Second Theme: Northern Economies in the Global Economy

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The Global Economy: Northern Needs*

Nyurguyana Alexandrova

The tendency has been towards economic globalization and the erasure of national borders at the end of the 20th century. International organizations striving to unite regional forces for the purpose of improving living conditions have been launched. We are facing the problems and opportunities that face northern economic activities within the global economy at the present time. The development of northern economies progresses unevenly and has its own special character. Positive and continuous movement forward takes place in Northern Europe and North America, whereas the Russian North is experiencing decline in all economic spheres. The difficult reformation process to a market-oriented economy is in progress there. Using the Sakha Republic as an example, I would like to highlight the regional needs and barriers to sustainable economic development in the Russian North.

The problem of food security and accessibility is still of priority, particularly in Sakha Arctic regions. The majority of foodstuffs are imported to the North from other Russian regions due to climatic features. The food problem is complicated at present by a series of other factors, including the low purchasing power of the inhabitants. The population tends to migrate to industrial centers, causing income variation in different branches of the economy. The vast majority of the Sakha population, however, lives in rural areas and is employed in low-income occupations. The decline in real income affects particularly the consumption expenditure structure in Sakha households. Food expenditure constitutes 65% of all household expense in poor families, whereas in developed countries food expenditure makes up only 15% of the family budget. As a result, there is continuing deterioration of the population's nutrition in Russian Arctic and northern regions where, due to the drastic increase in transportation rates, the import of foodstuffs such as potatoes, vegetables and fruits has been reduced. Meat consumption has gone down to an unacceptably low level: traditional „meat eaters" are able to consume meat $1^{1/2}$ to 2 times less often than the average Russian (Tikhonov, 1996).

The level of food consumption fails to meet recommended norms in regard to either structure, or energy needs. The problem of inferior nutrition and even malnutrition is the barrier to sustainable economic development in the Arctic and the North, generating a number of very serious problems, including health deterioration, labour supply shortage, and sex disproportion.

Another barrier is the unhealthy environment, which in turn affects food quality. Unreasonable use of natural resources in the Arctic and northern regions has resulted in a considerable shortage of biological

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resources, environmental pollution, and ecological disasters such as annual catastrophic floods, intensive forest destruction, and violated areas.

For example, for the purpose of tin mining in North Yakutia, the giant integrated mining plant „Deputatskiy" was built. As a result of its activities, a huge area has been destroyed, with a million cubic meters of rocks discharged onto the ground. And in 1998, due to destructive flooding of the Lena, Indigirka and Kolyma Rivers, 166 settlements were flooded, more than 1,000 houses were destroyed, 3,000 head of livestock were killed, and approximately 45,000 inhabitants suffered damages. Additionally, as a result of industrial pollution in the rivers in Eastern Yakutia, the stocks of sturgeon, nelma, omul and muksun have been severely reduced. There is a strong need to replenish these stocks through artificial reproduction. Of particular anxiety is the drinking water quality, as there is a shortage of up-to-date water refining systems. The major sources of water pollution are the gold- and diamond-mining industries.

Thus, there is an acute need to implement a comprehensively thought out ecological policy which fits the vulnerable conditions of northern nature. Any new human activities should be developed on the basis of a prior analysis of ecosystems and the potential consequences of anthropogenic impacts. Using the example of foreign countries, the system of sanctions and fines against enterprises causing environmental damage or destruction should be toughened.

At the same time, the mining industry forms the basis of Sakha's economy. The mining industry produces 80% of the area's total industrial output. That is why it is necessary to look for optimal ways of balancing economic development with other needs, resolving priority and value conflicts. For instance, it is possible to develop deposits by using an effective regional shift method, when workers who go for 2-3-week shifts are housed in modules. That method would help minimize the damage caused to the environment, provide the most effective use of investments, and manage the problems of social infrastructure.

The problems of the Russian North can be enumerated ad infinitum. Are there any changes for the better at all?

The development of the infrastructure and the economy in Russian Arctic and northern regions depends on the operation of the Northern Sea Route and the railroads, as these are necessary to further the links between northern regions and the outside world. The transportation of freight by the Northern Sea Route reached its highest point in 1987 - 6.5 million tons. In the 90's, the tonnage transported by sea has been drastically reduced in the eastern sector of the Russian Arctic, while in the western sector the level has remained steady thanks to the integrated „Norilsk Nikel" plant and the joint-stock company „Look-Oil", which manages almost all Russian icebreakers. Since 1999, the attention paid by the Russian Government to the Northern Sea Route has improved. The Russian Academy of Sciences was given the task of evaluating the state of the route. The NSR Users Association was also established, with the participation of the concerned regions. With the revival of the Northern Sea Route, large northern rivers would liven up and a united Arctic transportation system would be created: sea - river - ground - air transportation. Formerly, for example, fuel was transported to Khatanga only by plane. This year, the Lena River Steamship Company was able to provide the Taimyr Autonomous Okrug with fuel, bringing it up the Lena river to Tiksi by a tanker that is able to travel both by river and sea, thus saving considerable financial resources.

Partnerships between the joint-stock company „ALROSA" and local administrations in the so-called diamond region (Western and Northwestern Yakutia) have yielded positive results. Such partnerships allow uluses to support local economies, relieve fuel shortages and provide employment. The mean salary there is 2 to 3 times more than the average for the republic as a whole. With the assistance of the Northern Forum, meat and fish processing miniplants have been launched in the Anabarskiy, Olenekskiy, Tattinskiy and Verkhnekolymskiy uluses.

Tourism could be a source of income and employment for the local people, but the poor infrastructure in the Russian northern regions relegates that possibility for economic development to the distant future. Even under present conditions, however, it might be possible to develop research, ecological, event and paleontological tourism, all of which attract great interest from foreign investors. Of great importance, however, is the mindset of the population. During the years of stagnation, the population grew accustomed to being dependent on the government for support, and a deep-rooted dependent mood was formed. Passive adaptation by the population to new economic conditions and a lack of incentive has had depressing consequences, especially on aboriginal northern peoples. In the Russian Far North, one opportunity for ethnic renaissance and for stimulating the aboriginal economy might be wildlife co-management, with the establishment of ethno-ecological reserves based on existing state zapovedniks, reindeer herding industries, and tribal communities, where nature preservation will coexist with traditional industries, reindeer herding and tourism (Klokov, 1997). The legislative base for establishing these areas has already been developed, and a certain amount of work already done. Thanks to governmental support, more than 20% of Sakha's territory has been already protected.

Information plays an increasingly important part in the development of the economy, thus particular emphasis has been placed on the promotion of all types of communications and the introduction of up-to-date technologies Sakha. Satellite communications have been made available through the GlobalTel system this year, the internet is developing rapidly, and the computerization of most activities, especially in higher education institutions, is taking place. The development of distance learning has allowed Yakut State University to be a member of the University of the Arctic. Video communications are gaining acceptance: telecommunications and telemedicine are being developed in the Sakha National Center of Medicine, and the New Technology Center has been launched at the Yakut State University with assistance of the Soros Foundation.

As can be seen from this brief analysis of some aspects of economic development in the Russian North, particularly in the Sakha Republic, there exists a range of interrelated problems and barriers whose solutions would provide for the harmonious development of northern economies within the global economy: providing food security and stimulating local income; the establishment of a united transportation system; the development of tourism, providing local employment by the use of traditional environmental knowledge; the introduction of nature preserving technologies; and the creation of a united communication space.

Building International Networks for Circumpolar Research: Local and Global Approaches

Richard A. Caulfield

Scientists working in the North focus increasingly on interdisciplinary research as a means of understanding dynamic human/environmental relationships. The concept of sustainable development, which underscores the long-term viability of human societies in particular ecological settings, challenges the scientific community to integrate theoretical frameworks and research methods from both natural and social sciences. Increasingly, this research also involves a community-focused collaborative approach including a wide array of stakeholders.

These new approaches are particularly appropriate to issues of economic development-the topic of this session. It is clear that we cannot focus on issues of fisheries and wildlife management, resource exploitation, job creation, and infrastructure development in isolation. As Mark Nuttall notes, the Arctic today is integrally linked to the global economy, even if linkages for some communities and regions remain tenuous. To conduct research about Arctic economies requires a sophisticated approach taking into account cultural and historical dimensions of development, a dynamic mixed economy, and a host of social, political-economic, and environmental factors. The wholesale importation of classical economic analysis from the South has shown itself time and again to be wanting when applied uncritically to Northern issues and concerns.

Moreover, Northern peoples have long insisted that research about their communities be done in a more collaborative fashion, and in a way that respects and incorporates indigenous and local knowledge systems. In Alaska, at least, indigenous peoples have suffered through a troubled history with the research community, where insensitivities of scientists at best, and gross abuses at worst, created a climate of mistrust and antagonism that is only beginning to change. As Aron Crowell points out in his policy paper, there is a fundamental transformation of relationships underway between Alaska Native peoples and the research community. One visible expression of this is the creation of the Alaska Native Science Commission, funded by the National Science Foundation. And, we now have a growing number of successful examples of collaborative research that will help to overcome this troubled history between community and scientist.

Building on these promising developments requires new ways of thinking by the scientific community. In their policy paper for this forum, Niels Einarsson and colleagues point to the need for research that focuses on analysis of entire systems. Such research involves analysis of longer time scales, larger spatial scales, and greater degrees of complexity. It involves crossing institutional, disciplinary, and national boundaries. It requires blending different academic traditions and practices, and typically involves working across languages and cultures.

All of this may sound uncontroversial, but the question remains about how best to develop a research community that is willing to embrace international interdisciplinary research with all its subtleties and complexities. The number of universities focusing on Northern research, and the community of researchers itself is rather small. We need to cultivate this community. We need to build a cadre of intelligent, careful, and skilled researchers from a variety of disciplines with a sophisticated understanding of cross-cultural and cross-boundary research. These are individuals who thrive in a challenging environment and who are not unduly bound by academic traditions. They understand the risks and rewards of interdisciplinary research, and are open to new approaches and paradigms.

We have made significant strides toward meeting this need in recent years. Two programs designed to build the next generation of researchers show promise, and I believe it is worth exploring what contributes to their success. The first is the Circumpolar Arctic Social Sciences Ph.D. Network (CASS), which brings together promising young Ph.D. students for an intensive Northern field course each year, focused around geographic and problem-oriented themes. The second is the University of Alaska's new Rural Development Master's Degree program, designed to educate not only indigenous and rural Alaskans but also students from throughout the circumpolar North.

Interestingly, these two programs build research capacity from different directions: CASS is largely „top-down," involving university students who have a strong interest in the North even if many have few personal ties there. The second approach, from Alaska, is „bottom up," involving indigenous students who have the cultural knowledge and, at a mature age (typically late 30s), are developing research skills enabling them to conduct research in their own communities and beyond.

I want to describe each briefly, and then explore how they can be integrated with the aspirations of the Northern Research Forum.

Circumpolar Arctic Social Science Network (CASS)

The Circumpolar Arctic Social Science (CASS) Ph.D. Network, now in its fifth year, brings together Ph.D. students from throughout the North to engage in a two- to three- week intensive field course each year in a northern location. By taking part in CASS, students gain a sophisticated understanding of cultural, social, and ethical issues essential for Northern research.

The CASS Network was started because, too often, Arctic social science graduate students are cut off by national and disciplinary boundaries from those with common interests. During each CASS field course, students make formal presentations about their current research, and serve as discussants for others' presentations. Faculty and students alike provide feedback, thereby strengthening theoretical and methodological aspects of the students' research. Students remain in touch outside of the intensive seminar at conferences, seminars, and by email.

The first CASS field course took place in Greenland in 1996, and in subsequent years it was held in Quebec, Norway and Russia, and Nunavik. In August 2000, CASS held its fifth field course in Alaska. The theme of the Alaska course was „Northern communities and global change: New approaches to community resource management and use." Twenty-three students and faculty from all eight Arctic nations, plus Japan, joined in an exciting and stimulating field course.

Participants in the Alaska 2000 course heard presentations about sustainable development, ethical issues of research in indigenous communities, community healing and well-being, and industrial development in the Arctic. They learned about impacts of the Exxon Valdez oil spill, about Northern tourism at Denali National Park, and about statehood and Alaska Native land claims. Participants divided into two groups to visit Kotzebue, an Iñupiat community in northwest Alaska, and the Prudhoe Bay oil fields. Each group made a presentation about its findings from these experiences.

Student participants are enthusiastic about the CASS Network. One Canadian student, Shelley Tulloch, a Ph.D. student at Université Laval, said „the CASS Ph.D. Network is serving to create links and partnerships between excellent researchers who are well-informed and well-rounded in Arctic issues . . . I gained from this course concrete knowledge, professional growth as a researcher, and the propagation of a research network." Shelley is working on issues of Inuktitut language policy and practice in Nunavut.

In 2001, the CASS Ph.D. Network intends to meet on the Kola Peninsula in Russia, joining with the new Circumpolar Arctic Environmental Sciences Ph.D. Network to further explore interdisciplinary opportunities.

The CASS network operates under the aegis of the University of the Arctic. Funding for CASS field courses has largely come from the Nordic Academy for Advanced Study (NORFA), Canada's Social Sciences and Humanities Research Council (SSHRC), the US National Science Foundation (NSF) and individual universities. Their investment in this next generation of Northern researchers is much appreciated and vital to its continued success.

University of Alaska Rural Development Master's Program

A second program for building research capacity is the University of Alaska's Rural Development Master's Degree program. In this new program, sixteen indigenous Alaskans from rural communities are working toward their MA degree. Students are Inupiat, Yup'ik, Siberian Yup'ik, Aleut, Alutiiq, Athabascan, Tlingit, and Haida. Most are mature students returning to complete their graduate work after many years of community leadership and life experience. They bring an extraordinary array of expertise and insight to their studies, and they are eager to learn skills essential for interdisciplinary and international research.

This innovative Master's program enables indigenous and other rural Alaskans to complete a flexible program of graduate study that prepares them for effective and culturally informed research. Students take coursework both through face-to-face instruction and through web-supported distance education. Mentorships, directed readings, and hands-on project learning are an integral part of their program.

Importantly, the Rural Development MA program has a strong interdisciplinary and international focus. For example, researchers from two Nordic universities are involved as adjunct instructors and mentors at a distance. Students have recently participated in international conferences and seminars, including the August 2000 Inuit Studies Conference in Aberdeen and the United Nations Working Group meetings in Geneva. These same students were so excited about their involvement in the Inuit Studies Conference that they have volunteered to coordinate the next Inuit Studies Conference in Alaska in 2002.

The caliber of students enrolling in the program and their capacity for international collaboration is impressive. Examples include Vera Kingeekook Metcalf, a Saint Lawrence Island Siberian Yup'ik woman who works with the Bering Straits Foundation in Nome. Aron Crowell highlights her on-going involvement with the Smithsonian Institution's Arctic Science Center on an important cultural documentation project. Another is Andre Khalkachan, an Even student from Magadan in the Russian Far East, who is studying indigenous self-determination in the circumpolar North. These talented students need no introduction to the interdisciplinary nature of circumpolar issues or to the protocols of collaborative research. What they will gain from their MA program is a strengthened theoretical basis for continuing research and a toolkit of research methods and practices enabling them to participate in wider research efforts. And, like the CASS students, they build a life-long network of colleagues that can form the basis for future collaborative research.

Building On Initial Successes

These two programs highlight ways of building a research community capable of conducting interdis-

ciplinary, collaborative research. Each program has a different starting point: one involving university students with Northern interests, the other involving community members who are rising into the ranks of researchers. But the two programs complement each other.

In their paper about strengthening social science research in the North, Einarsson and colleagues highlight four barriers to building interdisciplinary research networks: personal characteristics, institutional territoriality, national boundaries, and resistance to interdisciplinary work. Personal characteristics of individual researchers can often influence their openness to collaborative research. Some researchers, because of training, disciplinary orientation, or personal style, find it difficult to engage in collaborative projects where the ability to work well with others is critical. An individual's or an institution's perception of territoriality can also work against effective collaborative research. National boundaries can sometimes be a hindrance to building international networks. Often national research funding is focused on supporting one's own research community, and coordination between national funders to support innovative projects may be difficult. Finally, academic reward systems often inhibit openness to interdisciplinary research. „Interdisciplinary research is academic suicide" is one sentiment cited.

A key advantage of the CASS Ph.D. Network and community-based networks like Alaska's MA in Rural Development is that students gain exposure to interdisciplinary research at an early stage of their careers. Through intensive and early international involvement, they become part of an academic culture where interdisciplinary work across boundaries is the norm, not the exception. Students hone personal and linguistic skills enabling them to work well with others. They become aware of issues, initiatives, and opportunities beyond their own institutions and beyond their own national boundaries. They develop a common vocabulary and conceptual framework that facilitates greater collaboration „outside of the box." The academic community in the North is small, and the impact of a new generation of researchers with these skills should not be underestimated.

Having said this, student research networks must be nurtured and given support over the long term to be successful. The generosity of Nordic, Canadian, and US funders thus far has enabled CASS to develop what appears to be a successful model for building a research network. Alaska's Rural Development MA program has also been successful in attracting funds from public and private sectors.

In my view, the University of the Arctic can play a vital role in planning and coordinating initiatives like CASS and its sister program, the Circumpolar Arctic Environmental Studies Program (CAES), and in linking educational and research programs in the North. I would hope that the University of the Arctic could also find the means to coordinate with, and add value to, „bottom-up" programs, such as Alaska's Rural Development program. I think there would be much to gain through this cooperation.

Likewise, this Northern Research Forum can play an important role in coordinating research and removing obstacles to interdisciplinary efforts. Stable funding to achieve these goals is essential. My hope is that we'll see greater opportunities for student mobility around the circumpolar North, and opportunities for international collaborative student research.

Arctic Economies and Globalisation

Lise Lyck

This article is a short clinical and strategic analysis of economic and political development in the Arctic for the purposes of estimating sustainable competitive advantages (SCA) in the Arctic and the impact of globalisation in respect to Arctic competitiveness development. Professionally trained in economics and political science, I have for many years studied the economic and political development of the Arctic, especially Greenland.

Arctic Economies

Arctic economies considered in this article include Alaska, Northern Canada, Iceland, the northern counties of the Nordic countries Finland, Norway and Sweden, Greenland as part of the Danish Realm, and the northern territories of Russia. Although territories of eight Arctic states are included, only one state, Iceland, can claim to be both totally sovereign and Arctic. This has profound consequences for the Arctic considered as a region as loyalties, as well as functional and political relations in most of the Arctic, are divided between identities rooted locally and identities rooted outside the Arctic. Technically, the Arctic can be considered a quasi region, a territory that includes at least one sovereign state plus territories of other sovereign states. These facts influence the context for Arctic development and also the conditions for achieving SCA (sustainable competitive advantages). They imply that political geography as well as constitutional conditions set the framework for Arctic development. As a consequence, Arctic development is shaped by not only climate and other external natural factors but also by external man-made factors. The man-made factors unfold in economic and political power relations established and decided, for the most part, outside the Arctic.

People living in the Arctic have only limited economic and political global power, but the Arctic region itself has a high economic and political global strategic importance. The political realms encompassing the Arctic region, the U.S., Canada, Russia and the EU, have the main power.

Arctic Context

The development and changes in the Arctic context are mainly due to the character of the Arctic region as explained above and rooted in changes taking place outside the Arctic. For instance, the break up of the Soviet Union and the end of the Cold War have resulted in more political space in the Arctic, and in a weakening of the eastern Arctic which mirrors the weaker Russian position.

Also the stronger market orientation has a heavy impact on the Arctic, giving the Arctic less potential to achieve transfer income, and changes the economic situation by giving the Arctic less subsidy potential. This change causes increased competitive pressure in the Arctic and the need to create new services to be bought from agents living outside the Arctic. These can, for example, be "laboratory services" or other services of a territorial character. This will increase market development in the Arctic and thus, in the long run, contribute to a stronger power position inside the Arctic.

SCA and the Arctic

A core problem concerns whether it is possible to develop SCA in the Arctic such that the Arctic can have a role as a player in a global regime. There are many sources of SCA, such as differentiation, low costs, niche production, technology, quality, service, vertical integration, synergy, culture, organisation and leadership. However, it is generally the case that competence to develop SCA in the Arctic has been weak, except in Iceland.

The reason for this lack of competence is closely connected to the structure of international trade and foreign direct investments, as well as state-market relations in the Arctic. Concerning international trade, most Arctic trade can be characterised as *inter trade,* while *intra trade* is extremely limited. As a consequence, trade can be explained mainly by the old Ricardo theory on the comparative advantages of trade, and not by the Heckscher-Ohlin theory or by economic geography. In other words, the structure of Arctic trade excludes many sources that have the potential to develop into SCA. The structure of foreign direct investment leans in the same direction. The investments are mainly the result of decision-making outside the Arctic. Examples of industrial complexes are few, and are mostly found in Iceland. The structures hindering development of SCA are also seen in state-market relations in the Arctic including an overly large public sector, too little private ownership and what is called „the tragedy of the commons" (as excellently argued for in Governor Hickel's background paper for the conference). Also, development towards the information society is problematic, as the general level of education in the Arctic is low, and much of the specific knowledge in the Arctic is not in demand outside the Arctic. This means that the Arctic has difficulties in coping with the ongoing dynamic knowledge development thus facing difficulties in developing SCA and in being competitive.

To sum up, the Arctic, with the exception of Iceland, faces serious difficulties in developing SCA. Integration within the Arctic is difficult due to market size, duplication of production, insufficient division of labor, infrastructure and allocation. Iceland has managed to escape this situation by a long tradition of expertise and education and by having access – as a sovereign state – to more economic and political instruments. If the Arctic is to be able to compete, its infrastructure must be reconsidered and Arctic hubs must be developed. Reykjavik and Anchorage have the potential for such development but it will require hard work to realise this in a satisfactory manner.

Globalisation

To understand what globalisation entails, what is at the core of the concept, it can be useful to look at the difference between globalisation and internationalisation, although it should be stressed that, in our time, they are generally going on simultaneously. As the word indicates, internationalisation stresses the concept of the nation or the state. Politicians set up international agreements, setting the rules for the behaviour of corporations and individuals and it is then up to the corporations and individuals to implement these rules in actions such as communication, trade and investment. These international rules are intended both as guidelines and as controls on individual and corporate rights and actions rooted in local political systems.

Globalisation, however, is rooted in production and economic rationales. It implies that treaties and agreements that do not include all states offer differ-

ing, negative or positive, potentials for impact on profit and the development of SCA. This potential has been part of the strategy for multinational and trans-national corporations. The development from multinational corporations to trans-national corporations mirrors the ongoing change in global decision-making in relation to products, manufacture and markets.

Globalisation is a complex concept, and different writers stress different elements when concluding that it is multifaceted. These include: intra-product specialisation, vertical specialisation, the changing role of the entrepreneur and the nature of the enterprise, a higher ratio of tradables to nontradables, communication and technological developments, the concentration of the population in increasingly larger towns, and, most importantly, the dynamics of globalisation making changes in the normal and expected outcome of daily life.

Theodore Levitt, the best known author and expert on globalisation points at technology, saying: „A powerful force drives the world toward a converging commonality, and that force is technology." The impact is the emergence of global markets for standardised consumer products on a previously unimagined and enormous scale of magnitude. According to Levitt, „ancient differences in national tastes or modes of doing business disappear." The result is a large selection of high quality, low priced goods and services to fulfil all the common consumer preferences.

Estimate of the Main Impact of Globalisation in the Arctic and of Arctic Competence in Coping with Globalisation

Most of the characteristics of globalisation on the input side are different from those of Arctic life and production, but on the demand side the commonality in the Arctic preferences for consumer goods is easily seen. This pattern of wanting to have (demand for imported goods) together with not being able to produce in a competitive way and not having the competence to develop SCA make up the core Arctic economic problem.

Iceland has overcome this problem by allocation (most of the population live in Reykjavik), by human capital (high education), by establishment of efficient transportation and communication systems (Eimskip, Icelandair etc.) and by applying political and economic instruments derived from its status as a sovereign state.

The question is: Will it also be possible for the rest of the Arctic to find a strategic political and economic route for overcoming Arctic underdevelopment and inability to cope with globalisation? To circumvent such inability it will be necessary to develop SCA, focusing on some of the sources of SCA, especially leadership, the ability to transform production from nontradables to tradables demanded by the outside world, and the development of Arctic hubs and Arctic co-operation.

My studies of economic and political development in Greenland since the introduction of home rule in 1979 demonstrate the difficulties. Although development in Greenland has been quite rapid, and although a lot of improvements have taken place and Greenland has spent a lot of effort on developing SCA, Greenland has not developed sufficient SCA within the economy to deal efficiently with globalisation. Greenland is still dependent on income transfer from the Danish state, an annual amount of 3 milliard DDK , about 400 million US dollars.

Greenland has been most successful in the development of political statesmanship. It will therefore be especially interesting to follow the negotiations on the new American defence system proposal in Thule, and to see whether Greenland will be able to move from the production of nontradables to tradables and achieve SCA. If Greenland does manage to realise SCA during this process, it is likely that it be a milestone in future Arctic development.

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Conceptualising Linkages Between the Northern Economy and the Global Economy*

Mark Nuttall

Much is now written about how local and regional economies in the circumpolar North are increasingly tied to the global economy and are also subject to the impact of global processes such as globalisation and modernity. Moreover, it is a commonplace remark that these links and impacts have largely negative consequences for the North and its diversity of peoples. Because outsiders have tended to view the Arctic as an immense storehouse of natural resources, industrial development and resource exploitation have been criticised because they have largely been of benefit to other regions and nations, rather than immediate benefit to the peoples and societies of the Arctic. Northern economies are usually characterised as being fagile and subject to boom and bust cycles of economic development. Perhaps the greatest challenge for policy-makers in the North is the creation of opportunities for viable local and regional diversified economies. Resource exploitation will continue to be crucial to the development of Arctic states, but densely populated parts of the world with limited natural resources of their own look increasingly to the circumpolar North for fisheries development, hydrocarbons, timber and minerals. Countries such as Japan, Korea and European Union member states constitute valuable markets for Arctic resources, thus firmly placing the circumpolar North in the global economic system. Future research on Northern economies would benefit from moving beyond an Arctic-centred perspective in an attempt to clarify the significance of economic, social and environmental linkages between the Arctic and other regions of the globe.

Indigenous Peoples and Renewable Resource Development

Although hunting and fishing retain their economic, social and cultural importance, especially for indigenous peoples, the reality is that increasingly fewer residents of Arctic communities depend upon or participate in the subsistence harvesting of terrestrial and marine resources for employment. For those who do, the harvesting of renewable resources may not in itself form an adequate basis for the sustainable development of small communities. The productive activities and distributive networks in which indigenous peoples are involved are subject both to the ebb and flow of the market economy and to globalising forces that contribute to a redefinition of subsistence, or threaten subsistence lifestyles. Animal-rights groups and environmentalist organisations have mobilised international public opinion and political action against the harvesting of wildlife and express concern at what they see as the development of 'non-traditional' activities. International opposition to marine mammal hunting and to fur trapping continues to influence public opinion, and therefore consumer tastes and markets. Furthermore, cultural

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and economic development through the use of renewable resources is still restricted by international management regimes and protectionist legislation, such as the U.S. Marine Mammal Protection Act. Restrictions on the international trade of products from marine mammals and other fur-bearing animals contribute to controversy between Arctic states, dampen constructive dialogue on environmental conservation, represent a major loss of income to indigenous peoples, place impositions on the right to self-determination and hinder the development of a sustainable economic base in Arctic communities.

Indigenous Peoples and Non-Renewable Resource Development

The arguments put forward by indigenous peoples for self-determination and land claims are embedded within indigenous discourses about the protection of indigenous political, cultural and environmental interests, but they also centre on rights to resources and access to the profits of resource development. Rather than being vehemently opposed to large-scale resource development, indigenous peoples wish to participate in, and profit from, the kind of economic development that will guarantee the economic and cultural survival of so many communities currently dependent on mixed economies and a precarious resource base. The future for many indigenous communities, therefore, may lie more and more in exactly the type of economic development and industrial resource base, such as oil production, mineral exploitation and commercial fishing, that has characterised the boom and bust nature of much resource development throughout the circumpolar North. Some indigenous communities and companies owned by indigenous peoples and organisations are already key players in the extraction, expropriation, production and marketing of valuable resources from the Arctic, such as fish, oil, gas and timber. The economic futures of many indigenous communities will be tied increasingly to distant markets, as well as the development of trade within and between the various regions of the circumpolar North.

Circumpolar Trade

Trade within and between indigenous communities is an increasingly apparent feature of the Arctic's economic and cultural landscape and the expansion of local, regional and inter-regional trading networks that link remote Northern communities may be one crucial way of developing informal economic activities. Some indigenous communities are exploring the potential for pan-Arctic trade links, such as the prospect of Greenlandic skin and fur workshops making winter clothing for people in Alaska, Canada and Scandinavia; the sale of harp seal meat from Baffin Island to west Greenland; and the sale of the by-products of marine mammal hunting such as baleen and walrus ivory. While the expansion of informal economic activities is attractive in that it enhances the prospects for small-scale local development and enables local initiatives to remain under local control, it is unlikely that fur workshops, community co-operatives or tourism, either alone or in combination, can provide the economic solutions to problems faced by the remote communities of the North. The potential for economic development is still severely hampered by the small size of many villages. Trade between Arctic communities is likely to be limited because markets are small, making the development of international markets necessary. This will do nothing to lessen dependency on southern tastes, fashions and needs. It is clear that research on these aspects of Northern development is vital in helping to shape policy on the sustainability of local and regional economies.

Global Processes, Management and Trade Barriers: The Case of Fisheries

Northern fisheries and the changing dynamics of communities in fisheries dependent regions represent a good example of how the effects and influences of global processes are increasingly felt in all aspects of social, economic and cultural life in the Arctic today. Many problems experienced by Arctic North Atlantic coastal communities, for instance, can be attributed in part to the global restructuring of fisheries, the balance of competition between differ-

ent species and different fishing areas, the internationalisation of the sourcing of supplies for processing plants and retail markets, and the redistribution of wealth from traditional actors, such as local fishers and local processors, to powerful global players in the form of transnational corporations. Fisheries are being transformed from industries or ways of life subject to the control and regulation of local, regional and national authorities to a global enterprise dominated by a handful of transnational corporations. Global market trends largely influence how far the sustainable uses of living marine resources are actually possible, yet the interrelations between international trade, the environment and sustainable development are poorly understood and further research is needed in this area.

Tourism Development

Arctic tourism is fast-growing industry, which plays on the image of the Far North as raw, pristine polar wilderness, a 'last frontier' far from industrialised urban centres. Increasing numbers of tourists regard indigenous cultures as the main attraction in visiting the Arctic, after wildlife and scenery. There is concern, however, over the possible social and environmental impact that may result from tourism development in the Arctic. For indigenous peoples, tourism offers economic opportunities and there are hopes that, developed and managed sustainably, it can contribute to community economic development. However, the appearance of tourists is seasonal and questions arise over how far tourism really can form the basis for community development.

Economic Development, Urbanisation and Out-Migration

Industrial development is often accompanied by urban development, which creates new social structures and new forms of settlement. Urbanisation not only has environmental impacts, but social and economic ones too, and its influence is not confined to the immediate area being urbanised but has consequences for rural populations. The myth of the Arctic as pristine, undisturbed wilderness obscures for many the realities of industrialisation and urbanisation throughout the circumpolar North, which has a number of major, large, fast-growing towns and cities with concentrated populations which are, increasingly, culturally and ethnically diverse. Arctic urban centres offer opportunities to study the social, economic and environmental impact of towns and cities. As the numbers of urban dwellers increase in the Arctic, the environment in which they live is placed under great strain. There are problems with sanitation, waste disposal, inadequate housing, transport and health services. Cities and towns create problems for rural areas as well because much of the waste they produce is airborne or waterborne. Urban centres place rural areas under stress as more urban dwellers look to the natural world for leisure activities. For those people living in rural areas in the Arctic, urban areas play a significant role in shaping their economies and social structures, as well as being a reason why people migrate from small communities.

Northern Economies and Sustainable Livelihoods

Northern economies are not isolated or insulated from the global market place. Social scientists argue that it is now possible to speak of a single world capitalist economy, with production and finance organised on a transnational basis. With an increased focus on sustainable development of both renewable and non-renewable resources in the Arctic, future research on local, regional and national economies throughout the circumpolar North will need to contextualise Arctic case studies with reference to the internationalisation of production and exchange, the globalisation of economic and industrial activity, and the activities and influences of transnational corporations and transnational practices. Recent perspectives on the impact of global change on the Arctic has moved the research agenda away from seeing the relationship between Arctic states and their Northern regions and populations simply in terms of core/periphery or metropolitan/hinterland models. While the regions and societies of the circumpolar

North have been profoundly shaped by policies and actions of the respective Arctic states, historical and contemporary situations can only be adequately understood with reference to the wider global contexts in which Arctic societies are embedded.

Northern Economies in the Global Economy*

Steingrímur Sigfússon

First of all I would like to use this opportunity to welcome the first Congress of the Northern Research Forum. It gives me great pleasure to participate, although indirectly, through this small position paper I have been asked to present. I have, in my already quite long political career, been an enthusiastic supporter of Nordic, West-Nordic and Arctic cooperation, so it is with great pleasure that I follow the developments that have taken place in recent years. In only ten years, we have seen lively Arctic cooperation arise out of almost nothing: up until 1990 it was more or less impossible to connect the people and institutions around the Arctic because of its great political and military divide, but now we have not only an Arctic Science Committee, we have an Arctic Council, we have a Standing Committee of Arctic Parliamentarians, we have the University of the Arctic, we have the Northern Research Forum and much more.

I'm convinced that this cooperation that now connects the indigenous people, institutions, countries and districts of the north is going to be of great importance in the years to come. The people living in this region now claim their fair share of economic development and prosperity which they certainly deserve and, at the same time, are trying to maintain their culture, protect the environment they are living in and find the road to a sustainable future. I wish the First Congress of the Northern Research Forum all success but have to apologize that my physical presence will be rather limited as other obligations to my Party and connected with the Nordic Council's general assembly, which starts in Reykjavík on the same weekend as the NRF and lasts through the second week of November, make it impossible for me to attend the entire conference.

Northern Economies in the Global Economy

The subject I want briefly to discuss concerns the above mentioned: in particular, the research opportunities and needs related to northern economies in the global economy. To begin with, it is necessary to realize how very different the traditional economies of the high north are — being heavily dependent on the utilization of living resources, hunting and fishing— from the modern industrialized, high-tech information technology orientated economies of the highly populated nations further south, especially those in the developed west. I am of the opinion that even though some areas in the Arctic have been quite successful in developing a „modern"-type economy — some being quite prosperous even, like Norway, Iceland and the Faroe Islands, with economies based on advanced and well-equipped fishing industries — there is still a character difference between those economies and economies further south. I think that this difference has been increasing rather than decreasing in recent decades, precisely in the period when globalization and neo-liberal economics have

* Invited Position Paper

come to the fore. These contrasts become of course most obvious when we move to the smaller, more rural areas in the Arctic where the common way of life is still the traditional old-style hunting for one's own consumption and for a bit of extra income through the selling of skins or side products. One could argue that the biggest and most modern companies of Iceland and Norway in the fishing industry, using computers and high-tech trawlers (and more likely than not, managed by young men with university degrees in business), are not so different in terms of technology and equipment from companies further south, in Europe or Canada or the USA, but this is only part of the picture. It is still a long way from the inhabitants of the isolated fishing communities on the coast of northern Norway or south-western Greenland to the businessmen working on the streets of New York or Frankfurt. In the former case, there is still quite a lot of the traditional hunter/farmer spirit, the desire to be as self sufficient as possible, to utilize the richness of nature and harvest it to provide food for the family, as well as some income; furthermore, the degree of specialization has not reached the same level as in the modern western city life. A fisherman with a boat who derives his main income from fishing is also quite likely to use his gun for hunting birds or seal in order to provide meat for his family, who may cultivate a vegetable garden as well. So there is still considerable self-sufficiency built into the traditions of everyday life in the high north, along with a particular attitude towards nature, and other special characteristics of these communities and the people living there. One can't help wondering what will happen to these communities in the rapid globalization now taking place, where the key to success is specialization and ever increased efficiency, and where competition is the main objective of life. I firmly believe that a turn towards a certain degree of economic localization is vital to the world environment. The blind drive towards globalization is dangerous, creating a monoculture environment in many regions, and even entire countries, in which diversity and self-sustainability were previously common.

This doesn't mean that there aren't many positive things inherent in the advance of technology and under this strange umbrella we call globalization, but there are purely negative and very dangerous factors there as well. I believe that there is a lot to be learned from the relatively self-sustaining societies of hunting, fishing and agricultural production in many of the Arctic regions, and that a solution to many problems even as far away as in Africa and Southeast Asia could derive from this return to diversity and self-sustainability. In any case, it seems rather obvious to me that if we give in completely to the forces that are driving the economic evolution of the day in the western countries then the future outlook and prospects for the traditional communities in the high Arctic region are not very good.

Now, my suggestion is to the economists and sociologists and other scientists in related fields that they should sit down and tackle these issues which I have only briefly mentioned. They need to reach down to the roots and not be afraid of asking the relevant questions, even when it means raising doubts about some of the major forces driving the apparent evolution of today. These are political questions, of course, but there is no way to tackle these issues or to discuss them honestly without becoming political. As I see it, we have very little need for social scientists or socio-economic research if we aren't prepared to become political in the sense that we deal with the controversial issues of present times. And why would we be doing this? Why should we ask such questions? Why bother? Well, isn't the obvious answer that we want to help the people living in these independently minded northern communities, and the young people growing up there to find ways and means to live a good life; we want to help them to enjoy the benefits derived from living in close harmony with nature, while at the same time taking advantage of the comforts and advantages of modern life. As an optimist, I firmly believe that we can draw, for example, on the benefits of modern information technology to make life easier and more comfortable in the northern communities than in the modern cities of the world, for we would still be able to enjoy the benefits of close personal contact in small communities, the social attitude of helping and caring for your neighbor, and a mode of life in close harmony with nature. This may sound very idealistic, but what I am

really saying that I believe we can have, and must aim for, the best of both worlds. I also believe that research and cooperation between scientists and politicians can play a major role here, as they do in other contexts; but I would argue that there is unusually much at stake in the case of the communities in the high Arctic and their traditional lifestyles. These communities are being threatened by current trends so that the next 50-100 years will decide whether large areas of the Arctic regions will be inhabited by people at all. We all know the underlying trend, the tendency of people to move from the north to the south and the centralization of population in capital areas or big cities. This may in some instances go beyond the scale of people moving from the rural northern areas to southern areas of their own countries. With globalization we may even see countries as such losing large parts of their populations to other areas, where the outlook is considered more prosperous.

So I think that research into the field of regional economic policies and the situation of northern economies in this globalizing world is a highly relevant and very important one. I wish all those success who are willing to deal with it honestly and without being afraid to disturb the sacred cows of present times, the neo-liberal economic philosophies; and anyway, like any other cows, those won´t live forever.

The North/Russian North Within the Context of Globalization

Sergei F. Sutyrin

One can hardly disagree that during the last several years, the global North in general, and the Russian North in particular, has attracted a lot of attention from politicians, academics, the mass media, business communities, and various NGOs. The issue here of globalization and its impact on the region in question is of substantial importance and extreme interest.

During the last several decades, the economic performance of almost each and every country on our planet has been strongly influenced (if not determined) by the process of internationalization. This has basically meant a gradual expansion of the routine/standard reproduction cycle of businesses beyond national borders. For more and more companies, their international operations - sales, investment, production - started to play a significant, sometimes even a crucial role as the determinant of overall commercial success and business prosperity.

More recently - at least as late as the early 80s - various authors in different countries argued that internationalization had entered a new qualitative phase in its development. Within the framework of these discussions, the name „globalization" was eventually given to this phase. Globalization is, in a way, similar to the traditional concept of internationalization since it also assumes trans-border expansion of the companies. On the other hand, in contrast to its predecessor, globalization converted the bulk of the assimilated territory of the globe into something that might be called the „natural domain of operation" (or market, if you wish) for advanced, leading manufacturers.

Under the circumstances, these companies significantly changed their approach with respect to marketing and management strategies. The typical international company of the 70s and even the 80s tried to adjust its product towards the national/regional peculiarities of each separate target-market on which it operated. This attitude originated from the idea that each country/region was something special, if not unique.

Global companies, however, tend to operate in quite a different way. Roughly speaking, one might argue that they are ultimately driven by a „one size fits all" point of view. Accordingly, there is no need to pay any serious attention to national or even regional peculiarities. On the contrary, potential consumers of the particular product all around the globe should be „educated" and persuaded to be equally interested in it. Right from the start, this might be seen as a clear challenge or even threat to the North since the overwhelming majority of advocates and investigators of the region emphasize its uniqueness in comparison with other parts of the globe.

In order to secure an adequate understanding of globalization, let me stress the fact that the main driving forces behind the process, as well as its major performing agents, are precisely large firms - transnational corporations nowadays, behaving more and more according to the „global pattern" described above. At the same time, one should probably bear in mind that even from the point of view of normative theory (to say nothing about positive approach) the individual global companies can hardly be blamed for the way they operate. To a significant extent these firms might even be perceived as a kind of victim. If you allow me some exaggerated pathos, I would say that they are actually forced to do what they do by the severe and pitiless logic of international competitive cooperation (or as some people prefer to name it - cooperative competition). One of the leading Nordic experts in the field, Professor Rejo Luostarinen from the Helsinki School of Economics and Business Administration, has described the challenge faced by Finnish companies in the following way:

- with respect to the period of the 70-80s - internationalize or die;
- with respect to the period of the 90s and at least the first decade of the new millennium - globalize or die.

That description was intended to provide a certain background for further discussion. Let me start it by presenting some data on the Russian North. According to the official Russian administrative division, the area under review is known as the „regions of the extreme North and equally treated districts". It currently comprises 70% of our national territory, and accounts for 80% of natural gas and 50% of oil extraction, as well as 47% of timber production. In sharp contrast to those figures however, though understandably enough, only 8.1% of the Russian population lives in the region.

Within the context of globalization, the above mentioned imbalance appears to be meaningful indeed. The point is that from the perspective of multinational or global companies, the North (and the Russian North in particular) constitutes a huge storage of various natural resources rather than a significant target-market with substantial consumption capacities.

It is the unity of the contemporary world that globalization is basically about. At the same time, globalization unfortunately (and maybe inevitably) enhances its diversity, in terms of economic welfare in general, and living standards in particular. Notorious demonstrations of protest during the last few meetings of a number of major international economic organizations (WTO, IMF, World Bank, etc.) provide good - and far from the only - evidence of that fact. Let me give you another example directly connected with one of the main assets which the North commands: the OECD countries, with a total population of about 750 million people, have a daily oil consumption of 40 million barrels. On the other hand, the rest of the world, inhabited by more than 5 billion people, consumes only 35 million barrels of oil per day.

The Russian North currently faces a wide array of problems, some of which are typical for all Polar areas of the globe, while others are almost unique to the region. The most significant of these problems are the following:

- deterioration of living standards;
- insufficient supply of foodstuffs and other basic products;
- excessive pollution and resulting environmental issues;
- labor migration and resulting demographic tensions;
- natural resources oriented industrial and economic structure;
- threats to the interests of indigenous peoples.

Since these clearly serious threats and/or challenges are often associated with globalization, one is tempted to ask what kind of general attitude towards the process should the North adopt. From a purely theoretical point of view, at least, the following options might be named:

a to stop it;
b to oppose it;
c to ignore it;
d to adapt/influence/adjust it.

In order to provide a more comprehensive background for the assessment of the above mentioned

alternatives, one should take into consideration certain peculiar features of the North within the context of globalization, namely:

- less space for market forces (while in an overwhelming majority of the cases specific problems of the region provide for national governments, this is yet another headache they are willing to avoid as much as possible);
- high propensity to international cooperation;
- substantial spin-offs of international cooperation.

Considered at all realistically, option (a) is hardly an alternative at all. Indeed, in order to block one of the major contemporary developments which is directly generated by key business interests all around the world, the Northern regions would have to be in command of a substantially larger share of various vitally important resources than they actually are. Option (b) might look different in terms of the short run, and/or with respect to some very special aspects of economic performance; in any other sense, (b) is almost identical to (a).

Option (c) appears, in a way, to be more feasible and, within a certain limited time-frame, really attractive and even rational in economic terms. Indeed, to ignore means to not pay attention: in other words, to economize on efforts and other resources which would otherwise need to be spent. Here we have another clear example, however, of a contradiction between short-term and long-term interests/rationality/equilibrium. Under these circumstances, economizing one day almost inevitably results in substantial losses another day. Hence option (c) should also eventually be rejected.

The above mentioned considerations leave us with option (d) as the only reasonable and rational attitude for the North with respect to globalization. Ultimately, globalization can be neither opposed nor avoided. If we agree upon that, the conclusion is a pretty obvious one. The sooner the Northern region in general, and its separate sub-regions in particular, start actively and deliberately participating in globalization, the better the chances are to neutralize the negative implications of that process, and to adjust local communities into its pattern. More than that, however, globalization might, under the circumstances, even provide new possibilities for solving at least some of the problems the North currently faces.

Ownership of and Access to the Northern Commons*

Mead Treadwell

Most of the North is commonly owned. The owner can be the world at large, as in the case of Northern seas and migratory species, government at a regional or national level, or a collective of traditional or indigenous groups. Northern residents exploit and share natural resources through traditional subsistence hunting, fishing and gathering. When common owners assign private individuals or corporations rights to extract resources, returns are shared royalties or "rent."

When government is an owner, it must take on "obligations of ownership" beyond those traditional roles of regulating the marketplace. The owner is usually challenged to provide incentives for both production and conservation. Further, with ownership comes some responsibility to provide physical and intellectual access (i.e. access for research purposes) to commonly owned assets.

With these premises, we respond to the Northern Research Forum's invitation to Akureyri with two suggested opportunities for collaboration among scholars and owners in the North, under the Research Forum's themes of "Regionalism and Governance", and "Northern Economies in the Global Economy."

Who Owns the North?

Alaska, at the time it was given statehood in 1959, received 103 million acres of land to be owned at the regional level. Alberta, in 1930, was given ownership of all natural resources, and the Yukon Territory has received its grant of resources in the last two years. In Russia, disputes between the national and regional governments over resource ownership and production sharing have delayed major resource projects. (Sakhalin oil development is an example.)

These examples suggest we need to better understand the question, "Who owns the North?" A pan-Arctic, benchmark understanding can be useful because lands and resources are similar, and ownership patterns and commons regimes can learn from each other as they are changing. In some cases, Northern regions are receiving transfers of resources from national authorities (devolution), or settlement of aboriginal land claims. In the case of subsistence fishing and hunting in Alaska, management is shifting back to the national government.

Understanding the best models of commons management has global, as well as local implications. In Russia, Alaska, and Canada, major storehouses of strategic minerals and energy are concentrated in Northern regions. Our Institute's founder, Governor Walter J. Hickel, has suggested a large-scale collaboration to develop a new world map of the common areas of the globe, to help convey the understanding that most of the world – he estimates 86% - is owned in common. From Africa to Australia, residents face similar issues.

* Invited Position Paper

Inquiry into Northern ownership will naturally approach a series of questions: What regimes are in place to avoid a "tragedy of the commons," onshore and off? Where have national governments transferred resources, lands, and authority to regional governments and indigenous peoples? Which resources are governed by regimes controlled outside the North? How effective are these various regimes, local and national, in providing access to resources, return of economic rent, and sustaining renewable resources? Which regimes are appropriate for adoption by regions in transition, including those areas still working on subsistence regimes, new territorial governments, or movement from communism to market capitalism? Which regimes promote democratic principles, such as participation, self-determination, and empowerment?

At the Institute of the North, we have begun this work in several ways:

- Through participation in meetings of the Northern Forum, we have grown to better understand the various regimes in place in the North to manage natural resources. Many Northern Forum regions are rich in resources but look to the day when they can better attract investment and keep and share more of the economic "rent" (like Alaska's $29 billion Permanent Fund does) from resource production.
- Governor Hickel is completing a book with the working title, *The Alaska Solution,* positing that Alaska's history of statehood land grants and Native land claims from the national government are a model for other areas of the world looking to sustainably develop state-owned or common resources. Institute of the North Senior Fellow Roger Pearson is preparing a map with a first approximation of commonly owned lands and waters, worldwide.
- A Circumpolar Infrastructure Task Force proposal made to the Arctic Council, developed by the Institute of the North with the U.S. Arctic Research Commission and the Northern Forum Secretariat, would address these ownership issues as a way of understanding government responsibility to provide access to resources, as well as ways this access might be financed.
- We have convened legal scholars to develop a casebook, research and teaching about the five federal laws that determine ownership and establish regimes for surface, subsurface and offshore land, mineral, and living resources in Alaska. The U.S. Congress provided funding for us to do further work in this area, on the occasion of the 20th Anniversary of the Alaska National Interest Lands Conservation Act (ANILCA) which, in 1980, put over 100 million of Alaska's 365 million acres in conservation units.
- We also host a collaborative effort between the North Pacific fishing nations of Russia, Canada, the U.S., Japan, Korea and China to share information on fisheries management, allocation and conservation.

We expect a review of U.S. policy toward Russia to take place when a new U.S. president takes office in 2001. Since 1990, U.S. aid to Russia has had a priority in helping prevent arms proliferation. Beyond that, the U.S. has focused on helping Russia strengthen its economy through natural resource production, and to build entrepreneurial capitalism through education and trade. Much work has been done to assist in the development of a democratic tradition. But we have questioned whether enough inside and outside help has been given to build capacity where resources will remain commonly owned, especially in remote Northern regions. The Arctic Council, meeting in Barrow in October, has committed all eight nations to greater capacity building in the Arctic. We suggest that an educated discussion of the issues of ownership and its obligations are appropriate to this process.

With Barriers Down, How Do We Better Tie the North Together?

For the better part of the 20th Century, either technology or politics prevented large-scale collaboration in development of circumpolar transportation and communication. In the 21st Century, that circumstance has changed. There is no better time to begin a discussion

of ways Northern regions can share costs and opportunities for providing basic infrastructure in the North, both for the benefit of Northern residents and the globe at large.

At the Institute of the North, we have begun this inquiry with the proposal for a Circumpolar Infrastructure Task Force, as mentioned above, with full text and report of the September 2000 planning workshop available at *www.institutenorth.org.* The Sustainable Development Working Group of the Arctic Council reported to the Ministers meeting in Barrow in October an interest by Russia, Norway, and Finland to join such an effort, and Canada announced its interest at the meeting. We expect to begin the CITF formally in 2001.

Transportation and communication in the North has been stimulated, in the past, by both global and local forces. These forces continue today. Early in the 20th Century, one of the first international airlines, Pan American World Airways, invited Soviet Russia to service flights between North America and Asia. Russia declined, leaving Alaska and the Russian Far East out of trans-Pacific air trade until World War II opened routes to Russia with lend lease. Jet aircraft began flying regular over-the-pole flights in the 1950's. The "ice curtain" came down with the "Friendship Flight" between the U.S. and Russia across the Bering Strait in 1988. Russia beginning to open its skies to more trans-polar air routes.

With global forces in play, there is also a question of whether a greater number of east-west air routes can be inaugurated to tie the Northern regions together locally. The Northern Forum made this one of its first priority projects in 1991. Yet national subsidies for "essential air service" (now funded by overflight fees for international carriers in the U.S.) and postal subsidies are still necessary to provide basic air service in many parts of the rural North.

The story of land and sea routes is similar. The U.S. Senate voted this year to study the possibility of a rail link between Alaska and Canada, and other studies are underway to tie North America and Eurasia. Road and rail routes from Scandinavia into northern Russia are under study and development. Canada is looking to make its Hudson Bay port of Churchill an export zone for grain and other products from the North American heartland, using icebreaking vessels. Led by Norway, a major study of using the Northern Sea Route for global commerce (INSROP) was recently completed.

In telecommunications, fiber optic cables now traverse the world oceans. Shorter "great circle" routes through the Arctic between population centers might someday bring broadband access to Arctic residents. Likewise, the advent of low-earth orbiting (LEO) satellite networks could, by their very configuration, bring greater bandwidth to Polar Regions than to any other part of the world served. (Ignoring this opportunity, the first major LEO network, Iridium, was configured to turn most of its satellites off over the Arctic to save power, rather than using its greater bandwidth and availability to serve Northern markets.)

So our questions are broad: How should we plan to tie the North together, and how should the owners of Northern assets plan to provide access to those assets? What are the opportunities for cooperation? How should the Northern regions proceed, once these opportunities are identified, to provide political and financial support to make them happen? Will these opportunities help relieve the high subsidies now provided by governments for essential communication in the North? How does recognition and realization of these opportunities depend on decisions related to resource ownership in the North?