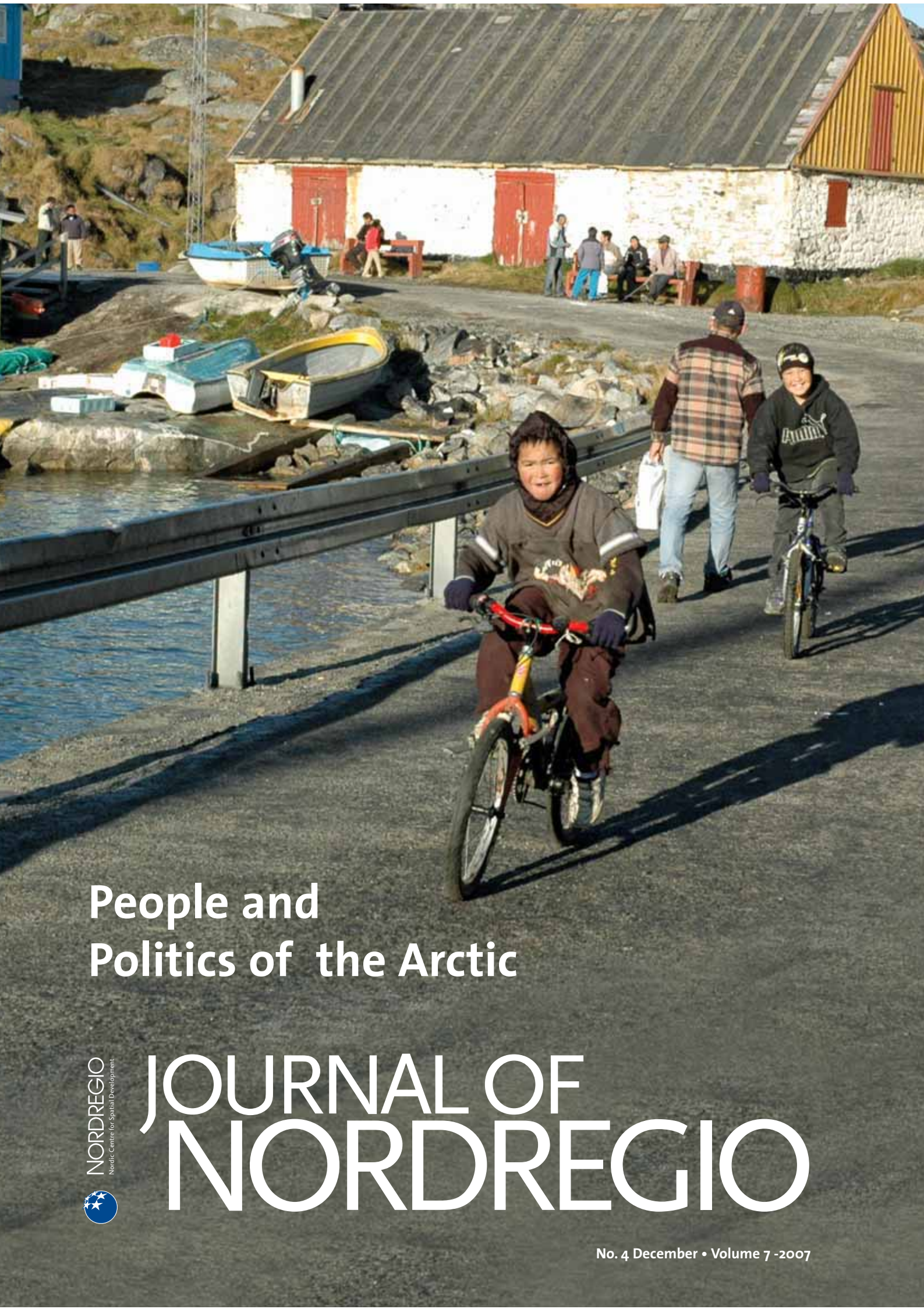


People and Politics of the Arctic

NORDREGIO
Nordic Centre for Spatial Development

JOURNAL OF NORDREGIO

No. 4 December • Volume 7 -2007

Contents

EDITORIAL 3
GEOPOLITICS OF A 'MELTING' NORTH 4
THE ARCTIC STATES AND OTHER INTERNATIONAL ACTORS 6
HOT ISSUES IN A COLD ENVIRONMENT 7
VIEWPOINT: TIME FOR AN ARCTIC TREATY! 10
PROVOCATIVE ABOUT GLOBAL WARMING 12
EXELLENT TIMING FOR POLAR YEAR 2007-2008 13
TWO HONORARY CITIZENS IN NANORTALIK 14
WOMEN DO BETTER IN WAGE-LABOUR 15
ONLY 800 KILOMETRES APART 19
POLAR WOMEN GO SOUTH 20
A REVIVAL OF THE RUSSIAN NORTH ? 24
MISSION AND MAMMON ON THE LOOSE 27
CLIMATE CHALLENGES FOR COPENHAGEN 2009 28
NORDIC ARCTIC RESEARCH 29
AVOIDING MEN AS THE NORM 30
NEW REGIONAL POLICIES 31
ONE REGION - MULTIPLE DEFINITIONS 32

Journal of Nordregio is owned and distributed by the Nordic Centre for Spatial Development (NORDREGIO). The journal appears quarterly and is distributed free of charge. All articles express the views of their authors. Subscription: liselott.happ@nordregio.se

 ISSN 1650–5891

JOURNAL OF NORDREGIO

OLE DAMSGAARD *Director*
ODD IGLEBAEK *Editor*
CHRIS SMITH *Language Editor*

Graphic production: Osigraf Oslo as, Norway | Phone: +47 64 87 60 80

ADRESSES:

NORDREGIO
Box 1658
SE-111 86 Stockholm
Sweden
Tel. +46 8 463 54 00
Fax +46 8 463 54 01
www.nordregio.se

ODD IGLEBAEK
Nordregio
Box 1658
SE-111 86 Stockholm
Sweden
Tel. +46 8 463 54 05
Fax +46 8 463 54 01
E-mail odd.iglebaek@nordregio.se

NORDREGIO
Nordic Centre for Spatial Development

NORDIC COUNCIL OF MINISTERS

Nordregio is a centre for research, education and documentation on spatial development, established by the Nordic Council of Ministers.

Front-page:
The village of Alluitsup Paa in South Greenland. The picture does not reflect the reality that only one out of three persons living here is a female.
Photo: Sigrid Rasmussen

New Nordregio Publications

Continuity or Transformation? Perspectives on Rural Development in the Nordic Countries: Proceedings of a 2 day Workshop hosted by Nordregio, Stockholm, October 10th and 11th 2006. Edited by Andrew K Copus. Nordregio 2007. 171pp. (Nordregio Report 2007:4) ISBN 978-91-89332-65-2 SEK 200

Learning through Evaluation: the Nordic Experience. Kaisa Lähteenmäki-Smith (ed.). Nordregio 2007. 84pp. (Nordregio Report 2007:3) SEK 100, ISBN 978-91-89332-64-5

Pettersson, Katarina: Men and Male as the Norm? - A Gender Perspective on Innovation Policies in Denmark, Finland and Sweden. Nordregio 2007. 71pp. (Nordic Research Programme 2005-2008. Report 4) SEK 100, ISSN 1654-2290

Heikkinen, Timo & Sairinen, Rauno: Social Impact Assessment in Regional Land Use Planning: - Best practices from Finland. Nordregio 2007. (Nordic Research Programme 2005-2008. Report 3) SEK 200, ISSN 1654-2290

Demographic Changes, Labour Migration and EU-enlargement: - Relevance for the Nordic Regions. Ingi Runar Edvardsson et al. Nordregio 2007. 149pp. (Nordic Research Programme 2005-2008. Report 2) SEK 200, ISSN 1654-2290

Place Reinvention in the North: Dynamics and Governance Perspectives. Edited by Torill Nyseth and Brynhild Granås. Nordregio 2007. 157pp. (Nordic Research Programme 2005-2008. Report 1) SEK 200, ISSN 1654-2290

Working Papers:
Neubauer, Jörg: ESPON for Nordic Regions: Breaking down selected results from the ESPON programme for the use in a Nordic regional context. Stockholm 2007. 77pp. (Nordregio WP 2007:4) SEK 100

Turning Point on Climate Change? : Emergent Municipal Response in Sweden: Pilot Study. Richard Langlais et al. Stockholm 2007. 40 pp. (Nordregio WP 2007:3) SEK 100

Pursiainen, Christer: Russia between integration and protectionism: International road transport, ports, and the forestry sector. Stockholm 2007. 79 pp. (Nordregio WP 2007:2) SEK 150

Planering och genomförande för framgångsrik och hållbar stadsutveckling mellan Göteborgs- och Lissabonstrategierna : Resultat av ett samnordiskt projekt. Editor: Michael Viehhauser. 145 s.
(Nordregio WP 2007:1) SEK 150

Order to: library@nordregio.se

No lack of Arctic challenges

Planting the Russian Flag at the North Pole seabed.

The world has probably never seen so many pictures of polar bears at one time as it has this autumn. The white animal of the Arctic struggling on the top of an iceberg has more or less become an international symbol of global climate change.

In the longer run, it might be, however, that the pictures we saw of the Russian flag (made of titanium) being planted on the seabed, more than 4000 meters below the icecap of the North Pole, will prove to be the best indication of what will be happening there.

There is no doubt that the implications of climate change will be of profound importance for developments on the municipal, regional, national and international levels. At the same time, it could be argued that the struggle for the rights to exploit the natural resources of the region will really be the determinant for the future of the Arctic. And as we know, this was what the Russian flag-planting was all about.

Had the flag event taken place during the days of the Cold War, it would have been an act of mostly political and military interest. With capitalism reintroduced in Russia, exploitation of natural resources also definitely creates opportunities for international business across the Arctic. This has been demonstrated not least in connection with the planned production of oil and gas from the Shtockman field. After first saying *"Njet"* to the courtesy, Norwegian *StatoilHydro* and French *Total* eventually got a "Yes" and have now become partners with Russian *Gazprom*. Although there is certainly going to be a struggle between these three for a share of the investments and profits (as was widely reported by the Norwegian media), there is no doubt that all of the companies concerned are in this "to learn more," as they say, about extraction in cold and deep waters. With increasingly more ice melt in the North, such developments can rapidly become a reality.

Concerning Greenland, relations with Denmark remain coloured by post-colonial discourses. Here are some samples: in both Greenland and Denmark a hard discussion is taking place related to the possibilities of oil and gas off the shores of Greenland. Thus far, close to a dozen international oil companies have applied for permits to drill. (*Sermitsiaq 07/10/07*), while the potential for extraction could be 73 times more than that which has been possible to produce in the Danish part of the North Sea. (*Politiken* 19/07/07). This newspaper also warns that Greenland might spend any oil profits independently of the economic interests of Copenhagen. Other media suggest that the possible revenue could in fact be the leverage for Greenland's economic breakaway from "the mother-country."

Parallel to this, Danish television and newspapers have (once more) carried stories portraying Greenland as a country of misery, alcoholism and social problems. This has led the *Dansk Folkeparti*, the supporting party behind the Danish government coalition, to suggest that the old practice of having Greenland "under administration" ought to be reintroduced. In fact, key members of the same party also argue that Greenland should prepare for economic payback to Denmark *in lieu* of future incomes from oil and gas. The proposal has also found some supporters in Greenland. In other words, ownership and property rights are high on the agenda here also.

In terms of research, it is very encouraging that the International Polar Year (see p 13) has this time also put an emphasis on research on the human dimensions of the polar regions. The Arctic is not only about meteorology, geophysics, oceanography, other natural sciences, or, for that matter, international politics and security. It is definitively also about the people (and animals) who live and work in this part of the world. That in Greenland there are today villages where only every third inhabitant is female (see pp 20-21) is at least partially understandable, but neither encouraging nor sustainable in the long run. That is just one example of an important issue that we need to know more about.

We will soon be half-way through the International Polar Year. In this issue of the Journal of Nordregio, we have tried to provide an introduction to some of the Arctic issues that are not generally debated in the Nordic capitals. We hope we have succeeded in this, and also that we have provided some incentive for further discussion.

Odd Iglebaek, Editor
odd.iglebaek@nordregio.se

Geopolitics of a 'melting' North

The circumpolar North, or the Arctic, politically includes eight unified states, the so-called Arctic Eight, two autonomous regions and an archipelago under the auspices of an international agreement, i.e. Canada, Denmark (meaning Greenland and the Faroes), Finland, Iceland, Norway (including Svalbard), the Russian Federation, Sweden and the USA (meaning Alaska). Thus, the region is legally and (geo)politically divided by the national borders of eight unified states.

The circumpolar North of the beginning of the 21st century is a stable and peaceful region without wars and armed conflicts. This is not, however, a given but is, due rather, to the existence of a level of political will and agreement based on significant international and inter-regional cooperation both within and pertaining to the region. Further more, within the region a number of innovative political and legal arrangements have been developed, while a certain devolution of power has also taken place, based on the human capital store of educated and skilful peoples.

In the northernmost regions of the Arctic states there are many built settlements and towns but also major cities such as Murmansk and Norilsk in Russia, Anchorage in Alaska and Reykjavik in Iceland, where a large part of the Arctic population lives.

Although ever larger numbers of tourists now visit these northern regions, the number of inhabitants is slowly decreasing in most parts of the circumpolar North, except in Alaska, Northern Canada and Iceland.

In basic economic terms the Arctic primarily remains a peripheral region with a rather low *per capita* gross product (15127$ US-PPP in 2001). In the background there is on the one hand, some recognition of the politico-cultural legacy of state colonialism in the northern peripheries, and on the other, a firm residue of 'national interest' in the eight Arctic states' northern policies.

The circumpolar North has however witnessed significant growth in its geostrategic importance for various military and security-political reasons. The reason is that these sparsely-populated northern peripheries are both strategically and politically suitable for the support of a military presence and for activities such as the patrolling of strategic nuclear submarines in the Arctic Ocean; deployment of radar stations and missile silos such as the US radar station in Thule, Greenland as a part of the US National Missile Defence system; and the testing of weapons, military applications and military training such as low-level flights in Goose Bay, Canada and artillery shooting in Lakselv, Norway and Rovajärvi, Finland.

This elevated level of strategic importance is due in the main to the existence of rich untapped stocks of natural resources such as fish metallic minerals and oil and natural gas. There are also other kinds of natural resources such as e.g. timber which is harvested in Russia, Finland and Sweden; alternative energy such as geo- and thermo- energy, mostly in Iceland; and resources of immaterial value such as the beauty of nature which attracts mass tourism to many parts of the region.

Based on the Arctic Human Development Report most of the gross production of the circumpolar North, some $230 billion (in 2001), for the region of four million people (in 2003), was based, predominantly, on the large-scale exploitation of natural resources such as precious metals and hydrocarbons serving the energy needs of the northern developed countries.

Most of the gross production came from Russia (67%), which is not surprising as Russia's rich oil and natural gas resources are generally located in her Northern regions.

The second largest gross production total was in Alaska (12.4%). Correspondingly, the gross production of Northern Norway, Northern Sweden and Northern Finland was almost equal (between 4.4-5.3% each) with that of the whole of Iceland being a little lower (3.5%).

The lowest shares were in Northern Canada (1.9%) and Greenland and the Faroe Islands (between 0.4-0.5% each). According to *per capita* statistics Alaska has the highest figure (45107$ US-PPP) with a population of 650 000, and Northern Canada the second highest (39 915$ US-PPP) with a much lower population of 130 000.

The northernmost regions of the Nordic countries have close to the average figure, except Iceland which remains a little higher, with a total number of 1.3 million inhabitants. Finally the Russian North has the lowest figure (12 327$ US-PPP) while also having the largest Arctic population, i.e. almost two million people.

The fact that the northern regions have been taken into the globalized world economy has seen increasing utilization of their energy potentials and a greater flow of raw materials out of the region. Indeed, estimates exist claiming that 20-25% of the world's undiscovered oil and natural gas resources could be 'hidden' in the shelf of the Arctic Ocean.

All of this speculation however merely emphasizes the growing economic importance of energy security. In the short-term the successful countries here are the USA (Alaska), and Russia, (particularly Yamalo-Nenets *Okrug)*, and Iceland.

In the longer-term all of the coastal and rim-land states of the Arctic Ocean could benefit due to the existence of a rich seam of discovered and undiscovered hydrocarbons in their northern regions, mostly on the continental shelves. These areas include Alaska, Yamalo-Nenets *Okrug*, North Norway and beyond the Arctic Ocean coastal states Iceland may also have a good chance of success.

Based on this overview it is possible to estimate that there will be (very) good market developments for northern energy resources, especially when the prize of crude oil in the world market is at present between 90 and 100$ a barrel.

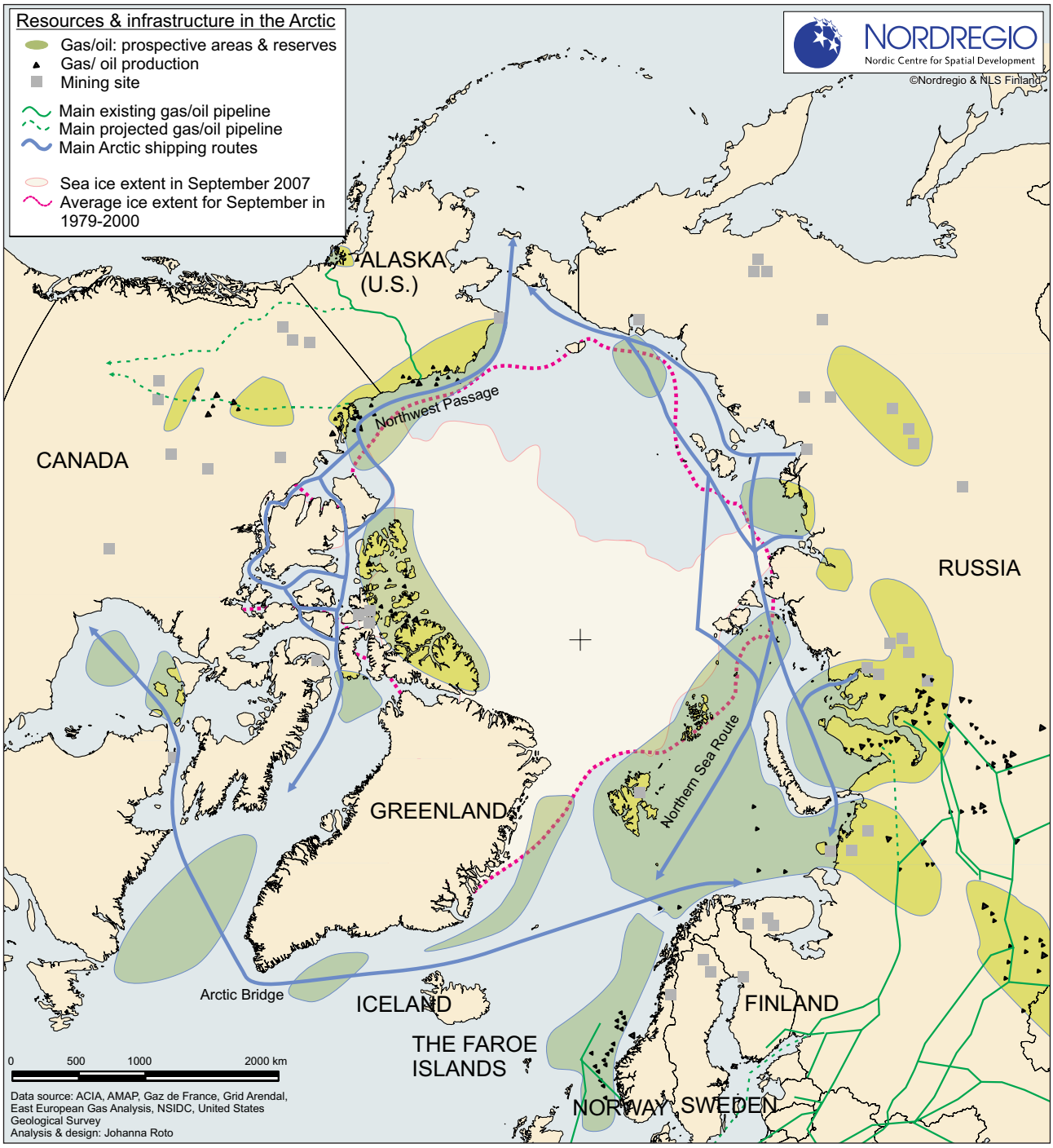
A similarly, healthy situation can also be forecast for precious metals such as gold and diamonds. Additionally, in the field of tourism, which continues to grow, market development can be seen to be positive, at least in so far as the northern

regions retain snow, darkness, the feeling of emptiness as well as good connections a modern infrastructure and convenient accommodation. This is already the case particularly in Iceland, Finnish Lapland and Alaska.

In the circumpolar North many kinds of global problems and globalization flows are detectable. Examples include the impact of long-range air travel, water pollution and general climate change. Also the flows of raw materials, labour, capital and information via foreign tourists influence the northern regions. Finally, we have many multi-functional impacts of climate change such as the weather, warming and melting of sea ice and glaciers. Climate change entails, for the Arctic North, a sort of dualism as the rapid warming of the climate makes new sea transportation routes possible while also creating major challenges and posing major risks to communities forcing them either to adapt or to become environmental refugees.

Climate change has challenged the security of many of these settlements due to rapid melting of the ice, glaciers and permafrost. This remains a real problem in respect of many coastal settlements due to erosion in the short-term and to rising sea levels in the longer term. Many towns in the Russian North face degradation of the building stock constructed on a now melting permafrost. In addition, the drilling and transportation of crude oil in cold, icy waters is *per se* very challenging due to the fragile nature of the arctic environment.

All this means that there is a need for accident prevention in the context of oil and gas drilling and sea transportation, especially in the Barents Sea region, where new oil and gas fields have been, or soon will be, put into production.



Moreover, there is also an urgent need for either mitigation, which might come too late, or adaptation, including the development of new kinds of environ-mental technologies.

This can be done based on so-called 'cold climate' technology, which has been successfully developed in Alaska, Finland and Sweden, but more as some sort of arctic "risk technology".

The big question however remains, namely, whether climate change will mean either a real change in the problem definition of security towards comprehensive and human security, which was one of the new innovations of Canada's northern, foreign policy, or merely an increase in national control and defence in these northern regions.

Following on from all this, it is no wonder that the circumpolar North has become a target area for the growing economic, political and military interests of both the regional states and actors from outside the region, meaning on the one hand, major and growing powers such as Japan and China, and on the other, new international actors such as trans-national corporations and international environmental non-governmental organizations.

One result of all of these factors and dynamics is that in these northernmost regions of the globe a significant and rapid level of environmental, geo-economic and geopolitical change occurring which retains a keen security dimension. As a part of this change there is now growing worldwide interest in the circumpolar North. Moreover, the region undoubtedly also has some positive contributions to make to the study of world politics more generally.

In addition to this growing geo-strategic importance, and based on the fact that the region is stable and peaceful, a number of positive developments have emerged, and are continuing to emerge. Among these are that the North has become a "workshop" for (multidisciplinary) research such as for example, that on climate change and its impacts; second, that the diversity of both northern nature and that of northern cultures is remarkable; and third, that there are some successful stories to be told such as those on innovative political and legal arrangements based on the devolution of power across this region. It is thus possible to claim that such developments make the region an interesting and relevant area in terms of the study of world politics.

In sum this entails the undoubted emergence of new kinds of challenges in the near future. Examples include the question of wheter governments are ready to really discuss the critical "real" issues such as mass utilization of those hitherto untapped natural resource endowments of the region, energy security, and existing disputes and claims, in the context of institutionalized international cooperation such as the Arctic Council, or whether this will only happen in a bilateral context, or perhaps within NATO, or even in some other *ad-hoc* based arrangement.

References

Bogoyavlenskiy, D. & Siggner A. (2004): "Arctic Demography", in AHDR (Arctic Human Development Report) 2004. Akureyri, Stefansson Arctic Institute, 27-41

Duhaime, G. (2004): "Economic Systems", in AHDR (Arctic Human Development Report) 2004. Akureyri, Stefansson Arctic Institute, 69-84.

Heininen, L. (2007): "Geopolitics and geoeconomics of a 'melting' North". A Presentation at Felagsvisindatorg of University of Akureyri, Iceland, 3rd of October 2007.

Heininen, L. (2005): "Impacts of Globalization, and the Circumpolar North in World Politics", Polar Geography, Vol. 29, No. 2 (April-June): 91-102. Issue: Challenges of Globalization for the North.

By Dr. Lassi Heininen
lassi.heininen@ulapland.fi

The Arctic states and other international actors

Canada and Russia: the major coastal states of the Arctic Ocean with partly similar conditions and interests such as the presence of many northern indigenous peoples, the importance of sovereignty in the north and a (national) sea route, and partly different, such as Russia being a major energy producer.

USA: the global power present in the North through Alaska with its worldwide interests.

Norway and Denmark: two more coastal states of the Arctic Ocean with generally rather different conditions and interests, with Denmark present in the north through its sovereignty over Greenland and the Faroes which are autonomous regions, and Norway strongly present in the Barents Sea region with its clear 'northern interests' and policy.

Iceland: another coastal state of the North Atlantic with a strong economic interest in the northern sea areas and recently high economic growth.

Sweden and Finland: two more Arctic states with some national interest in the circumpolar North, though without coastal areas on the northern seas, but significant interests within the Baltic Sea region.

The UK, France, Germany, China, Japan and South Korea: interested observers waving a "flag", i.e. major powers from outside the region with (growing) interests in the North in many fields such as science, energy and transportation.

Indigenous peoples and sub-national governments such as e.g. the Home Rule Government of Greenland: representing the citizens and civil societies of the region and defining it as their 'homeland'.

IGOs such as the United Nations (UN), NATO, the European Union (EU) and the Arctic Council(AC): having either special duties in the region such as e.g. the AC, or different kinds of interests in respect of the region, mostly due to the member states within the region, such as via the 'Northern Dimension' of the EU but also in terms of their governance duties in respect of the UN International Law of the Sea and the UN Commission on the Limits of the Continental Shelf.

TNCs and state-owned/dominated companies: strong commercial interests in the utilization and transportation of natural resources and in the geo-economics of the region.

Hot issues in a cold environment

In addition to being the focus of this designated Polar Year, the Arctic is currently the subject, spanning a number of issue areas, of much heated debate! First and foremost, ongoing climate change which is significantly affecting the Arctic environment brings several issues to the fore undoubtedly opening up new economic opportunities which could, potentially, generate much needed future revenue across the region. The economy remains central here, and may very well become crucial during the next decade, as climate change creates many new opportunities in the North.

THE NORTHWEST PASSAGE

The Northwest Passage has been an 'issue' since 1497 when King Henry VII of England sent John Cabot to search for a northern route to the Pacific. It took a long time, and many unsuccessful attempts, until Roald Amundsen from Norway finally succeeded in 1906. Nevertheless even thereafter it took three years to traverse the Passage in an ice-breaker ship. Indeed it was not until 1944 that a Royal Canadian Mounted Police sergeant was able to make the first single-season crossing. Since then, however, much successful traversing has been done, though heavy ice conditions remain a severe hindrance to passage through the 1450 km long passage, winding through Canada's Arctic Islands.

Due to a historical claim, Canada considers the Northwest Passage to be entirely within Canadian territorial waters. These Arctic Islands have been under Canadian control since the 1880s. Norway however claimed the Sverdrup Islands after Sverdrup returned to Norway in 1902 after being the first European to map the region. The dispute was settled in 1930 with the Canadian government paying Sverdrup $ 67 000, stating that it should be seen as compensation for the mapping efforts undertaken by the Norwegian. A similar claim was made by Norway in 1931 regarding East Greenland, leading to the 1932 occupation of the east coast between 61°30' and 63°45'. The case was brought to the Permanent Court of International Justice in The Hague which ruled in favour of Denmark.

The United States, as well as several other countries, has also argued that the Northwest Passage should be considered as 'international waters', allowing free and unhampered travel through the passage. This is based on the view that the Northwest Passage may eventually become a viable transportation route. Not only by reducing the distances travelled – in time and fuel consumption – from Europe to the Pacific region through the Panama Canal, but also by allowing ships of substantially larger dimensions than "Panamax-sized" to traverse the route.

HANS Ø / HANS ISLAND

A small isolated rock, situated in icy water, and measuring 1.3 km2 has caused turmoil in the otherwise good relationship between Denmark and Canada. The island was first mapped in connection with the British and American expeditions into the area from 1852-1876, and is supposed to have been named after a Greenlander called Hans Hendrik. The native name for the place is Suersaq, named after a man who worked as a guide and translator for the expeditions.

After a dispute with Norway regarding East Greenland, the Permanent Court of International Justice in 1933 declared the legal status of Greenland in favour of Denmark. In this decision the status of Hans Island – as well as that of the other islands surrounding Greenland – was not addressed. Denmark, has however, claimed that geological evidence points to Hans Island being part of Greenland.

In 1973 on the other hand, Canada claimed that Hans Island was part of their territory, and no agreement has been possible between the two governments on the issue since then. Newer satellite images however show that the island is not situated within the Canadian territorial sea, but is more or less positioned right in the middle of the ocean. As a consequence Hans' Ø does not appear as Canadian territory – on the new official Canadian map of the Arctic region.

The reason for the interest shown in this small rock is founded on numerous surveys in the Nares Strait region, such as seismic and geological investigations, ice flow measures, the mapping of archaeological sites, and economic surveys. Besides being important in connection with possible ship routes crossing the Arctic Ocean and using the Nares Strait as the entrance, the identification of possible energy and mineral resources adds to the level of interest in this area.

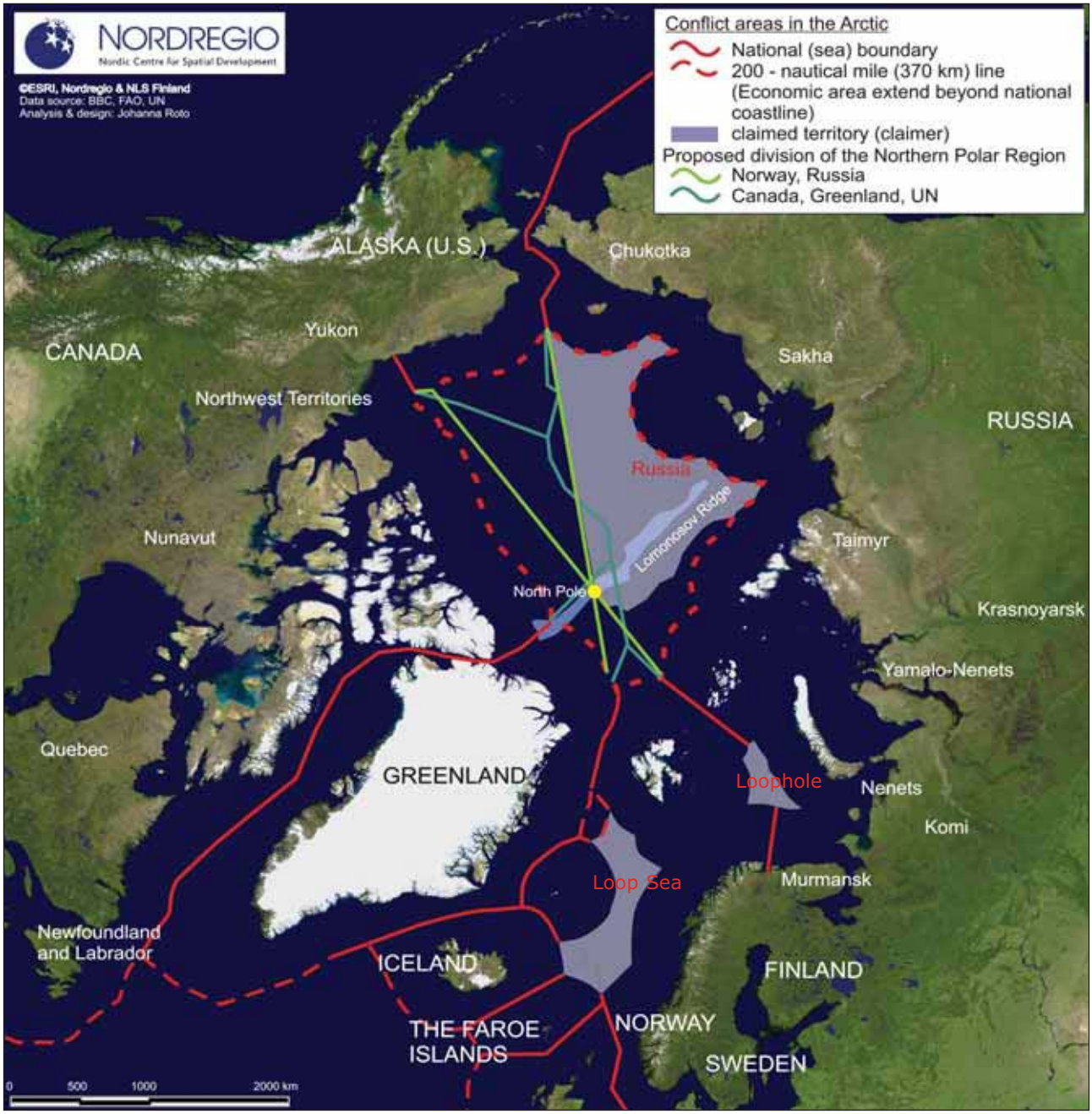
WHO OWNS THE NORTH POLE?

The North Pole has traditionally not been seen as a place of much interest. It is covered by more than 4 km of water, on top of that there are substantial amounts of ice which does not even stay intact but instead moves around with the currents in the Arctic Sea. The current raised level of interest relate however to increasing signs that below this inhospitable sea lie significant deposits of hydrocarbons – oil and gas – just waiting for recovery. So the owner of the North Pole will suddenly be in possession of this vast bounty of energy.

From a Danish perspective the question is whether the North Greenland shelf has a *natural* connection to the long and narrow Lomonosov Ridge. It is assumed that the Ridge is an extension of the continent, and that there should therefore be a connection to the Greenland/Canada shelf. To prove, however, that there is this *natural* connection it is necessary to show that the ridge actually starts somewhere in Greenland or on the Greenland continental shelf.

This can be done only if it is possible to show that there is a continuation of the materials and structures found in the ridge onto the shore, while there are different materials and structures on the two sides of this continuation. Drillings and sample taking along the supposed line would be one way of identifying both structures and materials, but such an approach would be very expensive.

In an initial attempt to seek out possible connections, the measuring of earthquakes has been adopted as a good method of providing clarification. Tremors caused by earthquakes somewhere on the globe will be recognizable even when they are very far apart, the delay of the signal will however remain very much dependent on the material it has to pass through. Therefore by measuring such signals where the expected ridge will be, and on its two sides, these signals will indicate whether the materials differ, and thus indicate the existence of a possible ridge.



A similar approach is currently being taken by Russia, with the international news gathering agencies remaining somewhat preoccupied with the fact that a Russian flag was planted on the seabed of the North Pole, some 4,261 metres below the Polar icecap. The TV-broadcast in connection with the event was part of a publicity stunt for a research project aiming at the investigation of the structure and evolution of the Earth's crust in the Arctic regions. First and foremost the part of the Arctic neighbouring Eurasia, such as the Mendeleev Ridge, the Alpha Ridge and also the Lomonosov Ridge, in order to discover whether they are linked with the Siberian shelf.

The expedition, part of the Russian programme for the 2007–2008 International Polar Year; used the *Akademik Fedorov* research ship and two Finnish built MIR submersibles on board, and was also assisted by the nuclear icebreaker *Rossiya*.

The message connected with the flag caused concern in the other countries bordering the Arctic, namely, Canada, Norway, Denmark, and the United States, as it was reported as constituting a possible claim on the North Pole as being part of Russia. It was however emphasized by the Russian authorities that the aim of the expedition was only to show that the Russian shelf stretches to the North Pole.

It is generally accepted by all of the nations involved that Arctic territorial issues can only be tackled on the basis of international law, i.e. the International Convention on the Law of the Sea. Their conclusions in respect of future disputes will however very much depend on the outcome of current research activities.

FISH AND DISPUTED WATERS

With the international agreement on a 200 nautical mile Exclusive Economic Zone (EEZ) in 1982 the issue of 'access to fisheries' was, in principle, agreed upon. Within the 200nm zone the Law of the Sea Convention gave each coastal state rights and duties in respect of the

utilization and conservation of living resources within its area of jurisdiction. It is the coastal states' responsibility to determine the allowable catch, and also their responsibility to ensure that the resource endowment is not endangered by over-exploitation.

The problem is that fish move. Many fish stocks are highly migratory in nature, and often move in and out of the different zones. As such, fisheries activity outside the zone can heavily influence potentials within the limited area. This, of course, causes conflict when the influences are very marked. In both the North Atlantic and North Pacific waters this has been the case.

The *Barents Sea Loophole* is an area of international water in the Barents Sea, surrounded by the EEZs of Norway and Russia. The management of fisheries in this area has historically been based on bilateral agreements between Norway and Russia. But with the expansion of high sea fisheries in northern waters, it is now not only the two countries surrounding the Loophole that must be considered stakeholders in this process. Both Greenland and Iceland have also been fishing there, and both claim the right to continue to do so.

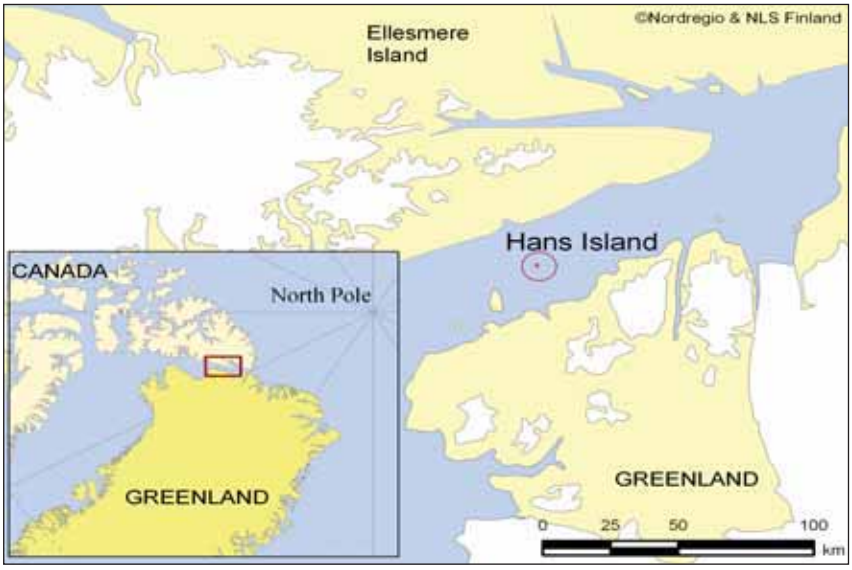
The *Loop Sea* is surrounded by the EEZs of Norway, Iceland, Denmark/Greenland and the Faroe Islands. The sea area is, however, outside the 200 mile EEZ of the surrounding countries, which makes it 'international waters' according to the Law of the Sea.

The *Donut Hole* in the Northern Pacific is situated in an ocean area among the richest in the North Pacific region, and indeed, in the world. The Pollock fisheries area has been registered as being among the largest in the world, and value-wise the King Crab fisheries area has massive importance for the fisheries dependent communities that use it. The Central Bering Sea is completely surrounded by Russia and the USA, but outside their 200 mile jurisdictions. The area has therefore been recognized as high seas with open access available to anyone subscribing to the Law of the Sea.

Consequently large-scale fishing of Polloch has been conducted in 'the Hole' by the United States, Russia, Japan, South Korea, China, and Poland, which eventually resulted in the depletion of the Pollock stock, thus also endangering the other species which feed on it. Until 1994 significant tension existed between the surrounding countries. In 1994 however, an agreement was signed, and enforced from December 1995, which included six contracting parties, namely, China, Japan, the Republic of Korea, Poland, the Russian Federation, and the United States.

.

By Rasmus Ole Rasmussen,
Senior Research Fellow.
rasmus.ole.rasmussen@nordregio.se



The position of Hans Island.

The "Donut Hole" in The Pacific Ocean.


The Canadians (left) and the Danes (right) have both planted their flag at Hans Island.

Viewpoint: Time for an Arctic Treaty!

Increased interest in the Arctic, fuelled by economic concerns related to the ongoing process of climate change, brings the issue of the region's political control and thus of the right to access to the region into the spotlight. The examples of current "hot issues" presented elsewhere on these pages provide an indication of some of the pressing current questions in need of a legal framework and procedures to best provide for their equitable resolution.

They may however be just the "tip of the iceberg", so one may just as well prepare for a considerable increase in potential conflicts, and start thinking of potential counter measures. But what is most disturbing is the fact that the current discourse seldom makes reference to the population currently residing in the Arctic. In many international settings where the consequences of changes in the Arctic are discussed, the concept of *"Terra Nullius"* still seems to be applied.

Antarctic Treaties

Two international treaties exist which could be considered as the starting points for the debate. The Antarctic Treaty, which was signed on December 1, 1959 by the 12 countries which were active in Antarctica during the International Geophysical Year 1957-58, when more than 50 Antarctic research stations were established across Antarctica. Secondly, we have the Svalbard Treaty which was signed in Paris on February 9, 1920.

The Antarctic Treaty encompasses all land and ice shelves south of the southern 60th parallel, and the treaty has now been signed by 46 countries. The overall goal of the treaty was to set aside Antarctica as a 'scientific preserve', to establish freedom of scientific investigation, and at the same time ban military activities on the continent. Besides emphasizing Antarctic as basis for research activities, article 1 of the treaty stresses the need to use Antarctica for peaceful purposes only, prohibiting military activities, while article 4 states that the treaty does not recognize, dispute, or establish territorial sovereignty claims, just as it is emphasized that no new claims would be asserted as long as the treaty is in force.

The majority of Antarctica is claimed by one or more countries, but most countries do not explicitly recognize those claims. Today there are 46 treaty member nations with 28 consultative and 18 acceding members.

The consultative – and thereby voting - members include the seven nations that claim portions of Antarctica as national territory, while the remaining 21 non-claimant nations either do not recognize the claims of others, or have not expressed their positions.

These claims, however, have not thus far led to conflicting situations which have been interpreted as violations of the original ideas behind the treaty to such a degree that it has called for the withdrawal of members.

First and foremost, the ban on military activities seems thus far to have prevented both nuclear weapons and "star wars" installations being sited on the continent.

The Svalbard Treaty

The Svalbard Treaty concerns the Archipelago of Spitsbergen and Björnö, and is based on recognition of the sovereignty of Norway over the Archipelago, while at the same time ensuring that these territories should be provided with an equitable regime which would ensure their development and peaceful utilisation.

The original signatories include Australia, Canada, Denmark, France, Italy, Japan, the Netherlands, Norway, Sweden, the United Kingdom and the United States, while The Soviet Union signed in 1924 and Germany in 1925. Today there are now over 40 signatories. All signatories have been given equal rights to engage in commercial activities, for instance coal mining, as well as equal fishing rights near the Spitsbergen Archipelago.

Norway has sought exclusive rights to the area since 1977. The treaty, however, emphasizes that Norway shall be free to maintain, take or decree suitable measures to ensure the preservation and, if necessary, the re-constitution of the *fauna* and *flora* of the regions, as well as the territorial waters. Besides discussing regulation measures in relation to resources, the concept of peaceful utilization has also been debated, as the Treaty allows the signatories to establish and maintain those installations needed in con-nection with communication, weather forecasts etc., installations which may also serve military purposes.

The situation has however never been so heated that it has led to real conflict situations, as the Norwegians have managed to maintain the spirit of the treaty intact.

Proposals and approaches

A draft of an Arctic Treaty was put forward in 1991 by Donat Pharand, Professor Emeritus of International Law, University of Ottawa. He emphasized the idea of an Arctic Region Council aiming at regional cooperation which should lead to the use of the Arctic Region for peaceful purposes. In this connection he stressed seven main points as being important for this:

1) to facilitate regional cooperation generally among its Members;
2) to insure the protection of the environment;
3) to promote the co-ordination of scientific research;
4) to encourage the conservation and appropriate management of living resources;
5) to foster economic and sustainable development;
6) to further the health and social well-being of the indigenous and other inhabitants of the Arctic Region; and
7) to promote the use of the Arctic Region for peaceful purposes.

Oran Young, Professor at the University of California and a long time writer on issues in relation to governance issues and the Arctic, stresses how a substantial number of "soft" agreements, for instance in connection with environmental protection issues etc., already show a legacy of both means and measures available in the existing laws and regulations when it comes to specific problems.

He also underlines the fact that on a more general level there are limi-tations to how existing Arctic governance systems can be structured to minimize problems arising from gaps and overlaps. He therefore raises the question to what extent 'added value' would result from the creation of legally binding international arrange-

ments for the Arctic, and what the proper relationship between international institutions and organizations in the Arctic might be.

The Arctic Council

In 1998 the Arctic Council was established as a forum for cooperation in the Arctic. In addition to the eight states with sovereignty over territory in the Arctic - Canada, Denmark, Finland, Iceland, Norway, Russia, Sweden and the United States – the Council included a number of organizations representing indigenous people as Permanent Participants. They do not vote, but otherwise participate fully in the work of the organization.

Similarly a number of non-governmental organizations and representatives from other countries are also present at these meetings. They may also participate in project activities arranged by the Council.

The Council has two primary objectives. First, to promote environmental protection which has been a major issue among the Arctic nations since the establishment of the Arctic Environmental Protection Strategy in 1991 – aiming at addressing environmental issues affecting the entire region. Secondly, it is to promote sustainable development in the Arctic, emphasizing the special economic circumstances of the indigenous people and other residents of the Arctic in relation to the preservation of the environment.

To these ends, the Council has endorsed a number of cooperative activities to be carried out primarily through a series of subsidiary bodies. The structure of the Council, however, is generally seen more as a forum for exchange of opinions and ideas than as an organization establishing binding agreements and resolving conflicts. This provides for an open and informal forum for the development of project activities relevant for the Arctic residents. At the same time, it limits very much the potential of the organization to establish binding solutions.

The challenge

The suggestions and the legacy therefore leave the Arctic – and any treaties addressing the future of the Arctic - with two major challenges. This is to develop a treaty which will enable the population already living in the Arctic to become active and decisive members of an organisation which will be very influential in respect of their future lives. Also it is to learn from the two treaties mentioned above, stressing the need to use the Arctic for peaceful purposes only.

By Rasmus Ole Rasmussen,
Senior Research Fellow.
rasmus.ole.rasmussen@nordregio.se

References

Declaration on the Establishment of the Arctic Council. http://www.arctic-council.org/

Donat Pharand: Draft Arctic Treaty: An Arctic Regional Council. University of Ottawa, 1991. Excerpted from the Canadian Institute of International Affairs, National Capital Branch, The Arctic Environment and Canada's International Relations (Ottawa: Canadian Arctic Resources Committee, 1991),pp.AI-A10.

Oran R. Young: The Internationalization of the Circumpolar North: Charting a Course for the 21st Century. http://www.thearctic.is/articles/topics/internationaization/enska/kafli_0500.htm

The Antarctic Treaty. http://www.ats.aq/uploaded/treaty_original.pdf

The Svalbard Treaty. http://www.lovdata.no/traktater/texte/tre-19200209-001.html

From the village of Alluitsup Paa in South Greenland. Photo: Sigrid Rasmussen

Provocative about Global Warming

Valsson, Trausti. 2006. How the World Will Change With Global Warming. Reykjavik: University of Iceland Press. 168 pp.

This book has an initially provocative message for everyone concerned for the future of the north. In this time of bad news about climate change, Trausti Valsson wants us to understand, in a contrarian way, his argument that "a warm Arctic is a new Paradise." His position is earnest; it reflects his passion for his native Iceland and its style is influenced by his long career in environmental planning.

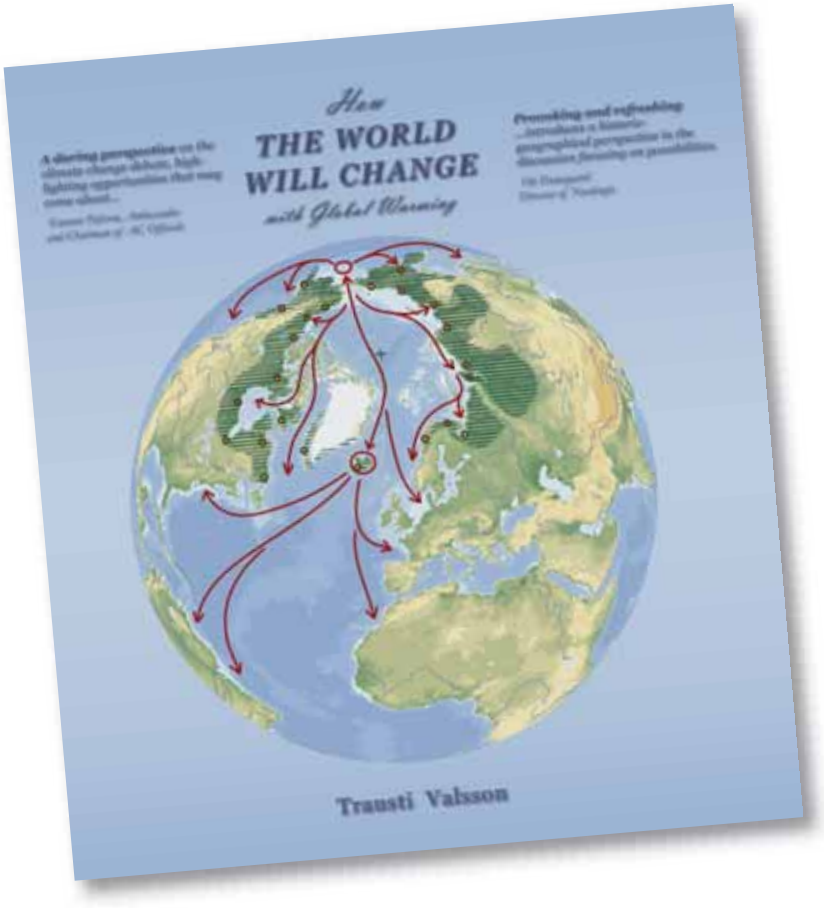
Valsson, Professor of Planning at the University of Iceland, wants to influence our idea of the north's future. To do that, he presents the Arctic from many sides, including a sketch of its natural and human history and its relation to the rest of the planet. This would, for the uninitiated, make it a good handbook on the Arctic, if we could recommend it with less caution. The author admits that the Arctic is not easy to understand, and that its ecosystems and human societies are interwoven in complex ways. Still, he argues, even though the local effects of climate change will vary, there will be more gain than pain and the north as a whole will be a "winner." It will be a great magnet for those fleeing the heat in the south, so northerners should see the opportunity to improve our democracies and infrastructure on the "New Northern Frontier."

As one reads, the initial provocation shifts to impatience, and one seeks to understand why. There are lots of facts, photos and maps and no absence of references; he ranges from fishing fleets to altered global transportation infrastructure, from the effects of the Cold War to the geopolitical implications of ice-free northern sea routes. Even when the reader is sympathetic to the positive slant on climate change, a gnawing resistance to the text grows stronger as that line is pursued. All of those things are on the drawing board, so what's the rub?

The danger is of being seduced into accepting the details of what at first are presented as only generalizations. This gives it an air of authority, implying, "This is the way it's going to be," and leaving little room for alternative scenarios. It would be refreshing to read, instead, "This is the way it could be." Space permits only one example here. Early in Chapter 3, he states, "In the following sections we will see how a new system of spatial organization is emerging. The reason for this is that global warming will make the Arctic more liveable. . ." (p. 59). That is stated as a certainty, but it will seem like a generality as the details emerge. Ten pages later, in Section 3 of the same chapter, the certainties are piling up, and just one of them reads, "As the North continues to warm it will, as a result, become spatially stronger. The importance of the South, in contrast, will weaken as, in many areas, it becomes undesirably hot for human activities" (p. 69). The entire chapter, and indeed most of the rest of the book, reads that way, with few cracks of doubt to disturb an unsuspecting reader.

Valsson argues that mitigation will probably fail, and even if it is successful, we will have a few degrees of average temperature change to cope with first. Whatever the merits of those claims, it is unfortunate that their packaging distracts the reader from more focused reflection on the author's overall and, this reviewer believes, genuine concerns. Valsonn's conclusion is straightforward: the need for adaptation is unavoidable, and the north will probably "benefit," at least in some ways.

The definition of "benefit," however, implies seeing that we need to benefit the rest of the world, too. In all of this, the Nordic countries could provide something unique for the future of humanity. It is time then for some serious planning.



Book review, by Richard Langlais,
Senior Research Fellow
richard.langlais@nordregio.se

Exellent timing for Polar Year 2007-2008

The timing could not have been better. Just as the world begins to wake up to the role that polar regions play in climate change, the international science community has launched a massive, focused campaign of research, on the Arctic and Antarctic, called the International Polar Year (IPY). Approximately 1.5 billion USD has been committed by 60 countries, financing 228 approved projects and involving over 50,000 researchers during a two-year blitz of research. Although it is called "the polar year," the program was designed so that it would officially last from 1 March 2007 until 1 March 2009, thus ensuring the inclusion of two full seasons of study in both hemispheres. In actuality, it is envisioned that research directly connected to the IPY will stretch for up to five-to-ten years.

The coincidence of all that new research with the upsurge in interest in how climate change is impacting on the Arctic and Antarctic is even more remarkable considering that the IPY is part of what now must be called a traditional cycle of research on the polar regions. Calling it a tradition stems from the fact that the last IPY, better known as the International Geophysical Year, was held in 1957-58, the one before that in 1932-33, and the original IPY, in 1882-83. Although fields such as meteorology, geophysics, oceanography and other natural sciences completely dominated the first three IPYs, the current one represents a true breakthrough by including a substantial number of projects, almost a fifth of the total, on different aspects of the "human dimensions" of polar life. While masses of detail about the IPY can be found on its main website, www.ipy.org, a few more points are worth highlighting out here. One of these regards the categories that the research has been organized under. The main themes for its research framework are:

1. **Status:** to determine the present environmental status of the polar regions;
2. **Change:** to quantify and understand past and present natural environmental and social change in the polar regions and to improve projections of future change;
3. **Global linkages:** to advance understanding on all scales of the links and interactions between polar regions and the rest of the globe, and of the processes controlling these;
4. **New frontiers:** to investigate the frontiers of science in the polar regions;
5. **Vantage point:** to use the unique vantage point of the polar regions to develop and enhance observatories from the interior of the Earth to the sun and the cosmos beyond;
6. **The human dimension:** to investigate the cultural, historical and social processes that shape the sustainability of circumpolar human societies and to identify their unique contributions to global cultural diversity and citizenship. *(IPY Joint Committee, 2007*)*

Each of the six themes is broken down into numerous sub-themes. The 6th theme, "The human dimension," is described according to the following headings:

- Integration of the knowledge and observations of polar residents
- Societal and human aspects of interdisciplinary studies
- Human health and well-being in polar regions
- Studies in polar history and human exploration of polar regions

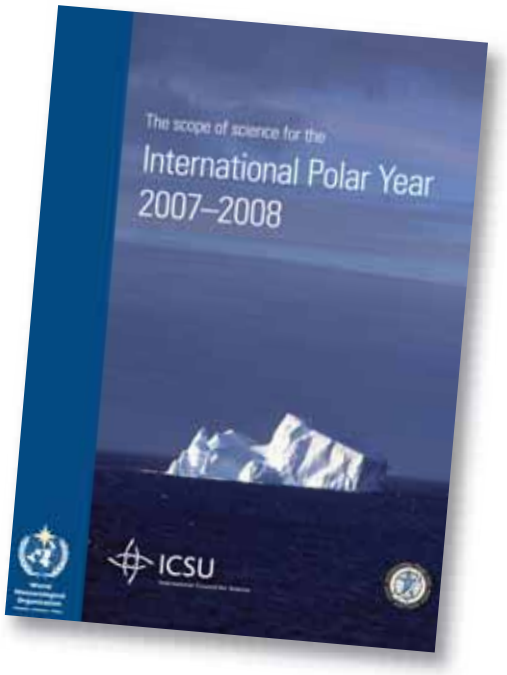
The observation made above, about the breakthrough of the current edition of the International Polar Year in its commitment to the Human Dimensions theme, is confirmed by the IPY Joint Committee's own description of its history regarding that theme. It is worth quoting the passage here at some length, to give the full flavour of this historic trend-setting development:

Previous Polar Years had no socio-cultural studies within their official research programme. {Emphasis ours.} Historically, social and human-oriented polar research was advanced independently of IPY initiatives and has been focused on the key role played by such social factors as the economy, industrial development, politics, demography and health in the overall increase of scientific knowledge of polar regions. A very strong social and human component was integrated into IPY 2007–2008 programme planning from the outset, unlike previous Polar Years. The social and human component programmes will expand well beyond the former range of topics. These will include new fields such as the interactions between the world economy, large-scale societies and small polar communities; the new global role of polar resources in many critical fields, from energy supplies to the preservation of earth ecosystems; strategies for economic and cultural sustainability for polar residents; studies of local knowledge of the polar environment, or local ecological knowledge and the application of polar residents' observations to the study of Arctic climate change. (IPY Joint Committee, 2007, p. 51)

That shift and growth in the IPY's perspective is laudable and welcome and we all look forward to the results. At the same time, it is hoped that concerns expressed by some residents of the Arctic, about whether or not the residents themselves would be included, as active participants in carrying out the research, and not just as the subjects of study, will not prove justified. Like so many of the other results that are awaited with great anticipation by the world community, concerned with global change and the fate of the planet, the livelihoods of Arctic residents are hanging in the balance.

By Richard Langlais,
Senior Research Fellow
richard.langlais@nordregio.se

* Access the IPY Joint Committee's full research framework description, *The Scope of Science for the International Polar Year,* at *http://216.70.123.96/images/uploads/LR*PolarBrochureScientific_IN.pdf*



Two Honorary Citizens in Nanortalik

Karline Eliasens has given her children a good education, but when they are visiting their old home town of Nanortalik in South Greenland she always encourages them to go out on a hunting trip.: –They need to remember where they come from, she explains.

Karline is in charge of the boarding school in Nanortalik, where the children from the villages in the municipality stay during the week. In the villages of Greenland school is only available up to 7th or 8th grade. The villages simply have too few children to provide a broader service. So attending high school requires children to go to the nearest town with such a facility. But with no roads, and several hours of sailing or helicopter flight to get from one place to another, the children have to stay in a boarding school in town during the week, and then go home to their villages at the week-end.

Karline is also the driving force behind the local choir. It was in order to support her own children that she originally moved from the village Tasiusaq and settled in Nanortalik, even though she loved the village life: –We wanted to give them the opportunity to pursue an education, Karline says.

For her, the town of Nanortalik, with approximately 1,500 inhabitants, seemed to be a big place. But she wanted to provide the children with all of the modern opportunities she herself did not get: – When we got visitors from Denmark we had difficulty in talking with them. We wanted to make sure that our children were able to do so, she underlines.

Her husband, Sakæus, was originally a sheep farmer, but he gave up the trade when they moved from the village to the town. Instead he started working as an organist in the church and later on also as a part time teacher in the vocational training school. Today he is a pensioner, but he helps Karline with practical things in the boarding school, where they also now live.

Karline and Sakæus recently received a medal from the Mayor in honour of their work for the community. One reason for the special honour was that they both continue to abstain from using alcohol, which remains a significant problem in many of the small Greenland communities. In addition, it also reflected their deep involvement in the promotion of Greenland's song culture to the youth of today through their work with the choir.

Similar to many other young persons, their children have chosen to settle in the larger towns in Greenland, and in Denmark: – We have never put pressure on them to make them choose one or the other. They should choose for themselves, says Karline.

By Sigrid Rasmussen
sigrid.rasmussen@gmail.com

Karline og Sakæus Eliasen at home in Nanortalik, South Greenland.
Photo: Sigrid Rasmussen

Women do better in wage-terms

The income-systems of the North are rapidly changing. The issue of wage-labour for women is thus of increasing importance. The general income level in the Arctic is relatively high. Typically the largest incomes are to be found in the largest settlements at levels comparable to Northern European standards. Incomes in the smaller settlements are, on the other hand, substantially lower.

There are marked differences in the welfare model used in different parts of the Arctic. The main difference is in relation to the sources of income transfers. Greenland, the Scandinavia countries and partly also Canada are all dominated by the welfare model and have transfers based on high taxes and public involvement. In Alaska, however, transfers are basically based on private sources and public revenues from the oil industry. The Russian North which, during Soviet times, was dominated by substantial public incentives in order to attract southerners to relocate North, has for the last 10 years, undergone something of a transition period. This has resulted in limited transfers and dwindling wages, eventually triggering massive out-migration from the region.

Combinations

Economies in the North are not determined by the somewhat one-dimensional system of capital/wage and transfer payment rationality. In addition to the dominant formal economy, the informal economy and subsistence activities continue to play an important role particularly in respect of individual and family-based activities such as hunting and fishing. These activities do of course also reflect traditional social and cultural values.

The informal sector is in this context defined as subsistence activity which is sold (or exchanged) in a local market or between people, but is not formally registered, for example, through taxation. It is located somewhere between the subsistence economy, i.e. hunting and fishing for oneself or one's own family, and the formal economy. Products from hunting and fishing are of course usually also transferred to the formal sector in addition to being consumed privately. As such then, the informal economy provides a link between the two economic sectors. In fact, one could argue that in an Arctic setting the distinctions between the subsistence and cash-based economic sectors are more or less artificial and meaningless, as the two sectors are thoroughly interwoven.

Extensive descriptions of informal and subsistence activities and their social and cultural characteristics are usually available through ethnographic and anthropological presentations of livelihoods in the North. Detailed analyses of the real, or formal, economy remain however rather sparse. In recent years however a more thorough analysis of the economic role of the various sectors in Greenland has been conducted. The result of this analysis also provides an indication of both the *relative* and the *absolute* magnitude of the scale of these informal economic activities in relation to that of the formal economy.

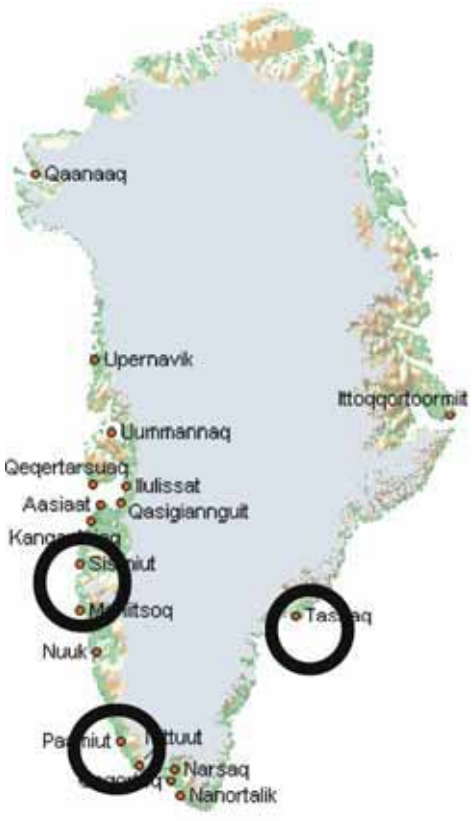
Women generate most

Natural resource exploitation is still considered to be the main economic basis for communities in the North. However the reality is that the 'third sector', namely, services with wage work in administration, education, the social service sector etc, is now the main income source for most families. Such incomes have in fact become necessary for the maintenance of many of the traditional renewable resource activities. Hunters and fishermen in Greenland are increasingly dependent on supplementary wage work. In a family context, women are becoming the main income resource, typically from their work in schools, kindergartens, public and private administration, cleaning etc. In Greenland 24% of hunters and fishermen have incomes from other activities. In more than 70% of households however women contribute to the family income, and in more than 50% of families the major income source is generated by women.

In Greenland, as elsewhere in the Nordic Countries, transfer payments have become a substantial part of the welfare economy, including funding for the maintenance of a public system of schools and health services, but also including pensions, childcare, housing support, different types of social services, and to some extent, the maintenance of the technical, social, and cultural infrastructure. In many small settlements where out-migration has resulted in an age structure dominated by pensioners, the main cash-income source is often pensions.

However, the subsistence economy and other informal economic activities also contribute substantially to family incomes. There are several types of such informal and subsistence activities, namely; informal sale to relatives, neighbours, on local markets, to institutions etc., as well as sharing with family and neighbours. In fact, in many communities both subsistence activities and informal sale may be decisive for the continuation of hunting and fishing, providing for basic sustenance and a small cash income.

The role of the different activities, depending on the settlement size, is illustrated in the graph see figure A (page 18), showing the distribution of the main types of informal activities in villages – typically settlements below 500 inhabitants.



Greenland and the three municipalities

What are formal and what are informal economic activities? In the busy harbour of Ilulissat (Disko bay region, Greenland) the heart of the country's formal economy

y – the fish processing plant and the trawlers - are intermingled with outboard-motored skiffs providing the basis of the informal economy.

Photo: Rasmus Ole Rasmussen

In the towns local market sales dominate activity, providing fresh products to the local inhabitants, and not only through local hunters and fishermen. Often products from nearby villages will be brought to market in the larger towns. In the villages, however, subsistence activity and the re-distribution of products to family, friends and neighbours remain among the most important activities. When comparing the two columns it is however important to bear in mind that the village population is around 10000 inhabitants while the number of inhabitants in towns is around 47000 persons.

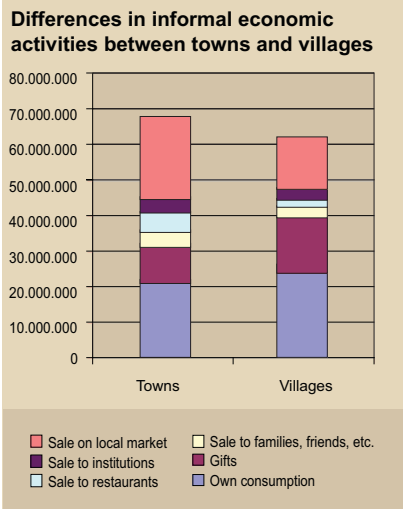
So even though the absolute value generated from towns and villages remains at more or less the same level, the average economic contribution *per capita* of the inhabitants of the villages is five times that in the towns. Basically, villages would not be able to exist without the existence of such informal and subsistence-based activities.

In addition to differences in the importance of such activities between towns and villages, regional differences are also quite marked. The graph contained in figure B shows the main forms of income for three different municipalities in Greenland: Sisimiut on the West-coast, one of the largest towns with a thriving and self-sustaining economy; Paamiut, also on the West-coast, which used to be a centre for cod processing, but after the cod disappeared the town has fallen into a steady decline, and is thus now a highly dependent economy; And finally Tasiilaq on the East-coast, a town which has never been an integrated part of the general Greenland economy, and therefore can be characterised as a 'detached' economy (see Map, page 15).

In the town of Sisimiut the major income sources are from wage earnings, partly from working on the trawlers and in fish plants etc., but mainly in connection with other land-based activities. Transfers add to this, as do contributions from the formal sale of fish products. On top of this there are contributions from the informal sale, especially to the local market, and finally from subsistence production. In Paamiut incomes from wage work contribute to the economy, but they are only just balanced by transfer payments. There is a small contribution from the formal sale of fish products, some informal sale on the local market and to other institutions, and a much higher level of subsistence production. And finally, in Tasiilaq the three sectors – formal incomes, transfer payments, and informal and subsistence activities are almost equal in size. Subsistence production in particular is decisive for the individual economy as compared to the other two places.

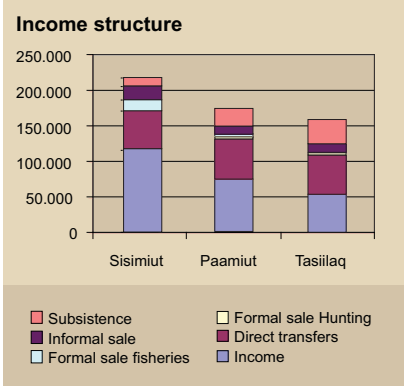
By Rasmus Ole Rasmussen,
Senior Research Fellow.
rasmus.ole.rasmussen@nordregio.se

Figure A



Main characteristics of the informal sector in towns and villages in Greenland

Figure B



Main characteristics of income structure in three municipalities in Greenland

Selected reading on the topic

Dahl, J. (1989): "The Integrative and Cultural Role of Hunting and Subsistence in Greenland". In Études/Inuit/Studies, 13(1): 23-42

Duhaime, G., Fréchette, P., Robichaud, V. (1996): "Changes and Stability in the Economic Structure of the Nunavik Region (Canada)". Department of Agrifood Economics and Consumer Science, Édifice Paul-Comtois, Université Laval, Quebec.

Duhaime, G., Rasmussen, R.O. et Comtois, R. (1998) "Sustainable Development in the North: Local Initiatives vs Megaprojects". Proceedings of the Second Circumpolar Social Science Ph.D. Network Conference, held in Aguanish, Québec, 1997. GETIC, Sainte-Foy, Presses de l'Université Laval.

Gromsrød, S. and Aslaksen, I. (2007): "The Economy of the North", Oslo, Statistics Norway.

Marquardt, O. and Caulfield, R. A. (1995): "Development of West Greenlandic Markets for Country Foods Since the 18th Century". Arctic 49(2): 107-119.

Rasmussen, R. O. (2005): Socioøkonomisk analyse af Fangererhvervet. Grønlands Hjemmestyre og Roskilde Universitetscenter. NORS forskningspublikationer.

Rasmussen, R. O. (2007): "Adjustment to reality - Social response to climate changes in Greenland", In:. Arctic Alpine Ecosystems and People in a Changing Environment. Berlin Heidelberg New York: Springer.

Rasmussen, R.O. (2007): "Gender and Generation Perspectives on Arctic Communities in Transition". In: Knowledge and Power in the Arctic. Arctic Centre, Rovaniemi.

Tommasini, D., & Rasmussen, R. O. (2006): "Adapting to change: Cases of detached, dependent, and sustained community development in Greenland".. State of the Arctic: Current State of the Arctic – Observations of Arctic Change. Fairbanks

Only 800 kilometres apart

The airplane was old, even then. It was 1992, and I was buckling my seatbelt for the flight to Nuuk, Greenland, from Iqaluit, on Baffin Island, when it was still part of Canada's Northwest Territories. The Hawker Siddeley HS-748 twin-engine turboprop was shaking and bucking as the pilots put the plane through its warm-up procedures, while the stewardess (dressed in dark blue flight-crew overalls) checked that all of the passengers were properly strapped in. It was an exciting moment; soon our plane would be lifting off from southern Baffin Island to fly the relatively short distance across Davis Strait, about 800 km, to the west coast of Greenland.

Eventually, an hour or so after take-off, we could see that we were approaching the enormous Greenland ice cap, even more impressive because of the relatively low altitude our plane was flying at. The passenger beside me, a Canadian fisherman who was returning the fast way to his boat after a vacation trip home, turned from gazing out the window and, shaking his head, lamented, "Nothing down there but ice." That was just when I was getting excited.

I had island-hopped across the North Atlantic by ship from Norway to the Faeroes and on to Iceland, and then by plane to Narsarsuaq on the southeast Greenland coast. The last leg was by coastal ship along the coast northward to Nuuk. All the way across that stormy expanse of cold and heaving ocean, however, I had been in Europe. Baffin Island was suddenly something else, altogether. Arriving by airplane in arctic Canada directly from Greenland, and now on the return flight, homeward bound to Europe, the sheer contrast between the European and the Canadian sides of Davis Strait was difficult to fathom. It had long fascinated me that when looking at a map of the northern hemisphere, Greenland was so close to northern North America, yet directly part of Europe because of its connection to Denmark. As a Canadian with a life-long interest in the Nordic countries, it seemed remarkable that when I was growing up it was almost impossible to find any books about Greenland in libraries or bookstores.

Greenland was way off the horizon in the minds of Canadians, and going there was out of the question. The day when I found out that there was a regular flight connecting Iqaluit, the soon-to-be-inaugurated capital of Canada's new territory of Nunavut, with Nuuk, the capital of Greenland, is still clear in my memory; mental maps dissolved and barriers came crashing down. Suddenly, there was a direct link between the worlds. Greenland appeared to slide just a bit closer to North America that day.

The weekly flights, in those periods when there were flights, that is, were usually flown by First Air, a Canadian Inuit-owned airline, as part of a route maintained by it and Greenlandair (now Air Greenland, owned jointly by the Danish State, the Greenland Home Rule Government and SAS Group). The route was flown only sporadically, so that booking a flight was often not possible, and finally closed in October, 2001, after twenty years of intermittent operations, with the argument that business was too meager to justify it any longer. (Neither of the two flights that I took were more than half-full). The closure of the route nevertheless marked the end of an era and a new definition of transportation absurdity. Traveling to the two capitals 800 km apart on either side of Davis Strait now means a trip of several thousand kilometers, unless you charter your own aircraft, that is.

The present situation is still better than it was in the periodbefore direct flights were available. Now, with Air Greenland's new route to Baltimore, it is possible to fly on scheduled flights between Iqaluit and Nuuk with only a detour via the United States. Earlier, when the direct route was not in use, it was common to have to travel south from Baffin Island to Montreal, then fly across the Atlantic to Copenhagen and then back again to Nuuk. It's no wonder that business, the exchange of ideas and collaborative ventures for a long time to flourish

Because of their proximity, eastern Nunavut and western Greenland bring the cultures of North America and Europe much closer in a geographical way than most people realize. Although the shared elements of Inuit culture remain to some extent, residents of Iqaluit will excitedly watch baseball's World Series, while those in Nuuk mostly prefer World Cup soccer.

Charming Danish architecture dominates the towns and villages of Greenland, while across the waters in Nunavut, stodgy Canadian functionalism prevails. It had been mentioned to me several times by hunters in Iqaluit that they envied the established outdoor markets where Greenland's hunters could sell their game to the townspeople, while the Nordic-type daycare centres and maternity leave were things they had a hard time imagining.

Greenlanders, on the other hand, were amazed at the new kind of political autonomy that had bee achieved in the name of Nunavut. The contrasts and parallels could be drawn at length; the essential point is that nowhere else are Canada and Europe so close and, for the same reason, so obviously different. It still seems remarkable that their interaction, even if it has increased during the last decade, remains so minimal, and that it is now no longer even possible to fly directly between the two arctic capitals, so near yet so far.

In that summer of 1992, I remember talking with Robert Petersen, the University of Greenland's first Rector, himself Inuit, about the future of tourism in Greenland. He predicted that it would grow, but admitted that one ironic difficulty for Greenlanders would be to learn to take money from people who were their guests. Just recently, indications that Petersen's predictions are coming true could be seen in *Sermitsiak*, the prominent Greenland newspaper, where it was reported* that travel to Greenland would be increasing by up to fifty percent in the coming year. The reason? Because of climate change, people living in the south want to see the ice before it disappears. "Nothing but ice down there," the fellow had said. You don't know what you've got until it's gone.

By: Richard Langlais, Nordregio
Senior Research Fellow
richard.langlais@nordregio.se

* *Sermitsiak* (Nuuk) editorial, "Turister valfarter til polarområder," (29 October 2007), viewed at http://sermitsiaq.gl/indland/article19689.ece. For extremely interesting reporting on Greenlandic and Nunavut society, Sermitsiak (Nuuk) and Nunatsiaq *News* (Iqaluit), respectively, are excellent reading. The latter can be found at www.nunatsiaq.com.

Polar women go south

Two dominant perceptions exist of people living in the Arctic. One is the image of small communities based on traditional lifestyles, making a living from hunting and fishing, and with dogsleds and kayaks transporting people in ice-filled water and across snow-covered landscapes. The other is the image of huge oil-, gas and mineral exploration fields, and of ravaged environments as a consequence of the attempt to supply the south with these much needed resources.

Both settings can be found, but the reality is that in the Arctic most communities have moved on from the traditional rural lifestyle embodied in the first image and adopted a lifestyle with more urbanised characteristics. So instead of closed, self-centred, and introverted communities, they have transformed themselves into more open and extrovert societies. By far the largest proportion of the population now works in the 'third' sector, providing public and private services to each other, for instance in relation to education, health care and social services.

These developments have also resulted in a situation where the traditional gender-based division of labour is disappearing, and is, step by step, being replaced by a situation where the social and economic role of the inhabitants is increasingly determined by individual interest and qualification. A shift is therefore occuring from structured hierarchy where males and elders have been decisive, to a situation with a much higher degree of hierarchical independence, where the decisions taken are based much more on aspirations, individual skills and knowledge.

Female flight

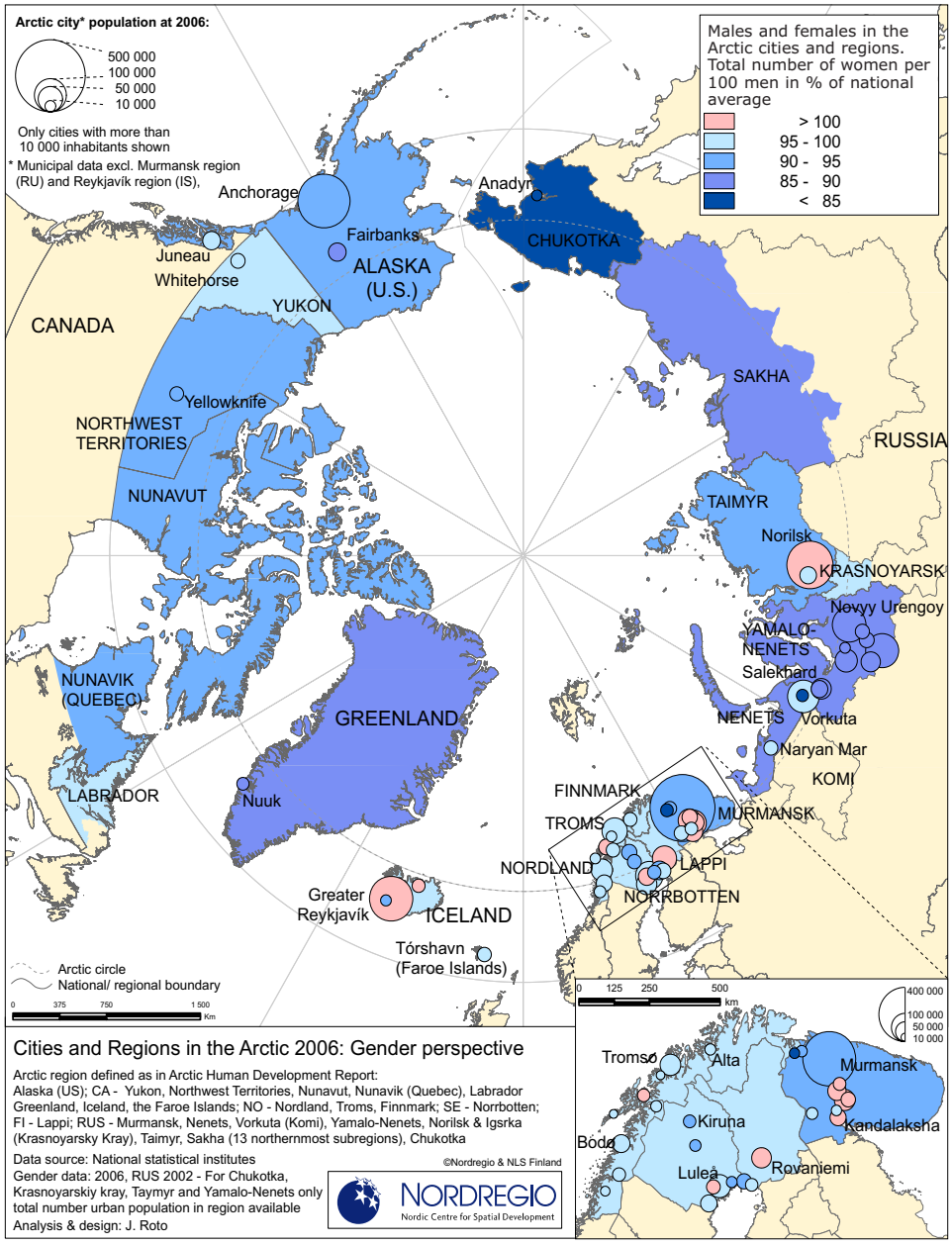
One consequence of these changes is the emergence of a situation where more females consider, and also now tend, to migrate permanently away from their home community and region. A first step in this process may be to move from smaller to larger places (within the region) with better opportunities better fitting their qualifications, and also providing potential employment outside the realm of the traditional economic activities undertaken in the communities.

Gender-based differences in migration choice are nothing new in the Arctic. In connection with large scale resource development projects, young and middle-aged males in search of employment and income opportunities have chosen to become migrant workers, leaving their communities for either a shorter or a longer period of time in the process. Seldom, however, have they left the community permanently. Only if the job turned out to be more permanent in character, and generated substantial incomes, have they done so. Often in such cases moreover they arrange with their families to follow them and settle in the new town or village.

Females, however, seem to migrate more permanently. Moreover, such choices have significant implications for the communities they leave, for instance decreasing opportunities for marriage, the maintenance of family life and family structures, and also fundamentally influencing other cultural activities.

Canada and USA

In Canada the national average shows that there are 103 females for every 100 males, a level which is comparable to most countries in Western Europe and North America, and is due to women generally living 5-10 years longer than men. Moving to the northern part of the country, this pattern however changes



Cities and Regions in the Arctic 2006: Gender perspective

Arctic region defined as in Arctic Human Development Report:
Alaska (US); CA - Yukon, Northwest Territories, Nunavut, Nunavik (Quebec), Labrador Greenland, Iceland, the Faroe Islands; NO - Nordland, Troms, Finnmark; SE - Norrbotten; FI - Lappi; RUS - Murmansk, Nenets, Vorkuta (Komi), Yamalo-Nenets, Norilsk & Igsrka (Krasnoyarsky Kray), Taimyr, Sakha (13 northernmost subregions), Chukotka

Data source: National statistical institutes
Gender data: 2006, RUS 2002 - For Chukotka, Krasnoyarskiy kray, Taymyr and Yamalo-Nenets only total number urban population in region available
Analysis & design: J. Roto

NORDREGIO
Nordic Centre for Spatial Development

markedly. In Nunavut, for instance, there are only 95 women for every 100 men, so the level is as low as 92% of the national level. Similarly the Yukon level is at 96%, Nunavik at 92%, Labrador at 98% and North West Territories at 92% of the national level.

In USA the national level is at 103 females per 100 men, but Alaska shows a female ratio as low as 90% of this, meaning that just 93 females exist for every 100 males. Looking at regional differences Kodiak Island and North Slope are at around this level, while the urban centres show a higher proportion of women – Anchorage 98% and Fairbanks 94% respectively. The Valdez-Cordova region, however, is at 89%, Bristol at 85%, and the Aleutians as low as 51% and 55% for East and West respectively.

Russia

The Second World War still has a significant impact on the population structure in Russia. In 1950 six out of 10 persons were females, and even today there are 115 females for every 100 males in Russia. As a consequence the relative proportion of females is generally at a higher level in the Russian North when taken in absolute terms. Compared to the national level, the relative proportion of females however turns out to be at an extremely low level.

Taken in absolute terms, the urban and western regions like Murmansk *Oblast*, Krasnoarskiy Krai and Nenetskiy Autonomous *Okrug* show a small surplus of women, somewhere between 104-110 females for each 100 males. But compared to the national average a clear deficit appears, at a level around 92 to 95% of the national average. Moving eastwards, the levels decline dramatically, down to 80-85% of the national average with the far eastern Chukotskiy Autonomous *Okrug* as low as 79% with an absolute value of 90 females per 100 males.

The Nordic Countries

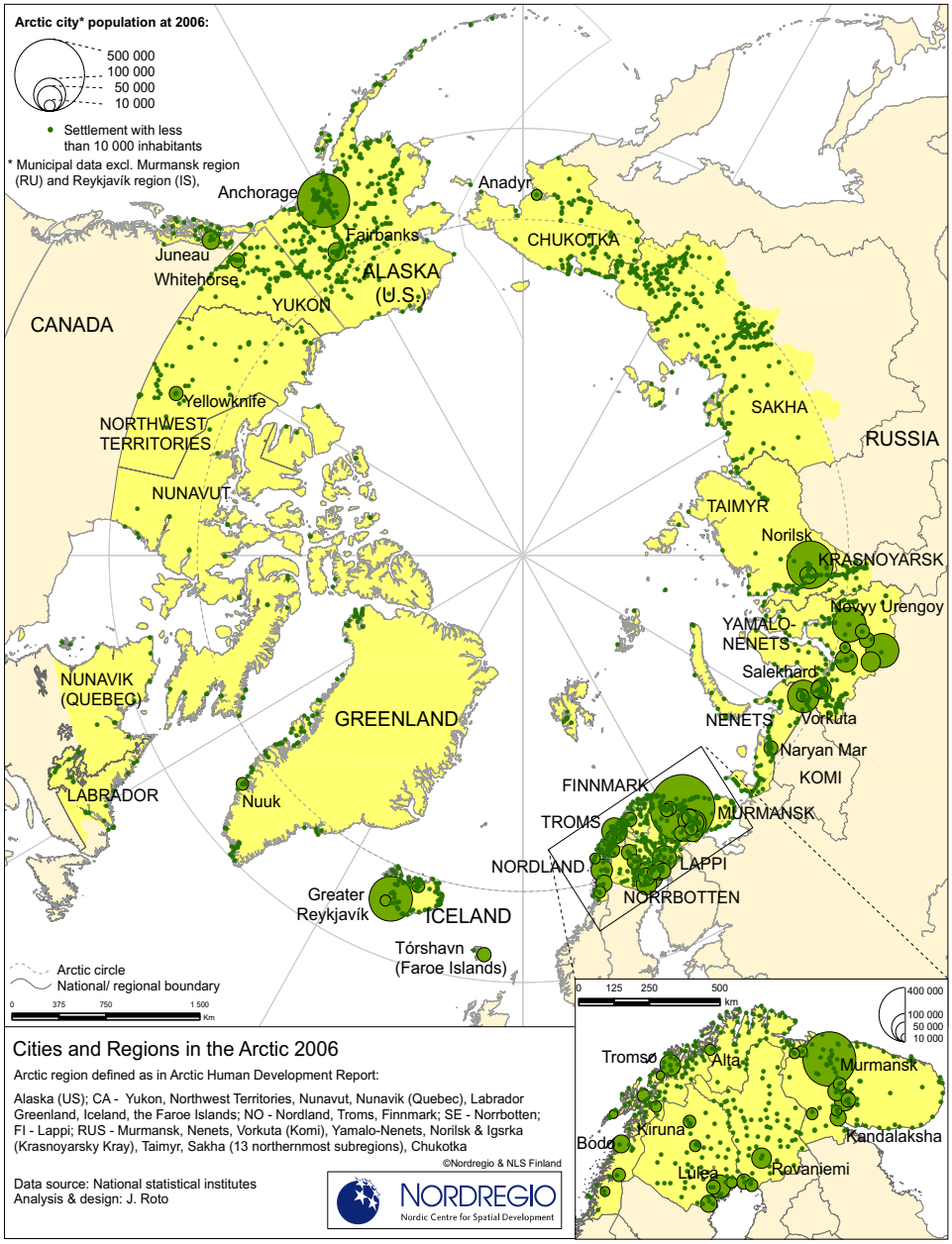
In the Nordic countries the levels of women to men show national averages of around 103 to 111 females per 100 males, with Finland having the highest level, and as with Russia the Second World War is responsible for this deviation from the general Nordic Patten.

The northern regions of the Nordic countries show the same pattern as the rest of the Circumpolar North. At the regional level the "North calotte" area shows numbers around 95 to 98% of the national levels, but with the Faroe Islands down to 92% and with Greenland having as low as 88 females per 100 males. Looking at the municipal level many Northern and interior municipalities turn out to have less than 80 females for every 100 males.

Affinity to change

The most likely explanations for the changes described above are connected to two interrelated factors. On the one hand to the labour market characteristics and job opportunities offered, and on the other to a number of gender-related differences in aspirations and approaches to change.

The perception of northern communities as "frontiers" in the North has profound implications for the kind of business development focussed on, as well as the job opportunities offered. The North as a provider of raw materials is a development trademark while renewable resource cultivation activities – hunting, fishing, reindeer herding – as well as the harvesting of non-renewable resources – the large scale extraction of minerals and energy resources - each continue to predominantly offer what can be viewed as male jobs. Fisheries used to offer on-shore jobs to women in the fishing industry, but most of these processing jobs have been moved on-board to the factory trawlers themselves. The development of advanced technology and the automation of the labour force



reduce the need for manual production, and job opportunities are thus declining.

The gender-related perception of customary male activities related to resource exploitation seems to be "sticky", in the sense that males have difficulty in moving on from what once were key activities, but now constitute only a small percentage of the available jobs. Females, however, seem less limited by specific job characteristics, determined by what may be considered to be "traditional" and "acceptable" activities.

Gender differences in adaptation to change become very clear when talking about the changes needed in respect of the "knowledge economy", where education has become a keyword. Today more females than males in all of the Nordic countries finish higher education courses, and fill the majority of positions in administrative and service-related public and private business activities. The shift from male to female dominance appeared in the late 1990s, and in a total of more than 1500 municipalities in the Nordic countries, there are only more educated males than females in a handful of cases.

The further north you go the more marked the differences appear. In Greenland three out of five persons getting a degree or diploma will be female. Boys still dominated the educational system up until around 1990 with 5-10% more boys than girls finishing a diploma or degree-level course of education. From 1991, however, a marked change occurred. During the 1990s and into the first half of the 2000s, between 10 and 20% more girls than boys finished an education, and since 2003 more than 60% of the persons graduating have been female. So from a situation where women were merely 'accepted' in the education system, they today have become the key persons ensuring that society as a whole gains the qualifications needed. This is not only a situation characterizing the Nordic countries, but a pattern found in the whole Circumpolar north – and a general trend in most of the industrialized world.

Who are the providers?

While resource exploitation is still viewed as the main economic basis for communities in the North, the reality is that the third sector – the service sector with wage work in administration, education, the social services etc., – has become the main income source for most families. With limited job opportunities for well educated women, however, the prospect of staying remains highly unattractive for many women, resulting in continuing out-migration as more or less the only option available to them.

For many men, however, limited options exist in respect of them leaving their current occupations. In the small villages in particular the situation is often desperate. Without proper qualifications unskilled jobs becomes the only option, and as these are also now disappearing, the prognosis for unskilled male employment is becoming ever bleaker. They are caught in a classic "catch 22" situation where their incomes from traditional activities are not enough to enable them to profitably continue in work, as these limited incomes do not enable them to re-invest in new equipment in order to expand their activities.

They also have difficulty in finding young girls who are interested in staying in the village, thereby severely limiting the option of generating the double incomes which are needed in order to maintain a life encompassing traditional activities. And without skills and money it is not possible to move to larger places to find a job. This situation then sees many in the villages, but also some in the towns, in desperate straights often resulting in violence and abuse, which only adds to female flight, not only in order to pursue a better future, but also to avoid the negative consequences of the process of decline.

The villages are the first to be abandoned, though the smaller towns are now also suffering from female flight. Only the towns with higher education opportunities and a broader supply of qualified job opportunities seem to be able to maintain an environment which seems to be attractive enough for younger women to enjoy.

By Rasmus Ole Rasmussen,
Senior Research Fellow.
rasmus.ole.rasmussen@nordregio.se

From the fishing industry on Suderoy, Faroe Islands. Photo: Rasmus Ole Rasmussen

Selected reading on the topic

Bjerregaard P, Holm AL, Olesen I, Schnor O, Niclasen B. Ivaaq (2007) "The Greenland Inuit child cohort: a preliminary report. 2007". National Institute of Public Health. Copenhagen.

Hamilton, L.C., Seyfrit, C.L. (1993) "Town-village contrasts in Arctic youth aspirations", Arctic 46(3):255-263.

Hamilton, L.C., Seyfrit, C.L. (1994) "Female Flight? Gender Balance and Out-migration by Native Alaskan Villagers". Arctic Medical Research, vol. 53: Suppl. 2, pp.189-193

Hamilton, L.C., Rasmussen, R.O., Flanders, N.E., Seyfrit, C.L.(1995): "Out-migration and Gender Balance in Greenland". American Journal of Sociology.

Rasmussen, R. O. (2004) "Socio-economic consequences of large scale resource development; cases of mining in Greenland", in: Beyond Boom and Bust in the Circumpolar North (pp. 101-131). Prince George, B.C., Canada: UNBC Press

Rasmussen, R.O. (2007) "Gender and Generation Perspectives on Arctic Communities in Transition". Knowledge and Power in the Arctic. Arctic Centre, Rovaniemi.

Tommasini, D and Rasmussen, RO (2006) "Adapting to change: cases of detached, dependent and sustained community development in Greenland. AAAS 2006 Arctic Science Conference, Fairbanks, Alaska.

Indigenous peoples in the Arctic

The Arctic has been inhabited by varied groups of indigenous peoples for thousands of years. They have managed to survive massive environmental and climactic changes by being flexible, adaptive and mobile. Today, however, they have become a minority across most of the Arctic, because a massive influx of "newcomers" has entered the region many of whom are individuals attracted by the presumed wealth which could be gained.

Many moved to the North, most have left again, some have perished in the endeavour, and a few have decided to stay. Often influx has been as a direct consequence of policy measures taken by governments. In some cases forwarded as an attempt to rid lowland society of persons who were considered unwanted. In other cases governmental motives concerned the perceived need to display 'national presence' and supremacy, thereby ensuring access to the renewable and non-renewable resources of the North. In still other cases government policy must be seen within the context of a modernization process where economic and social systems from the south were transferred to the North. The process started in the early 1900's but undoubtedly accelerated after WWII.

The level of outside involvement is indicated by the current level of indigenous peoples in the different regions of the Circumpolar North, as indicated in the graph, At present Murmansk region being the largest with some 864,607 inhabitants, while Nunavik in Canada, with 12,861 inhabitants, is the least populated region.

The Russian North is home to a large number of ethnic groups, ranging in size from the Sakha - almost half a million strong - to the nearly extinct Kereks (8 people registered in the 2002 census). According to Russian legislation, indigenous status is only given to groups counting less than 50,000 people. The Sakha, Komi and Karelians are thus not entitled to indigenous status. All together 39 peoples residing in the Russian North are officially recognized as "indigenous numerically small peoples".

Half are Russians

Approximately 50% of all inhabitants in the Arctic live in Russia while the most densely populated area of the Arctic is North Western Russia, particularly around the Kola Peninsula, where almost 25% of the Arctic population lives. The Nordic countries boast 31% of the Arctic population, while Alaska has 16% and Canada approximately 3%.

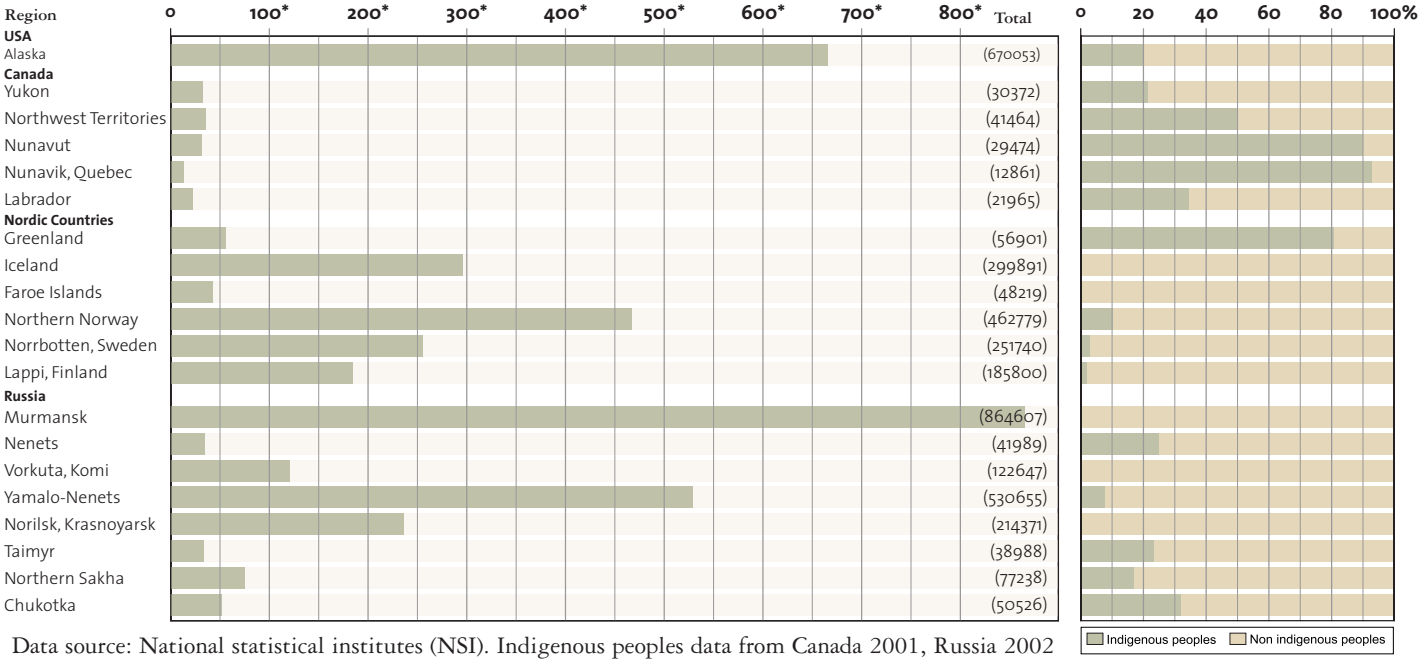
In relation to the Indigenous peoples, the population in Greenland and Nunavut in Canada have the largest proportions, while Sweden, Finland and Russia have the lowest proportion. It is moreover debated to what extend Icelanders and Faroese can be considered Indigenous.

The vast majority of the population in Arctic Russia lives in large population centres, with Murmansk being the largest. Similarly, Alaska is dominated by the two large settlements, Anchorage and Fairbanks. In the Nordic countries larger towns dominate only to a certain degree, as the settlement pattern is somewhat more dispersed. The exception here is Iceland where 62% of the population lives in the Reykjavik-region. In Canada, Greenland and the Faroe Islands there are few large settlements while a substantial part of the population in these areas continues to live in settlements with below 5,000 inhabitants.

Indigenous peoples in the Arctic

Alaska : Inuit,Yupik, Aleuts, "North American Indians"
Canada : Inuit, "North American Indians", Métis.
Finland, **Norway**, **Sweden** : Saami
Russia (from west to east): Saami, Nenets, Khanty, Selkup, Enets, Nganasan, Dolgan, Evenk, Even, Yukagir, Chukchi, Chuvan and Siberian Yupik

Population by region 2006: **% share indigenous peoples**



Data source: National statistical institutes (NSI). Indigenous peoples data from Canada 2001, Russia 2002
Peoples names as in NSI Northern Norway - Finnmark, Nordland and Troms Sakha - data refers to 13 northernmost uluses (subregions), indigenous peoples excl. Sakhas.

A revival of the Russian North ?

Where is the Russian North? This seemingly simple question has no straightforward answer. The Russian definition of which territories are situated 'in the North' is not based on any single, clear-cut criterion. It follows neither climatic nor administrative borders, and the territory covered has thus expanded and contracted according to political trends. Today, however, 11.9 million km2, or about 70 percent of the total territory of the Russian Federation, is defined as belonging to the North. Were it an independent state, the Russian North would thus constitute the world's largest country. The population is, however, modest: currently it stands at 11.5 million, i.e. the population density is less than one person per km2.

The Russian North – a landscape of both *tundra* and *taiga* – contains large amounts of untapped natural resources, including most of Russia's oil and gas reserves as well as diamonds, gold, and other valuable minerals. At the same time, it is a constant reminder of the flaws of a planned economy and of the Soviet regime's attempts to defy the logic of the market. Russian authorities today thus face the challenge of developing a new northern policy adapted to the realities of the 21st century.

The Soviet North

Until the 1917 October Revolution, northern Russia and Siberia were poorly integrated into the Russian state and economy and inhabited almost exclusively by indigenous peoples (with the exception of the *Arkhangelsk* region). A combination of climatic, infrastructural, and technological constraints had prevented Tsarist Russia from developing the riches of the North. The new Soviet authorities, however, envisioned the North as an untapped resource to be exploited for the benefit of the national economy and mythologized it as the 'land of the future'. Under the slogan "the conquest of the North" (*osvoenie severa*), Soviet authorities set about colonizing this vast realm.

The development of the North required a massive relocation of the workforce. Initially, this was provided by cheap, forced labour from the *Gulag* – the system of prison camps developed under Stalin. When the *Gulag* was dismantled after Stalin's death, workers were enticed to move to these often inhospitable tracts by various incentives (higher wages, lower pension age, etc) and a system of labour rotation. Normally, northern workers would, after a set period, return to the South (or 'the mainland' as it was termed in Russian). Not until the 1970s did the Soviets enter the third and final stage of the 'conquest' by attempting to establish a permanent population, which required significant investment in the physical and social infrastructure.

The focus on the extraction of natural resources shaped the settlement structure, not only in the sense that towns were constructed in the immediate vicinity of the resources, but also that the overwhelming majority of these new settlements were 'company towns' set up around a single enterprise. As the settlements developed, it was the company that bore responsibility for

Products from the "Datchas" surrounding the larger cities in Russia – here Skt. Petersburg - provide a much needed supplement to the dwindling pensions in the post-Soviet Russia. Photo: Rasmus Ole Rasmussen

View of the town Monchegorsk. To the left (outside the frame) are the large nickel smelters, responsible for massive pollution of the environment. The town is beautifully located on lake Imandra, while the mining company recently payed for the erection of a church in the traditional Russian style, instead of reducing the outlet of massive amounts of acid fiumes from the smelters.

Photo: Rasmus Ole Rasmussen

developing the entire infrastructure of the settlement in question – from housing to kindergartens and hospitals.

The 1990s: A decade of decline

The Soviet approach to the colonization and exploitation of northern regions had been intimately linked with the logic of the planned economy and its artificial pricing of industrial input and output, especially the gross under-pricing of transportation costs. Thus, it is not surprising that the North was especially hard hit by the introduction of market mechanisms in the early 1990s. It soon became clear that a substantial part of the Soviet settlements had been built up around loss-making enterprises and the future of many northern 'company towns' looked bleak.

While Moscow failed to live up to its obligations and struggled to develop a new future-oriented policy for the North, northerners voted with their feet. With the exception of the main oil- and gas-producing regions in Western Siberia, population levels fell from the Kola Peninsula in the West to the Bering Straits in the East. Hardest hit was Chukotka Autonomous *Okrug*, the region bordering the Bering Straits and Alaska, which lost almost 70 percent of its population between 1989 and 2002. Half of the federal subjects in the Russian North experienced double-digit losses in the same period.

The out-migration to more southerly parts of the country was welcomed by the government. With a cost of living more than four times higher than the rest of the Russian Federation, it was simply too expensive for the economically weakened state to maintain an adequate social infrastructure throughout the North. But, again, the state underperformed – there were far more people who wanted to leave the North than the state managed to provide for.

The Putin years

As in most other fields of the state administration, the change of presidency from Boris Yeltsin to Vladimir Putin in 1999/2000 also implied fundamental changes in the approach to the North. Indeed, the whole legal-administrative concept of the North came under attack. Various proposals for alternative approaches to calculating northern subsidies were floated, including dividing Russia into six zones of 'discomfort' and assigning each settlement an individual factor. So far, however, the North has survived.

The bureaucratic-administrative bodies however did not. Upon being elected president in spring 2000, Putin closed down the state committee *Goskomsever*, which had coordinated northern policy

during the 1990s. For a while, it survived as a separate department within the Ministry of Economic Development and Trade. However, within a couple of years, this downsized entity was abolished. Northern issues were then transferred to "regular" ministries.

Changes were also introduced in the Russian North itself, most notably as a result of centralization and strong economic performance. Whereas the northern regions in the 1990s had enjoyed substantial autonomy in a decentralized federal system, Putin re-established central control through the introduction of governors as presidential appointees, a ban on regional parties, and limitation of the powers and responsibilities of the regional administrations. The centralization trend also resulted in pressure to disband some of the smaller federal subjects in the North. Under Putin, Russia's number of federal subjects has been reduced from 89 to 85 and, by the time he leaves office next year, it will be down to 83. All these mergers took place in the North.

From being on the brink of bankruptcy in 1998, Russia has made a remarkable economic comeback, largely driven by high oil and gas prices. As the Russian North stands for 95 percent of the nation's gas and 75 percent of its oil production, the North has again become a crucial factor in Russian economic development. The income from the energy sector has not only profited the producing regions, but has also given the Russian authorities greater capacity to provide for the more destitute parts of the Russian North. However, the state does not consider it a goal in itself to preserve the current settlement structure and a distinction has been drawn between 'the profitable North' and 'the unprofitable North'. Whereas the former, which includes the settlements built up around profitable natural resource extraction (oil, gas, gold, diamonds, etc) are to be further developed, the latter is to be gradually scaled down.

Towards a revival of the Russian North?

The importance of "the profitable North" for the overall development of the Russian economy is unquestionable: its oil and gas resources will – at least in the short- to mid-term perspective – form the backbone of the economy. Successful exploitation of these resources (including oil and gas resources offshore) will necessarily remain a top priority for the government while the political and economic importance of these resources raises the question of how 'open' or 'closed' the Russian North is to non-Russian actors, most notably foreign petroleum companies. While the development and management of northern resources, in particular oil and gas, is still governed by the desire to achieve market profits, Putin has used these resources to re-position Russia as an influential actor or 'energy superpower' at the international level. Unsurprisingly then, Putin's second term was marked by increased attention to the question of how to promote private investment (both Russian and foreign) in natural resource extraction while maintaining control over natural resource assets that came to be defined as 'strategic'. Regardless, given the importance of northern resources for the Russian economy, the state seems set to play a much more active role in developing the Russian North in the years to come. After a decade of decay, it now appears that the Russian North might be heading for a revival.

Elana Wilson Rowe
Senior Research Fellow
ew@nupi.no

Helge Blakkisrud
Head of Section
hb@nupi.no

References:

Blakkisrud, Helge & Geir Hønneland (eds) (2006) Tackling Space: Federal Politics and the Russian North. Lanham, MD: University Press of America.

Hill, Fiona & Clifford G. Gaddy (2003) Siberian Curse: How Communist Planners Left Russia out in the Cold. Washington, D.C.: Brookings Institution Press.

Hønneland, Geir & Helge Blakkisrud (eds) (2001) Centre-periphery Relations in Russia: the Case of the Northwestern Regions. Ashgate Aldershot.

According to the current definition, 11.9 million square kilometres, or about 70% of the total territory of the Russian Federation, is defined as belonging to the North. It is important to note that the notion of the 'North' encompasses the actual 'Far North' as well as 'territories equivalent to the regions of the 'Far North'. This emphasis on equivalency make it possible to define as 'northern' some climatically disadvantaged territories in Southern Siberia, even though they are not geographically contiguous with the rest of the North. The present boundaries of the Russian North are demarcated by a heavy green line in the map.

Mission and Mammon on the loose

In the small village of Lovozero, centrally situated on the Kola Peninsula, the turmoil wrought after the breakdown of Soviet power has taken its toll on the community. It used to be a rather anonymous small village of around 3,000 inhabitants, with a large contingent – around 800 persons - of Sami, but also major representations from other indigenous groups such as the Komi and the Nenets, many of them immigrated in 1883-84. Its economy was based on a combination of rare mineral production and a *kolkhoz* farm with reindeer herding as its primary activity. It was established during the 1930's and ended up with the total collectivization of reindeer herding in 1937.

In recent decades, however, the community has drawn a lot of international attention, epitomized through three buildings next to each other at one end of the town. Within the walls of these buildings there are several entities which have definitely contributed to the shaping of the present, and perhaps also the future.

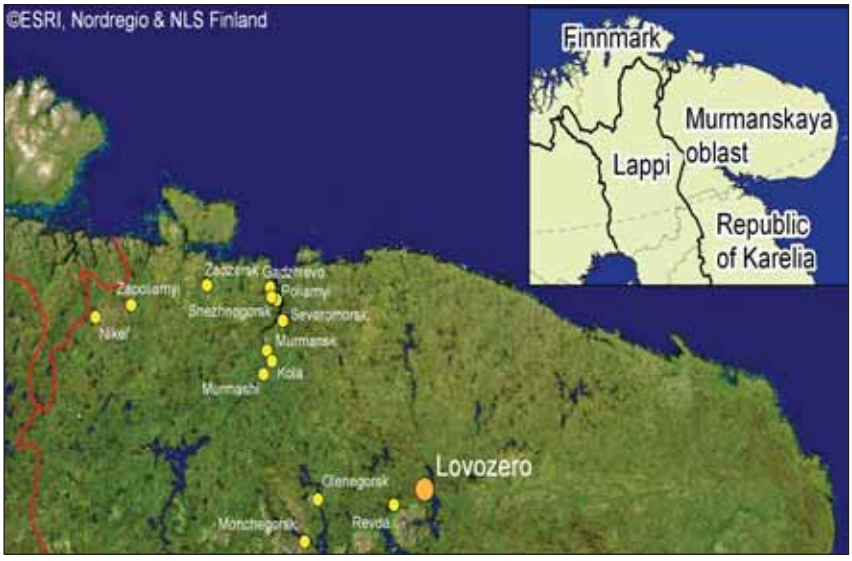
A newly erected Russian Orthodox Church was established in response to the post-soviet focus on religion. On the first floor of the nearby *Hotel Virma*, named after the local river, the Norwegian Sami Mission established a permanent office in 1997. The hotel also serves as a starting point for tourism, particularly for fishermen looking for large salmon in the rich rivers in the hinterland. The fish used to be caught by the local communities, but are now up for sale to wealthy foreigners, organized by tourism businesses from the outside. Similarly a Swedish company took over the old reindeer abattoir and is now sending the reindeer meat to the Swedish market.

Next to the hotel a multi-cultural centre was established in 1994, aiming at giving all of the indigenous people in the community a basis for strengthening their cultural activities. The building, however, has recently been restored, based on a grant of some 1.2 million SEK from the Swedish Government dedicated to the development of a Sami cultural centre. Sami delegations and groups of individuals from across the Nordic countries are now arranging visits and exchange arrangements with the Sami group, disregarding the other indigenous groups. To be Sami today opens the way for foreign resources and special attention, including that of the inter-national press such as the BBC. However it also opens the way for the influx of what in Russia is called "New Russians", persons who take advantage of any new opportunity to make a profit for themselves.

A special type of mission has also been introduced from Canada where the Arctic Institute of North America has tried to introduce to the community a Canadian Land Claim approach. Indigenous peoples in Canada have been quite successful in negotiating land rights based on traditional land use patterns, claiming rights to areas where land use activities have been documented. The approach was brought to Lovozero by a group of scholars and students from the institute, "helping the Sami to contribute their traditional knowledge of their land to help the Russian government manage resources and development in the region", by drawing maps of alleged traditional land use patterns including the migratory patterns of their reindeer herds, the presence of berry bushes, good fishing holes, cabin locations and sacred Sami sites, such as an island where Sami shamans are buried.

In this process, however, they often disregarded the fact that the community was *multi*-ethnic with very different approaches to land use and land rights being shown across the various ethnic groups, while fundamentally ignoring the fact that individual land rights have been absent since 1937.

By Rasmus Ole Rasmussen,
Senior Research Fellow.
rasmus.ole.rasmussen@nordregio.se




The previous multi-culture – now Sami-culture house


The church


The hotel

All Photos: Rasmus Ole Rasmussen

Climate challenges for Copenhagen 2009

In 2009 Copenhagen will be the seat of a huge new United Nation's conference focussing on combating global climate change: The so-called second Kyoto-conference. The Kyoto-agreement has validity only until 2012. Therefore decisions made in Copenhagen will be of utmost importance for the future. In 2009 Sweden will hold the chair of the European Union. As such then 2009 could really provide a good opportunity to demonstrate the positions of the Nordic countries in the global climate debate. This point was underlined by the Nordic prime ministers during their Oslo Nordic Council meeting in October this year.

At present, Denmark, Finland and Sweden all are committed to the climate goals of the EU. That is to reduce the emission of greenhouse gases by 20% by 2020 as compared to 1990-levels. For Norway the goal is a 10% reduction during 2008-2012 as compared to 1990 and a total of 30 % by 2050. In addition Norway also aims to be 'CO2 neutral' by 2050. By 2050 the aim for Iceland is to see a reduction in emissions of 50-75 %.

The overall Kyoto-goal is to avoid global temperature increase above +2 oC by 2050. To achieve this, the world's total greenhouse emission must at least be reduced by 50 % compared to the 1990-level, according to the recommendations from the intergovernmental Panel on Climate Change (IPCC).

Globalisation has the latest year been a central issue in respect of official Nordic political cooperation. In June this year the Nordic Council of Ministers (NCM) published *Möjligheternas Norden – svar på globaliseringens utmaninger (Nordic oppturnites – an answer to the challenges of globalisation (*unofficial translation).The NCM basically argues here that the issues of globalisation must be solved multilaterally. They also underline that the Nordic countries have already set very ambitious goals to reduce greenhouse gases, and to achieve sustainable and secure supplies of energy.

– For the time being it is important that the Nordic countries work towards the supply of clean and secure energy, comments Halldór Ásgrímsson, the Secretary General of the NCM, adding: – Each country has her own focus; wind-power for Denmark, thermo-power for Iceland, storage of CO2 for Norway and bio-energy for Finland and Sweden.

During the meeting in Oslo the Nordic prime-ministers were asked about the perspectives for nuclear-based electricity in the joint Nordic electricity market. They categorically stated that no changes were planned: – We will continue as present, where the issue of nuclear power is regarded as an individual policy-arena for each of the Nordic countries, explained Finland's prime-minister Matti Vanhanen. Finland is the largest producer of nuclear-based electricity in the Nordic area. Prime-minister Fredrik Reinfeldt, representing Sweden and the other Nordic nuclear-based power-producer, chose however not to comment on the question.

The Nordic prime-ministers did not lay out any new goals for greenhouse gas emissions. They did however send the clear message that the world must act in a united manner to reduce the speed of climatic change: – The EU and the Nordic countries can do very little on their own. We must get the USA and the large countries like China, India and Brazil to join forces. That is really what we should work towards before Copenhagen, the prime-ministers underlined.

This ambition is also highlighted in Nordic policy-notes on globalisation. One of the most interesting suggestions here is to arrange a Nordic (Davos-style) Forum on Globalisation. The first meeting should be hosted by Sweden and should take place early in 2008. Important to the proposal here is the desire to invite key international actors from the governments of the major powers and from the management of the most powerful international institutions. No further information on this was however forthcoming at the current time of writing. – It is the Swedish authorities who are doing all the planning, noted the NCMs Halldór Ásgrímsson, who also mentioned that the NCM has a potential budget of 60 MDKK for work on Nordic globalisation for 2008. – It is a lot of money, but I think it is needed, he suggested.

The importance of the work on reducing global climate change is illustrated by the fact that the IPCC will, together with Al Gore, receive this years Nobel Peace Prize.

Nordic prime-ministers present in Oslo. From left: Fredrik Reinfeldt (Sweden), Jens Stoltenberg (Norway), Matti Vanhanen (Finland) and Geir H. Haarde (Iceland). Photo: Odd Iglebaek

The IPCC has three working groups. Professor Eystein Jansen is the Director of the Bjerknes Centre for Climate Research at the University of Bergen and one of the twenty coordinators of the first of these groups. He is also the editor of chapter 6 on Paleoclimate in the IPCC's assessment report for 2007.

– Thus far (2007) the EU has managed to reduce its greenhouse gas emissions by 1% while the goal is to reach a 20% emissions reduction level by 2020. Do you think this target remains attainable?

- Yes, if strong measures are applied. It has to cost to be a emiter of CO_2. Therefore I think trading emission quotas cannot be the main way forward. Sweden has already cut its emissions to below the 1990-level and I think that others can also achieve this. I also think that the strategy cannot be to wait for new technology. The urgency of the problem says we must start now, and that implies we have to use existing technology. Of particular importance is to capture and store CO_2 from power-stations based on fossil fuels. This would benefit Europe as well as many other countries. For Norway, the challenge is to reduce emissions in connection with the oil- and gas-based production of energy in the North Sea.

– But we are talking about a global problem? – Definitely, as such then the way forward will depend on the US and in particular on whether they agree to accept new international obligations in respect of climate change. We just have to hope that this will change with the new president who will take over from George Bush, concludes Eystein Jansen adding: – And of course that Australia and other large emitters will join our ranks and commit themselves to the goals that will be decided upon in Copenhagen in 2009.

By Odd Iglebaek
odd.iglebaek@nordregio.se


Halldór Ásgrímsson


Eystein Jansen

Nordic Arctic Research

Late 2005 The Nordic Council expressed a wish to survey the need for research on climate change and its consequences for the societies in the Nordic Arctic areas. The assignment, entitled ARKUFO, was given to NordForsk by the Nordic Council of Ministers in February 2007. In total some thirteen priority initiatives in five categories were identified. Below is a summary:

I. Climate models and scenarios

• Pooled Nordic resources with broad interdisciplinary expertise collected in a Nordic centre can contribute to the development of more advanced climate models and scenarios.

• Modelling of climate variations over the last 1000-10,000 years can improve on understanding of how they may develop over the next 100 years.

• Integrated scenarios (including atmospheric composition, pollution and other environment and social changes) will help in the development of more realistic climate models.

II. Effect of climatic processes

- Research will contribute to a better understanding of the combined effects on the Arctic ecosystem of climate changes plus other factors which can be surprisingly fast and large.

- Better understanding of biodiversity (including changes to vegetation zones and the variety of vegetation) help to identify weaknesses and plan ways to protect biodiversity.

- Pan-Nordic research can boost understanding of the effects of climate changes on permafrost, with consequences for infrastructure and the balance of greenhouse gases.

III. The vulnerability of society and adaptive strategies

• Through evaluation of adaptive measures and strategies, critical analysis of decision-making, intra-sector synergies and consequences and reconnection mechanisms can be linked to measures.

• Complex and integrated vulnerability analyses on a Nordic scale can provide a practical picture of society's adaptation in the Nordic region, and improve the theoretical understanding of the problem.

• Studies on what constitutes risk and vulnerability can critically analyse risk issues and what risk is for whom (depending on age, sex, relationship, rural/urban, sector, income etc.).

• Research on adaptation aspects which will mostly occur on local level to explain why certain societies and groups cope with the risks better than others, who will adapt best and why.

IV. Monitoring

- Continual monitoring helps society understand climate change in the the Arctic, identify early warning signals and make well-informed decisions on adaptation and mitigation.

• Nordic collaboration to improve the availability and cost effectiveness of monitoring products, i.e. use of climatic data for comparison of research.

V. General

- Holistic research on changes in the Arctic to stimulate local participation will create social capital and faith in the future in areas adversely influenced by climate change.

The complete report: *Nordisk forskningssamarbete om klimatförandringen och dess konsekvenser i Arktis – Kartlägging av kunnskaps och- koordineringsbehovet - Tema Norden 2007:580, ISBN 978-92-893-1562-3* can be order from www.norden.org/order.

Avoiding Men as the Norm

The analysis undertaken in the study, *Men and Male as the Norm? – A Gender Perspective on Innovation Policies in Denmark, Finland and Sweden* of around 50 innovation policy texts and 18 homepages of governmental innovation agencies in Denmark, Sweden and Finland can be shown to conclude that: gender equality is not mainstreamed in innovation policies. For example there are few occasions where gender-related issues are discussed or a gender perspective is defined. There is a lack of knowledge on the gendering of society and the role gender plays in issues related to the knowledge economy, while gender-divided statistics are seldom used.

Denmark can be concluded as being marked by a gender-blind quest for an innovative society. Very few of the investigated agencies even mention the word 'gender' or the phrase 'gender equality' and none can be said to mainstream gender. A number of interesting reports do however exist, for example, on how to bring more women into science, since too few researchers are women. These reports could have been used in the discussion on Danish innovation policy, but were not. These few reports on gender issues hence form a kind of parallel to mainstream innovation policy.

The Finnish case reveals a focus on the scarcity of women researchers in Finland, while internationally the country is seen as an innovative wonder. Women are also often represented as lacking in what it takes to be an asset in building innovation e.g. having the right technological and scientific knowledge. The main organizations supporting research, technology and innovation – The Finnish Funding Agency for Innovation and Technology (Tekes) and the Technical Research Centre of Finland (VTT) – do not discuss gender-related issues in their policies.

Sweden differs in comparison to Denmark and Finland in that the *The Swedish Governmental Agency for Innovation Systems* (Vinnova) promotes a gender perspective. Vinnova has analysed its own use – or rather non-use – of the gender equality directive from the Government. The starting point here is that only 20 percent of applicants for R&D-funding from Vinnova are women. This is explained by the representation of the successful applicant as a technically well-educated, middle-aged, Swedish man, with great networks in relation to the calls for tender and by the fact that the texts 'speak' to men rather than women, through the bureaucratic, complex, information-dense, abstract and un-popular writing style. Vinnova also promotes a gender perspective in the VINNVÄXT programme. Besides, there is currently a research programme focusing on gender perspectives on innovation systems, and also a research programme focusing on the health care and care sectors of the economy where many women work.

Various analyses of innovation policies indicate that men and 'male' are created as the norm in these policies. This implies that, even though a seemingly gender-neutral discussion on 'everyone' and all of society takes place, men, male-dominated and 'masculine' sectors of the economy are focused on in the policies. Top-quality male researchers, sometimes in accordance with a male-centred engineer-ideal, and as 'bread-winning' men, are seen as the best assets upon which to build innovative societies. Besides, knowledge on technology and science, both connoted as masculine, male-dominated sectors of the economy, and large companies are promoted as the primary sources of competitiveness and innovation.

Women's knowledge, entrepreneurship and women-dominated and/or 'female' sectors of the economy are hence not seen as important or innovative. Instead women are represented as lacking, for example the 'right' (technical) knowledge, education and/or an 'entrepreneurial spirit'.

Innovations are increasingly seen as one of the main ways to enhance economic growth thereby creating prosperous nations and regions. Innovation policies aim at supporting different processes of creating innovations through various measures. Enhancing and supporting innovation is one of the key approaches within regional and economic developmental policies in the Nordic countries.

The question one could ask is therefore whether the goals of innovation, economic development and gender equality are compatible? Is it possible to mainstream gender in innovation policies?

The answer to this is simply *yes*, but also that it probably requires a transformed perspective on economic development and innovation. A transformed perspective on innovation policy through gender mainstreaming means building on everybody – both men and women – as assets on which to build development. To by-pass a large part of the population – women – is unfair and does not seem feasible or economical, when aiming at the development of the whole society.
This includes: seeing and taking account of many people, not only male workers, pupils, researchers or entrepreneurs; many different kinds of knowledge, not only technical and scientific knowledge from universities; many different kinds of sectors of the economy and economic activities, not only technical businesses or large companies and many different kinds of innovations, not only technical goods, but also services originating from a longstanding, well-developed public sector.

A link to the report:
www.nordregio.se/Files/NRP2005-8R4.pdf

Gender equality
implies that all persons' — men's and women's — knowledge, experiences and contributions to society are taken into consideration and have a bearing on the development of society. In a quantitative perspective gender equality implies a 40-60 per cent share of the respective gender.

Gender mainstreaming
means inte-grating a gender equality perspective into, for example, a policy or the work of an organisation. Within the EU, gender mainstreaming has been on the agenda since 1996 and the Member States are obliged to adopt this approach. The latest EU definition of gender mainstreaming can be summarised as: Incorporating equal opportunities for women and men into all community policies and activities. Another useful definition of gender mainstreaming is provided by Rees (2005, p. 560): "the promotion of gender equality through its systematic integration into all systems and structures, into all policies, processes and procedures, into the organisation and its culture, into ways of seeing and doing".

By Katarina Pettersson,
Senior Research Fellow
katarina.pettersson@nordregio.se

Danish Debate
The Danish Agency for Science, Technology and Innovation recently opened its new web based debate forum with a focus on women and innovation. Among the questions discussed are, why are there still relatively few women working on innovation in Danish firms? How can women be attracted to the high-tech sectors? Why are changes so slow – what can the management of firms do? The initiative is based on an action plan presented by the Danish Council for Technology and Research in February of this year, entitled "Innovation Denmark – 2007-2012", with the purpose of strengthening Danish innovation.
http://fi.dk/site/forside/innovation/debat-web-tv

A new report from The Danish Agency for Science, Technology and Innovation – *Innovation og mangfoldighed – ny viden og erfaringer med medarbejderdreven innovation* – reveals that increasing diversity pays off. Firms with a more diverse composition of the workforce nearly double innovation. The report uses a 'diversity-index' which builds on statistics from 1700 Danish firms with more than twenty employees and is representative for Danish industry. Diversity regarding gender, ethnicity and education is said to lead to a marked increase in the ability to innovate.
http://fi.dk/site/forside/nyheder/pressemeddelelser/2007/mangfoldighed-skaber-innovation

Nordregio Academy Open Seminar

Gender and the Knowledge Economy
Knowledge and innovation are seen as increasingly important for economic growth and thereby creating prosperous nations and regions. What role does gender play in the knowledge economy? Does 'masculine' knowledge shape innovation and development policy? Is innovation and creativity greater in heterogeneous work teams? How can gender be mainstreamed into research and policy on the knowledge economy? The seminar is a collaboration with the 6th Framework programme EURODITE (www.eurodite.bham.ac.uk).

Speakers:
Dr Alison Parken, University of Cardiff, Wales
The gendered construction of knowledge in the economy

Dr Katarina Pettersson, Nordregio
Gender mainstreaming innovation policy

Welcome to Nordregio

Friday 11 January 2008
10.00-12.00 followed by lunch

No fee but registration necessary if you wish to join us for lunch.

Register at www.nordregio.se/events.htm
Contact: Margareta Dahlström
margareta.dahlstrom@nordregio.se

New regional policies

The Swedish government has recently reformulated the objective of its regional development policy. Improved local and regional competitiveness is the new call of the day also in Denmark and Finland, while redistributional objectives are still maintained by the non-EU Nordic states of Norway and Iceland.

Regional development policy objectives have traditionally been a balancing act between promoting re-distributional goals (supporting 'lagging' regions) and socio-economic growth objectives (supporting leading regions and regional centres). The regional development policy objectives were borne out of the labour market policies of the 1950s and 1960s, so as to expand economic activities to less central areas.

In recent years, the focus of regional development policies has shifted from redistribution objectives (reducing territorial disparities and improving national cohesion) to regional development (economic growth) objectives and territorial integration. Following the economic downturns of the late 1980s and early 1990s, regional growth issues came to the fore in several of the Nordic countries. Internationally, the old approach, focussing on redistribution from leading to 'lagging' regions has been replaced by increased emphasis on building competitive regions by bringing local actors and assets together.

After 1995, when both Finland and Sweden became members of the EU, regional development policies and industrial policies have become increasingly intertwined, as growth objectives have become more prominent in both countries.

However, these policy shifts are not unambiguous. As noted by the Swedish Institute for Growth Policy Studies (ITPS) in a recent report, even regional policy instruments with an explicit growth objective may incorporate re-distributional ambitions, as former regional policy goals may remain in operation – although informally - within some regional policy implementation bodies.

In Denmark the globalisation strategy of the current government (as of October 2007) maintains a strong focus on economic growth as a regional development strategy. In Finland, the new Vanhanen II government echoes the Danish approach, stating that its regional policy objective is to increase the international competitiveness of the regions while also providing for regional specialization, basic public services and network cooperation.

In Sweden, the centre-right government introduced a new regional development policy objective in their autumn budget in September 2007. The former policy objective of regional development so as to provide for "well-functioning and sustainable local labour market regions with good services in all parts of the country" has been replaced by a more explicit growth objective that states that "the objective of regional growth policies shall be to promote development in all parts of the country with improved local and regional competitiveness".

In the non-EU0 states of Norway and Iceland, both counties try to pay attention to both the growth and redistribution objectives in the regional development policy field. Norway is currently in the midst of launching a major study to assess the effects of its combinatorial regional development policy.

By Jon M. Steineke, Research Fellow
jon.m.steineke@nordregio.se

Regional development policy objectives

	Denmark	*Finland*	*Iceland*	*Norway*	*Sweden*
Current regional development policy objectives	Growth	Growth, some redistribution	Growth and redistribution	Redistribution and growth	Growth
Policy objective trend	Increasing focus on growth	*	Territorial broadening of regional growth agreement strategies	Stability in duality of objectives	Increasing focus on growth

* to be operationalised by the end of 2007

Ankarhem, Rudholm and Quoreshi (2007), Effektutvärdering av det regionala utvecklingsbidraget – en studie av effekter på svenska aktiebolag. Report A2007:016 (October).

One region - multiple definitions

Even though the concept of "The Arctic" is commonly used, not single defition exist that everybody agrees on. The map show six common delineations. The Arctic circle is sometimes referred to as defining the Arctic, while the 10 °C has been the traditional definition used in many geography school books. Similarly the treeline has been used as a delimiting line for the Arctic in schoolbooks in biology and ecology. The AHDR (Arctic Human Development Report) emphasizes that the Arctic is a homeland for peoples, and therefore includes the social, economic, political, and ecological processes that are the critical properties for the functioning of the Arctic System. The AMAP (Arctic Monitoring and Assessment Programme) focuses on the environmental conditions in the Arctic, and therefore chooses to use a definition based on the general function of the Arctic environmental system. CAFF (Conservation of Arctic Flora and Fauna), however, focuses on the Arctic from an ecosystem point of view.

The fact that not one definition serves all purposes highlights show the complexity of the Arctic, and the need to be precise when referencing it in a specific manner.