations, namely the interview and the Internet forum. My paper ponders, where the silences lie in these media and why so.

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**Łuszczuk, Michal** (Jan Kochanowski University)

### **Military Cooperation in the Emerging Arctic Security Regime**

The massive transformation occurring in the Arctic has strengthened and broadened political concerns regarding the state of the regional security and its effects on the international system. Interestingly, questions about the nature of renewed military capabilities and significance of hard-power relations in the Arctic simultaneously returned and partially regained the international attention. Although the development of military presence in the region has been usually either underestimated or considered as a signal of imminent conflicts, this paper focuses on analysing main patterns of the Arctic military cooperation, including (1) military dimension of the Barents Cooperation, (2) bilateral and multilateral joint military exercises and cooperation agreements, (3) high-level meetings concerning military adaptation to the effects of climate change in the North. It aims primarily to reconsider the potential of such activities for the structural and functional aspects of the emerging Arctic security regime, both in its internal (regional) and external (global) dimension.

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**Lysenko, Dmitry** (Government of Nova Scotia); **Schott, Stephan** (Carleton University)

### **The Importance of Harvesting in the Nunavut Economy**

This paper examines the unique and largely unexplored data of the Nunavut Wildlife Harvest Study (NWHS). This survey provides monthly data on harvest and number of hunters by detailed species for each of the 27 communities in Nunavut. The data covers the period from June 1996 to May 2001 that includes the time of creation of the Territory of Nunavut in 1999. The purpose of our study is to examine the importance, value and change of harvested country meat over the time span of the study. In addition we will examine the concentration of harvesting effort by individual hunters by type (occasional, active and intensive) for key species. We will discuss the relative importance of each type of hunter for each key source of country meat and identify to what extent communities depend on superhunters.

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**Mack, Liza M.** (University of Alaska Fairbanks)

### **Alaska Native Leaders and Natural Resource Management**

This paper will give an overview of the research of an Alaska Native Indigenous PhD student as she uses an emic approach to understand what Aleut people know about the laws that directly affect their access to local resources and explore how this understanding impacts resource access and traditional ecological knowledge being passed on to future generations. This is a community-based, participatory research study with Native leaders in the communities of King Cove and Sand Point, Alaska. The talk will focus on the complex hunting and fishing regulations and how these policies are understood and disseminated throughout the Native community and across generations.

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**Mackin, Nancy** (Wilp Wilxo'oskwhl Nisga'a Institute; University of Victoria)

### **Gwich'in Moss Houses: A Case Study in Climate Change Adaptation in the Western Canadian Arctic**

Unpredictable climatic conditions have made gathering wild berries, caribou, and other country foods increasingly difficult for peoples of the Western Arctic. Traditionally, Gwich'in people (often women) would build moss houses to stay warm and dry while harvesting food. This traditional wisdom was re-applied in October and November 2013, when Elders, an Inupiat/Gwich'in videographer, and Inuvik high school students built a moss house as a case study in climate change adaptation. After a Gwich'in Elder prepared the site, gathered wood, and cut blocks of moss, students and Elders built an A-frame structure using spruce poles clad with insulating sphagnum moss. One triangular end was enclosed with a spruce bough frame, while a fire pit just beyond the opposite (open) end kept the house warm. The reconstruction explores how traditional ecological knowledge, shared across generations, can help people adapt to changing climates while harvesting health-giving country foods and medicines.

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**MacPhail, Fiona** (University of Northern British Columbia); **Bowles, Paul** (University of Northern British Columbia)

### **Labour Systems and Globalization in Northern British Columbia: The Contemporary Mining 'Boom' in Historical Perspective**

The mining and energy sectors are undergoing expansion in northern BC in response to rising global demand for commodities. We analyse the impact of this on labour systems in the region. We argue, firstly, that the issues of race, gender and space are enduring and clearly evident concerns. Secondly, we show that the volume of employment created in the mining sector is insufficient to replace the employment declines witnessed in the forestry sector, the mainstay of many northern communities in previous decades. As a result, we argue, thirdly, that the extractivist economic development strategy being used in northern BC by provincial and federal 'globalizers' holds only limited promise for the economic and social sustainability of the communities in the region.

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**MacRae, Ian J.** (English, and Society, Culture & Environment, Wilfred Laurier University)

### **Arctic Dreams and Nightmares: Alooook Ipellie's Vision of a Monstrous North**

This paper addresses the historical, religious, and cultural significance of \*monstrous\* transformations in Alooook Ipellie's powerful book of short stories and drawings, "Arctic Dreams and Nightmares." This is a beautiful, terrible collection that treats cultures in collision and contact in the Canadian Arctic. An important Inuit writer, editor, and illustrator, Ipellie\* was the first single-volume text by a Canadian Inuit artist. Yet the work has received little critical attention, and is currently out of print \* perhaps because it is perceived as being \*monstrous.\* In wonderful ink drawings which accompany these stories, Ipellie takes up issues relating to colonialism, religious change, southern law and celebrity culture, violence, eroticism, capitalism and desire in the North. Having taught the text a number of times, southern students certainly tend to be puzzled, even frightened, by Ipellie\*s \*monstrous\* entanglement with history. How this text functions in Northern historical and cultural contexts is the subject of this paper.

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**Magdanz, James S. (Jim)** (University of Alaska); **BurnSilver, Shauna B.** (Arizona State University); **Kofinas, Gary P.** (University of Alaska); **Stotts, Rhian** (Arizona State University)

## **Quantifying Food Flows: Evaluating the Effects of Social Networks on Subsistence Food Distribution**

In rural Alaska, small communities of mostly indigenous people maintain thriving customary and traditional subsistence economies based on local harvests of wild, renewable resources. As naturally bounded populations with complex yet easily described relations, highly dependent on a wide variety of ecosystem services, and historically resilient when subjected to substantial ecological, social and economic shocks, these communities create unusual opportunities for network research. This research explores the distribution of subsistence goods and services, relying on social network data collected during retrospective household surveys to quantify and characterize the flows of goods and services among households. In particular, we seek to quantify the effects of network flows on the terminal distribution of subsistence goods in the study populations.

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**Maheux, Gisèle** (Université du Québec en Abitibi-Témiscamingue); **Pellerin, Glorya** (Université du Québec en Abitibi-Témiscamingue); **Mangiuk, Siaja** (Nuvviti School); **Manrique, Eliana** (Kativik School Board)

## **The Challenge that Isolation Poses to Primary Teachers in Nunavik: A Situation to be Acknowledged and Improved**

In Nunavik, the primary schools are located in 14 communities spread out on the wide territory of northern Quebec, Canada. The communities are not linked one to the others by roads as the situation in the South of the country. Consequently, teachers who work in this particular practice context, must cope with isolation. Moreover, we can easily assume that isolation is more intense for teachers who work in small communities than those who work in a community counting with a population of about one thousand inhabitants or more. The lack of educational teaching and learning resources, both human and material, is an important obstacle for their professional development process. Consequently, it is affecting the relevance and richness of the learning activities that teachers plan and do with their pupils. Considering that collaboration work among teachers is important for developing an effective and efficient teaching practice, and knowing about the extreme high travel expenses related to the specific geographical context, innovative ways for the teachers that allow them to be in communication need to be examined. In the perspective of improving the general schooling process and educational achievement of Inuit youth, the authors will highlight what are the possible networking projects to develop.

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**Mamontova, Nadezhda** (Institute of Ethnology and Anthropology of the Russian Academy of Sciences, Department of the North and Siberia)

## **Discussions Around the Ways of Minority Language Revitalization in the Evenki District of the Krasnoyarsk Territory**

The report examines discussions on the ways of language maintenance and, in particular, on setting up a nomadic kindergarten as a means of language revitalization, among indigenous population of the Evenki Municipal District of the Krasnoyarsk Territory. Relying on the field materials, the report aims at finding out why Evenki leaders have chosen this model of language revitalization over others. The paper critically observes an approach of “language ecology”, according which it is believed that indigenous peoples’ languages can be revitalized only in traditional environment conditions, e.g., in reindeer breeding. The author comes to the conclusion that in the situation of language shift this choice does not frequently favour the implementation of adequate language policy, and that “primordial” ideology of language revitalization in practice led to exclusion of certain group of people from language planning process.

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**Mangiuk, Passa** (Nuvviti School); **Mangiuk, Siaja** (Nuvviti School); **Paul, Véronique** (Université du Québec en Abitibi-Témiscamingue); **Allaire, Stéphane** (Université du Québec à Chicoutimi)

## **An Ongoing Experimentation of Preschool Pupils' Networking in a Nordic Context: Planning, Implementing and Coming Back to the Experience**

This paper describes an ongoing networking experimentation of Puvinituq and Ivujivik kindergarten classes. The main objectives of our design are (1) to give pupils the opportunity to break isolation, i.e. to come into contact with kids from elsewhere and to learn from each other (2) to allow the teachers to work in partnership, to share knowledge and improve their practice with colleague from other schools.

The paper describes the meetings preparation phase which implied teachers and researchers. It presents how the networks activities went between children. It discusses the preliminary findings learned from the experience. What was successful? What are the challenges? This pupils networking is seen as an essential step in the Inuit professional and cultural

development in remote Nordic communities context like it is in Nunavik. For the authors, the creation of such links between schools is fundamental from a sustainable educational development point of view.

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**Marchioni, Meredith** (Alaska Department of Fish and Game, Division of Subsistence)

### **Diet Choices: How the People of Two Communities on the Alaska Peninsula Make Decisions Regarding Their Food**

This paper discusses the choices made by residents of two small Alutiiq communities on the Alaska Peninsula. In these isolated communities there are two options for acquiring food, you can purchase boxed and canned goods or you can hunt, gather or fish for fresh food. Why do some people choose to purchase preserved foods and others choose to continue the lifestyles of their ancestors? How is information regarding food safety and resource sustainability transferred and accepted within each of these communities? This paper presents the beliefs, values and attitudes surrounding individual diet choices and what these choices mean for the health and wellbeing of individuals residing in these two communities.

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**Marino, Elizabeth (Beth)** (Oregon State University – Cascades)

### **The Next "Unsustainable" Community?: An Examination of Isolation and Rurality in the Age of Climate Change**

Rural communities in the Arctic have often gone through phases of village consolidation, village closures and migration linked to governance practices, larger national discourses, economic opportunities, and health care needs. Arctic residents in these communities resist or embrace migration incentives in various ways and across various time scales. What seems consistent is that when risk in rural Arctic communities is identified and articulated, a discussion of isolation and vulnerability arises (once again) to encourage village consolidation, village closure, and subsequent migration. This paper will explore whether or not climate change discourses have ignited similar conversations. Through the case study of Shishmaref, Alaska and demographic information across rural Alaska this paper will explore migration patterns in the Arctic along with environmental drivers of migration and narratives of Arctic migration linked to climate change.

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**Markdorf, Natalia** (Novosibirsk State Pedagogical University)

### **Adaptation Problems of Prisoners Towards Construction Polar Railroad in 1940-1950**

Construction of polar railroad Vorkuta-Choom-Salekhard-Igarka-Norilsk is one of the GULAG grandiose projects, which was realized in 1947-1953. Construction was determined by economic and military-strategic factor. Polar railroad was built mainly by prisoners in a short time and in extreme conditions. The study examines the problems of physiological, mental, social, vocational adaptation of different categories of special contingent. According to the recollections of former prisoners and archival documents showing gender and age peculiarities of integration, rehabilitation of people in the society after the liberation of the camps. In particular considered manifestations of social, institutional (personal), internal stigmatization in the Soviet and post-Soviet society, the influence of «historical trauma» fate of witnesses and their descendants. Study of the consequences of being prisoners in Northern areas, the impact of post-traumatic syndrome for the physical, psychological and moral state of the individual and human behavior in extreme conditions is important to understand the psychological condition of a modern society.

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**Markdorf, Natalia** (Novosibirsk State Pedagogical University)

### **"Vlasovites" and White Emigrants in Siberia 1945-1956: Myths and Reality**

The problem of the «Soviet collaboration in the Great Patriotic war is one of the most difficult and controversial theme of Russian and international history. In modern historiography almost no works devoted stay «Vlasovites» in Siberia and the North. The result of this situation was the active myth around the postwar fate of the collaborators in the USSR. Overcoming these myths and stereotypes in the evaluation of historical events military and post-war years and the creation of objective scientific picture of what happened is important for modern society. In this region in July 1945 has been forcibly displaced more than 50 % «Vlasovites» from Judenburg. The majority of them lived in Siberia until 1956. Among the prisoners of Siberian camps are plenty of talented scientists, officers of the tsarist army, leading officials, who until February 1917, made a

notable contribution to development of economy, science, culture of Russia. In Canada, France, Germany lives the descendants of Russian immigrants who by the will of fate found themselves in Siberia.

The article analyzes number, ethnic composition, peculiarities of their work, and the reasons of morbidity and mortality, the process of adaptation in camps of World War II prisoners and special settlements in Siberia and in the North. Also in this paper the problem of rehabilitation in modern Russia were studied. The study was conducted on the basis of comparative analysis of archival documents and memoirs of historical events participants.

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**Marker, Michael**

### **Indigenous Scholars, Indigenous Scholarship and Transformation in the North**

Indigenous scholars, having recently arrived at the University may represent a prospective iconoclastic juggernaut; or this may simply be a moment when an equity opening parts intellectual storm clouds making space within a catch-as-catch-can marketplace of ideas. Indigenous Ph.D.'s, if they act as the diagnostic and polemic voices of an intellectual tradition of dialectical Otherness, can be more than disruptive to methodological and theoretical intransigence. This group of scholars can provide both the cultural dynamism to represent their community's knowledge and offer a probe to expose and transform a moribund modernity/postmodernity. This paper examines the need for Indigenous Ph.D. development within a Northern context. Without the development of a Northern research paradigm that includes Indigenous researchers, university academics will continue to act as ventriloquists for Indigenous community desires. As the director of an Indigenous Graduate Studies program, I compare the challenges of recruiting and growing Indigenous intellectuals in the Coast Salish territory with the unique needs for access to culturally responsive graduate studies in Northern rural settings. The Ts"kel Program, located in the Faculty of Education at the University of British Columbia, is a model for interdisciplinary research and Ph.D. capacity building. This paper analyzes the challenges of drawing on place based knowledge systems for rigorous scholarship that can both engage the academy and respond respectfully to Aboriginal communities. Ultimately, these cross-cultural research and program developments will require a brick and mortar university to be constructed in the Canadian North. This future institution must reflect the connections between climate change research, Indigenous knowledge, and the advancement of Indigenous communities on their own terms.

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**Mason, Arthur** (University of California Berkeley)

### **Abstractive Industry and the Arctic Ego-System**

Subtle changes in fields related to the provisioning of knowledge surrounding Arctic energy systems development is giving rise to a new type of experience that I call the Arctic Ego-System. This new experience, founded on an Abstractive Industry, suggests the rise of a delicate semantics of provisioning through new kinds of visualization, a typology and hierarchy in conferencing, practices of knowledge-branding, and new forms of authority related to corporeality of expertise. Together, it is a new type of aesthetics for the staging of verification about arctic energy futures, replacing the traditional form of energy politics from reliance on closed-circle partnerships to an interest in knowledge and the role of expertise. Through salon culture, etiquette, spatial relations, modes of visualization, aesthetics of corporeality, an Arctic Ego-System suggests objects of representation are structuring the image that decision makers have of energy development, but also, equally important, the image they have of themselves.

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**Mazzullo, Nuccio** (University of Lapland)

### **Museums and Libraries Have Our Stories: The Different Lives of Sámi Narratives**

Based on fieldwork experience of collecting narratives among Sámi people, I shall discuss one of the main problems encountered, namely the difference between people and researcher's assumptions on the notion of authenticity of narratives. The fact that traditional tales are no longer told within the traditional context of the home, but are rather told on the radio or read in books, can be seen as alienating people from the very process of narratives generation and regeneration. Hence it can be argued that with the recording of these narratives the social space once occupied by traditional Sámi storytelling is being mediated through the aether space in which mass media operate, and story-telling is being replaced by story-writing. This trend can be seen as progressing even further with the advent of the internet era, where the production of narratives has been accelerated. Despite inherent challenges, the internet does offer possibilities for the generation and regeneration of the

narratives. The paper concludes that in lights of these changes the role that the concept of performance has in the process of storytelling and in the production of the social space of stories of which they are part and parcel has increased. In the new global multimedia space performance has become even more crucial for the survival of Sámi oral historical heritage.

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**Mazzullo, Nuccio** (University of Lapland/Arctic Centre)

### **Narratives of Drinking and their Reproduction Among Sámi People in Northern Lapland**

In this paper I shall focus on the historic development and contemporary functions of narratives about northern drinking practices. Some of the narratives I will discuss in this paper have been generated outside Sámi cultural borders, and they depict Sámi drinking practices in a way which is not appropriate to Sámi culture. Despite accounts of Sámi drinking practices being foreign, they have become part of the repertoire of the stories being told by the Sámi themselves. I shall argue that the adopted narratives today fulfil different functions. In a sense, accounts of drinking support a behavioural independence and self-reliance that is highly esteemed in Sámi culture. Further, it prevents moral intrusion into everyday life practices. The paper shall illustrate this argument with examples from fieldworks conducted in the Northern parts of Finnish Lapland.

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**McCarty, Carol** (University of Alaska Anchorage)

### **Alaskan Adolescent Nutrition Project**

Surveys reveal adolescent's failure to consume enough fruits and vegetables resulting in dietary inadequacy. Many personal and environmental factors affect personal food preferences. Human nutrition depends on agriculture-based businesses. Implemented in a middle school, Alaskan Adolescent Nutrition Project used five lessons, based on growing plants in VDI units, and questionnaires; covering plants, nutrition, health, and agriculture. A mixed method, single sample, cross sectional survey of the participants revealed significant findings related to food preferences and gardening plans. A formative evaluation exposed the complications of implementing an indoor garden and complex lesson plans in a crowded science curriculum. Participants preferred a variety of fruits and vegetables and enjoyed the indoor garden. While the results show significant changes in attitude toward these foods, plans to change eating behaviors failed significance. An expanded taste test will provide opportunities to explore additional food-related topics. Follow-up research could measure the sustainability of garden-based instruction.

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**McGregor, Heather E.** (University of British Columbia)

### **Inuit Qaujimagatuqangit and the Transformation of High School Education in Nunavut: History, Context and Statistical Profiles of Four Schools**

This research consists of case studies that document the history, context and statistical profiles for four schools in four Nunavut communities, as part of the ArcticNet grant Inuit Qaujimagatuqangit and the Transformation of High School Education in Nunavut. With a specific focus on education programs provided in grades 10, 11 and 12 over approximately the past 10 years, the analysis moves away from viewing statistics in isolation from the strengths and challenges of unique school-communities. Outlining significant events and changes in education across Nunavut, as well as local variables that shape education goals and practices, the intent of these case studies is to provide a baseline from which local school-community leaders can conduct their own education reviews and pursue their own research questions.

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**Medby, Ingrid A.** (Durham University)

### **The Emergence of an Arctic Identity in Norway: Towards International Cooperation or International Competition? (oral presentation)**

As the thawing Arctic is presenting the world with new opportunities and challenges, geopolitical tension is rising, potentially endangering the vulnerable area. Focusing on one "Arctic state", Norway, this paper examines the emergence of an Arctic identity, shedding light on the nature thereof – whether it is conducive for international cooperation or international competition. This is done by, firstly, analysing governmental discourse relating to the Arctic; and secondly, exploring identity among 239 young Norwegians through an online questionnaire. The results show an Arctic identity that is both affecting and

an effect of foreign policy. There is indeed a sense of an emerging Arctic identity; however, this is highly contextually and geographically contingent. Though geared towards cooperation, there is also a cautious anticipation of competition. Despite Norway only being one of numerous Arctic states and stakeholders, ensuring that emerging Arctic identities favour international cooperation is vital for securing a sustainable future.

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**Medvedkov, Alexei** (Moscow State University)

### **Life Support Systems of Indigenous Siberian People Under Conditions of Globalization and Climate Change (on the Example of Kets)**

The main topic of presentation is the modern state of the Ket ethnos, its cultural heritage, and existing problems. The author analyzes the role of social factors in the transformation of the traditional economy and the Ket's philosophy at the modern stage. Using analysis of the data collected, the climatic impact on the traditional resource use of the Ket people have been identified. The author suggests possible ways of diversification of the traditional Ket economy under existing organization of economy in the remote regions of the country under changing climate. Global climate warming increases dependency of the traditional Ket economy on the environmental and geographical factors (natural-environmental resources of the taiga, natural hazardous disasters, natural risks of different origin).

The presentation is followed by pictures, graphics, maps and other illustrative material.

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**Meschtyb, Nina** (Arctic Centre University of Lapland)

### **Coming Back: Memories About Forced and Free Relocation Among Russian Sámi**

In this paper I will present an example and analysis of biographical interviews about relocation among Russian Sami. Examples of forced relocation from the traditional Siida during Soviet time as well as free relocation connected with job, marriages and education shall be compared. In doing so, I shall relate the topic of relocation in people's life history to building identity. This in turn is connected to the feeling of place with potential and emotional attachment.

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**Mordvinov, Dmitry** (University of British Columbia)

### **Imperial Ethnography of the North: Northern Expeditions of Matthias Castrén in 1830s and 1840s**

Mthais Castren's expeditions to Lapland, Karelia, Northern Russia and later Siberia from the late 1830s to the late 1840s were in many ways a ground-breaking enterprise. A Russian and Finnish ethnographer and linguist, Castren undertook his expeditions in the time when scientific expedition was the norm, but had only limited support from the Russian Empire, for which ethnographic and linguistic knowledge of its population was becoming an increasingly pressing concern. Thus we find Castren on the intersections of the imperial and the national, but also, crucially, of the regional. The paper looks at the ethnographic writings Castren produced after his expeditions and argues that in many ways Castren saw his Northern ethnography of distant peoples as a unified enterprise. Looking at Castren's North, the paper concludes with considerations on whether a unified vision of studies of the north can be relevant and practised today.

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**Moritz, Sarah Carmen** (McGill University)

### **'It had the biggest spring salmon run, it was a 'Valley of Plenty' for all': Remembering and Restoring St'át'imc Fishing in the Bridge River Valley**

This paper seeks to highlight the fact that fishing in the Bridge River 'Valley of Plenty' used to be and continues to be vitally important for the St'át'imc local economy despite of detrimental impacts of hydro-electric development and despite of (related) counter-narratives and underestimations in scientific and prevalent discourses of St'át'imc fishing and salmon. It proposes a revisionist view to such discursive oversight, one that emphasizes the historical and contemporary entanglements between fishing and other land-based activities, between various animal and St'át'imc persons within a relational ecology that relies on social metaphors of 'respect', 'reciprocity' and 'sharing' as frameworks for ecological knowledge. Remembering fishing within a 'Valley of Plenty' has recently become part of a vision and strategy Elders teach for the restoration of the area upon potential

decommissioning of hydro facilities. It will conclude with this key (re-)vision for protecting and recuperating St'át'imc livelihood, environmental integrity and institutional autonomy.

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**Moses, Joshua** (Harerford College)

### **The Embrace of Civilizational Anxiety: Narrating Northern Survival**

While many Arctic peoples were predicted to disappear generations ago, a new round of images questioning the possibility of northern peoples' survival has entered the popular imagination. Through media images of drowning polar bears, environmental collapse and imperiled coastal villages, the Arctic has come to simultaneously symbolize survival and loss, vulnerability and persistence, hope and despair. The difference now is that civilizational anxiety of disappearance has now become a pervasive trope in the South. Through a reading of post-WWII Arctic ethnographies, this paper examines the how anthropologists have narrated Indigenous Arctic continuity, and how these narrations reflect fundamental anxieties about our own ability to survive.

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**Müller, Dieter K.** (Umeå University)

### **Public Perceptions of Tourism Opportunities and Constraints in Northern Sweden**

Tourism has often been seen as remedy to various problems of Arctic communities. However, despite being promoted intensively, many northern communities have failed to achieve a viable tourism development. Often the scientific literature identifies, accessibility, lack of human capital and a lack of power as important reasons for the limited development. In order to cope with this constraints multiple governmental programs have been initiated to change the situation to the better. This paper asks how public and semi-public stakeholders in northern municipalities try to develop tourism and what opportunities and constraints they seize for such a development. This is done for the case of northern Sweden. A phone survey among all municipal administrations, DMOs and Tourist information offices was conducted. The results indicate that there are varying visions of tourism development in the region and moreover they reveal a dissonance on what a "sustainable development" is with respect to tourism.

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**Murray, Maribeth S.** (Arctic Institute of North America, University of Calgary)

### **Arctic Institute of North America, Advancing Knowledge for a Changing North**

The Arctic Institute of North America (AINA) at the University of Calgary is home to the Kluane Lake Research Station (KLRS), the Arctic Science and Technology Information System (ASTIS), and the interdisciplinary academic journal Arctic. The AINA mandate is to advance the study of the North American and circumpolar Arctic through the natural and social sciences and the arts and humanities, and to acquire, preserve and disseminate information on physical, environmental and social conditions in the North. Never has this mandate been more relevant. Environmental change and development across the north are unprecedented, and the issues arising from both are complex and multifaceted with local, national, and global consequences. In this presentation we address recent education, outreach and community engagement projects undertaken at AINA, including new initiatives for community based environmental monitoring in Canada and Alaska.

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**Murray, Maribeth** (Arctic Institute of North America, University of Calgary); **Gearheard, Shari** (National Snow and Ice Data Center, University of Colorado Boulder); **Eicken, Hajo** (International Arctic Research Center, University of Alaska Fairbanks); **Evengård, Brigitta** (Umeå University, Sweden; Craig Gerlach - University of Calgary); **Schlosser, Peter** (The Earth Institute, Columbia University); **Sommerkorn, Martin** (Global Arctic Programme, WWF); **Starkweather, Sandy** (National Oceanic and Atmospheric Administration); **Van der Watt, Lize-Marié** (International Study of Arctic Change, Swedish Polar Research Secretariat)

### **Responding to Arctic Environmental Change: Translating Our Growing Understanding into a Research Agenda for Action**

Research programmes tend to be more successful in observing and understanding arctic change but less so in responding to arctic change. The first limitation is a lack of conceptual clarity on a common definition and understanding of Responding to

Change (RtoC). A second limitation is a lack of approaches for: 1) systematically entraining stakeholder needs into the research definition process; 2) building the range of interdisciplinary bridges necessary for effective response. Like other contemporary international arctic environmental research programmes, the International Study of Arctic Change (ISAC) adopted a tri-partite framework for organising research: Observing, Understanding and Responding to Change. This paper presents results from the first ISAC RtoC Workshop, one of a series designed to transform arctic change research through comprehensive engagement of all stakeholders in collectively shaping and coordinating research initiatives that directly address the needs of those who are affected by, or who are addressing, arctic environmental change.

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**Mutual, Alycia** (University of Northern British Columbia)

### **Conceptions of the Arctic Through the Lens of the Media**

The media's role in shaping Arctic perceptions receives very little attention among northern scholars, yet this is where most citizens obtain information about the Arctic. Given the Arctic's geographical remoteness, the media take on substantial power to influence citizens' perceptions of the region. It becomes important to critically examine how the media function in relation to local and national identity. As such, this research, focusing on resource development in the Beaufort Sea region, consists of a qualitative discourse analysis comparing local print media with national print media (i.e. north-south) as well as print media across countries between Canada and the United States. The aim is to examine which types of knowledge print media cite when referencing resource development. To build upon the data, an additional component of this research project is to interview journalists who work in the north to learn more about northern media.

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**Nakhshina, Maria** (University of Aberdeen)

### **Russian Indigeneity and the Political and Economic Disillusions of the Pomor Identity Movement**

Political liberalization in post-Soviet Russia has led to the rise of multiple new ethnic identifications. The 2002 census revealed that several thousand people in the Russian Federation stated their nationality as Pomor. The name Pomors has been traditionally applied to (presumably) Russian people living in the White Sea and Barents Sea coastal areas.

The unique nature of Pomor identity movement lies in the fact that while the Russian state has repeatedly referred to Pomors as quintessence of Russian people in order to pursue its political agenda in different historical periods, Pomors have recently claimed their status of a small-numbered indigenous people within the Russian Federation. The paper will approach current Pomor identity movement as a complex entanglement of the legacy of soviet nationality policy, post-soviet social and economic processes and current geopolitical interests of the Russian Federation in the Arctic region.

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**Nielsen, Flemming** (Ilisimatusarfik / University of Greenland)

### **Ritualized Catechesis in the Early Days of Christianity in Greenland**

Christianity came to Greenland in 1721 when the missionary Hans Egede arrived as representative of the Danish king, then sovereign of a dual kingdom of Denmark and Norway. The task of the Danish state missionary and his colleagues was to convert the local Inuit, transform the society and incorporate Greenland into the multilingual European family of Christian nations as part of the Danish-Norwegian empire of the day. A few of the missionary's early Greenlandic manuscripts have been preserved. They bear witness to his method which may be described as a kind of ritualized catechesis. Based on Hans Egede's own descriptions of his proceedings and those early manuscripts which haven't been given the attention they deserve in scholarship, the paper will explore this kind of catechesis and its results and consequences for the Greenlandic nation.

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**Nielsson, Egill Thor** (Polar Research Institute of China)

### **China-Nordic Arctic Cooperation**

In recent years Arctic cooperation between China and the Nordic Countries (especially Finland, Norway, and Iceland) has increased significantly. This presentation will mainly focus on China-Iceland Arctic cooperation, which took a large step during an official visit from former Chinese Premier, Wen Jiabao, to Iceland in April 2012. During the visit the two countries governments' signed a Framework Agreement on Arctic Cooperation and a MoU for Marine Polar Science and Technology.

R/V Xuelong's, China sole icebreaker, visit to Iceland followed soon after in August 2012. During that occasion two further MoUs were signed between the Polar Research Institute of China and (1) the Icelandic Centre of Research on making joint efforts to establish a China-Nordic Arctic Research Centre and (2) the University of Iceland on a joint Aurora Observatory, both initiatives have been launched. Finally, the China-Nordic Arctic Cooperation will be put into broader scientific, political and economic perspective.

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**Nilssen, Trond** (Norut Alta - Northern Research Institute); **Nylund, Ingrid** (Norut Alta - Northern Research Institute); **Jóhannesson, Hjalti** (University of Akureyri Research Centre)

### **Multinationals Meet the Locals in the Arctic: Monitoring of Megaprojects in Northern-Norway and East-Iceland**

A closer integration of global markets and improved communication, supported by international regulation regimes, facilitate a mobile labour force as well as mobile industrial actors. One important dimension in this development is the increasing presence of multinational corporations. We are interested in the consequences this increased mobility has on local value creation and local labour markets in the Arctic. The objective is to develop comparative knowledge to improve the understanding of the industrialization wave of mega-projects in the Arctic, including regional influence of projects. By exploring the linkages between transnational companies and local firms, we search to identify similarities and differences, involving different context and regional systems of production. The concept of path-dependence is of major interest. We base our comparative study on a study conducted in Northern-Norway on petroleum industry and one in East-Iceland on aluminium smelter, including a comparison of the different methodological approaches these studies utilize.

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**Nilsson, Annika E.** (Stockholm Environment Institute)

### **The Changing Role of Arctic Governance**

Governance provides rules for cooperation and in spite of its weak legal status, the Arctic Council has come to play an important role in shaping perceptions of the Arctic. As the Arctic is changing, so is the Arctic Council. In its Kiruna Vision from May 2013, economic cooperation is a top priority in a text claiming that "transparent and predictable rules and continued cooperation between Arctic States will spur economic development, trade and investments." This presentation views the Kiruna Vision and the national Arctic strategies as tools of soft power that have a dual function of asserting facts and intentions about a certain future and by doing so attempting to mobilize resources towards making that future real. The analysis focuses especially on how security and sustainable development are conceived and highlights increasing emphasis on creating a safe operating space for business as a precondition for social development.

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**Nilsson, Annika E.** (Stockholm Environment Institute); **Peterson, Garry** (Stockholm Resilience Centre); **Cornell, Sarah** (Stockholm Resilience Centre); **Carson, Marcus** (Stockholm Environment Institute)

### **Arctic Resilience Report Phase 2 – A Social-Ecological Framework for Case Comparison and Analysis**

The Arctic Resilience Report aims to understand how large shifts in Arctic ecosystems services could impact human well-being, and identify mechanisms that could enable resilient, adaptive, and transformative approaches to these changes. Following the release of the Arctic Resilience 2013 Interim Report, the project's second phase focuses on identifying social-ecological mechanisms that enable resilience and transformation. We will compare the causes and consequences of identified Arctic regime shifts and aim to identify how social and ecological structures, processes and agency can provide people with the ability to cope with surprises and transform to sustainable arrangements. The presentation will focus on the approach for identifying lessons to be learned from existing research of persistence and transformation in the Arctic by conducting a social-ecological case study comparison.

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**Nilsson, Kjell** (Nordregio – Nordic Centre for Spatial Development); **Weber, Ryan** (Nordregio – Nordic Centre for Spatial Development); **Rasmussen, Rasmus Ole** (Nordregio – Nordic Centre for Spatial Development)

### **Strategies for Sustainable Urban Development in the Arctic Region**

Urbanisation is a global trend which also affects the Arctic region. Since the 1960's most of the population growth in the Arctic has occurred in urban areas. Besides population growth, urban sprawl is an important driving force behind urban expansion. A major trend is that urban areas expand approximately two times faster than the population, e.g. since the mid-1950s European cities have expanded on average by 78 % whereas the population has grown only by 33 %.

Urbanisation is a process where society is undergoing transformations from predominantly rural to urban characteristics in terms of economy, culture and lifestyle. But it also has an impact on land use and natural resource management. Examples of negative consequences are consumption of productive land, destruction of biotopes and fragmentation of landscape and ecosystems, increase in the dependency of private car, air pollution and emissions, unhealthy life-styles, decay of downtown areas, social segregation and larger gaps between rich and poor areas.

In this paper strategies applied by local and regional authorities in order to manage these conflicts are analysed and compared based on the results of PLUREL (Peri-urban Land Use Relationships – Strategies and sustainability assessment tool for urban-rural linkages), a research project funded within the 6th Framework Programme of the European Union, and proceedings from the first international conference on urbanisation in the Arctic in Nuuk, Greenland, 28-30 August 2012.

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**Nilsson, Lena Maria** (ARCUM - Arctic Research Centre, Department of Public Health and Clinical Medicine, Division of Nutritional Research, Umeå University); **Kotyrló, Elena** (Demographic Data Base, Umeå University); **Steingrimsdóttir, Laufey** (University of Iceland, Unit for Nutrition Research); **Berner, James** (Alaska Native Tribal Health Consortium); **Dudarev, Alexey A.** (Northwest Public Health Research Centre); **Mulvad, Gert** (University of Greenland, Greenland Centre for Health Research); **Odland, Jon Øyvind** (Faculty of Health Sciences, University of Tromsø); **Rautio, Arja** (University of Oulu, Thule Institute); **Evengård, Birgitta** (ARCUM - Arctic Research Centre, Department of Clinical Microbiology, Division of Infectious Diseases, Umeå University)

### **The Feasibility of Monitoring the Cost of a Universal Nutritious Food Basket in the Arctic**

The aim with this study is to demonstrate the potential feasibility of using the cost of a nutritional food basket as an indicator of food security in the Arctic. Food prices were collected by gathering data from existing local price surveys or by random samples in nine Arctic countries. Calculations on yearly nutritious food costs were based on a revised model of the Canadian Healthy food basket and applied on a family with two 40 year old adults and two children, 11 respectively 6 years old. Preliminary results suggests that the cost of a nutritious food basket is generally higher in the North compared to the South. Harmonization of local price surveys in the Arctic would improve the comparability of the results. In conclusion, this methodology needs further improvement, but has definite potential to serve as an indicator of high informative value to a low monitoring cost in the Arctic.

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**Nomokonova, Tatiana** (University of Alberta); **Losey, Robert** (University of Alberta)

### **What is Nerpa: 10,000 years of Human-Seal Interaction in the Lake Baikal Region of Siberia**

The sacred sea of mainland Siberia, Lake Baikal, is home to the worlds only wholly freshwaters seal, known locally as nerpa. This animal has been involved in a suite of meaningful relationships with foraging and pastoral groups living on lake's shores, both in the present and in the far distant past. Images of this animal are present in rock art panels, and bones of nerpa have been found at habitation sites, human cemeteries, and sacrificial offerings, the earliest of which is at least 10,000 years old. Importantly, hunting for nerpa remains a living tradition at Lake Baikal, albeit a dwindling one. Here, seal hunters and their families strive to maintain their relationships with nerpa by staying in good standing with the spiritual master of the sacred sea and other local spirits, and through hunting, cooking, consuming, and sharing parts from this unique animal.

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**Nordin, Gabriella** (Arcum - Arctic Research Centre at Umeå University)

### **Ethnic and Cultural Mechanisms in Sámi Marriages Under the Impact of the Colonization Process in 19th Century Northern Sweden**

Historical demographic studies about indigenous populations in the Circumpolar North are still quite rare. Though, the Demographic Data Base at Umeå University holds a substantial amount of data about the Sámi, Sweden's only indigenous population, and allows for longitudinal studies. Of particular interest is the colonization process taking place from the beginning of the 18th century until late 19th century. This study explores a period in Northern Sweden when contacts between Sámi and

non-Sámi became more frequent as the colonization progressed. The investigated period is 1758-1895 and four parishes are under study. The main purpose of the paper is to see whether the cultural meeting between Sámi and non-Sámi affected the way people chose to make significant decisions. These cultural meetings are represented by the way people married and the preliminary findings suggests that a preference within the own ethnic group still operated in the end of the colonization era.

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**Norris, Mary Jane** (Research Consultant, Norris Research Inc)

### **Assessing the Vitality of Arctic Indigenous Languages: Development of a Canada-based Approach**

This paper presents a Canada-based data and mapping approach in language assessment as part of the Arctic Indigenous Language Vitality Initiative. It demonstrates the potential of various data and information sources for Arctic language assessment in Canada such as: Statistics Canada's Censuses and surveys (e.g. Aboriginal People Survey); linguistic classifications; levels of endangerment (e.g. UNESCO); and, published studies. The applications of selected demographic and social indicators of language vitality are illustrated through tables, graphics and interactive language maps. Examples are provided for the different Arctic languages of Inuit, Athabaskan and Gwich'in and their communities associated with the AC's Permanent Participants of Inuit Circumpolar Council, Arctic Athabaskan Council and Gwich'in International. The presentation emphasizes the need for a flexible hierarchical approach in language assessment, moving from detailed to aggregate, with respect to linguistic classifications (dialects, languages, families) and geographic levels of community, region (e.g. Inuit Regions), province / territory and nation.

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**Norum, Roger** (Institute of Social and Cultural Anthropology, University of Oxford)

### **Extracting the Imaginary from Two Spaces of Mobile Labour**

Local experiences of mobility, despite being acted upon by translocal or global forces, are often studied ethnographically on their own, due to both logistical and epistemological obstacles. But what might we learn from a comparative method that engages with differing contexts of mobility linked by similar global(ized) imaginaries? Through a comparative study of highly flexible, mobile workers in two different geographic spaces – Longyearbyen, Norway and Kathmandu, Nepal – this paper seeks to question the extent to which everyday life in communities of transient labour migration is influenced by circulating global imaginaries and narratives. The paper questions how such legacies of these richly imagined, 'remote' regions – in this case, the Arctic and The Third Pole, both heavily mythologized for exploration and adventure – affect how mobile workers articulate specific place-related practices and experience a particularly mobile life. It also questions what about mobility in labour and lifestyle is specific to Polar regions.

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**Nutti, Laila A.** (Sami University College)

### **Verdde and Yoik Effecting Indigenous Education**

As the leader of Verdde I have explored the possibilities and looked more deeply in to the value of learning through exchanges between indigenous students and educators in the Arctic. These experiences have involved sharing knowledge, rethinking strategies for learning, reconceptualizing power relationships within indigenous education, and eventually positioning for the kinds of systemic change needed for rejuvenated culturally meaningful educational programs connecting indigenous children, families and the societies. In 2010 and 2011, I researched the Sámi traditional music, yoik, in Sámi early in early childhood education, for my Master's. I met Sámi educators from all over Sapmi and could see a lot of dilemmas around the yoik and concerns related to engaging with traditional ways and knowledge in institutions. Meeting educators, parents and elders in Nunavik and Nunavut in 2013, discussing these issues gave new understandings and led to processes that I have brought in

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**Nygaard, Vigdis** (Northern Research Institute - Norut Alta)

### **Sustainable Mining and Indigenous Stakeholders – Conflicts or Consent?**

The resource periphery of Northern Europe obtains substantial attention from global mining companies due to valuable mineral resources. The role of indigenous population in mining projects are well addressed in developing countries through the

literature of Corporate Social Responsibility, but not so much studied in countries where the interests of the indigenous population are comparatively well protected by national laws. This paper addresses the role of indigenous population in mining projects in Finnmark region, Northern Norway. Using case studies of ongoing and planned mining projects, I address the formal role of the Sámi indigenous population in processes of Environmental Impact Assessment studies; how they take part in EIA-processes, and to what extent their views are taken into account. Secondly, I will discuss the role of the Sámi Parliament as a guardian of different and in some cases conflicting Sámi interest.

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**Nyseth, Torill** (UiT, The Norwegian University of the Arctic)

### **Negotiating Arctic Urban Space**

This paper challenges the concept of the right to the city as these rights are negotiated in informal and formal processes. Today ethnic diversity is a key feature of how urban spaces are transforming also in Arctic cities, where small scale mixtures of indigenous population and new immigrants produce particular urban fabrics. The Arctic cities are also situated on land that is considered indigenous by some people. The right to the city emphasizes how different voices in public spaces work with recognizing the variety of people and groups who seek opportunity there. A relational, material and dynamic understanding of place implying that different types of conflicts, interests and identities are produced played out and negotiated. This perspective makes it possible to understand localized situations of public controversy. The paper will discuss these issues through a case study of the public controversies about the Sámi status of Tromsø, Norway.

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**Ogilvie, Astrid Elizabeth J.** (INSTAAR/Stefansson Arctic Institute)

### **An Ancient Enemy Observed: Images of Sea Ice in Selected Narratives of Iceland**

The association of Iceland with the element of ice is implicit in its very name, and throughout its history the country has been affected greatly by the sea ice which reached its shores via the East Greenland current. The writings on ice are legion and this presentation examines images of ice as seen in a variety of narrative accounts of Iceland. Because of the wealth of material, the discussion will be limited to: early historical and literary texts; the sixteenth-century accounts of Iceland written partly as refutations of inaccurate accounts by foreigners; seventeenth to nineteenth-century descriptions found in the later Icelandic annals (*Íslenzkir Annálar*) and in certain official reports in the form of unpublished letters of the county sheriffs and governors (*Bréf sýslumanna og amtmanna*); and, finally, the image of sea ice as depicted in the poem by Matthias Jochumsson, *Hafísinn*, "The Sea Ice".

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**Oishi, Yuka** (Tokyo Metropolitan University)

### **Marginal Decision System of Oil Development in North-western Siberia**

In my presentation, I focus on regional political economy of extractive industries from the point of view of marginal indigenous society in North-western Siberia. First, I look at the brief history of indigenous reactions to oil development and its policies. Second, I show how Khanty and Forest Nenets actually recognize and cope with the rapid changes in the forefront of oil exploring, based on the data collected through ethnographic fieldwork around the Hum-to Lake in the Khanty-Mansi autonomous region of northwestern Siberia during the winter of 2011 to 2012. Finally, I demonstrate that local government, oil companies and minority committee play roles of middle actors in local decision system between Russian political economy and indigenous society.

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**Olsen, Julia** (Nordland Research Institute); **Hovelsrud, Grete K.** (Nordland Research Institute); **Lovecraft, Amy L.** (University of Alaska, Fairbanks)

### **Is Climate Change Adaptation Gendered?**

There is a gap in the literature on the linkages between climate change adaptation and gender. An integration of gender issues in research on coupled social-ecological systems is called for. of the project Critical Aspects of Adaptive Capacity in the Northern Regions (CAVIAR-II). An international and interdisciplinary workshop was held in Northern Norway in order to develop a framework for studying how women and men, and their gendered roles, are affected by climate change. The

workshop addressed the socioeconomic interplay between men and women, the effects of climate change, and the linkages to social phenomena of migration, education, employment, economic development, livelihood, and mental and physical well-being. We will address questions of how gender is performed differently in different arctic contexts; what aspects of identity and adaptive capacity are significant in different geographic, cultural contexts, and at different scales; and what variables intersect with gender to drive adaptive capacities.

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**Olsen, Lise Smed** (Nordregio – Nordic Centre for Spatial Development)

### **Inclusion of Sámi Tourism in Destination Development**

Tourism is a significant industry in the Sámi areas of Norway, Sweden and Finland. However, tourism focused on Sámi culture accounts for a limited part of the tourism industry, and in most cases involves a complement to a tour to the North Cape, vacation in the mountain area, or visits to other main attractions such as the ice hotel in Kiruna or the Santa Claus village in Rovaniemi. Sámi tourism in many cases involves leisure activities such as hunting, fishing, downhill-skiing, snowmobiling and dog-sledging. This paper explores how the public business support system, including local/regional development authorities and destination management organisations, are working to support the inclusion of Sámi tourism in the wider tourism development of selected destinations in Northern Norway, Sweden, and Finland.

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**Olsen, Paju Carl Christen** (ICC Greenland & The Greenland Language Secretariat); **Grenoble, Lenore A.** (The University of Chicago & ICC Canada)

### **Circumpolar Collaboration and Indigenous-Driven Initiatives: Arctic Indigenous Language Vitality**

The present talk introduces this session and reports on how Arctic indigenous communities are working collaboratively and across national boundaries to change the course of indigenous language shift. The present initiative is working to reverse language shift through active engagement and collaboration throughout the circumpolar region. While the long-term goal is to achieve vitality and sustainability for Arctic indigenous languages, the first measures center around three key areas: (1) Arctic language policy; (2) language acquisition; and (3) language vitality. We outline the project and provide specific information about core elements of each of these three areas. Critically, we explore the mechanisms for creating policy changes at all levels, and the measures needed to turn the findings of the assessment teams into action to promote language vitality. We address the challenges of working across broad geographic territories, spanning multiple national boundaries, and the challenges of working with so many diverse stakeholders.

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**Orjasniemi, Tarja** (University of Lapland)

### **Higher Education in Barents Region: BCBU and Development of Social Work as an Academic Discipline and a Profession**

During the last 20 years significant societal changes have occurred in the Barents Region. The aim of collaboration in higher education under Barents Cross Border University (BCBU) is to develop expertise across border, focusing on the neighboring collaboration program, northern dimension and the needs of labor force. It is important part of sustainable social and economic development in Barents Region. Master's program in Comparative social work is one of five master's program in BCBU. The program is established in 2009, and now conducted by University of Lapland, Northern (Arctic) Federal University, Petrozavodsk State University and Murmansk State Humanities University. Social work as a discipline is young in Russia. The main aim is to develop Social work practices as a part of development of social services and social welfare in Russia and in Finland.

There is a need of cross border cultural understanding and multicultural skills of Social work because of the internationalizing. Communities in the north are more and more multicultural. There is a need of social work professionals who understand cultural diversity and the special characters of peripheral EU region. The aim is focused on acquiring a better understanding of national and global social work through a comparative approach and multicultural understanding.

In addition, the aim is implementation of the Bologna process in Finland and Russia and the development of joint curriculum and joint courses. The presentation will present the cross border collaboration and its challenges in Social work field: how to build up IT-campus (for virtual courses) and cross the border not only between countries but between programs and disciplines (The First Joint Multidisciplinary Summer School).

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**Orttung, Robert** (George Washington University)

### **Center-Periphery Coordination and Conflict: Integrating Local, Regional, Federal and Corporate Interests**

Robert Orttung will discuss a case study examining Moscow's relationship with the resource-rich Yamal-Nenets Autonomous Okrug, arguing that corporate and federal political considerations preempt local concerns. The presentation will lay out the interests of the key players working in the region, including federal, regional, local, and corporate actors. On the basis of this empirical analysis, Orttung shows how the centralization of oil and natural gas money flows away from the local government makes it difficult for local politicians and the residents they represent to pursue the sustainable development activities necessary for improving living conditions in their cities.

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**Osgood, Kathleen** (The Center for Circumpolar Studies)

### **Respect and Reciprocity, Ownership and Benefit: Indigenous Ethics in the Northern Academy**

Indigenous knowledge is well protected by international law, indigenous groups have formulated clear policies on the use of traditional knowledge, and research organizations subscribe to strict protocols around indigenous knowledge. However, the academy, with deep roots in Western knowledge traditions, is far from clear about whether or how to formalize indigenous and intellectual property rights. In the matter of international online curricula and publishing, are Creative Commons sufficient for securing author rights to content, as well as assuring wide distribution required by many research grants? I think the answer is yes, but the manner of that articulation becomes its own question. Is ceremony capacious enough to accommodate deep learning? Is academic work flexible enough to include ceremony? I think the answers are yes, but the manner of that integration becomes its own question. IASSA was among the first international organizations to formulate a Code of Ethics for Research. To what degree should our home institutions subscribe to similar clear standards?

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**Ozkan, Umut Riza** (Carleton University); **Schott, Stephan** (Carleton University)

### **Individual and Collective Well-Being in the Arctic**

The capabilities approach emerged as a criticism to solely resource-based approaches to development. The capabilities perspective focuses on 'the freedoms [people] actually enjoy to choose between different ways of living that they can have reason to value' (Sen, 1990). These individual capabilities are often in conflict with collective capabilities, and this could be particularly relevant in the polar region that depends to a large extent on collective capabilities to survive off the land and to transfer knowledge to other generations. We develop a framework based on the interplay between individual and collective capabilities to assess sustainable well-being in Arctic communities. We contrast two hypothetical communities (one with a high indigenous population and one with a low indigenous population). We will use insights from our comparative analysis to suggest updates for a revised Survey of Living Conditions in the Arctic (SLiCA) and for the Arctic Social Indicators (ASI).

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**Paglia, Eric** (KTH, Royal Institute of Technology)

### **The Construction of Arctic Stakeholder Status By Extra-Regional States**

This paper investigates how stakeholder status in Arctic affairs is constructed by non-Arctic states through science and other means. Scientific research is perceived as a legitimate activity that contributes to the work of the Arctic Council, the regional governance body that a dozen non-Arctic states have become observers to. It also affords aspiring stakeholders the possibility to establish physical presence in the Arctic in the form of research stations on Svalbard, as well as through expeditions aboard scientific vessels and within various multi-lateral projects with Arctic states. Moreover, science supports geopolitical narratives that establish non-Arctic states as legitimate stakeholders at a distance due to the profound trans-regional impacts of environmental change in high latitudes. Investigated here are the activities, artefacts and narratives that are mobilized to

legitimate non-Arctic states in regional governance. Particular emphasis is placed on the international scientific community of Ny-Ålesund, a node of science and geopolitics.

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**Palluq-Cloutier, Jeela** (Inuit Tapiriit Kanatami)

### **Standardization of Inuktitut in Canada**

How can the Inuit of Canada choose one standard writing system when dialects differ so vastly from NWT, Nunavut, Nunavik and Labrador? Our language is spoken in different dialects having different writing systems in each region. Syllabics is used by East Nunavut and Nunavik while Latin based script is used in all our regions which is used differently between NWT, West and East Nunavut and Labrador. Inuit writing systems were introduced at different times from Alaska to Greenland by the missionaries wanting to convert Inuit to Christianity. The resulting fact that Inuit do not have a uniform way of writing is an indication of this non-uniform, historical process of colonization. In my presentation I will elaborate more on the regional differences and the similarities of the Inuit language within Canada. I will explore the options possible that can be chosen as a standard to support better political communication between regions.

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**Parente, Genevieve** (University of British Columbia)

### **Governance in Russian Natural Resource Centres: Norilsk's 'Closed City' Policy**

Among the largest Russian cities north of the Arctic Circle, Norilsk hosts the main production facilities of one of Russia's largest natural resource corporations, Norilsk Nickel Mining and Metallurgical Company. Norilsk is attempting to intervene in negotiations around a draft federal bill, 'On the Arctic zone of the Russian Federation', which outlines state development policy in the region. Specifically, city authorities seek to amend a portion of the bill that legally designates the territorial extent of Russia's Arctic region. Within this border zone, economic activity and access by both foreigners and Russian citizens are restricted without permission. Harmonizing these zones and their migration policies dovetails with Norilsk's long-term program of cutting its municipal costs by drawing down the city's large population. By amending this bill, Norilsk could expand its longstanding 'closed city' policy to include Russian citizens. This paper examines Norilsk's political strategies to champion in-migration restrictions to Arctic cities by linking national security to regional sustainable development. This intervention has implications for demography, economic development, and political representation in Norilsk and other natural resource centers in Russia's Arctic and beyond.

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**Pashkevich, Albina** (School of Technology and Business Studies, Dalarna University)

### **Developing Nenets Indigenous Tourism: Institutional Settings and Every Day Realities**

Rudimentary tourism development is began to appear in most of the Russian Arctic regions. Nenets Autonomous okrug lying on the territory northwest Russia is one of the examples where the attempts to develop the indigenous tourism were underway since the beginning of 2000s. The study of the preconditions for this development is comparing the point of view expressed by the regional authorities and the local entrepreneurs taking part in this process. The first results of this development show the disparity between the actions taken by various stakeholders involved in this process. The absence of the joint strategy and the continuous follow up of the actions taken in favor of the tourism development are apparent. The level of the involvement of indigenous population in this process as well as the quality of the tourism experiences varies considerably in the region.

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**Pearce, Tristan** (University of the Sunshine Coast / University of Guelph); **Dannevig, Halvor** (Vestlandsforskning – Western Norway Research Institute); **Hovelsrud, Grete** (Nordlandsforskning - Nordland Research Institute)

### **Adaptation to Climate Change Across the Circumpolar North**

Peoples across the Circumpolar North are already experiencing and responding to unprecedented changes in both climate and socio-economic conditions. These changes have implications for culture and livelihoods. Culture and livelihoods are encapsulated in place and influences how climate change is experienced. This has been the focus of recent case studies, which characterize local vulnerabilities to climate change in the context of multiple climate and non-climate stressors. Here we

present a synthesis and comparison of results from case studies that employ a consistent research approach conducted with communities in Canada, Norway, Sweden, Finland, Russia, Iceland and Greenland. We identify and examine exposure-sensitivities and adaptive strategies employed to deal with climatic changes across a diverse range of human and physical geographies. We help to advance the science and practice of adaptation by highlighting key themes among case studies and sources of resilience, and generate opportunities for knowledge sharing across communities and regions.

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**Peers, Eleanor** (Max Planck Institute for Social Anthropology)

### **How to Enjoy a Teetotal All-Night Party: The Use and Abuse of Alcohol at the Sakha People's Yhyakh**

The Sakha people are the titular nationality of the Republic of Sakha (Yakutia), in Siberia. The Yhyakh is a shamanic ritual, and following a post-Soviet Sakha nationalist revival has become one of the Republic's most important yearly events. During the late 2000s the sale and consumption of alcohol at Yakutsk's Yhyakh was banned. The ban is consistent with a widespread condemnation of the use of alcohol in public discourse, matched by a revulsion towards heavy drinking, which has often been expressed to me by Sakha acquaintances. Yet many of the festival-goers manage to smuggle in alcohol: the ban has succeeded in reducing the number of alcohol-fuelled disasters, but it has not eradicated the desire to celebrate the Yhyakh with a drink. I use the case of the Yhyakh to draw out the ambiguity surrounding alcohol in Sakha (Yakutia), and its links with the complex impact of the Sakha nationalist revival.

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**Pelaudeix, Cécile** (Aarhus University)

### **EU Arctic Policy and Sustainable Development: Strategies of Cooperation and Governance Constraints. The Case of EU-Greenland Relations**

Since it has developed its Arctic policy, the EU has placed important emphasis on sustainable development and protection of the Arctic environment. While the EU upholds its interests, inter alia in terms of energy and raw materials, its competences in some key sectors are limited. Moreover, the EU operates in a region where its participation in governance is constrained, as reflected by its observer status to the Arctic Council which is still pending, whereas Asian actors are increasingly active. In this context, the EU is gradually giving attention to its relationship with Greenland as an Oversea Country and Territory, and setting the base for a comprehensive partnership for sustainable development between the European Union on the one hand, and Greenland and Denmark on the other. Relying on EU foreign policy analysis and multi-level governance, this paper analyses the strategies deployed by the EU institutions on the bilateral level to support cooperation on sustainable development with Greenland, and the role this relationship with Greenland might play in an international context.

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**Pellerin, Glorya** (Université du Québec en Abitibi-Témiscamingue)

### **Implementation of a Supportive Approach by Videoconferencing for the Inuit Teacher Training: Project Presentation**

Since 2010 a project of implementation of a new technology to support teacher training has been experienced in Nunavik. It is a partnership project granted by the SSHRC which implied collaborators from a University, a School board, 2 communities and a leading internet service provider. The approach is based on a hybrid model of alternation between presence and distance meeting. The developmental research methodology has been chosen to serve the reinforcement of the Inuit culture and identity. The project aims to: (a) integrate distance session in this intercultural and trilingual teacher training context, (b) assess its feasibility and its relevance, and (c) test a technology enabling a structure of ad hoc meetings between professors and students. The relevance of the development of this tool has been already demonstrated and the use of the technology is now taking varied formulas.

As the principal researcher, the author will describe how the project evolved, she will release results of the data analysis and will draw a portrait of the current different alternatives that Inuit students and teachers are considering.

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**Pemik, Linda** (Nunavut Arctic College)

### **Circumpolar Cooperation in Indigenous Teacher Education**

Nunavut Arctic College and the Sami University College established the UArctic Thematic Network, Verdde in 2004, recognizing the critical role that indigenous teachers play in the preservation of language and culture in the midst of neo-colonial pressures. After years of public consultations, a made in Nunavut Education Act was passed in 2008. The benefits of the Act which outlines a bi-lingual education system and recognizes the relationship between learning, language and culture have yet to materialize. I argue that teachers need to change their practices so that they are in line with the new Education Act. They need to learn new ways of thinking in terms of education and be cognizant of the negative impact of the colonial education system on how Inuit children learn and how they themselves have learned. Implementation of the Act is compromised by the skill sets of the teachers who are themselves products of the colonial education system. Our connections with the Sami and more recently with Greenland and Alaska are challenging our student teachers and faculty in the Teacher Education program to question their ideas about teaching and learning and providing opportunities for them to focus on decolonization and culture based education in the circumpolar world. That is why the University Center of Mobility in Indigenous Education, which has grown out of the Verdde agreement, is so important to us. It will serve as an active center for mobility activities for both students and faculties, increasing opportunities for research and dialogue that challenge indigenous educators to teach in a way that does not perpetuate the dominance of a foreign worldview.

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**Petersen, Bui** (Memorial University of Newfoundland); **Cooke, Gordon B.** (Memorial University of Newfoundland)

### **The Faroese Labour Market: The View From Newfoundland and Labrador**

The purpose of this presentation is to identify and discuss some of the key challenges and opportunities facing workers and employers in the Faroe Islands. We have just begun a multi-year comparison of labour issues in the Faroe Islands compared to Newfoundland and Labrador, and our initial analysis is on current employment conditions, and key factors shaping those conditions. From our Canadian perspective, we are particularly interested in some of the social, educational, and structural supports available for current and potential workers in the Faroe Islands. Based on the relatively low current unemployment levels and robust per capita incomes, our preliminary analysis is the employment conditions are favourable in the Faroes. On the other hand, we see strong similarities with Newfoundland and Labrador and other Northern, Subarctic and/or remote jurisdictions in terms of challenges to restructure to a 'new economy', ensure equitable income opportunities, and mitigate out-migration.

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**Petrasek MacDonald, Joanna** (McGill University); **Konek, Jordan and Curtis** (Konek Productions); **Ford, James** (McGill University); **Cunsolo Willox, Ashlee** (Cape Breton University); **Baikie, Marilyn** (My Word Digital Storytelling Lab); **Shiwak, Inez** (My Word Digital Storytelling Lab); **Mitchell, Claudia** (McGill University) **Rigolet Inuit Community Government**

### **From the Minds of Youth: Using Participatory Video to Explore Youth Resilience to Mental Health and Well-being Challenges in a Changing Climate**

Considering the potential mental health and well-being impacts arising from significant social, political, economic, and environmental changes facing Northern youth, their families, their culture, and their communities, the importance of understanding and enhancing Inuit youth resilience and finding meaningful and innovative ways to engage the younger generation in this work is crucial. This presentation will discuss research that piloted the use of participatory video with Inuit youth in Rigolet, Nunatsiavut, Canada to explore the use of video as a data-gathering technique, a participatory method to engage youth in research, and a resilience strategy in and of itself. Seven youth received training in film design, filming, editing, and production by Jordan and Curtis Konek, two Inuit filmmakers from Arviat, Nunavut supported by the 'My Word': Storytelling and Digital Media Lab in Rigolet. Twenty-one follow-up in-depth interviews were conducted with participants and community members. This research emerged in partnership with two multi-year, community-based research projects led by the Rigolet Inuit Community Government. A clip from the video will be screened, and the participatory video process will be discussed. Based on the findings from this research, participatory video provides a strong method to engage youth in research and is an effective youth-led resilience strategy that could help to build adaptive capacity among youth within a changing context.

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**Petrasheva, Viktoria** (Kamchatka Branch, Pacific Ocean Geographical Institute); **Degai, Tatiana** (University of Arizona); **Koester, David** (University of Alaska)

### **Itelmen Connections – Historical Ties and Contemporary Linkages Up and Down and Across the Pacific**

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From the first recorded information about Itelmen people over 250 years ago, in which we learned of their trade connections to the Japanese, to a long colonial relationship with the Russian Empire, to current interlinkages with global entities, Itelmen people of Kamchatka peninsula have been variably connected with and isolated from people and goods from around the North Pacific. This paper examines some of the effects on society and culture of connection and isolation in Itelmen history.

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**Petrov, Andrey N.** (University of Northern Iowa)

### **From Creativity to Sustainability: Knowledge Economy and Human Capital in the Arctic**

One of the aspects of sustainable development is shifting region's reliance on renewable resources or endogenous economic activities. Knowledge, creative and cultural economies represent economic sectors heavily embedded into internal community capacities and intangible competitive advantages. This paper extends the discussion of the relevance of formal and informal education and knowledge to sustainable development in the Arctic. It discusses patterns and trends in postsecondary educational attainment and attendance in the last decade and provides an assessment of human capital and knowledge production in the Arctic. We try to establish a conceptual and qualitative links between human capital accumulation, knowledge economy and sustainable regional development.

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**Petrov, Dmitry** (Moscow State University)

### **Banya and its Spirits in Nocturnal Beliefs in Russian North**

Banya (steam bath) plays significant role in spiritual traditions of many peoples. Magic rituals and tales about spirits related with steam baths are far-famed. In Russian North some of these beliefs still exist and evident part of them takes its actualization in the nighttime. The data concerning this topic were collected during field works in Arkhangelsk area in February and August of 2010 and July of 2013. Spirit of Banya is usually called Baennik (in Pinega district - a female spirit Obderiha). Nighttime is believed as Baennik bathing time – it is forbidden to visit Banya after midnight. Furthermore, it is advisable to leave bath accessories for Baennik. Violation of night-visiting taboo is dangerous. In such cases spirits of Banya are believed to be responsible for hurting people by hot water and bath stones. There are a wide multitude of legends, fairy tales and scare stories about Baennik's anger and aggression

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**Pieski (Nordberg), Aura**

### **Verdde´ as Part of Lifelong Learning**

One-month exchange in Nunavut through Verdde has become a part of my own lifelong learning process. As an early childhood educator I wonder, if this mutually beneficial exchange could start much earlier. How could we make this part of lifelong learning process of children in the Arctic?

Sámi Early Childhood Education Plans for Day Care (for 1-6 year-olds) encourage us to learn from and build a connection with other indigenous peoples. Still, the means to build that connection between the children are hard to find.

From Iqaluit I brought a few children's books, which I have read to children, translating to Sámi. From these books we learn through the differences and equalities of our cultures, values, livelihoods and nature. This experience has made me think, if we should start translating children's books between Arctic indigenous peoples. This kind of book-exchange might help to build an indigenous connection from early childhood on.

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**Plattet, Patrick** (University of Alaska Fairbanks); **Lincoln, Amber** (University of Alaska Fairbanks)

### **Restoring Human-Reindeer Relations in the Alaska Peninsula: Challenges and Prospects**

In the Alaska Peninsula (Southwest Alaska), reindeer herding officially started in 1904 and ended in the 1940s. Seventy years after the introduction of herding, and over a century after the first translocation of Chukchi and Sámi reindeer to Alaska, local communities are taking steps towards restoring reindeer herds. In addition to finding a source of reindeer and herder workforce, a challenge is to forecast how the newcomers will cohabit with the Northern Alaska Peninsula (NAP) caribou herd. Predictions are made difficult because of the incorporation of the lost reindeer from the 1940s into the NAP. Moreover, different stakeholders (communities, hunters, game management specialists, biologists, anthropologists) identify different

animal categories or 'persons' in the NAP – "caribou", "reindeer", "reinbou", "hybrids", etc. This paper examines how the ambiguity surrounding the genetic and cultural history of Rangifer tarandus in Southwest Alaska affects the 'restoring' of reindeer herds and of human-reindeer relations in this region.

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**Poppel, Birger** (Ilisimatusarfik, Grønlands Universitet)

### **Future Assessment and Measurement of Living Conditions and Quality of Life in the Arctic**

The rapid change of livelihoods and living conditions for indigenous peoples and other Arctic residents and the increased focus on the circumpolar north is illustrated, for instance, by the Arctic Council's initiatives to assess 'human development'. Arctic Human Development Report (AHDR), Arctic Social Indicators (ASI), Economies of the North (ECONOR) and the Survey of Living Conditions of the Arctic, SLiCA, among others have all contributed to fill the gap of lack of knowledge of different aspects of living conditions and quality of life in the Arctic.

This presentation draws upon the experiences of SLiCA: the development of a new research design, the partnerships between researchers and indigenous peoples, the collaboration with international experts, the questions asked and some significant findings and not least, what lessons have been learned and which recommendations can be brought to a second and updated survey of living conditions, hopefully including all Arctic citizens.

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**Poppel, Birger** (Ilisimatusarfik, Grønlands Universitet)

### **Internal Migration To and From Greenland's Settlements**

It used to be part of the Inuit's traditional way of life to move from places with decreasing opportunities to fish and hunt to places where conditions for making a living were more plentiful. Nowadays both more pull and push factors exist. Better housing conditions, education possibilities etc. add to the attractions of moving to larger cities and less attractive livelihoods and living standards in small towns and settlements might affect the choices people make about where to settle. A small study from the late 80's and early 90's suggests that the settlement pattern among Inuit was still (to some degree) determined by expected income possibilities from hunting and particularly from fishing.

This paper presents recent tendencies in economic and demographic developments of the small settlements and looks into potential push and pull factors.

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**Poppel, Birger** (Ilisimatusarfik, University of Greenland; SLiCA)

### **Measuring Living Conditions / Well-Being and Quality of Life of Indigenous Peoples in the Arctic**

The rapid change of livelihoods and living conditions for indigenous peoples and other Arctic residents and the increased focus on the circumpolar north is illustrated, for instance, by the Arctic Council's initiatives to assess 'human development'. Arctic Human Development Report (AHDR), Arctic Social Indicators (ASI), Economies of the North (ECONOR) and the Survey of Living Conditions of the Arctic, SLiCA, among others have all contributed to fill the gap of lack of knowledge of different aspects of living conditions and quality of life in the Arctic.

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**Poppel, MarieKathrine** (Ilisimatusarfik, University of Greenland)

### **Domestic Violence in Greenland**

Domestic violence in Greenland is often regarded as alcohol related and categorized as 'domestic disturbances' by the police when reported by a neighbour or one of the involved. The annual number of 'domestic disturbances' amount to 3000 to 3500 according to the 24-hour police reports but they are not included in the official statistics published by the police. The assumption behind this paper is that there is a connexion between domestic violence and social problems in the families. The presentation analyses the information about 'domestic disturbances' and social problems in the 24-hour police reports.

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**Porokhina, Irina** (Northern (Arctic) Federal University named after M.V. Lomonosov); **Simonova, Natalia** (Psychology Department of the Northern (Arctic) Federal University named after M.V. Lomonosov, Department of Research Institute Arctic Medicine, Northern State Medical University)

### **Socio-Psychological Peculiarities of Shift Work in the Arctic**

Shift work is widely used during development of new territories in remote areas, especially with extreme natural and climatic conditions, such as the Arctic. Shift work is accompanied by the influence of factors causing unfavorable functional status such as stress, performance decrement, fatigue, etc. Apart from extreme environmental conditions, a complex of unfavorable social factors influence shift workers. There is observed personal space narrowing, lack of possibility to stay alone, compulsive cooperation with colleagues during working hours and free time independently of preferences, interests and personal characteristics. These peculiarities of social interaction can negatively influence shift staff. Irritability, aggressiveness, intolerance, proneness to conflicts, narrowing of social network can be dangerous in such conditions and can negatively influence shift brigades performance. Correspondingly, a shift work subject needs psychological supervision for maintaining optimal conditions of vital activity in group isolation environment as well as stabilizing and supporting effectiveness of shift brigades work.

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**Powell, Richard** (University of Oxford)

### **Geography, Anthropology and Arctic Field Practices**

The late nineteenth-century was a key moment in the development of both regional specialisms and disciplinary affiliations. In the body of commentary that has developed in history of geography around Halford Mackinder's 'On the Scope and Methods of Geography' of 1887, very little attention has been paid to the competing programme outlined by Franz Boas in the journal *Science* that same year as 'The study of geography'. Historians of anthropology have often dismissed Boas's early geographical contributions, pointing to an intellectual conversion during his fieldwork on Baffin Island. This paper begins to sketch of comparison of this with the Arctic field practices developed by Knud Rasmussen in Greenland. This paper traces this moment as a stage in the development of intellectual depictions of the Circumpolar Arctic. In concluding, the paper considers the role of the Arctic as the locus classicus for such debates about boundaries between geography and anthropology.

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**Pram Gad, Ulrik** (Department of Political Science, University of Copenhagen); **Strandsbjerg, Jeppe** (Copenhagen Business School, Dept. of Business and Politics); **Jakobsen, Uffe** (University of Copenhagen)

### **Politics of Sustainability in the Arctic**

The concept of sustainability has taken centre stage in Arctic politics. However, there is little agreement on what 'sustainable' means. For different actors (NGOs, indigenous people, states, companies) the concept implies different sets of opportunities and precautions. The paper presents a first step in a collective research project that aims to map and analyse the role of sustainability in various political and economic strategies in the Arctic. Traditionally sustainability invokes technical-rational authority to inform development policies. But sustainability has become a fundamental concept that orders the relationship between development (change), society (identity), the environment (nature) and security (state). We, first, present an attempt to capture sustainability as a political theoretical concept. Second, we discuss how sustainability changes its meaning when meeting the Arctic (from concerning the global ecosphere to a more limited environment), and how sustainability is conceptually transforming to allow rather than limit development in a fragile Arctic environment.

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**Prior, Daniel** (Miami University)

### **Comparative Mythology and Human-Rangifer Relations**

This paper is a comparative-mythological examination of the relationships between human beings and Rangifer tarandus, via representations of reindeer and caribou in ethnographically collected texts from a broad sampling of peoples in Eurasia and North America. The aim is to contribute to understanding of how humans think about the process of rapprochement between us and our principal megafaunal associates. By focusing on close reading of reindeer hunters' and herders' verbal art texts,

we can search for creative conceptions of our relationships with a species whose wild and domesticated forms are more similar than any other large mammal with which we live closely. The stance here is comparative, though it holds back from committing to structuralist aims or reductions of culture as if to a set of “responses” to objective “stimuli.” In the words of the comparatist Arthur T. Hatto, “birds and beasts ... are prime authors of their own imagery.”

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**Pristupa, Alexey** (Environmental Policy Group, Wageningen University); **Amelung, Bas** (Environmental Systems Analysis Group, Wageningen University); **Lamers, Machiel** (Environmental Policy Group, Wageningen University)

### **Sustainable Use of Resources in the Russian Barents Sea**

Climate change and melting ice result in new economic opportunities in the Arctic. Oil and gas ventures, new fishing grounds, tourism as well as maritime transportation spur political and economic interests in the region. The need to coordinate different sectors and interests has been addressed through elaboration of ecosystem-based integrated management strategies in different parts of the Arctic. The Russian Barents Sea, however, despite anticipated growth of economic activity and looming conflicts associated with it, remains to be administered on the base of traditional sectoral approach to planning economic activities and environmental protection. This paper aims to analyse the current state of marine environmental management in Russia on the example of the Barents Sea region. The study will assess the recent policy developments in Russia in the field of sustainable management of resources and economic activities in the Barents Sea as well as discuss prospects for an integrated management framework.

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**Procter, Dennis** (School of Education, University of Northern British Columbia)

### **Educating for the North: Including Winter Environmental Knowledge in the Science Curriculum for Student Teachers**

Northern schools of education typically do not include material characteristic of the winter season in the science courses taken by elementary and secondary student teachers. This omission occurs despite the fact that the winter season dominates the school year in much of the Northern hemisphere. Consequently, new teachers who move to the far North for their early career appointments are relatively unprepared to utilize the dominating winter conditions and resources they typically experience. Similarly, trainee teachers from the far North, who often have to come south to gain their educational qualifications, typically receive little or no development of their local winter knowledge. Routine exposure to winter knowledge and resources further south should help provide a foundation for understanding and appreciating the far North. This paper outlines a winter environmental studies subunit in an elementary student teacher science course at UNBC, which attempts to help redress the lack of winter environmental knowledge in teacher education programs. This subunit offers foundational material on the physical environment, including snow, the nature of subnivean natural communities, plant and animal adaptations, human adaptations, including aboriginal knowledge and technology, recreation, and the ethical use of winter resources. Two winter out-door experiences are an important part of the educational process.

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**Pulsifer, Peter** (National Snow and Ice Data Center, University of Colorado); **McCann, H.** (National Snow and Ice Data Center, University of Colorado); **McNeave, C.** (National Snow and Ice Data Center, University of Colorado); **Duerr, Ruth** (National Snow and Ice Data Centre, University of Colorado); **Sheffield, Betsy** (National Snow and Ice Data Centre, University of Colorado); **Wallace, Allaina** (National Snow and Ice Data Centre, University of Colorado); **Gaut, Agnieszka**

### **Linking Scientific and Documented Indigenous Knowledge Using Information and Communications Technology: Representation, Ethics and Mediation**

For many years the lives and knowledge of Arctic Indigenous peoples has been documented for a variety of purposes including the establishment of land use and occupancy, heritage preservation and more recently as part of an effort to link Indigenous and scientific knowledges. Currently, these efforts often involve the use of information and communications technology (ICT) to represent and link across knowledge domains. Using examples from the Exchange for Local Observations and Knowledge of the Arctic (ELOKA) program, we discuss the challenges of representing knowledge systems that have some distinct ontological, epistemological, methodological and technological elements. Using ICT has important ethical considerations that include but are not limited to providing sufficient context, recognizing when the use of ICT is not appropriate, and protecting moral rights. We conclude by situating the process of linking Indigenous and scientific knowledge

through ICT within a theoretical framework of mediation that critically examines how knowledge is transformed through re-presentation.

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**Quintal, Magalie** (McGill University)

### **Northern Wage Economy and Gender Dynamics**

This presentation aims to contextualize the changing opportunities for Inuit women in the wake of socioeconomic transformations occurring in Nunavut. While the irreversible importance of money in modern harvesting activities has been amply demonstrated, patterns of access to this critical resource through wage-employment have largely been overlooked. More interestingly, gender responses to the emergence of the Northern wage economy and the specific economic contribution of women have even more been neglected.

Therefore, in this presentation I first explore the development of the labour market in the Canadian Arctic as well as its internal dynamics. Second, using fieldwork data collected in Nunavut, I demonstrate that Inuit women are surging into the labour force and increasingly becoming the main monetary provider. Finally, I argue that the expanding role of Inuit women bridges the modern and the traditional sectors of the Inuit mixed economy and foregrounds new gender roles and divisions of labour.

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**Rasmussen, Rasmus Ole** (Nordregio – Nordic Centre for Spatial Development)

### **Multi-Functionality as Scenarios for Land Use Development in the Arctic**

Rural land use activities used to be separate and distinct activities in the Arctic. Examples could be: grazing areas for husbandry; fencing of agricultural activities producing field crops; hunting grounds; suburban areas surrounding larger settlements and urban areas; tourist resorts; open cast mining and tailing areas; protected areas; etc. It is obvious that many uses may be mutually excluding, and cause conflicts. For instance impacts of dust from tailing areas may be causing negative impact on grazing areas. Fencing may be prohibiting free passing of wildlife. And free passing of wildlife may destroy field crops. It is, however, just as obvious that potential conflicts may be turned into mutual beneficial situations. Wildlife is an attraction for tourists. Traditional farming activities are similarly considered an attraction by tourist. And with farming not only focussing on mass production but furthermore emphasizing distinct qualities of food products from the Arctic additional attractions are added to the rural activities. Even active mining sites may be considered worth visiting by many tourists. And the reconstruction of abandoned mine sites may even provide options for establishing landscapes with attractions connected to a variety of leisure activities such as biking and other sports related activities. By thinking beyond the individual activities and instead considering options for including multiple functions in the land use by merging interests related to agriculture, hunting, tourism, housing and other land use based activities a more viable and sustainable development in rural areas may be obtained. The presentation will – based on the concept of multi-functionality - give examples of both rudimentary but also advanced integrative multi-functional land use activities in the Arctic.

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**Rasmussen, Rasmus Ole** (Nordregio – Nordic Centre for Spatial Development)

### **Narsaq: A Community Challenged by Municipal Restructuring and Uranium Mining in South Greenland**

Narsaq in South Greenland was an important place in connection with the Danish modernization of South Greenland both before and especially after WWII. The town was chosen as centre for commercialization of sheep farming as well as fisheries. The town situated close to Uranium ore in the Kvanefjeld could have provided resources changing it into a centre for large scale industrialization. But the Home Rule Government focused on the two first resources and abstained from making use of the latter. Recently, however, the option of becoming a mining centre in the new economic plans for Greenland has re-opened the old ideas which might generate a new future for the town that lost its importance in connection with the municipal reform and turned into a dull town of pensioners.

The presentation outlines the steps leading to the present situation, and focus on the dilemma between the inhabitants in the town, the surrounding villages, and the government's interests in turning the place into a mining boom town.

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**Rastad Bjørst, Lill** (CIRCLA - Centre for Innovation and Research in Culture and Learning in the Arctic, Aalborg University)

### **Tolerance and Mining of Greenland's Uranium**

How the government of Greenland discursively went from no-tolerance policy to a position as the ones promoting tolerance towards uranium mining in Greenland. Numerous actors are involved in discussions about uranium, and this study will focus on the political debate in Greenland and the growing participation of civil society, incorporating knowledge and experiences from a continuing ethnographic case study in Narsaq - a community close to Greenland's potentially biggest mine of REE and uranium. Studying uranium as an object of tolerance reveals the constant negotiation of 'tolerance' among the various actors. With the newly elected government of Greenland, 'tolerance talk' is again at the heart of Greenlandic politics and not at least when it comes to the acceptance of local ecological choices and strategies.

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**Rautio, Arja** (Centre for Arctic Medicine, Thule Institute, University of Oulu)

### **Health and Well-being Programs in the Arctic**

Thematic Network (TN) of Health and Well-being in the Arctic is one of the University of Arctic's TNs. It covers at the moment international Master's (2 years' program) and PhD programs and research projects. The TN has arranged ten multidisciplinary summer and winter schools in the connection of the conferences and in close collaboration with several research societies, doctoral programs and health networks. The next summer school will be in Anchorage in August 2014. The Master's program of Health and well-being in the circumpolar area is led by University of Oulu. It has now its third intake, and three of the graduated students have already continued their studies into the PhD program. The next important task for the TN is to start the exchange program for students and teachers and finish the curriculum development during 2014. Almost 20 Arctic universities and institutes are participating in different activities of the TN.

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**Ravna, Øyvind** (University of Tromsø – The Arctic University of Norway)

### **The Governance of Sámi Land Usage in Scandinavia - The Case of the Finnmark Act: A Suitable Way of Completing Norway's Obligations to Identify Sámi Rights to Lands and Waters?**

The Sámi struggle for "rights to land and waters", visualized by the Alta Hydro plant Case, put pressure on Norway to explore the rights of the indigenous Sámi. Both Norway's ratification of the ILO Convention no. 169 concerning Indigenous and Tribal Peoples in Independent Countries in 1990 and the 2005 Finnmark Act are results of that. To meet the obligations in the ILO-169, The Finnmark Act authorizes the Finnmark Commission (FC) to investigate land rights held by Sámi and other people in Finnmark, the most central part of Sámi areas in Norway. In the fall of 2013, FC has submitted three reports, which are the first specific legal clarification of particular areas after 30 years of study of Sámi rights. Norway's status as a driving force in recognizing indigenous peoples' rights make these reports interesting to other countries. This presentation shall analyse the main findings of the FC and shall look at Norway's obligations with regards to ILO-169, including its commitments to Sámi land rights and governance.

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**Ready, Elspeth** (Stanford University)

### **Food Security in a "Social Economy": Sharing Networks and Country Food Access in Kangiqsujuaq, Nunavik**

This paper presents initial results from an ongoing study of household economies in Kangiqsujuaq, Nunavik, aimed at better understanding the economic and social functions of contemporary food sharing and the role of traditional foods in supporting food security. Although many Kangiqsujuaq households express concern about getting enough food, relatively few frequently experience hunger because of reliance on food sharing networks that include pajuktuq (carrying food), demand-sharing, meal-sharing, and institutionalized sharing through the Hunter Support Program. Relational data is therefore essential for understanding the cultural and economic determinants of food security in Kangiqsujuaq. One of the greatest challenges to food security in Kangiqsujuaq in the near future may be whether traditional food sharing is being eroded by monetization and decreased availability of certain country foods (beluga, caribou). Based on my preliminary results, I discuss how social network analysis might provide insight into this issue.

**Richard, Wilfred E.** (Smithsonian Museum of Natural History, Arctic Studies Center)

### **Uummannaq, Greenland – Building on Traditional Resources in Context of Modern Tourism**

Uummannaq is located in northwest Greenland on Uummannaq Fjord, north of the Nuussuaq Peninsula. South of the peninsula is Ilulissat, the well-established Mecca of ice tours. Tourism has begun in Uummannaq, much of it by cruise ship, helicopter or otherwise by sail boat to kayak, rock climb, hike, or search for archaeological ruins. Uummannaq is the burial site of the Greenland Mummies. However, much tourism infrastructure is lacking, though traditional resources are filling the gap as tours by boat drivers, hunting trips, securing rooms in local homes, and attending dinners and cultural events mounted by Børnehjemmet, the Children's Home. In this paper, I present Uummannaq as it seeks to develop a tourism industry with which to draw jobs and money into this economically and geographically challenged part of the High Arctic. I contrast tourism in Uummannaq with Ilulissat, each offering its own product, and complementing each other.

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**Ridington, Robin** (UBC - UVic); **Ridington, Jillian** (Independent Researcher)

### **Dane-zaa Oral History: Why It's Not Hearsay**

The Dane-zaa maintain a close connection to the human and non-human persons with whom they live through what we have called "narrative technology," and elder Billy Attachie calls "wise stories." Folklorist Amber Ridington has used the term "oral curation" to describe the way Oral history is passed down through generations among the Dane-zaa. Robin began documenting Dane-zaa oral history in 1964 and Jillian joined him fourteen years later. Our audio and later video recordings are mostly in the Beaver language. Because young people no longer speak Beaver, Chief and Council of the Doig River First Nation asked us to work with elders on a history of the Dane-zaa First Nations based on their oral histories. The result is a collaborative book, *Where Happiness Dwells*. Our presentation discusses Dane-zaa oral history in relation to issues that have arisen when First Nations presented Canadian courts with oral history testimony.

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**Riedlsperger, Rudolf (Rudy)** (Memorial University of Newfoundland); **Bell, Trevor** (Memorial University of Newfoundland)

### **Building Frameworks for Building Sustainable Communities – An Example from Nunatsiavut, Northern Labrador**

The SakKijanginnatuk Nunalik (Sustainable Communities) initiative (SCI) is an interdisciplinary and community focused initiative aiming to inform best practices and to provide guidance for enhancing community sustainability in Nunatsiavut, northern Labrador. Reflecting an Inuit worldview, the Initiative highlights a holistic approach that takes into account the social, cultural, environmental, and economic aspects of sustainability. The SCI is broadly influenced by frameworks related to vulnerability and adaptive capacity, participatory action-research, and the integration of different sets of knowledge. However, at this point the SCI has not yet developed a comprehensive theoretical framework to support and explain the overall initiative and its sub-projects. This presentation focuses on the development of such framework and its significance for understanding the processes that make the SCI effective, for learning about entry-points for theory and thought to further inform or bring forward the SCI, and for providing guidance for building sustainable communities elsewhere in the North.

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**Ringholm, Toril** (Norut Northern Research Institute, Tromsø, Norway)

### **Small, Peripheral Municipalities and a Big, Multinational Company: High Expectations and Mutual Learning**

The meeting between a multinational oil and gas company and small municipal organizations appear an uneven match. The company will have years of experience with entering new localities, from all over the world, whereas for the local authorities this will most often be a once in a lifetime experience. Are there circumstances that contribute to even out the assumed mismatch, and what resources are put into action? What is the outcome of the process? This paper will investigate these questions with the help of an exchange perspective in combination with the dualism of trust and power. This is done by a case-study of the development period of the Goliat oil-field outside the western part of Finnmark in Northern Norway. The development of the process has been studied over a period of four years; 2010-2013. The data contains repeated interviews with key actors, observations of meetings and mapping of outcomes.

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**Ritsema, Roger** (University of Ottawa, Department of Geography); **Dawson, Jackie** (University of Ottawa, Department of Geography)

### **Good Fortune or Misfortune? Pond Inlet and the Mary River Project**

As a warming Arctic unlocks previously unfeasible resource development, mining in Nunavut is gaining momentum. With land claims settled and provisions for Inuit Impact and Benefit Agreements (IIBA's), adjacent communities appear to be in a good position to benefit from mineral projects. What is much less clear is how the opportunities will play out at the community level. Drawing on interviews conducted in 2013 with key informants in Pond Inlet and regional decision makers in Iqaluit, this paper uses Pond Inlet as a case study to examine emerging opportunities from the Mary River Project. In particular: How can new economic opportunities be harnessed? What are the main challenges and barriers and how can they be overcome? Using the Harvard Project on American Indian Economic Development's (HPAIED) 'Nation Building' as a theoretical framework, themes of governance, cultural match, leadership, and future vision are used to shed light on a community with a new mega-project in its backyard.

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**Riva, Mylène** (Université Laval)

### **How do Housing Conditions Get Under the Skin to Influence Health? Considering Psychosocial Factors Associated with the House Environment in the Arctic**

Housing is a fundamental human right and an important determinant of health. In the Arctic, the housing shortage and inadequate housing conditions are reaching high levels. At the 2006 Census, 49% of the population in Nunavik reported living in overcrowded dwellings and 46% in dwellings requiring major repairs, compared to 3% and 7% respectively for non-Aboriginal Canadians. A large body of evidence indicates strong associations between poor housing and poor health. For example, recent studies report associations between household crowding and increased physiological stress levels and poorer mental health among the circumpolar Inuit. Yet in these studies the link between housing and health is often treated as a 'black box' despite a growing literature suggesting that housing conditions might influence health through psychosocial pathways. This paper explores how psychosocial factors associated with the house environment, such as control, identity, security, privacy, inequality and social support may 'get under the skin' to influence health in the Arctic.

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**Roberts, Peder** (KTH Royal Institute of Technology); **Depledge, Duncan** (Royal Holloway University of London/Royal United Services Institute)

### **Historicizing The Circumpolar North**

This paper argues that the 1978 publication of *The Circumpolar North* (by Terence Armstrong, George Rogers, and Graham Rowley) came at a moment when the Arctic was emerging as a circumpolar space in scholarly terms at the same time as an imagined circumpolar community – especially among indigenous peoples – began to take shape. Yet many of those same scholarly experts, including Armstrong and Rowley, owed their careers as Arctic specialists to the surge of support from many Western states for Arctic research and development during the Cold War. The strategic need for knowledge relevant to statecraft provided career opportunities, and in turn fostered an international community of Arctic experts attuned to the contemporary geopolitical context – and the importance of north-south connections. The paper concludes with reflections on whether the end of the Cold War has really made east-west polar connections stronger than those from north to south.

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**Robinson, Suzanne** (Aurora College/ University of Essex)

### **Take it from the Top of the World: Co-research Through Collaborative Cross-Cultural Visual Construction as an Identity Journey of Discovery, Understanding and Declaration**

Identity is a multifaceted construction that is both individual and collective. It is not only how we perceive ourselves, but also how others perceive us. Co-research endeavors to be an equitable process to discover and negotiate the research process through collaborative meaning-making, analysis and understanding. Research in the Arctic is a confluence of culture, discipline and world-view. The only sustainable way forward for Northern research is for Northern identity to be a guiding principle. The paper will feature Northern student-made video series about their North but also turns the tables for a (lighthearted) view of the South. Northern communities are not waiting for research reports: rather they are waiting for

engagement and dialogue. Co-research-produced video is a tool of practical reciprocity for improved communication and deeper understanding for all; it allows for more ideas and voices to be shared and heard. Sustainability in Northern research is understanding and celebrating Northern identity. To view some of the project video clips please go to <http://www.youtube.com/user/TakeltFromTheTopVids> or the "Take it From the Top" Facebook fan film page

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**Robinson, Suzanne** (Aurora College/ University of Essex)

### **Visual Methods for Sustainable Literacy and Skills Development in NWT**

Northern world-view is rooted in observation and participation in the natural world. Learning tools should be selected to engage this community approach. Visual methods, like video making and photography, can fit into Northern literacy and learning and the deep tradition of storytelling. Northern cultures are deeply adaptive and digital media can be a powerful means for Northern peoples to control and share their stories in their own way. Northern adaptation and resilience are shining examples of sustainability, as Northern learners have endured through their ingenuity, strength and practicality. This paper gives examples from student-made videos and photographs. Knowledge creation and sustainability in learning must be by Northerners for Northerners. By creating visual images Northerners can be in control of their message. Education and learning must go forward with Northerners in the lead. To view some of the project video clips please go to <http://www.youtube.com/user/TakeltFromTheTopVids> or the "Take it From the Top" Facebook fan film page.

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**Rodon, Thierry** (Université Laval); **Riva, Mylène** (Université Laval); **Blais, Jonathan** (Université Laval)

### **Resource Revenue Distribution and Community Development and Well-Being: Evidence from Salluit and Kangiqsujuaq**

Resource development is often portrayed as a means to improving the well-being and quality of life in Northern Aboriginal communities. This narrative makes the assumption that the benefits from employment and resource revenue distribution will improve the social circumstances in these communities. In this presentation, we will look at the evidence provided by the impact of the Raglan Mine on the two neighbouring Inuit communities of Salluit and Kangiqsujuaq. The Raglan Mine has been in operation since 1998 and has signed an agreement (IBA) with Makivik Corporation with a goal for Inuit employment at the mine. It also provides a 4.5% share of profits to Makivik, which are mostly redistributed in Salluit (35%) and Kangiqsujuaq (25%). Using data from Qanuippitaa? Nunavik Health Survey (2004), Statistics Canada and interviews conducted in both communities, we will assess the impacts and benefits stemming from the mining development.

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**Rodon, Thierry** (Université Laval)

### **Serving Nunavimmiut: Public Policy Autonomy and Adaptation in Nunavik**

Nunavik was the first Inuit region to negotiate a treaty. Signed in 1975, The James Bay and Northern Quebec Agreement (JBNQA) is also the first modern-day treaty. Although it does not provide for self-government, it has nevertheless created strong administrative autonomy with a distinct regional identity. This administrative governance provides very limited autonomy on paper but the autonomy gained is quite extensive if we look at the capacity to adapt or create policies to better serve the Nunavimmiut. In this paper, using a multilevel governance approach, we will analyse the structuration of power within different policy fields (i.e., daycare, housing, education, health, Hunter Support Program, and National Park Management) to assess the capacity of Nunavik institutions to create their own policies or to influence policy design to respond to the needs of Nunavimmiut. We will also assess the limitations imposed by the institutional framework created by the JBNQA.

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**Rönkä, Anna Reetta** (Women's and Gender Studies, Faculty of Education and Institute of Health Sciences, Faculty of Medicine, University of Oulu); **Sunnari, Vappu** (Women's and Gender Studies, Faculty of Education, University of Oulu); **Rautio, Arja** (Thule Institute, University of Oulu)

### **Experiences of Perceived Social Isolation Among Young Adults Born in Northern Finland - Northern Finland Birth Cohort 1986 Study**

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Northern Finland is a multifaceted area, with bigger cities and rural, isolated areas. Generally, population density in Northern Finland is low, and young people tend to move to cities. Additionally, individualism and the ethos of managing on one's own, are contributing to physical and social distance, isolation, between individuals. Furthermore, isolation can be an emotional experience. Perceived social isolation, also called loneliness, occurs when one's socioemotional needs are not adequately met. Loneliness is a subjective, involuntary and negative experience. When loneliness experience becomes prolonged, it may have serious effects to one's wellbeing. The experiences of loneliness were examined in Northern Finland Birth Cohort 1986 (N=9432). Associations of loneliness with selected social, emotional, contextual and wellbeing variables were studied quantitatively and the lived experience of loneliness qualitatively through 39 interviews. The main results are presented and the role of social media in lonely young adult's life is discussed in this presentation.

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**Rosales, Jon** (St. Lawrence University); **Chapman, Jessica** (St. Lawrence University)

### **Obvious and Disruptive Climate Change in Northwestern Alaska**

It is well documented that climate change is happening fastest in the Arctic, but what is less known is what elements of climate change are most obvious and most disruptive to the residents living there. This paper summarizes survey results of traditional ecological knowledge holders in two subsistence indigenous communities in northwestern Alaska, Savoonga and Shaktoolik. The survey's focus was on identifying the climatic changes, such as sea level rise or increased storm intensity, that are most obvious to hunters and gatherers and most disruptive to their lives. The survey is part of the ongoing efforts of the Alaskans Sharing Indigenous Knowledge (AKSIK.org) project that seeks to document the impacts of climate change on indigenous peoples in this area and communicate their adaptation needs through videos housed on its website.

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**Rouillard, Rémy** (Scott Polar Research Institute, University of Cambridge)

### **Foreign Bodies in the Russian North : On the Biological Adaptation of Indigenous Nenets, Soviet-Day Settlers and Mobile Oil Workers to the Arctic**

Based on more than a year of ethnographic field research as well as on a literature review of Russian medical science, I will show how medical knowledge and popular discourses held by the members of different ethnic and professional groups in the oil-rich Nenets Autonomous District situate each group on a scale of adaptation to the Arctic environment. I will show how descriptions of the biological differences discussed in medical science and popular discourses tend to reify the adaptability of the Nenets, while minimising the political, economic and social constraints structuring the life of their communities. I will also show how medical research on the mobile oil workers presents the health of this group as a subject of prevention and intervention, namely by promoting shift-work as the most appropriate organisation of work.

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**Routledge, Karen** (Parks Canada)

### **A Lot Of Tongues Were Available!: Enduring Stories of Survival in Cumberland Sound**

My paper takes an historical approach to survival in Cumberland Sound on Baffin Island. A rich Inuit homeland for centuries, Cumberland Sound became a place of intensive cross-cultural interaction with the arrival of commercial whalers in the nineteenth century. I consider Inuit and qallunaat "survival stories" from this period of change. Although everyday life was not a struggle for survival for most people in Cumberland Sound, stories of risk and danger have endured in oral histories and written records, in part because they engage with larger debates and fears about cultural identity. I discuss what I think these stories say about some Inuit and qallunaat ways of thinking about risk, about the Cumberland Sound landscape, and about the human place in nature. As an historian, I am very interested in learning more about how present-day Arctic Indigenous peoples and scholars in other disciplines are thinking about the idea of "survival."

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**Rowan, Caroline** (University of New Brunswick)

### **Making Circumpolar Connections in Early Childhood Practices Through Ilitsagait**

In the winter of 2011, I travelled to the Inuit community of Inukjuak, Nunavik to undertake a narrative research project as part of the requirements for completing my Masters. I wanted to investigate the potential of learning stories to provide a means of incorporating Inuit perspectives into the early childhood processes of the community. These little narratives, made with digital photos and Inuktitut language text are becoming known as ilitsigait. The stories enabled educators to uncover children's interests, to make visible actions and understandings connected with Inuit ways of knowing and being, and to build strengthened relationships. In 2014 at the Sami allaskuvla in Guovdegaidnu, Norway: I shared this photo story approach to working with children and teachers to professors and early childhood educators working with Saami children and teachers. In this session I will reflect on these materials and their transportability from one northern location to another.

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**Runge Olesen, Mikkel** (DIIS - Danish Institute for International Studies)

### **The Future of the Arctic Region: Cooperation or Conflict?**

International Relations research interest in the Arctic is booming, not least due to the growing political importance of the region. Brought about by climate change, the Arctic region faces both pressing environmental concerns and enticing prospects of hitherto inaccessible natural resources and trade routes. The Arctic has usually been hailed as an exemplar of positive results of multilateral cooperation and conflict resolution, but this state of affairs might now become challenged, as more predominant national interests of both regional and non-regional powers emerge. This paper reviews the current academic debate concerning the prospects for Arctic cooperation and conflict in the future. In doing so, it argues that the combination of a relatively well regulated legal framework, the presence of increasingly powerful regional institutions like the Arctic Council and the fact that resource extraction is only gradually becoming feasible, gives reason to be cautiously optimistic concerning the prospects for continued cooperation.

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**Ruotsala, Helena** (University of Turku)

### **What Ice Can Tell Us?**

"If you have seen the change in the landscape when a boat appears in the horizon, you no longer think that life of a single person has no meaning." *Ice* (original *Is* in Swedish) is a novel written by Ulla-Leena Lundberg, a Finnish-Swedish author, and an ethnologist. This novel won important literature awards in 2012, but it was also a long time number one in Finland's best-seller list. *Ice* is a story about an archipelago community, where everything that is required, has to be delivered by a boat. *Ice* can be seen partially autobiographical since it has many similarities with the author's childhood in the 1940's. My aim is to focus on the questions of how the author, who has her background in ethnology, describes the everyday life of the islanders from perspective of economic, ecological, social and cultural sustainabilities? How do the issues of sustainabilities – how we call them today – are present in their everyday lives? What are the cracks or deep changes in this question? And, why this novel has gained such a great popularity among Finnish readers today.

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**Ruttan, Lia** (NT Aurora Research institute, Aurora College)

### **The Truth Was In It': From Trust to Testimony**

Aboriginal knowledge holders in the Northwest Territories frequently describe how truth was found in relationship, stories and cumulative traditional knowledge gained from experience and observation. A cultural system of acknowledgement of knowledge holders and experiences, as well as language markers for types of discourse, verified and informed listeners of this truth. This process needed to be absolutely reliable in conditions found on the land. Non-Aboriginal people who use different knowledge, verification and communication systems are often described as being inconsistent in truth telling and keeping their word whether as individuals or government systems. This presentation looks at how these differing understandings come into play in the climate of contemporary hearing on resource development involving both federal and federal/territorial hearings related to environment. Illustrations from Dene testimony at the Gateway pipeline hearings, held in Edmonton, Alberta and in hearings held in Yellowknife, NWT related to the devolution of land and water boards in the NWT will be presented.

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**Rygaard, Jette** (Ilisimatusarfik, University of Greenland)

## **Young People as ‘City Flaneurs’ – Living Cittáslow or Urbanfast?**

Urban spaces invite its inhabitants to use their city by their own means. This paper explores different groups of young people's methods of expressing themselves in their city. Through walks with camera, all senses open and discussions with young people, as well as film clips, this paper will look at young people as city flaneurs to disclose their living as cittáslowers, urbanfasters ... or something in between and to take the temperature of city life as multi sensuous feelings and expressions in an Arctic Urban City, Nuuk. Nuuk and its population of young people are the empirical setting. The theoretical grounds are urban theories and sensuous anthropology, that in the latter years have developed from being a 'primitive' approach or manifestation to a genuine 'sensory turn' as Paul Stoller (1989), David Howes (1991, 2005), Nadia Seremetakis (1994), Constance Classen 1990, Sarah Pink 2009 etc. advocates.

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**Sable, Trudy** (Saint Mary's University)

## **Emerging Identities: Mixed Messages and Ironies Indigenous Youth in Northern Canada**

This presentation will draw on fourteen years of working with the Innu First Nation of Labrador specifically programs for what are termed "at risk" Innu youth. We will explore the various mixed messages and often contradictory conditions youth, and Innu in general, face to the formation of their identities, and the notion of what it means to be an educated Innu. We will explore a new way of conceptualizing and approaching this "problem", one that promotes supportive conditions and recognizes the strength of the Innu youth, fosters a genuine and inter-generational dialogue, and places the Innu at the source of their own power. Having glimpsed the potential for this to happen during programs developed with some of the most 'at risk' youth today, we found the challenge does not lie with the Innu, but rather in how to make systemic changes within the educational systems and the government of Canada.

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**Sachse, Marcel** (FernUniversitaet Hagen)

## **Arctic Cooperation Between Canada and the USA – Why is it Difficult? A Realist Analyses**

With the Arctic sea ice shrinking and accessibility to marine transport routes and natural resources rising, the Arctic has been changing into a complex political arena. Among others, Canada and the United States are two important political actors in this region. However, both countries currently find themselves in disputes over their marine boundary in the Beaufort Sea and the status of the Northwest Passage. Through a realist perspective, my research looks deeper in the Arctic relationship between both countries and finds arguments why cooperation in the Arctic is wanted but difficult to achieve. Results show that cooperation in the Arctic has global implications and is among other reasons, expensive, logistically challenging as well as in need of strong national Arctic strategies.

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**Salzman, Hal** (Rutgers University)

## **Sustainability and New Pathways to “Development”: Is There an Arctic Alternative?**

This paper, based on field work in the Alaska Arctic, provides a multi-dimensional analysis of "sustainability" which involves the ability of the communities to maintain their cultural, social, and economic integrity as they respond to various changes, challenges and opportunities of „development“. The past few years have seen natural resource and marine transit development in the Arctic that raises new sets of challenges and opportunities for communities. Although the challenges and threats to community integrity are often recognized, there is less research on new developmental pathways. In particular, communities in Arctic Alaska have developed the insitutional framework that can provide insight into development pathways that can incorporate socio-economic benefits of urban/industrial societies and the ability to maintain cultural and social integrity.

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**Sanderson, Håkan** (University of Nordland)

## **Aquaculture as Development Strategy in Coastal, Indigenous Communities: A Comparative Study of Salmon Farming in Musken, Norway and Klemtu, BC, Canada**

Aquaculture has been promoted as a survival or development strategy for vulnerable coastal indigenous communities in many parts of the world, as this can be carried out in remote locations and make economic difference to such communities. But it is also obvious that lack of capital, infrastructure and formal training required in modern aquaculture can make this strategy poorly suited. Other studies also indicate that the situation in terms of indigenous rights to the resources and the properties of the management systems are very important for the outcome of this strategy. This paper analyzes two cases where aquaculture development has been used to develop small indigenous communities and shows that the Canadian case has been substantially more successful than the Norwegian one. This can mainly be explained by properties of the communities as well as the indigenous rights and aquaculture management systems in the two countries.

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**Sanderson, Håkan** (University of Nordland); **Forstorp, Per-Anders**; **Kukarenko, Natalia**

### **Improvise, Adapt, Overcome - Educational Cooperation and Exchange in Higher Education Between North Norway and Northwest Russia**

The paper analyzes educational cooperation between universities in North Norway and Northwest Russia and focuses on the institutional similarities and differences in the national frameworks, rationales, organization and activities between the two countries, and how these play out in the practical collaborative efforts and student exchange. The findings indicate that the rationale for internationalization and the way this work is organized is getting increasingly similar. The economic incentives are very different, and the Norwegian incentives facilitate internationalization and collaboration in both countries. A distinct Barents educational policy space is slowly emerging, but the student exchange flow is however still very asymmetric.

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**Savinova, Antonina N.** (M. K. Ammosov North-Eastern Federal University); **Filippova, Viktorya** (Institute of Humanitarian Research and Problems of Indigenous Peoples of the North, Siberian Branch, Russian Academy of Science); **Fondahl, Gail** (University of Northern British Columbia); **Lazebnik, Olga** (St. Petersburg state University); **Poelzer, Greg** (University of Saskatchewan)

### **Changes in Forest Yukagirs' Traditional Nature Use, 1997-2013: Local Views**

Sustainable development of indigenous peoples of the North is often directly connected with their 'traditional nature use'. The Yukagirs of Sakha Republic (Yakutia) have not developed economic activities in the post-Soviet period that are competitive in the market place, but are still highly dependent on such 'traditional nature use'. This paper looks at the Forest Yukagir, residing in Nelemnoe village of the Verkhnekolymskiy district (ulus), where part of the indigenous population depends derives income from employment in local government services (kindergarten, medical center), and a significant part remain dependent on 'traditional nature use' activities (hunting, fishing), organized via an obshchina, "Tekki Odulok".

Research carried out in 1997 identified local opinions on and concerns about traditional nature use, and on land-use, land tenure and self-governance issues. The same questionnaire was administered once again in 2013. Our paper analyzes the changes in the reported traditional usage of resource by the Yukagirs of Nelemnoe, and shifts in opinions about land tenure and self-governance. Based on this analysis of changes over a 15 year period, we offer preliminary recommendations for sustainable development of the forest Yukagirs of Yakutia.

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**Schreyer, Christine** (University of British Columbia – Okanagan)

### **Language Stewardship and Land Stewardship: (Re)claiming Taku River Tlingit Language Through Place**

This paper examines how Taku River Tlingit citizens are engaging in both language stewardship and land stewardship in order to increase sustainability practices in their territory. Within the town of Atlin, British Columbia, children no longer learn Tlingit as their first language and the community has developed various strategies to bring the Tlingit language back into use little by little. These plans are evidence of their language stewardship or their desire to assert responsibility in caring for their language. However, in this community, many of the examples of language stewardship are also examples of land stewardship since they are tied to genres of place or expressions of culture that are bound to a particular territory or landscape, such as place names, maps and government policies on land use. This paper will also discuss how these concepts of language and land stewardship may be applicable in other locales across the North.

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**Sem, Tatiana M.** (Department of Ethnography of the peoples of Siberia and Far East, The Russian museum of Ethnography)

### **The Aldan Evenk Shamanism**

Evenk Shamanism is of family type and considered as one of the most powerful in Siberia, unlike the others there are full set of a ritual costume, a drum, a baton and cult objects. Until recently Aldan Evenk of the river Timpon region had two shamans – Semen Stepanovich Vasiliev (the sacral name Savei, whose roots were from the upper world) and Matrena Petrovna Kurbul'tinova (considered as the most powerful shaman, whose roots were from the lower world). As Savei told, his soul could fly to the Venus, the Sun and the stars of Ursa Major. He had a big shaman gift, which he got at 15 years old. He came ill with a shaman sick. The spirit ancestor came to him in a dream and told him to be a shaman. He suffered for 6 years and then the special clothes, drum and baton were made for him. He began to held shamans rituals, to heal and to foretell the future. Shaman Kurbul'tinova during the ritual entered in an ecstatic trance and felt the flying to the spirits of other worlds. She visualized that she swallowed a birch – a symbol of the world tree and turned herself into another Universe. She moved along the birch to upper and lower worlds and sung as a cuckoo, her spirit-helper. The shaman capacity for spiritual flying is a peculiarity of the shamanism. At present the shamanism of Aldan Evenk is in decline, in a view of death of two powerful shamans.

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**Sergunin, Alexander** (St. Petersburg State University)

### **Russia's Arctic Industrial Centres' Paradiplomacies and Urban Sustainability**

The paper aims at examining Russia's Arctic industrial centres' international policies. Particularly, the paper focuses on the following strategies/methods of their paradiplomacy: making direct agreements with international partners; attracting foreign investment; creating regions' positive image; cooperation with international organizations; establishing representative offices in foreign countries; city-twinning; capitalizing on national diplomacy and federal infrastructures, etc. The institutional framework available for the sub-state actors in the Arctic region is examined. The implications of paradiplomacy for Russia's domestic context and Arctic strategy are analyzed. Particularly, this study aims at examining how the international cooperation helps the northern cities to solve local problems and ensure urban sustainable development. The consequences of the sub-national actors' international activities for the centre-periphery relations in Russia are discussed.

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**Sergunin, Alexander** (St. Petersburg State University)

### **Russia's Military Strategies in the Arctic: Myths and Reality**

The paper aims at examining Russia's military strategy in the Arctic region. The ongoing debate on the nature and strategic goals of Moscow's security policies in the High North is studied. The main modernization programs of the Russian armed forces (navy, air and land forces) and border guard service are discussed. This analysis is undertaken to understand whether the above-mentioned modernization programs will provide the Russian armed forces with offensive capabilities or they have purely defensive nature and aim at protection of Russia's national sovereignty over the Arctic and the country's legitimate economic interests in the region. The paper will examine the possibilities for the military-to-military cooperation between Russia and other Arctic states as well as for the development of confidence and security-building measures in the High North.

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**Shadian, Jessica** (Political Science and International Relations, Associated Researcher, Anthropology Research Team Arctic Centre, University of Lapland)

### **Mukloks on the Ground: Community-Based Monitoring and Regional Arctic Governance – Shall the Twain Ever Meet?**

It is well known that the exploration and development of hydrocarbons and other extractive industries in the Arctic is on the rise and will likely only continue to increase. To address these developments, the Arctic Council has begun to pass a number of binding declarations. Most noteworthy are the 2011 'Agreement on Cooperation in Aeronautical and Maritime Search and Rescue in the Arctic' (SAR) and the 2013 Agreement on Cooperation on Marine Oil Pollution, Preparedness and Response in the Arctic (Oil spill Agreement). This paper will focus on role that community-based monitoring can play in creating effective emergency response arrangements for the Arctic. Ongoing and expected extractive industry developments (not least offshore oil and gas) as well as increased shipping are being played out on the doorstep of many Arctic indigenous communities.

Whereas, the Oil spill Agreement at the least acknowledges the threat of oil pollution for the livelihoods of local and indigenous communities and that indigenous peoples, local communities, local and regional governments and individual Arctic residents have valuable resources and knowledge to contribute to oil pollution preparedness and response, the agreement is, nevertheless, an agreement amongst states. The Declaration focuses on the role and cooperation of and by states and calls for the creation of a mechanism/arrangement to coordinate an oil pollution incident as well as the capabilities to mobilise the necessary resources. The SAR does not make any mention to Arctic indigenous or other local communities and as such it ignores the simple fact that any search and rescue effort will likely set out on its mission from any number of indigenous communities living along the Arctic's shores.

In terms of governance, indigenous communities have achieved the international legal rights to participate in global governance as well as the status of permanent indigenous participants who sit at the negotiating table of the Arctic Council. At the least, indigenous participation should exist at the policy making level. Yet, aside from the political rights to be active agents in constructing legal regimes for search and rescue and oil spill response, indigenous communities living on the Arctic's shores most often possess the local/traditional knowledge necessary to respond effectively and efficiently to an oil spill or other incident. They are, in effect, the boots on the ground. For these reasons this paper will explore the literature on community-based monitoring, post-Westphalian law, legal pluralism and multilevel governance in order to construct a political space where local Arctic indigenous communities can take an active role in writing themselves into emergency response plans for the Arctic. This includes their ability to act as first responders as well as monitors to detect problems and or changes on and off-shore in the Arctic. The case of the deepwater horizon spill will be used as a comparative case study.

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**Shadian, Jessica** (Political Science and International Relations, Associated Researcher, Anthropology Research Team Arctic Centre, University of Lapland)

### **Not Seeing Like a State: Rights Holders Rather than Stakeholders, Is there a Political Space to ensure Indigenous Agency on the Arctic Council?**

The idea of indigenous permanent participants was conceived during the formative years of Arctic regime building. Internationally, it was also a time when indigenous internationalism was on the rise. The creation of the AEPS created a very unique role for the Arctic's indigenous peoples to participate in the politics of the region. Their participation was also a first for international regimes in general. Changing geopolitics of the region in recent years has instigated institutional change for the Arctic Council in order to accommodate the political changes in the regional as well as newly interested non-Arctic political actors. The addendum of new permanent observers, in particular, is cause to revisit the role and meaning of the permanent indigenous participants. This paper will focus on the external and internal aspects of the category of permanent participants. At the external level, this paper will focus on the relationship between the Arctic states, the permanent participants and the observer states with attention towards the future power of the permanent participants in helping to govern the Arctic. Permanent observers must commit to 'Respect[ing] the values, interests, culture and traditions of Arctic indigenous peoples and other Arctic inhabitants. But what does this mean in practice? Internally this paper will focus on one of the biggest challenges for indigenous inclusion in Arctic governance which is to ascertain exactly what constitutes an indigenous "group". The permanent participants are quasi NGO's but they are also much more in that they are actually nations, not interest groups - they are polities. The ICC in particular argues that the indigenous permanent participants are 'rights holders' when it comes to the Arctic and not merely 'stakeholders'. Discussion and reflection as to what the position of permanent indigenous observer actually means is necessary in and of itself and will help us better understand and help conceive of their future role and power in governing the Arctic. These questions are not merely those related to financial restraints but also include transparency, outreach and the mandate they maintain at home.

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**Shapovalova, Daria** (University of Aberdeen)

### **Exploration of Natural Resources in the Arctic on the Continental Shelf Beyond 200 Nautical Miles Prior to Positive Recommendation by the CLCS: Inherent Right or Broad Interpretation of the UNCLOS?**

While Norway is the only Arctic coastal State that has completed the procedure set by the UNCLOS for the establishment of the outer limit of its continental shelf, the process for other Arctic States might take much longer. It is a common view that a coastal State, and not the CLCS, establishes the outer limit, while the Commission's role is purely advisory.

Arctic States' claims for the extended continental shelf are significantly overlapping. Assuming that a State has an inherent right to explore and exploit its continental shelf beyond 200 nm before the procedure set out in the UNCLOS is completed, which dispute resolution mechanisms are in place to prevent conflicts over debated areas? Is the CLCS recommendation significant to the hydrocarbons exploration in the extended continental shelf at all? Finally, is there any role for the ISA in this process?

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**Shelokhovskaya, Larisa** (North-eastern Federal University, Department of Socio-cultural service and tourism; Directorate of Biological Resources and Protected Areas of the Sakha republic, Department of Protected areas and tourism)

### **Nature-Based Tourism and Indigenous People Within Protected Areas of the Sakha Republic: Prospects and Regulations**

In spite of various factors that hinder development of mass tourism in the Sakha republic (Yakutia), nature-based tourism remains one of the most popular forms and attracts many people from diverse countries, which benefits local economy in a certain degree. The territory of Yakutia is about 1 million sq km., and more than 90% of this area is free of industrialization, 30% of the territory is included to the local protected area system, which is represented by arctic, sub-arctic and boreal ecosystems. These territories are also inhabited by indigenous peoples of the North, maintaining their traditional lifestyle. In order to find a balance between nature conservation and interests of indigenous people, for some protected areas a functional zoning was introduced, incl. a zone of traditional land use. This paper examines contemporary status, prospects and regulations of indigenous communities activities in the tourism industry within protected areas in the Sakha republic.

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**Sidorova, Lena** (Department of Cultural Studies, Institute of linguistics and culture of the peoples of North-eastern part of Russia, North-eastern Federal University named after M.K.Ammosov); **Solovyeva, Vera** (George Mason University)

### **Linguistic Diversity: Case of Kolyma (Yakutia)**

The paper is devoted to the following research purposes:

- the contemporary situation of the North languages' minorities: Ukagir, Chukchi - residents of Kolymskoe and Andruishkino villages in multicultural Nijnekolymsky district of the Republic of Sakha(Yakutia);
- the institutional forms of state policy potency that preserve languages;- the possibilities of small communities of chukchi and uikagirs to sustain continued use of their languages in the future within Russian language speaking circumstances.

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**Sidorova, Mayya** (North-Eastern Federal University)

### **Minorities Media: Makers and Consumers**

There are several minority groups in Yakutia: the Evenks, the Evens, the Yukagirs, the Chukchi and the Dolgans. Media is one of the main tools for integration of any community. In Yakutia there are several newspapers issued in languages of minorities: "Tomponsky Vestnik", "Bytantai Togalny" (the Even language), "Ilken" (a group of minorities' languages). There are also a few websites which use the minorities' languages, e.g. "Kuiaar" ("Universe"), a radio and TV station "Gyavan" which broadcasts in the Even. My investigation is devoted to the issue of effectiveness of these media: the demand and average number of consumers. Do these media support language and culture preservation? Do they represent cultural forms of resilience? How the state of these media reflects the linguistic situation. The paper is based on the interview with leaders and members of the minority communities in the urban space of Yakutsk.

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**Simonova, Veronika** (European University at St.Petersburg; University of Tromsø; Kazan Federal University; University of Versailles)

### **'Bringing Wild Home': Stories About Wild Animals and Spirits from Amudisy Evenki Hunters and Reindeer Herders**

Human engagement with wild animals is not limited by hunting but also has important relationship of getting wild animals known through taking separate individuals into human world. In this paper I argue that taking wild taiga animals is for Zabaikal

Evenkis is experiment of interaction with the world of the wild that has two dimensions: the practice of bringing wilds into camps in the boreal forest, and watching wild animals in dreams as substances of human spirits or souls that walk ahead or behind [perednik] while its human-master is sleeping. Through learning narratives of hunters and reindeer breeders about such cases of interaction I suggest that through recognition of both wild animals as intellectual beings that have souls and avanguard spirits, Evenki hunters and reindeer herders create indivisible world of the forest where part of people's and wild animals' nature share certain similarities and have strong relationship with spiritual world.

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**Simonova, Veronika** (European University at St.Petersburg; University of Tromsø; Kazan Federal University; University of Versailles)

### **“Night is Stronger than Day”: Pathways to Nocturnal Sociality in the North**

'Night is stronger, believe me!' – the words of the famous Soviet and later Russian pop-band 'Mirage' is very well known across Russia from the song 'the night is coming' and unbelievably philosophically represent the competition between day and night where day is obviously losing since people became humane and emotional only when darkness comes. This song can be metaphorically attached to the beginning of the discussion opening beautifully the key question of the session 'what is the night in the North? What is its social and cultural condition? In my presentation I will introduce attempts to investigate night in different social-humanitarian disciplines and also examine how earlier scholars watch the night as a method of understanding both natural and social worlds. I will also give examples of how local people approach, interpret, and practice night from my fieldwork that I did among Evenkis in the North Baikal and Zabaikale, Siberia.

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**Simpkins, Maureen** (University College of the North); **Bonnycastle, Marleny M.** (University of Manitoba - Northern Social Work Program)

### **Success in a Complex World: Factors that Influence Northern Female University Students' Educational Plans**

More than 80% of Social Work and UCN students in Northern Manitoba are women. Many face multiple barriers completing their degrees. Traditionally success in post-secondary educational programs is measured through retention and graduation rates. Such measures see success in terms of finishing a 4-year degree in 4 years, while ignoring the complexity of social, political and geographical contexts of Northern communities. Our research involved interviewing 27 post-secondary female students who were either in their third or fourth year of study or have graduated from a degree program. The research provides information regarding women's post-secondary experience that will: (a) provide a qualitative context in order to identify new indicators of success for sustainable and meaningful education in a Northern region; (b) address and respond to challenges women currently face in becoming involved in post-secondary education.

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**Slocombe, Scott** (Wilfrid Laurier University)

### **Yukon Land and Resource Governance: Assessing Social-Ecological System Management and Connections**

Governance of Yukon lands and resources has become both more local and more complex over the last twenty years with the broad settlement of comprehensive land claims, and devolution of powers from the Federal to Territorial governments. This has resulted in largely Yukon-based, comanagement processes for environmental assessment, land use planning, water management, wildlife and fisheries management, and resource development. Some of these processes have been more fully implemented than others, and their mutual and social-ecological interconnections are still evolving. This paper draws on research on governance and management needs, structures, and processes in the southwest Yukon's Kluane region, to explore the ways in which governance and management processes at multiple scales can be made effective and efficient. Recommendations include more ecosystem-based or integrated approaches, clearer roles for better-defined processes, effective utilization of cumulative and regional assessments, and mechanisms for participatory implementation and monitoring.

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**Smieszek, Malgorzata** (University of Lapland/Arctic Centre); **Kankaanpää, Paula** (Arctic Centre, University of Lapland); **Banul, Karolina** (Arctic Centre, University of Lapland); **Stepien, Adam** (Arctic Centre, University of Lapland); **Koivurova, Timo** (Arctic Centre, University of Lapland)

### **Methodological Challenges in the Conduct of Assessments in the Arctic**

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In general terms assessments bring together varied strands of knowledge in a way that is useful for decision making processes. They should not be perceived as merely reports or publications as they constitute fundamental communication channels delivering research results and expert knowledge to decision-makers. As such assessments are considered to be key mechanisms through which science can inform and advise the policy making.

In the Arctic assessments conducted under the auspices of the Arctic Council have been among key policy-shaping instruments in the region's governance. The paper aims at examining methodological challenges in the conduct of these assessments which, regardless of their theme or scope, can share similar features. As the Arctic Council's assessment works develop and incorporate new themes and approaches, the objective of the author is to identify main challenges in their methodology and the still existing bottlenecks within research - decision-makers' communication lines.

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**Sneddon, Duncan** (University of Edinburgh)

### **Monsters and the North in Adomnán's Life of Saint Columba**

Adomnán's Life of Saint Columba is one the most important sources for studying early medieval Scotland and early Gaelic society. Written c. 700 at the important monastic centre of Iona, it is largely a record of miracles, the nature and settings of which give valuable insights into Adomnán's conceptions of geographical space and Gaelic relations with the Picts among other things. Several of the narratives are concerned with monstrous beings, including an account of a monk's voyage "to an area under the most northerly skies... beyond the limit of human exploration" where his boat is attacked by "deadly loathsome little creatures"; another features (allegedly!) the Loch Ness Monster's first appearance on record. This paper will consider these narratives in comparison with monsters in other hagiographies as well as Irish secular literature in order to investigate Adomnán's ideas of physical space and the north in particular.

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**Solovyeva, Vera** (George Mason University)

### **Vulnerability, Knowledge, and Adaptation Strategies Regarding Climate Change in Siberia: Ongoing Research in the Oymyakon (Russia)**

An ongoing study focuses on the impacts of, vulnerabilities from, and adaptation strategies to climate change of two Siberian native communities: the Sakha and the Evens that live in the same area (Oymyakon, Republic of Sakha (Yakutia), Russian Federation). Evens are semi-nomadic reindeer herders; Sakha are horse and cattle breeders. They both practice hunting, fishing, and harvesting natural resources as necessary additions to their food supply. Evens and Sakha are well adapted to the extreme conditions of the north; however, they currently face formidable challenges due to the processes of climate change that interact synergistically with other stressing factors rooted in their recent history. The research is aimed at finding what aspects of their knowledge, culture and other factors Evens and Sakha perceive as a key to their adaptation to climate change and sustainable life, and at exploring the ways their local knowledge can benefit policy and decision-making processes.

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**Sonck, Kirsi** (University of Turku)

### **Socio-Cultural Resilience and Adaptive Capacity**

When examining socio-ecological resilience and adaptive capacity relating to it, the indicators are usually as follow: economic resources, technology, information and skills, infrastructure, institutions and equity. However, cultural factors, such as sense of belonging, sense of community, traditions and identities are often missing although they might play a crucial role when determining how the socio-ecological system will adapt. My study focuses on the inhabitants of the Rymättylä Island in the Baltic Sea, in the Archipelago of Southwestern Finland. I examine the ways the archipelago dwellers have adapted their lifestyles when facing global changes and how they executed their cultural and social capital in order to do so. My paper addresses the question of the role of socio-cultural factors in the process of adaption and the decision-making connected to it.

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**Spiers, Kent** (Lakehead University)

## **Northern Exposure: A Comparison Study of Alaska and Yukon Models of Community Wellbeing**

Research suggests that evaluating the wellbeing of resource dependent communities in the arctic is difficult because there is no agreed upon model of wellbeing. There are many models used in southern communities, but because of the unique aspects of arctic communities such as, subsistence activities, southern models are unsuitable and problematic in the arctic. This presentation will outline the methods used to examine the different models of community wellbeing in resource dependent communities in Alaska and the Yukon. Past research has only examined models of wellbeing by using quantitative or qualitative methods; there has not been a mixed method approach to examine multiple models. By using a case study approach and in-depth interviews with experts, this project will highlight similarities and differences across models in Alaska and the Yukon. Furthermore, it will provide a better understanding for a suitable model of wellbeing in resource dependent communities in the arctic.

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**Stammler, Florian** (research professor, coordinator anthropology research team Arctic Centre, University of Lapland)

### **How Does Memory Become Collective and How Does it Travel Among Coastal Residents of the Arctic?**

This paper introduces to the session and shows how oral history can be used not only as a method to document personal individual experience of marginalised citizens, but to contribute to larger debates on the making of memory, the particular role that anthropologists have in that making, and ultimately to identity construction projects in the field sites we work. Narratives by indigenous inhabitants in this session contain a set of shared elements revealing the centrality of the Arctic environment and its remoteness to capital cities where political decisions were made that intended to influence all residents equally. Yet, our research reveals the unexpected diverse social life that such decisions develop through life-history narratives of indigenous Arctic elders. This paper explores the process of upscaling oral history in three stages: from individual memoirs through collective memory shared inside the community to public history represented vis à vis the world outside the community of Bykov Mys, the central village of Lena River Delta fishing in Arctic Yakutia, Siberia. I suggest that participating and following the process of transforming individual memoirs to ingredients of a collectively shared memory, and from there onwards to publicly disseminated history, we can understand how anthropological fieldwork contributes to those larger debates on societies' relation to the past that have sometimes been missing in oral history studies focusing on individual experiences only. The examples from the Lena River Delta show how the topic of relocation becomes a major ingredient of collective memory building, where the emphasis of the community shifts more and more to highlighting peaceful interethnic coexistence as a building block for identity.

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**Stammler-Gossmann, Anna** (Arctic Centre, Arctic Anthropology/Sustainable Development Group, University of Lapland)

### **Changing Barents Sea: Fish – Fishers – Fishery**

Changing Barents seascape has increasingly become an important theme in relation to the fishery not only as a mere environmental factor. In the northern coastal communities it may be valued as an economic good or commodity, but also as a social equity, as a sacred substance or imaginary space. Among the indigenous peoples, the coastal seascape is increasingly conceived as a 'contested' space. Occurring and predicted changes in material attributes of water may cause shifts in meanings and force people to adopt new water-use practices.

This paper discusses how changes in the water 'physicality' and increased industrial sea activities in the Barents Sea bring new challenges for the intricate relations between people, sea water and fish. Based on anthropological fieldwork in the coastal areas of Northern Norway and Northern Russia the paper analyses the ways in which changes are understood and valued in a variety of social settings (declining or flourishing fishermen communities, small or large economic enterprise) and between different sectors (production of farmed fish and recreational fishing, fishing of invasive and traditional species, commercial fishery and off shore industrial development). I conclude that changes are rather than absolutely perceived as facts negotiated according to narrators' diverse perceptive spheres.

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**Stammler-Gossmann, Anna** (Arctic Centre, Arctic Anthropology/Sustainable Development Group, University of Lapland)

### **Finnish and Russian 'Rules of Drinking'**

Alcohol studies have been heavily represented by research on pathological outcomes of alcohol use. However, the value of drinking as 'normal' behavior is another side of this phenomenon and deserves the same attention as a 'problem-emphasized' approach. Maybe in this way we will be able to understand better than now the elusive nature of all definitions related to drinking. This paper approaches northern drinking in relation to culture's 'normal' way of drinking, as a social act, 'performed in a recognized social context' (Douglas 2003). The subject of inquiry is the existing set of values attached to what people in Finland and Russia may refer as 'normal drinking', as an accepted part of life in society, informal patterns of rules when, what and how to drink, as well as social uses of drinks. Comparing similarities and differences in two national contexts, I also trace the patterns of social control. In doing so, this paper refers to the existing forms of the state control of alcohol consumption.

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**Stammler-Gossmann, Anna** (Arctic Centre, Arctic Anthropology/Sustainable Development Group, University of Lapland)

### **River and People – riverpeople: The Making of a Siberian Place**

This paper analyses important episodes of the past and present that have shaped the community life of Myndahai, a small settlement in the North East of Russia, Yakutia. Events experienced by villagers represent different meanings informed by political and economic agendas of the Soviet time, by revived spirituality and practices of pastoralism. Seemingly not related different occurrences in this place have in the local interpretation one central connecting element – they all are attributed to the presence of the river. This paper engages with how people place themselves in relation to water and to what extent these relations facilitate place understanding and community's contemporary life.

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**Staples, Kiri** (University of Saskatchewan); **Natcher, David** (University of Saskatchewan)

### **Gender and Decision-making in Natural Resource Management in Yukon Territory**

Across the Canadian North, co-management boards have become a central part of natural resource management. The purpose of these institutions, based on agreements between Aboriginal, territorial and federal governments and resource users, is to manage natural resources in more sustainable ways by sharing responsibility for decision-making between a diverse range of interests. Despite this objective, most co-management boards in the Canadian North have limited female representation within their board membership (Natcher, 2013). This project examines the implications of this finding by investigating the extent to which gender affects decision-making on co-management boards in the Yukon Territory. It focuses specifically on women's experiences as co-management board members and considers whether or not gender dynamics influence the nature of the decisions that are made by these boards. Although limited research exists in this area in the Canadian North, these issues are an important part of establishing socially and ecologically sustainable management decisions.

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**Steenholdt, Naja Carina** (University of Greenland)

### **The Hunting Profession – A Socio-scientific Analysis & Discussion**

Hunting is a crucial part of Inuit culture, history and knowledge. The Greenlandic people have relied on hunting for time immemorial. The number of hunters, however, has been decreasing for more than a century. In this thesis I explore why the number of hunters has decreased. The increasing societal expectations to formal educational skills place the typical hunter in a grey zone. I claim that traditional livelihoods involving hunting and fishing in Greenland are being marginalized due to political, economic, environmental and cultural change. In this thesis I find that hunters face multiple challenges, the greatest of which appears to be political limitations and economic strains. Following that, I conclude that the hunter as well as the hunting profession is being marginalized in the labor market.

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**Steinberg, Philip** (Durham University); **Medby, Ingrid Agnete** (Durham University); **Bruun, Johanne** (Durham University)

### **The Race for the Arctic (Council)**

It is puzzling that so much effort was expended by the six non-Arctic states that successfully petitioned for admission as permanent observers in May 2013, given the relative insignificance of the Arctic Council and the subordinate status of observers in the Arctic Council framework. To understand what drove each country in its quest for observer status, this paper

turns not to the official statements of foreign ministers, but rather to the news media from each country, which had the burden of informing each nation's citizens about their interest in a distant region. An analysis of media reports from these six countries is paired with an analysis of reports from the eight Arctic Council members states and the six pre-existing permanent observer states to interpret how the Arctic is being constructed as a space that matters and how this is refracted in the perceived roles of states, permanent participants, and observers.

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**Stephenson, Eleanor (Ellie)** (Department of Geography, McGill University); **Pearce, Tristan** (Sustainability Research Centre, University of the Sunshine Coast; Department of Geography, University of Guelph); **Cunsolo Willox, Ashlee** (Department of Nursing & Department of Indigenous Studies, Cape Breton University); **Shiwak, Inez** (My Word: Storytelling & Digital Media Lab; Rigolet Inuit Community Government); **Kaodloak, Susan** (Ulukhaktok Community Corporation); **Klengenber, Laverna** (Ulukhaktok Community Corporation); **Ford, James** (Department of Geography, McGill University); **The Rigolet Inuit Community Government**

### **Local Perspectives on the Formalization of Knowledge Transmission**

Formalized programs that teach land skills and local and traditional knowledge are unfolding across the Canadian Arctic to ensure such knowledge is passed on, support health and wellbeing, enable adaptation to environmental change, and respond positively to stressors that have compromised knowledge transmission. Working in association with the Nunamin Iliihakvia: Learning from the Land program administered by the Ulukhaktok Community Corporation in Ulukhaktok, Inuvialuit Settlement Region, and the IlikKuset-Ilingannet/Culture Connect! program administered by the Rigolet Inuit Community Government in Rigolet, Nunatsiavut, we explore local perspectives on the move towards formalizing knowledge transmission. We situate findings in the context of three broader questions: How might formalization change the knowledge system and social relationships that underpin it? How do funding agency and research needs, such as evaluation and priority areas, affect the local implementation and continuity of programs? How can formalized programs remain in line with local values for education?

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**Stepien, Adam** (Arctic Centre, University of Lapland); **Kankaanpää, Paula** (Arctic Centre, University of Lapland); **Koivurova, Timo** (University of Lapland/Arctic Centre)

### **Stakeholder Engagement and Multidimensional Learning in Assessment Practice: Lessons from the Strategic Assessment of Development of the Arctic Process**

The prescribed best practice for environmental/integrated assessments (Mitchell 2006; UNEP 2009) or strategic impact assessments (Therivel 2009) includes both a strong participatory element and tools designed to conduct/produce assessments as true knowledge-policy 'boundary objects'. These areas of methodological challenge are discussed drawing upon experiences from implementing EU Arctic Impact Assessment, an EU-funded study assessing implications of Arctic developments and appraising the role of European Union's policies. The process was based on combining stakeholders' influence on assessment outcomes with strong learning component, facilitating the understanding of Arctic and EU complexities among actors involved. Project's strengths and shortcomings indicate some characteristics of successful practices. This self-reflective paper concludes that the relevance and effectiveness of stakeholder engagement and learning process depend on careful and consistent design of the assessment: from objectives to practical details. The appropriate combination of input and learning as well as the critical role of time factor are highlighted.

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**Stoor, Krister** (Department of Language/Sámi Studies, Umeå University)

### **The Power from Within: Karin Stenberg a Forest Sámi Woman's Political Struggle in the 1900s**

In this paper I will examine the forest Sámi tradition in northern Sweden during early 1900s. A semi-nomadic culture, with hunting, fishing and a small scale farming. One of the key persons in the area was Karin Stenberg. She became the political leader and traditional healer, together with her siblings. As a healer in this context has nothing to do with the body literally, but a healer for her people. Karin Stenberg was an excellent yoiker, storyteller and like other forest people made their songs to remember and to entertain, so did she. A lot of research has been done on Mountain Sámi people through the years. However, few researchers have analyzed the forest Sámi tradition. This paper proposes to discuss why Karin Stenberg became this leader for the forest Sámi peoples. Karin Stenberg as a teacher and a traditional healer were the center until her death 1969.

**Storey, Keith** (Memorial University)

### **FIFO in the Canadian North: What has 40 Years of Experience Taught Us?**

Commuter work and specifically fly-in/fly-out work, or FIFO, has been a feature of oil and gas and mining exploration and production activity in the Canadian North since the 1970s. Designed to meet labour requirements in regions where there was insufficient skilled labour and workforce accommodations, such work arrangements are now standard practice. While initially regarded as a way of developing resources while at the same time minimizing the environmental footprint and social disruption associated with such development, there has been only limited reflection on the actual costs and benefits of FIFO for northern Canadian communities and residents. This paper explores some of the key issues associated with the use of FIFO in the Canadian North and identifies some of the ongoing knowledge gaps that exist in spite of several decades of experience with these work arrangements.

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**Strauss-Mazzullo, Hannah** (Arctic Centre, University of Lapland); **Mazzullo, Nuccio** (Arctic Centre, University of Lapland)

### **The Construction of Legality: Legal Consciousness in the Arctic**

The Arctic region has become centre stage of global geopolitical contestation, exhibiting a strong reliance on scientific knowledge and international regulatory frameworks. Resource extraction, environmental degradation and the struggle for rights of indigenous peoples reinforce an increasingly legal framing of Arctic livelihood. This paper proposes to study the growing legal consciousness among a variety of groups in the Arctic context (local communities, indigenous peoples, industrial enterprises, political and administrative entities) from a socio-legal perspective by using qualitative methods. How do people understand and make sense of laws in their daily lives? How does the exchange over legal questions shape and modify common interpretations of law? How and to what effect are these interpretations mobilised in the political struggle over rights and resources? This paper will compile and analyse examples of legal consciousness and outline how Arctic residents contribute to the construction of legality. In addition, contestations arising from the differences between legal orders will be highlighted, facilitating an account of the common heritage of legal orders in interaction.

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**Strawhacker, Colleen** (National Snow and Ice Data Center, University of Colorado); **Pulsifer, Peter** (National Snow and Ice Data Center, University of Colorado); **Gearheard, Shari** (National Snow and Ice Data Center, University of Colorado)

### **Effectively Managing Data from the Social Sciences: Challenges and Approaches to Making Social Science Data Accessible for the Long-Term**

Scientists are realizing the importance of social science research to fully understand how the rapid environmental change in the Arctic will affect human populations living in the Arctic and beyond. Millions of dollars are invested in scientific research, including in the social sciences, on the changing Arctic every year, and with that investment, scientists have begun stressing the importance of preserving these collected data for future analysis. With the increased recognition of the importance of social science data, however, numerous challenges and obstacles exist to effectively managing data from the social sciences. Data from the social sciences, for example, frequently take a different form from data from the physical sciences and can be highly dependent on context. This presentation will address the challenges of managing data from the social sciences, including maintaining privacy of subjects, preserving context of the data, and ensuring the data are preserved for the future.

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**Strecker, Lisa** (University of Alaska Fairbanks)

### **Kamchatkan Sled Dogs: Traditional Sled Dog Husbandry vs. Modern Mushing in the Russian Far East**

In Northern Kamchatka traveling on snow-machines is extremely expensive, especially when compared to sled dog travel. Even in the capital Petropavlovsk, the political and economic center of Kamchatka, snow-machines are considered a major expense. Ironically, there where more people have jobs and goods cost less, sled dog owners complain about high prices and difficulties in acquiring gear and new dogs. They attribute these difficulties to the remoteness of Kamchatka. Northern, rural dog team owners rarely if ever voice such complaints.

This paradoxical situation indicates two completely different approaches to sled dog keeping and driving. In Northern Kamchatka, sled dogs are still an inherent part of the Native subsistence economy and social life; mushers (sled dog drivers) in the capital pursue a competitive, sportive approach on the model of Scandinavian and Northern American dog keeping. This study presents a comparison of two different forms of sled dog husbandry in contrasting subsistence and wage labor/commercial environments.

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**Sulyandziga, Pavel** (RAIPON - Russian Association of Indigenous Peoples of the North); **Yefimenko, Alona** (Arctic Council IPS)

### **Indigenous Peoples and Resources in The Russian North**

Russian North, Siberia and the Far East - is not only rich in natural resources due to its production and trade, which form today the economic power of Russia and where more than 10 million Russian citizens live and work in harsh environments. A special category of these people – about 40 indigenous peoples groups numbering about 270 000 people with their traditional cultures and lifestyles. Their ancestors for centuries were engaged in reindeer herding, hunting and fishing. We should be grateful to these people who preserved and continue to preserve our country, not only a vast territory, but also the richest storehouses of natural resources. However, the extraction of resources without considering the interests of indigenous peoples which leads to massive violations of their constitutional rights. Previously lands reserved for the Northern indigenous peoples use are now posted by regional authorities for competition, indigenous hunting grounds are sold to logging companies. Ancestral lands of indigenous peoples are handed over to industrial companies. Indigenous hunters and fishermen peoples became poachers at their homes, their rifles are confiscated guns, fishing nets, fish or animals, they hunted and fished are taken.

But today, I must admit that I am not here as an opponent of the development of natural resources. My example - is an example of the evolution of opinion, when your mistakes and experience make you to adjust to the principles of the contemporary world, and through personal thinking comes the understanding that you are not the navel of the earth in this life, that, in addition to your interests, there are many others who should be considered. And everyone should know that. If applied to a discussion of today's conference, neither the state nor the company or the indigenous peoples and the environmentalists, no one else can or should behave in such a way that all the others should adjust to. Why do we really have to respect the rights of the peoples of the North? Are they better than others? Why should we give them any preferences? These are very narrow-minded questions, which we receive very often, even from those who are according to their work responsibilities must comply with these rights, companies operating in places of residence and economic activities of indigenous peoples ask those questions, because they believe that no privileges should be given just because people are indigenous.

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**Summerville, Tracy** (University of Northern British Columbia); **Wilson, Gary** (University of Northern British Columbia)

### **All Aboard or Watching the Trains Go By? Globalization and Northern BC**

The development of the northern spur of the Asia-Pacific Gateway and Corridor (APGC) was heralded by many as a critical piece of infrastructure that would transform the economy of northern British Columbia. For the most part, communities across the north accepted this promise and waited for opportunities to emerge. Communities like Prince Rupert and Prince George, the two largest communities in northern British Columbia, were able to take advantage of these developments and their geographical location along this transportation corridor to transform themselves into regional hubs. Other, smaller communities along the route connecting Prince Rupert and Prince George (and beyond), however, have not felt the direct benefits of the APGC. Metaphorically speaking, for many communities in the north, the corridor, a long passageway with lots of access doors, has become a tunnel, a closed passageway connecting two points.

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**Tang, Keren** (University of Alberta); **Community Wellness Program**, (Yellowknives Dene First Nation); **Jardine, Cindy** (University of Alberta)

### **Experiences from Northern First Nations Community: Implications of Culturally Relevant Physical Activity in Health Promotion Practice**

This community-based participatory research project explores physical activity with the Yellowknives Dene First Nation community in the Northwest Territories. Aboriginal youth documented on video the community's experience with and perspective of physical activity. Community members then assessed lessons learned from the youth perspective, developing concrete steps to improve engagement with physical activity. Through the process, youth identified physical activity as more than sports; traditional games and activities on the land are also important. Community members further commented on the role of technology, adult and family influence, access to land, and resource availability in affecting people's physical activity. Ongoing conversations raised consciousness about active living and culturally and geographically appropriate physical activity solutions. This research demonstrated various ways one First Nation community stays active. Traditional ways of life is critical to Dene people's health and wellbeing. Recommendations include integrating on-the-land programs as culturally relevant health promotion strategies in Aboriginal communities.

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**Tang, Keren** (University of Alberta); **Community Wellness Program**, (Yellowknives Dene First Nation); **Jardine, Cindy** (University of Alberta)

### **Participatory Video: Exploring Physical Activity in Northern First Nations Communities**

Given the complex dynamics of the North and the important role of Indigenous sovereignty and knowledge, participatory methods are becoming critical tools that link communities with research for the betterment of livelihood. This research engaged youth in a participatory video project where participants documented their experiences with physical activity. Community discussions then provided feedback on the videos, segueing into a broader conversation about intrinsic motivation, cultural identity, active living, and challenges and successes of organizing physical activity initiatives. The process generated ideas to mobilize all community members to be active. During family suppers where we shared research outcomes, community members voted for their favorite physical activity idea, which will be realized by the local collaborating organization. Lessons learned from this research provide insights about relationship and trust building to achieve equitable and meaningful partnerships, potentially serving as a guide for others who are working with northern communities.

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**Tejsner, Pelle** (Eskimology and Arctic Studies, Copenhagen University)

### **Greenlandic Mining in Recent Memory: Experiences of Conflict and Collaboration on a Horizon of Opportunities**

In Greenland, the combination of further reductions in ecosystem services caused by rapid climate change and concomitant increases in industrial development may spell significant consequences for Arctic wildlife and local Inuit who continue to rely on the biodiversity of coastal environments. As multi-national mining firms converge upon Greenland, it becomes a key priority for researchers working on behalf of local communities, to assess and identify not only the negative, but also, positive initiatives and developments as these relate to the continuation of sustainable livelihoods. Based on a review of Greenlandic mining activities in recent times, commissioned by the Committee for Socio-sustainable use of Greenland's Natural Resources (University of Copenhagen), the presentation explores some of the lessons learned from previous cases of conflict and collaboration asking: how previous community experiences with the industry; may inform contemporary debates about informed consensus and sustainability in the Arctic today?

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**Tennberg, Monica** (Arctic Centre, University of Lapland)

### **Regionalism, Economy and Knowledge: Problematizing the Arctic**

The purpose of this paper is to discuss the relationship between regionalism, knowledge and economy from the perspective of governmentality in the Arctic context. Governmentality here refers to the ways in which the economy is constructed as a part of political reasoning and the practice of region-building. Much of the regional studies in the Arctic emphasise political or legal region-building, but forget the economic dimension of regionalism. Regional governmentality – a political rationality and practice of region-building – requires knowledge about politics and the economy and the connections between the two. In Foucaultian perspective, making the economy visible and challenging the invisibility of the economy in the sphere of politics is a critical approach. The governmentality perspective suggests that the economy should be understood as socially constructed, time-space bound discourses and practices to organize relations between resources, peoples, institutions and agencies, closely connected to political practice.

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**Teräs, Jukka** (Nordregio – Nordic Centre for Spatial Development)

### **Arctic Local Communities and the Competence Building in Relation to Large Mining Projects - The North European Experience**

Arctic mining industry in North Europe has recently experienced an upturn – the second generation of the mining industry is taking off. Besides domestic actors, the current re-emerging mining industry consists of a number of international well-known mining companies. The resources and competences related to the renaissance of the mining activities remains a challenge. Local community plays an important role in building up the competences for the mining activities. The paper analyses the role and importance of local communities in building up the necessary competences in the Arctic mining regions. A literature review is followed by a case study of an Arctic mining region in Sodankylä in North Finland. How and to what extent have the local communities contributed to the mining activities especially regarding competence building? Moreover, the paper discusses the Arctic interplay between (multinational) mining companies, local community, and other interest groups in competence building.

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**Turcotte, Catherine (Kate)** (Colby-Sawyer College)

### **SLiCA 2.0: New Directions**

The paper being presented puts forth an argument for the development and execution of a follow-up study examining the living conditions of Arctic indigenous peoples (SLiCA 2.0). Discussion will include the importance of introducing additional indicators. Specifically, I propose new domains be added to SLiCA exploring: attitudes toward/patterns of internet usage and participation in various forms of social media; perceptions of and attitudes toward climate change both globally and more locally; and patterns and effects of outmigration and the impact of outmigration on individuals remaining in communities.

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**Uitangak, Elisapi** (Ikaarvik School); **Qalingo, Lucy** (Ikaarvik School); **da Silveira, Yvonne** (Université du Québec en Abitibi-Témiscamingue)

### **The Use of Videoconference in the Context of Inuit Teacher Training Programs Comanagement: Advantages and Challenges**

The two Nunavik communities of Puvirnituk and Ivujivik, along with the Université du Québec en Abitibi-Témiscamingue (UQAT), have been engaged in a durable partnership related to the training of Inuit teachers throughout the last three decades. Based on a will to get support for their project of development of their community schools, Inuit school leaders initially approached UQAT with a clear request: putting into place a comanagement group, composed of Inuit and University partners, in order to make decisions about Inuit teacher training. A bilingual and intercultural comanagement group was subsequently created to conduct monthly meetings by teleconference on diverse topics related to the programs management. A year ago, the idea came up to try and proceed to our meeting by videoconference, and since then, the videoconference became a very important tool to the group. Our presentation aims to (1) describe our comanagement dynamics completed by videoconference and (2) subsequently outline advantages and challenges faced by participants.

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**Ulturgasheva, Olga** (University of Cambridge); **Rasmus, Stacy** (University of Alaska Fairbanks)

### **“Anthropological Gaze” and Productive Points of Disorientation in Indigenous Research Methodology**

This paper explores how a new approach of anthropological peer observation has been applied in ethnographic fieldwork in two indigenous Arctic communities in Alaska and Siberia. The approach involved peer observation of research with a team of two indigenous researchers engaged simultaneously in relational research activities with community members as well as with each other. Instead of engaging in yet another auto-ethnographic or self-reflexive enterprise, the study aimed to document the researcher/participant interaction from a double perspective of Native and non-Native anthropologists in order to identify challenges, advantages and disadvantages of conducting research as an indigenous person in an indigenous community. We shall discuss how anthropological peer observation of research levels the field by having everyone involved in the experience

take up both subject and object roles. Peer observation of research turns the anthropological gaze on back on “us” in a way that is not just self-reflexive but is as revealing of “us” the researchers as it is of “them” the researched.

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**Usenyuk, Svetlana** (Dept. of Design, Aalto University); **Hyysalo, Sampsa** (Dept. of Design and Dept. of Management Studies, Aalto University)

### **Proximal Design: Exploring the Agency of Users Through Mobility in Russian Arctic**

By examining mobility in remote Arctic areas, we analyze how challenging environmental conditions evoke people’s creativity as technology users. Based on historical materials and ethnographic observations of user innovations in the transport sector in Russian North, we draw on the phenomenon so-called “proximal design”, in three different modes: 1) the proximal complementation of “distant design” machines (trucks and military equipment) with tuning to ascertain their reliability; 2) the emergence of new type homemade all-terrain vehicles called “karakats” made from salvaged parts to specialize in times and locations where other vehicles turn unreliable; and 3) the traditional craft of sledge-making by nomadic reindeer herders of Yamal Area where materials are proximally collected and shaped. We conclude by outlining a ‘proximal design strategy’ that would help to shape the very way of adaptation and comfortable existence in extreme environment through establishing close relationship between technical objects and their users.

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**Vagramenko, Tatiana** (National University of Ireland Maynooth)

### **Bollywood Nights in the Nenets Tundra**

The paper deliberates on the temporality and fluctuation of religious life in a Baptist community among the Nenets indigenous people (the Polar Urals, Yamal-Nenets Autonomous Area). The author seeks to analyze how the ‘narrow path of Christ’ and the Bollywood movie culture have found their places in the society of nomadic reindeer herders, and indigenized in Nenets moral order. What social norms and practices are developed as part of Nenets’ new religious experience and how they are being changed when the night comes? How day and nighttime social lives are correlated in the community of converted; and how the symbolism of Christian light and ‘heathen’ darkness is displayed through the day light and the darkness of night?

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**Vagramenko, Tatiana** (National University of Ireland Maynooth)

### **Changing Religious Landscape, in Search of Sustainability: Religious Conversion in the Polar Ural Tundra**

The paper examines the phenomenon of post-Soviet Evangelical conversion among the Nenets indigenous people (North-Western Siberia). In the post-Soviet period new opportunities have been created for cross-cultural interaction, revealing a global religious marketplace and opening up Siberia to an ‘army’ of missionaries from different countries, making the Polar Ural tundra a ‘battlefield’ of competitive missionary principles and life strategies. The paper deliberates on the social and cultural outcomes of missionary work and religious conversion. While expressing and interpreting Christian notion of ‘born-again’ native converts are immersed in discussing and reconceptualising indigenous culture, tradition and authenticity. The author seeks to develop an understanding of conversion as a part of wider process of indigenous peoples’ engagement with global society and what they call ‘modernity’. How, as a native response, the converts transform new religious practices into a strategy of empowerment, as a new foundation for Nenets authenticity and indigenous tradition.

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**Vaguet, Yvette** (CNRS-UMR I.D.E.E.S., University of Rouen, Rouen); **Derkatcheva, Anna** (Laboratory of Aerospace Methods, Faculty of Geography, Moscow State University); **Colange, Celine** (CNRS-UMR I.D.E.E.S., University of Rouen); **Tutubalina, Olga** (Laboratory of Aerospace Methods, Faculty of Geography, Moscow State University); **Jeanne, Philippe** (CNRS-UMR I.D.E.E.S., University of Rouen)

### **Arctic Cities in Move: The Case of Oil & Gas Towns in Western Siberia**

While “Arctic goes urban”, Russia has already a worldwide known experience of the urbanization in polar environment. Western Siberia, lying mainly in permafrost area, is urban for a couple of decades. Since mid-1960s, with the development of oil and gas industries, the region has experienced urbanization at a rapid pace (23 out of about thirty towns were created ex-nihilo). Building human residential and industrial infrastructures at this scale, this pace, within such a harsh natural

environment had been a challenge on itself. Currently, towns and country planning experience the transformation of the soviet urban landscapes. The detached house model is spreading here like in many parts of the world. The presentation will discuss, at the regional level, the urban population defined by the number of inhabitants and the urban morphology over time based on the case of three different towns of Western Siberia using satellite imageries and census data since the 1980s.

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**Valeeva, Vilena** (Global Climate Forum)

### **Some Challenges for Stakeholder Engagement in Research on Sustainable Development in the Arctic**

Arctic scientists show a growing interest in the challenging process of stakeholder engagement in research. Those who aim to develop a dialogue with stakeholders should find out how to identify stakeholder groups, how to contact key stakeholders of each group and how to involve them in the research process. Since socio-economic, political and cultural characteristics differ significantly between Arctic regions, it is also important to take into account the national and local context. This paper discusses challenges facing scientists that conduct research on Russia, such as specific understanding of issues of sustainable development and climatic changes as well as political sensitivity of the Arctic topic.

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**Van Bets, Linde** (Environmental Policy Group, Wageningen University); **van Tatenhove, Jan** (Environmental Policy Group, Wageningen University)

### **Adaptation of Marine Communities: Expedition Cruise Tourism on Svalbard**

Marine ecosystem deterioration reveals three scale mismatches in governance of marine social-ecological systems:

1. increased economic development of maritime activities, disproportional to their biogeophysical scale
2. Knowledge generation at global level does not always match with local decision-making and implementation.
3. Global environmental problems affecting small island's local resources lack a mixture of global and local regulations and instruments.

To address these scale mismatches the new concept 'marine community' is introduced. This is a socio-political community organized around maritime activities and their impact on the ecosystem. This paper will investigate how (successful) the marine community on expedition cruise tourism on Svalbard adapts to those scale mismatches and which factors influence this success. Specific attention will be paid to Ostrom's preconditions of adaptive governance on access to knowledge and conflict resolution mechanisms and how those enable the marine community's adaptation by dealing with the abovementioned scale mismatches.

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**van Dam, Kim** (Arctic Centre, University of Groningen); **Scheepstra, Annette** (Arctic Centre, University of Groningen); **Stepien, Adam** (Arctic Centre, University of Lapland); **Gillie, Johan** (Ecorys Nederland); **Vanclay, Frank** (Faculty of Spatial Sciences, University of Groningen, the Netherlands)

### **Addressing Social Issues Associated with Mining Developments in the European Arctic**

Recently, in response to growing global demand, mining activity in the European Arctic is intensifying. Concerns about the environmental impacts of resource development are widely considered, but social impacts receive much less attention. However, it is the social issues that have most effect on communities and people, including indigenous. This paper will address the social implications of current mining developments in the European Arctic. First, we will discuss the wide variety of social impacts on e.g. local governance, economy, traditional activities and education. Second, we will discuss some frameworks for addressing social impacts including Social Impact Assessments, Impact and Benefits Agreements, Corporate Social Responsibility, the principle of Free, Prior and Informed Consent (FPIC) and human rights. Finally, we aim to discuss the diversity in using these frameworks throughout the region. In doing so, this paper offers an exploratory review of how different stakeholders in the European Arctic approach social issues.

542

**Vanek, Susan B.** (Binghamton University - SUNY)

### **Governing Identity: Nation-Branding and Nation-Building in Greenland**

Greenland's movement toward independence is not only contingent on its assumption of the political powers remaining with Denmark but also on the diversification and expansion of its economy. To this end, the Greenlandic government initiated a nation-branding effort in the mid-2000s designed to construct a unique and marketable national identity for country. Originally employing international marketing firms, the nation-branding initiative is part of a larger process of state-sponsored development geared to coordinate and manage representations of the country internationally and disseminate them internally. This paper explores Greenland's nation-branding as part of its nation-building effort, a process that complements, masks, and conflicts with internal social and cultural divisions within the country as well as representations of Greenland promoted in on-going debates of large-scale mining projects. On a broader-level, it examines nation-branding as a tool of modern governance characterized by multiple and intersecting social, cultural, political and economic interests and contested meanings.

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**Varfolomeeva, Anna** (Uppsala Centre for Russian and Eurasian Studies)

### **Mining as Identity: How Vepses Perceive Extractive Industry Development in the North-West of Russia**

The paper explores the historical connections of Vepses, a small indigenous people in Northwestern Russia, to mining industry, and how this traditional involvement operates in contemporary debates about extractive industries in the region. Many anthropologists have looked into indigenous opposition to mining developments. However, we have paid less attention to the situations when indigenous people are predominantly positive towards mining, seeing it as a source of income, or even as a part of identity. The Vepses are an example of an indigenous people possessing a "mineral identity". Already in 18-19c they were famous as skilled stoneworkers. Mining has been considered a traditional Vepsian occupation, a source of pride. In the post-Soviet time the mining deposits of quartzite and gabbro-diabase were partly closed, partly sold to private non-local companies. The situation brings a whole range of themes of indigenous mineral identity and the complex connections between industry and indigenous communities.

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**Vereschaka, Elena** (Museum of Anthropology and Ethnography, Russian Academy of Sciences)

### **Tynevil's Writing**

My research is based on the analysis of the archive document stored in the Archive of Russian Academy of Sciences which contains the information about one reindeer Chukchi who lived in the first half of the 20th century and invented his own pictographic writing. He and his relatives and friends used this system for communication and in their economic activities. My investigation aims to give a description and interpretation of the writing signs not linguistically but from anthropological point of view. I argue that Tynevil's invention was connected with his daily practices and traditional knowledge, and the most interesting that it shows the dominant aspects of his social life and Chukchi's culture.

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**Vestergaard, Cindy** (DIIS - Danish Institute for International Studies)

### **The Rigsfælleskab and Arctic Yellowcake: Challenges and Opportunities for Greenland and Denmark**

On 24, October 2013, the Greenland parliament, Inatsisartut, lifted a decades-long moratorium on mining radioactive elements. For a Kingdom that has otherwise foregone the nuclear fuel cycle (except for medical purposes), the abolishment of the so-called 'zero tolerance' policy has the potential to catapult the Rigsfælleskabet into the world's top suppliers of natural uranium. Greenland's status as a country within a state is accompanied by a complicated legal system within the Rigsfælleskabet, where Greenland has authority over its natural resources and Copenhagen is constitutionally responsible for the Kingdom's foreign, defence and security policies. This system is further complicated by Denmark's membership (and Greenland's non-membership) in the EU. Consequently, the process ahead for Greenland and Denmark in jointly developing a regulatory system to govern uranium will be complex, and one based on a steep learning curve. This paper will look back at the zero tolerance policy, the rationale for its abolishment, and what's next for the Rigsfælleskabet and its nuclear non-proliferation policy.

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**Vinokurova, Liliia** (Institute of the Humanities and the Indigenous Peoples of the North, Siberian Branch, Russian Academy of Sciences); **Filippova, Viktoriia** (Institute of the Humanities and the Indigenous Peoples of the North, Siberian Branch, Russian Academy of Sciences)

### **Gender Aspects of Social Consequences of Climate Changes in Yakutia**

In recent years sustainability of indigenous communities of Yakutia has been more sensitive to climate changes. Now we can observe and discuss not only permanent and visible consequences of climate changes, but also hidden or invisible processes of the adaptation to them. Gender aspects of impact of climate changes in Yakutia are the field of unofficial interest mostly. The monitoring of the gender dimensions of adaptation is absent. But the facts of gender differences in the behavior of members of rural communities cannot be ignored. There are gender differences in the parameters of demographic processes, including social mobility, mortality and morbidity. Perception of climatic changes and the strategies of adaptation to them are differentiated too. The results of the analysis of the various manifestations of gender in indigenous communities of Yakutia inspire to continue and to discuss this work.

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**Vlasova, Tatiana** (Institute of Geography, Russian Academy of Sciences)

### **Demands, Interests and Hopes of the Arctic People and How to Reveal them Through Socially-oriented Observations**

In the era of anthropocene where we do live nowadays, it is becoming more recognized that demands, interests and hopes of people are playing important role in building sustainable socio-cultural, economic and ecological environments. Although speaking about sustainable development or resilience building in the Arctic we put our attention mostly on the negative character of human activities impacts on vulnerable ecosystems and societies in a changing climate, human capacities to navigate rapidly changing Arctic environments, improve quality of life conditions are extremely important to consider. Human capacities are based on demands, interests and hopes of people that are also changing in a rapidly globalizing and technology-modifying world. In this presentation the experience of gathering knowledge about human demands, interests and hopes through the methodology of socially-oriented observations in key regions of observations in the Russian North both urban and rural are presented for discussion. This knowledge will be helpful for understanding why people, special age, gender, professional groups want to migrate or live in the Arctic, how they imagine their best occupation, family structure, natural and build environment, housing and general quality of life conditions. It is extremely important also to know what limitations arctic people perceive and improvements foresee, what best solutions to implement their hopes local people, both indigenous and non-indigenous, find.

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**Vola, Joonas** (Arctic Centre of the University of Lapland)

### **Breaking the Boundaries of Body and Landscape – Micro and Macro Spaces in the Arctic Explorations**

The Arctic has been perceived as Ultima Thule, inhumane space of non-culture, by the outsiders entering the region. The heritage for such perceptions has often emerged as a form of cultural violence for those who have adapted to such spaces. This study looks into ways in which the micro scale imitations of the selected forms of landscape enable people to reach and maintain their existence in the arctic environment but also how such 'cultivation' of imported spaces extended to macro spaces might also perform violence. Presented case studies on the modern icebreaker research vessel Aranda's material culture and colonial school environment among Canadian Innu people examine translation and transferring of landscape into material objects which relate and affect to physical performativity, ergonomics, memory and learning. Genealogy of such practices has the potentiality to expand the forms of life while they simultaneously carry a threat of violence, suffering and distortion.

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**Vola, Joonas** (Arctic Centre of the University of Lapland)

### **'Strong by Nature' – Neoliberal Governance and Sustainability in Inari Municipality**

Inari is a combination of different ethnicities and villages in Finnish Lapland. Another special feature of the area is the long history of economic governance coming outside its borders, while still remaining responsible of its own wellbeing. Latest development in local industries has been moving away from primary production and processing to services, concentrating in tourism. Development which was originally driven by state owned tourism institution has been replaced after the economic depression of the 90's by individual entrepreneurs, alliances and municipality. Meanwhile the tourism entrepreneurs feel that

even though their major positive economic impact; they are not recognized as industry, and that the state owned aviation company is disabling profitable tourism in the area by their flight policy. Multiple stressors are shaping the local actors into economic, responsible, self-sustainable subjects to resist of becoming into peripheral resource resort.

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**Vossepoel, Shannon** (Arctic Institute of North America, University of Calgary)

### **Promoting Sustainable Knowledge through Collaboration: A Proposal for Information Sharing**

In Canada and around the world, information about the Arctic is collected by a variety of organizations and individuals. From traditional knowledge to research datasets to scientific publications, it can be difficult to locate and use this scattered information. The Arctic Institute of North America is keenly aware of the need to both digitize and incorporate new information into its Arctic Science and Technology Information System (ASTIS) and to develop better connections between the publications and research project information contained within ASTIS and the Arctic information that is held by other organizations. As the Arctic Institute of North America enters a new phase, we discuss the future of ASTIS (<http://www.arctic.ucalgary.ca/databases>) and the possibilities for collaboration with other databases, individuals, and organizations to create a truly holistic view of the Canadian Arctic that incorporates research datasets, scientific publications, traditional knowledge, and more.

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**Vuojala-Magga, Terhi** (Arctic Centre, University of Lapland)

### **The Forest Animals and Peoples in Action**

In this presentation I have a deeper look at the concepts of trust and dominance (Tim Ingold). In contemporary studies the concepts of trust and risk in the context of hunting animals have been less discussed than the animal domestication connected to the concepts of dominance and pain. I draw out my examples from the bear hunt and forest dogs and I build up an argument questioning the archaeological studies of animal domestication. Do we have competence to draw the conclusions or generalize the past animal domestication if it is based on our present experiences on animals of specific domesticated species such as horses or dogs? I analyse the concepts of dominance and trust by using different angles of perceptions, learning and memory - not only from human perspective but from the animal behaviour.

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**Vuojala-Magga, Terhi** (Arctic Centre, University of Lapland)

### **The Good and Healthy Poverty**

In this presentation I evaluate the every-day life of the Sámi reindeer herders in a wilderness village in Finnish Lapland. The time consuming life, on the one hand, is full filled with its practical tasks and works, and on the other hand, the needs of other people and family members have to be taken care of, too. Eventually, it costs nothing but it does not bring any income to the family either. From the urban perspective, it could be seen as a life of everlasting poverty with the low level of production. However, such immaterial values as an exchange system of help and goods, enskilment, respect and tolerance are hidden in this social system. I argue that these invisible values of arctic life have not been fully understood in the studies of northern peoples in the context of sustainable development and climate change.

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**Watt, Maxine** (College of Nursing, University of Saskatchewan)

### **Internationalizing Northern Health Education**

This presentation will describe a collaborative initiative between nursing students and faculty from Northern Saskatchewan and Yakutsk Siberia aimed at understanding determinants of health in circumpolar regions. Contemporary biomedical models are typically concerned with individual well-being; however from a circumpolar perspective cultural and wellness play an important role in considering the collective health needs of Northerners and their unique health concerns. A Summer Institute, created in partnership with the University of Saskatchewan, College of Nursing, the International Centre for Northern Governance & Development (ICNGD) and the College of Nursing and International Office of the North Eastern Federated University (NEFU), will immerse northern learners in a culturally focused, circumpolar health and wellness sharing opportunity. The Institute will begin in 2014.

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**Weber, Barret** (University of Alberta)

### **The Development of Nunavut and the Sociological Imagination: Connecting the Personal and the Political**

There is a role for public educators to play in educating the southern public about northern social and economic issues. This paper develops a reading of the creation of Nunavut based on the scholarly literature regarding the spatial construction of Canada's third territory. Although it is now widely recognized that climate change represents important spatial changes in the north, this paper addresses the often underemphasized socio-spatial remaking of the eastern Arctic in post-war Canadian society through innovative land claims and self-governance movements. In particular, this paper will explore how the broader framework of Arctic Urbanization has explanatory power when attempting to understand contemporary political dynamics in Nunavut that have national and global implications.

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**Wensing, Enrico** (George Mason University); **Doubleday, Nancy** (McMaster University); **Hurth, Victoria** (Plymouth University)

### **The Role of Identity Discourse and Value Inquiry in Boundary Organization Collaboration for Sustainability: Guiding Insights from Arctic Communities**

In this paper we combine the concepts of identity discourse and value inquiry with social science research in the Arctic to move toward an idealized global model for boundary organization collaboration on social issues related to generating sustainable communities. We argue that resolving social issues in sustainability might best occur when collaboration is rooted in the recognition and exploration of identity and values throughout a research based social learning process. In this regard identity discourse can serve as an anchor for the inclusion of cultural recognition, the inherent rights to place and freedom, and our collective responsibilities as global citizens. A collaborative inquiry of values serves as a common ground on which to build consensus agreements for action based on shared perspectives of what sustainable futures should look like. We begin to outline a model, in terms of structure and systems, for optimum collaborative learning for sustainability.

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**Westman, Clint** (University of Saskatchewan)

### **Bouncing Along on a Cree Moose-Hunting Trip in Northern Alberta, Autumn 2013**

In late September, 2013, I participated in a week-long moose hunt with a Cree elder and members of his extended family. I will be reflecting directly on this experience and what I learned from it as I discuss the importance of both tradition (history?) and renewal (resilience?). The moose hunt is a key cultural activity and is important in maintaining family members' connections to the land, animals, and tradition. This is particularly the case for those who are not active hunters. Yet many changes are notable! One might even argue that, in spite of changes in technology and context – including massive changes in the land wrought by industrial operations, as well as the presence of Euro-Canadian hunters – moose hunting is still a kind of cultural core for many Cree. I want to consider how Cree relations with animals are being maintained in this context of cultural, linguistic, and environmental change.

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**Wilson, Emma** (International Institute for Environment and Development)

### **Rights and Responsibilities: Re-thinking the Social Licence to Operate**

This paper will present interim findings from the research project Sustainability and Petroleum Extraction: Corporate and Community Perspectives in Northern Norway and the Russian Arctic, funded by the Norwegian Research Council. The project aims to identify and reconcile differences in perceptions and practices of sustainability and corporate responsibility in the Barents Region, providing a foundation for cross-border dialogue and collaboration. This will be done through analysis of case study material gathered in Norway (Hammerfest) and Russia (the Murmansk Region, the Nenets Autonomous Region and the Komi Republic). The project explores how companies, communities and governments negotiate benefit-sharing and to what extent social and environmental sustainability is considered in these negotiations. This paper will outline selected relevant corporate responsibility standards and provide an initial analysis of how these are being implemented in practice in the Komi Republic, northern Russia – with reference to comparable international experience.

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**Wilson, Gary N.** (University of Northern British Columbia)

### **The Evolution of an Ethnic Self-Government Model in Nunatsiavut**

The 1970s marked the beginning of a long journey towards self-government for many Inuit peoples throughout the Circumpolar North. In 1975, the Nunatsiavummiut, the Inuit of Labrador in eastern Canada, formed the Labrador Inuit Association (LIA), an organization that would represent their interests in treaty negotiations with the governments of Newfoundland and Labrador, and Canada. In 2003, trilateral negotiations between these governments and the LIA resulted in the Labrador Inuit Land Claims Agreement (LILCA). Unlike earlier treaties involving Inuit peoples in Nunavik and the Inuvialuit Settlement Region, the LILCA contained a specific chapter on self-government. Furthermore, whereas other existing Inuit governments in Nunavut and Kalaallit Nunaat (Greenland) are based on a public governance model, the self-government system put in place by the LILCA is ethnically-based. Using an historical institutionalist approach, this paper will examine the political, economic and social factors that led to the evolution of this unique self-government model.

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**Wishart, Robert** (University of Aberdeen)

### **The Wrong Kind of Fish: Gwich'in Fish Camps and Questions of Sustainability in the Mackenzie Delta, NWT**

This paper will introduce the importance of fish camps to the Gwich'in ideas of sustainability while attempting to reconcile why fishing and the ethnography of the fish camp has gone largely unnoticed in academic accounts of Gwich'in human-animal relationships. The paper puts forth an explanation for why fishing has been neglected, introducing local arguments about how they might just catch the wrong kinds of fish, while at the same time introducing the corpus of fishing activities included in the yearly round. It historically situates fishing as an important, but largely underestimated, part of the Canadian fur trade and returns to an older anthropological observation that the fish camp has been central to Gwich'in social life throughout history. Fishing is thus entangled in Gwich'in history and their current way of life, and this paper challenges the idea that it can be easily separated from other land based activities.

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**Wormbs, Nina** (Div of History, KTH Royal Institute of Technology)

### **Arctic Assessments: A Scientific Future Business?**

During the last decades the Arctic has been the focus of several scientific assessments, such as the Arctic Climate Impact Assessment (ACIA) or the Arctic Monitoring and Assessment Programme (AMAP). These assessments are not neutral vehicles of knowledge production and collection but carry with them preconceptions not only about the history of the region and its present condition, but also ideas of the future development of the region. The central argument of this paper is that assessments like these form part of the discourse in which an Arctic future is formulated, and which is central to several policy areas. The paper analyses a number of assessments showing the content of those future images. This is part of the project Assessing Arctic Futures sponsored by the Swedish Foundation for Strategic Environmental Research (MISTRA), with the main research question to disentangle and analyze historically produced Arctic futures.

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**Ye, Jiang** (SIIS - Shanghai Institutes for International Studies)

### **China's Role in Arctic Affairs in the Context of Global Governance**

For nearly a quarter of the past century a series of notable changes have taken place in the Arctic area. All of them, whether political, economical, environmental or climate, inevitably brought impact on regional and global governances to cope with new circumstances as a consequence. This article mainly focuses on the role of China which is under great changes and is part of the global changes played in the Arctic affairs in the context of global change and global governance. Firstly the article analyses the changes of Arctic Affairs -- from a national geopolitical issue to a global one; secondly it argues that the Arctic governance should be imbedded in global governance, and thirdly the author will focus on China's role in Arctic affairs and Arctic governance. Through a series analysis of the facts of Arctic activities of China the article explains clearly the China's stance in Arctic affairs and the role played by China in the Arctic governance as well.

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**Yeasmin, Nafisa** (University of Lapland, Rovaniemi Finland)

### **Interaction of Cross-border Immigrant Communities in the Barents Region: Promoting Sustainable Muslim Entrepreneurships**

Cross-border relationship between immigrant communities has a significant role in trade and economy in the Barents Euro Arctic Region although has not yet been discussed widely. The immigrant communities in the Barents Region are facing similar types of challenges. However, immigrants in bigger cities in the region face less number of challenges than those of smaller cities. The cooperation between the immigrants and their enterprises among small cities could be addressed as general problems. Creating stronger social ties between close ethnic immigrants communicates in the border areas would facilitate immigrant entrepreneurships (i.e. producing and supplying ethnic goods, halal meat trade). This paper focuses on the cross border relationship between immigrant communities in the Barents Region, its development so as to promoting growing immigrant entrepreneurships in Barents Region may encourage immigrants to stay in this area. I have chosen Muslim communities across borders, halal meat trade and related interactions as a case study.

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**Yeasmin, Nafisa** (University of Lapland)

### **The Public and Politics of Immigration in the Barents-Euro Arctic Region: A Critical Analysis**

Barents Region is a sparsely populated area and full of natural resources. Dramatic demographical changes mainly decreasing of population is a big challenge for this area. Integration of immigrants in the region primarily their involvement in labor market is needed in order to better use of the natural resources of the region. However, the overall situations of the region do not entirely supportive to different immigrant groups – diverse treatments towards immigrants are found mainly generated from their various origins and skills. The public and politics is not positive concerning immigration issues a sustainable immigration strategy; including enhancing the capability of immigrants to local issues may achieve a stronger economic development. Immigration is opposed by the local public and politics to some extent.

This paper examines whether formation process of immigration strategies and its implementation restricted by the public favor and political influences in the Barents Region. I have chosen Finnish Lapland as a critical analysis.

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**Young, John** (University of Northern British Columbia); **Coates, Ken** (University of Saskatchewan)

### **Open for Business? Historical Perspectives on Province-Building and Globalization in Northern British Columbia**

Northern British Columbia has been shaped, manipulated, exploited, transformed, remade and affected, made prosperous and undermined economically by the forces of global trade and investment and by government policies influenced by interests outside the region. Thus the economic trajectory for northern British Columbia has been shaped by external forces, with relatively little control exercised by the people and communities in the region. This paper reviews the history of economic development of northern British Columbia and illustrates the foundational importance of the global economy and international connections in the development, underdevelopment and transformation of the region. The paper then questions whether emergent endogenous factors within the North have sufficient capacity to respond to the many exogenous factors that shape its development.

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**Yudina, Olga** (University of Waterloo); **Grimwood, Bryan S.R.** (University of Waterloo)

### **Representations of Polar Bears in Tourism: Exploring Power Relations Through Discourse Analysis**

The Arctic tourism industry relies on the (re)creation, dissemination, and maintenance of particular meanings and natures for economic benefit. This paper explores how this industry constructs or portrays polar bears, and the social effects of these portrayals, through an examination of tourism promotional materials associated with Churchill, Manitoba, the “polar bear capital of the world.” Informed by ecofeminist theory, the authors emphasize how tourism supports and/or resists the gendered exploitation of polar bears—a social issue that intersects gender and species studies. The paper shows how various representations of polar bears and the depictions of human-polar bear interactions are not impartial, but embedded contextually and within an intricate web of power relations. Consequently, the authors reveal how these representations

express inequality, power abuse, and domination, and argue for the importance of addressing these issues when envisioning sustainable and ethical engagements between human and other-than-human animals in Arctic tourism contexts.

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**Zamorshchikova, Liudmila** (North-East Federal University, Yakutsk)

**The World View of the Northern Peoples and Language Vitality: Psycholinguistic Issues (the Case of the Sakha Republic [Yakutia])**

The world view (or the ethnic picture of the world) is a major component of culture and language vitality. It contains all the essential elements of cultural knowledge which an individual, belonging to a particular culture, needs in order to adapt to both natural and social components of his/her surrounding environment. This is the lens, so to say, through which people see the world in which to act. The research is aimed at study of northern world view through free associative experiment's database realized in indigenous communities. The associative verbal nets reveal the peculiarities of spiritual and material culture, ethnic stereotypes of behavior, traditional beliefs and specificity of ethnic world view. The strings of verbal associations translate into assemblages of ideas, identities and behaviours which found their owner experientially located in self-contained worlds of people, events, values, norms and constraints.

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**Zamorshchikova, Valeria** (University of Québec in Montréal, M.K. Ammosov North-Eastern Federal University)

**Oil and Gas Development in the Russian North: Major Issues and Indigenous Concerns**

International interest in the Arctic region has intensified today resulting from the potential of resource development, the opening of shipment routes and the growing impact of climate change. High global demand for energy and minerals has led to increasing interest in the exploration of resources of the Russian North. Traditional land use areas are mainly located within zones of political and economic interest.

The issue of an effective dialogue and interaction between stakeholders including government, business and population has become more acute and urgent. In this changing social and economic climate, indigenous systems of traditional resource use are under threat. In Russia the inclusion of indigenous peoples is limited to a few exceptional cases. The paper discusses some of the major issues related to the large-scale industrial development focusing on its impact on indigenous people. It offers a set of policy issues, relating to Arctic resource development with regards to the indigenous population.

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**Zhang, Pei** (SIIS - Shanghai Institutes for International Studies)

**After Kiruna: The Deepen Cooperation Between Arctic and Northeast States in Arctic Governance**

The climate change and rapid ice melting has promoted the Arctic from periphery region into the center-stage of the world, and brought the Arctic and non-Arctic states together closer. Through the successful application to the Observer Status of the Arctic Council in Kiruna, Northeast countries (including China, Japan and South Korea) have gained the unprecedented opportunities to deepen the cooperation with Arctic states in Arctic governance. The aim of this paper is to explore the expectations and cautious of the Arctic states to the Northeast states in Arctic governance and the role the Northeast states can play in Arctic governance in the future. The paper argues the successful and fruitful cooperation between two sides depend on: the accommodation of Arctic states to Northeast states on the one hand, and the incremental value the Northeast states can provide on the other hand.

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**Zhang, Yao** (SIIS - Shanghai Institutes for International Studies)

**Arctic Governance and the Participation of Northeast Asian Countries**

China, Japan and South Korea have become an official observer of the Arctic Council in the last May. This means that the relation between Arctic governance and Northeast Asian is closer. Arctic environment and climate change have great influence on the Northeast Asian countries and the future Arctic sea route is very important to the economy and trade of Northeast Asian countries. Therefore, Northeast Asian countries want to express their concerns in the Arctic governance, provide their own contributions and public goods. Of course, the Arctic states and Northeast Asian countries need to

cooperate closely, looking for common values and interests in Arctic governance, to create a new framework and mechanism for effective cooperation.

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**Ziker, John** (Boise State University)

**Kin Provisioning, Risk Minimization, and Generosity in Indigenous Food Sharing Networks in the Siberian Arctic**

This paper provides an example of how social network analysis can be used to cognize the social relationships involved in indigenous Arctic sustainability. Food sharing is a prominent means by which community well-being and culturally-desirable diet are sustained in Arctic communities. This paper explores the distribution network of interhousehold food transfers following 77 hunting, fishing, and trapping forays documented in the Taimyr Autonomous Region in 2001 and 2003. Independent variables, including genealogical relatedness between households, other similarities and differences in household attributes, reciprocal food transfers, sales outside the community, and non-food forms of reciprocity, are used to test hypotheses about the social and environmental factors that shape a sustainable mixed economy in the Arctic. The implications of the use of network analysis techniques for understanding the sustainability of social norms for sharing are discussed.

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