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Growth from the North

How can Norway, Sweden and Finland achieve sustainable growth in the Scandinavian Arctic?

Report of an independent expert group

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Name of publication Growth from the North. How can Norway, Sweden and Finland achieve sustainable growth in the Scandinavian Arctic? Report of an independent expert group			
Abstract This report is a co-production of an expert group set up by the Prime Ministers of Norway, Sweden and Finland in April 2014. Anne Husebekk, Rector, University of Tromsø – The Arctic University of Norway (anne.husebekk@uit.no) Magdalena Andersson, Governor, Västerbotten County, Sweden (magdalena.andersson@lansstyrelsen.se) Risto E. J. Penttilä, CEO, Finland Chamber of Commerce, Finland (risto.penttila@chamber.fi) Norway, Sweden and Finland share common economic, environmental and social interests in the Scandinavian Arctic. This report defines four drivers of growth and offers four instruments for the Governments of Norway, Sweden and Finland to use to secure sustainable economic growth in the North. Four drivers: 1) LNG (Liquefied Natural Gas) and renewables, 2) greener mining solutions, 3) increased tourism, and 4) ice and cold climate solutions. Four instruments: 1) one regulatory framework, 2) one pool of talent and labour, 3) one long term transport and infrastructure plan, and 4) one voice in Arctic matters.			
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CONTENT

SUMMARY	7
INTRODUCTION	9
1 FOUR DRIVERS OF GROWTH	13
1.1 Cleaner Energy from LNG and Renewables	14
1.2 Greener Mining Solutions	16
1.3 Increased Tourism through Coordinated Marketing Efforts	18
1.4 World Leaders in Ice and Cold Climate Solutions	20
2 FOUR INSTRUMENTS	22
2.1 One Regulatory Framework	22
2.2 One Pool of Talent and Labour	25
2.3 One Long Term Transport and Infrastructure Plan	28
2.4 One voice in Arctic matters	33
CONCLUSION	37

SUMMARY

Norway, Sweden and Finland have a lot to gain in the Arctic. By combining forces, these three countries can be in the forefront of creating sustainable growth in the region. At the same time climate change and other environmental challenges underline the need for closer cooperation.

This report is a co-production of an expert group set up by the Prime Ministers of Norway, Sweden and Finland in April 2014.

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This report defines four drivers of growth and offers four instruments for the Governments of Norway, Sweden and Finland to use to secure sustainable economic growth in the North. The four drivers are:

- 1) **LNG (Liquefied Natural Gas) and renewables,**
- 2) **greener mining solutions,**
- 3) **increased tourism, and**
- 4) **ice and cold climate solutions.**

The four instruments are:

- 1) **one regulatory framework**, meaning for example
 - removal of border obstacles,
 - coordination of construction regulations,
 - borderless public services
- 2) **one pool of talent and labour**, meaning for example
 - harmonization of education and qualification standards in a number of regulated professions,
 - trying out innovative new solutions in and between national labour service agencies,
 - making better use of existing Nordic exchange networks and creating joint education and research programmes

- 3) **one long term transport and infrastructure plan**, meaning for example
 - exploring opportunities of creative funding
 - working closely together to convince the European Commission of the importance of transport connections in the Scandinavian Arctic before the TEN-T Core Network is revised in 2023

- 4) **one voice in Arctic matters**, meaning for example
 - two or three common Arctic policy objectives per year,
 - awareness raising and lobbying together in Brussels.

INTRODUCTION

Potential

The Arctic region is full of potential. Extensive sea areas, fantastic flora and fauna, harsh but beautiful wilderness, plentiful natural resources and the establishment of new transport corridors make the Arctic a crossroads of huge economic interests and deeply felt ecological concerns. It is also home to a population of about four million people sparsely distributed across the region.

The Scandinavian Arctic is the most developed part of the Arctic region. By Scandinavian Arctic and by North we mean the counties of Finnmark, Troms and Nordland in Norway, Norrbotten and Västerbotten in Sweden, and the regions of Lapland, Northern Ostrobothnia and Kainuu in Finland. There are more cities, more universities, more cultural institutions and more young people in the Scandinavian Arctic than in any other part of the Arctic area. In view of this, Norway, Sweden and Finland are well placed to take a leading role in the development of an environmentally sustainable and economically exciting Arctic region.

60 years ago, the Nordic countries were at the cutting edge of regional development, with the introduction of a common labour market, the Nordic Passport Union etc. Today, with national interests and economic potential shifting northwards, we have an opportunity to develop the Scandinavian Arctic as a laboratory for even deeper regional cooperation, to test smart solutions, and to create sustainable growth across borders in the North.

Uncertainties

The potential for sustainable growth in the Arctic is great, but there are significant uncertainties as well. We do not know how quickly traffic on the Northern Sea Route will grow. We do not know the timetables of big energy projects. And we do not know the full effects of climate change in the Arctic. However, uncertainties do not remove the need for closer cooperation, they underline it. Together we will be better prepared for future scenarios and have a better chance of overcoming the challenges we face. The authors of this report believe that sustainable economic growth and development of new technologies in the Scandinavian Arctic are good for people, communities and nature across the Arctic, and that there is genuine growth potential in the region.



Strategic Environmental Impact Assessment of development of the Arctic (p. v). Arctic Centre, University of Lapland. Arctic Portal, 2014, www.arcticportal.org.

The need for cooperation

Norway, Sweden and Finland share common economic, environmental and social interests in the Scandinavian Arctic. Cooperation in the North between these three countries is today more important than ever for three main reasons.

Firstly, economic growth in Sweden and Finland is not as robust as it ought to be. At the same time, economic focus in many fields important for national well-being is moving northwards. Norway, Sweden and Finland, including their northernmost regions, need each other and need strong drivers of growth.

Secondly, the norms and rules of Arctic business and environmental protection are in the process of being written. By combining our strengths we can have a significant impact on the rulebook of the Arctic. Together we can convince others that the future development of the Arctic must be based on the principles of openness, cooperation and sustainability.

Thirdly, people in the Scandinavian Arctic already live in a borderless reality. Unfortunately this is not true for national bureaucracies, rules and regulations. Northern municipalities, local communities and indigenous peoples should be empowered, not restricted by their capitals.

Mandate

There are already numerous well-researched and extensive reports on the potentials, uncertainties, development and cooperation needs in the Arctic. This paper is not one of them. Our aim is to offer a practical Arctic toolset for the Governments of Norway, Sweden and Finland. We have concentrated on a few achievable goals. If the three Governments commit to implement the four recommendations of this report, regional economic cooperation will take significant steps forward.

The members of the working group behind this paper are Dr Anne Husebekk, Rector of the University of Tromsø – the Arctic University of Norway, Ms Magdalena Andersson, County Governor of Västerbotten, and Mr Risto E. J. Penttilä, CEO of Finland Chamber of Commerce.

The Prime Ministers of Norway, Sweden and Finland agreed in April 2014 to set up this group to identify concrete ways of boosting sustainable growth in the North through tripartite cooperation. In this paper we will not go through the whole spectrum of growth potential and challenges in the North, but instead

present four drivers of growth and four instruments, that we think are essential for achieving sustainable growth and building sustainable communities in the North.

Norway, Sweden and Finland have all published Arctic strategies. Although they are extensive and contain similar goals, the strategies are no guarantee for streamlined policies, sustainable border-crossing growth or effective collaboration between these three countries in the North. In this report we have tried to combine some of the goals in the national Arctic strategies, and also to come up with new ideas for closer cooperation.

Goals

The ultimate goal is to achieve sustainable growth and sustainable communities in the North. "Sustainable growth" means that all economic activity in the Arctic shall take environmental factors into account and respects the rights of indigenous peoples. "Sustainable communities" underscores the fact that the Scandinavian Arctic is, and, in the view of the authors of the report, must remain, a hospitable environment for individuals and families who wish to live in the region.

We believe that sustainable growth in the High North is a prerequisite for sustainable communities – and vice versa. Without investment and new growing businesses in various sectors there will be no jobs, no houses being built, no ground for communities to flourish. And without flourishing communities our Scandinavian Arctic will become an empty husk, a treasury of resources to be emptied or a vast nature reserve with little significance to people and development outside the region. If we truly want to see the Scandinavian Arctic as part of our future success stories, then both sustainable growth and sustainable communities are needed.

Sustainable growth in the North is not possible without strong political commitment from the three governments. Therefore, we encourage the Governments to use the toolset provided in this report to strengthen the cooperation in order to reach the goal of sustainable growth in the Scandinavian Arctic. This commitment should be reflected in the national policies of all three countries.

1 FOUR DRIVERS OF GROWTH

Of the various drivers of growth, we have chosen four

It is easy to identify numerous drivers of growth in the Arctic region. Traditional livelihoods, fishing and aquaculture, forestry, shipping, environmental expertise, maritime industry, oil and gas activities, oil spill prevention, renewable energy, weather and ice information services, mining, tourism, construction industry, IT and space industries, marine bioprospecting, and many other industries, services and fields of expertise, all contribute to the future economic success of the Scandinavian Arctic.

In Arctic Norway, the main drivers are related to marine resources and hydrocarbons. In Arctic Sweden, mining and forestry are the main drivers. In Arctic Finland, the main drivers are tourism and mining. In addition, there is considerable expertise in ice and Arctic technologies in all three countries.

Based on these main drivers, and for the sake of clarity, we have chosen four drivers of growth, that we believe have the greatest potential for securing lasting growth and creating positive ripple effects across the region:

- 1) LNG and renewables, with Norway in the lead,
- 2) greener mining solutions, with Sweden in the lead,
- 3) increased tourism, with Finland in the lead, and
- 4) ice and cold climate solutions, with trilateral spearheads.

We do not suggest that these four are the only drivers worth attention. They just have compelling stories to tell and if developed responsibly, will probably benefit other drivers around them.

Climate change as an all-encompassing frame

According to several experts, the rate of climate change in the Arctic is two to three times faster than the global average. Combatting climate change and adaptation to the effects already visible in the Arctic have to be seen as a compelling operational framework for all economic development in the area. That is why we have not included climate considerations in each following chapter. We believe that when responsibly handled, all four drivers of growth are compatible with ambitious goals of reducing greenhouse gas emissions.

1.1 Cleaner Energy from LNG and Renewables

Offshore oil and gas resources and plentiful hydropower have long been the bedrocks of Norway's economic success. Advances in offshore technologies and maritime transport will probably make offshore operations possible ever further north on the Norwegian continental shelf and continue to provide business opportunities both off- and onshore for Norway's closest neighbours. However, to safeguard fragile Arctic nature, to combat climate change and to secure a sustainable energy infrastructure for ourselves, we need to look beyond the traditional production of hydrocarbons in the North. How can we combine Norway's energy success with the future energy needs of mining, shipping, tourism and other growing industries in the Scandinavian Arctic in a sustainable way?

Common electricity market and boosting renewables

Finland, Sweden and Norway are already part of the common Nordic and Baltic wholesale electricity market, which uses Nord Pool Spot of Norway as its trading centre. The common market is possible because the electricity systems



Foto: Joakim Aleksander Mathisen

of the countries are interconnected. Developing the common market, ensuring sufficient transmission capacity in the electricity grid, and encouraging the production of renewable energy through green certificates or other means in the Scandinavian Arctic should be set as key priorities. With considerable hydropower production in Northern Norway and potential for more wind power across the region, the Scandinavian Arctic should be on its way towards a low-carbon green economy.

Strong points of LNG

From a climate change perspective, natural gas is still often seen as part of the problem. However, of fossil fuels, natural gas has the lowest CO₂ emissions per unit of energy, and in a liquefied form, it is cost efficient to transport it over long distances where pipelines do not exist. We believe that with renewable energy sources plentiful in the Scandinavian Arctic, liquefied natural gas (LNG) could be part of the solution, a source of sustainable growth and energy security. Current price trends suggest that LNG will also be more competitive in the near future. With a large-scale processing plant on Melkøya near Hammerfest, Norway, and existing and planned terminals on the Baltic Sea coast, parts of the necessary infrastructure are already in place.

Gas meets ore

Processing mineral raw materials is very energy intensive. Today, mineral raw materials in many parts of the Arctic are processed using coal or heavy fuel oil or transported elsewhere for processing. We believe that in the future, LNG can be the energy component in mineral processing activities, creating new industry clusters and achieving considerable reductions in CO₂ emissions. Scientists at SINTEF, the largest independent research organisation in Scandinavia, and at the Norwegian University of Science and Technology, have been working with such "gas meets ore" concepts for years.¹ Mining in the Scandinavian Arctic should be developed according to these concepts.

LNG is also an important part of various value chains including Carbon Capture and Storage. For example, in the petrochemical industry, LNG is used to produce plastic products and medicine. Finland, Norway and Sweden could be in the forefront of developing these value chains.

1 SINTEF [<http://www.sintef.no/home/Press-Room/Research-News/Gas-plus-ore-equals-new-industry/>]

Europe and the Sulphur Directive

In addition to LNG as an energy source for the Scandinavian Arctic itself, LNG could also be an important part of the energy mix in the Baltic Sea region and all of Europe in the future. According to the EU Sulphur Directive, stricter provisions on sulphur emissions from shipping will come into force at the beginning of 2015. Shipping companies can meet the new provisions by shifting to the use of alternative fuels such as LNG, for example, and some have already done so. As the demand for cleaner energy sources on land also increases and as questions concerning Europe's energy security continue to be raised, it might be wise to concentrate on strengthening the LNG distribution network and export channels from the Scandinavian Arctic towards central Europe.

1.2 Greener Mining Solutions

Mining is an industry of massive potential in the Scandinavian Arctic. But in order to develop this industry further in a sustainable way, the foundation for further growth must be built on new technology and R&D, and not exclusively on the extraction of raw materials. This way, fluctuations in resource prices will have less effect on the industry, and it will be possible to create value chains that will be more sustainable and long-lasting.

Sweden is by far the biggest producer of iron ore in the EU, and among the leaders as regards the base metals copper, zinc and lead.² The mine in Kiruna is the largest underground iron ore mine in the world, and Aitik, located

² Ruotsin geologinen tutkimuslaitos [<http://www.sgu.se/en/mineral-resources/minerals-of-sweden/>]



twenty kilometres east of Gällivare, is Europe's largest copper mine. Growth in the mining sector today comes from many fields outside the mines such as consulting and environmental services, creating a broad base for new business opportunities and employment.

Local benefits and Nordic growth

The Fennoscandian Shield, on which most of Northern Scandinavia lies, is rich in ore deposits. The national geological surveys of Norway, Sweden and Finland have reliable geotechnical data to help companies get started with exploratory work. The investment climate for establishing exploration and mining activities in the Scandinavian Arctic is world-class.³ Although this wealth of raw material, knowledge and investment climate benefits the mining sector in all three countries, we believe that closer cooperation on regulation and between Nordic companies would ensure that a bigger share of the sector's profits would stay in the area.

The bounty of minerals in the North should be used sustainably to benefit local communities and Nordic growth. There are some regions where known mineral deposits should be left undeveloped to preserve Arctic nature and potential for tourism.

³ Fraser Institute, Survey of Mining Companies 2013 [<http://www.fraserinstitute.org/uploadedFiles/fraser-ca/Content/research-news/research/publications/mining-survey-2013.pdf>]



Exchange of knowledge

Environmental and social sustainability is mentioned as a key goal in each of the three countries' minerals strategies. Consultation across borders with local communities, indigenous peoples, reindeer herders and other stakeholders before and during permitting processes is considered important, but should be complemented with the exchange of knowledge and experience across borders between municipalities, industry regulators and other stakeholders.

Dialogue

Industry actors should engage in open dialogue with local communities and the Sami Parliaments of Norway, Sweden and Finland. In developing this dialogue, best practices from other Arctic nations should be considered.

The regulatory framework for mining in the Scandinavian Arctic should be developed with indigenous rights and the well-being of local communities in mind. At the same time, all stakeholders should remember that the region is part of a developing Nordic, European, and global economy. Without investment and growing businesses in various sectors, there will be no basis for communities to flourish in the Scandinavian Arctic.

1.3 Increased Tourism through Coordinated Marketing Efforts

From the midnight sun to northern lights, from dog sledding to king crab safaris, from Svalbard to the Jukkasjärvi Ice Hotel, the Scandinavian Arctic has a lot to offer for tourists. While tourism has become a major source of income in Northern Norway and Sweden, Northern Finland with its prospering ski resorts and Santa Claus has probably been the most successful in attracting tourists from all over the world. Yet all three countries face the same questions: how to maintain steady tourist flows across the year, how to encourage tourists to stay longer and come back.

Specialized tourism instead of mass tourism

Instead of mass tourism, we believe that many destination in the North should concentrate on special services and target groups. Nature-based tourism, sport tourism, adventure tourism, fishing, ecotourism and culture and heritage tourism offer countless business opportunities that are not yet fully utilized. By

creating regional hubs and complete travel packages including destinations in all three countries, the positive as well as the negative effects of tourism would be more evenly distributed. Tourists from growing markets should be defined as key target groups, and services tailored accordingly.

“Visit the Scandinavian Arctic”

While there have been joint marketing initiatives between different counties and municipalities inside national borders, joining forces with Nordic neighbours has never truly been tried. So why not try combining seasonal strengths and market the Scandinavian Arctic together as a whole? It is unlikely that, for instance, a family in Beijing differentiates between Finnish Lapland, Swedish Lapland and Northern Norway when planning a trip. They see the North as a whole. That is how it should be marketed to them.

On their own, none of the providers of specialized tourism services can hope to attract a year-round flow of customers from around the world, but with a joint Nordic state-supported marketing scheme the whole area would have a chance against its global competitors. Closer cooperation between companies and the northern counties of Norway, Sweden and Finland through one brand could benefit business development. Instead of numerous brands, there would be only one: “Visit the Scandinavian Arctic”. Through this brand and by building service packages, a steady year-round flow of tourists across the region might be easier to secure.



We encourage tourism companies, regional councils and other relevant actors in the Scandinavian Arctic to continue project cooperation directed towards the development of only one brand for the whole region, and hope that the Governments will support this kind of broad cooperation. In addition to one brand, a joint tourism web portal should be developed. Through this portal, potential visitors from all over the world would find the countless possibilities of the Scandinavian Arctic easier to access.

1.4 World Leaders in Ice and Cold Climate Solutions

Norway, Sweden and Finland all have similar expertise when it comes to shipping, winter navigation and maintenance of roads, icebreaking, offshore applications and other solutions related to ice management and cold climate. While it is important that companies with expertise in this field compete freely in the market, it should not be too difficult to start joint ventures or to lean on the neighbouring countries' experts in one field to better concentrate on another field. Norway, Sweden and Finland should not compete but complete each other in Arctic expertise. Together they should create a business and research environment that produces world leaders in ice and cold climate solutions.

Centre of excellence for Arctic oil spill preparedness and response

The creation of centres of excellence is one way of bringing together the best research and the best companies from each country. As there is currently no research facility in the world focusing solely on oil spills in icy waters, we suggest establishing a joint centre of excellence for Arctic oil spill preparedness and response. The centre of excellence would facilitate commercial activity and provide opportunities for larger research networks in oil spill preparedness and response in the Arctic.

Cooperation in weather and ice services

When it comes to weather and ice services in the Arctic, there is world-class expertise in the national meteorological institutes of Finland, Norway and Sweden. Cooperation between these institutes is already extensive in many multilateral fora and bilaterally, but more could be done as regards joint research facilities and the pooling of resources. One idea worth further examination is a joint Nordic monitoring and information system based on

BarentsWatch, Norway's comprehensive monitoring and information system for large parts of the Arctic seas.

Nordic companies building and maintaining roads across the Arctic

Because of increasing need to access remote areas more safely and faster, expertise in the construction and winter maintenance of highway and road infrastructure in the Arctic will be in high demand. Nordic companies and public traffic authorities should actively seek possible cooperation in this field. The Scandinavian Arctic should strive to maintain the safest and best functioning road infrastructure in the entire circumpolar region.

In the future, Nordic companies could also be trusted service providers and partners in building and maintaining roads elsewhere in the circumpolar region. *The Nordic Road Association* (Nordiskt Vägforum, NVF), which promotes advances within the road, road traffic and road transport sector through cooperation among professionals in the Nordic for decades, could take the lead in developing Nordic joint ventures for projects in Canada, Russia and Alaska.



2 FOUR INSTRUMENTS

We have identified four key instruments, which we think are essential for promoting growth in the Scandinavian Arctic. These instruments should not be seen as definite requirements in all fields, but as issues to be kept in mind when drawing up Government programmes, choosing priorities in sector Ministries, and in moving forward with Nordic and bilateral cooperation. If the Governments of Norway, Sweden and Finland really want to boost sustainable growth in the North through tripartite cooperation, they should concentrate on creating:

- 1) one regulatory framework,
- 2) one pool of talent and labour,
- 3) one long term transport and infrastructure plan, and
- 4) one voice in Arctic matters.

The four drivers of growth mentioned above will surely fail, if they are impeded in the North by elemental factors such as uncoordinated regulation, lack of qualified labour and poor infrastructure. The drivers can create pressure for change, but it is up to politicians to decide on the instruments of change.

2.1 One Regulatory Framework

Border obstacles

Border obstacles between the Nordic countries have hindered regional economic development in the northern parts of Norway, Sweden and Finland. It seems that although we were once trailblazers in regional economic development, the lack of coordination in sector-specific regulation and differences in the implementation of EU regulation constantly create more border obstacles.

Reducing the number of border obstacles has been high on the political agenda of both the Nordic Council and the Nordic Council of Ministers for years. Countless reports have been written. Yet concrete results affecting regional economic development in the North, i.e. the mobility of qualified labour and the simplicity of running a business across borders, are practically non-existent.

Reducing border obstacles is of paramount importance to economic growth in the Scandinavian Arctic. More political will, prioritizing and concrete goals are needed. The establishment of the Freedom of Movement Council, a political body set up by the Nordic governments to foster freedom of movement in the Nordic region for individuals and businesses in January 2014, was a step in the right direction. Like all Nordic initiatives, this work should be underpinned by clearly defined decisions with binding timetables and effective national and Nordic follow-up.

We support the Freedom of Movement Council's goal of abolishing 5–10 border obstacles per year in the fields of labour market, social policy and education.



Coordination of construction regulations

The construction industry is one of the industries most affected by border obstacles. Different building regulations in Norway, Sweden and Finland hamper trade across borders in the Scandinavian Arctic. To support energy efficient building in the North, to keep environmentally friendly wood construction as a Nordic strongpoint, and to build a bigger market for all construction companies across the region, we suggest that the three Governments pay special attention to the harmonization of construction regulations.

As an alternative to time-consuming and problematic harmonization of all building regulations and legislation in the respective countries, **we propose a completely new set of Nordic regulations for energy efficient buildings, which the countries can adopt and which can exist in parallel with the countries' existing regulatory frameworks.** Such a set of regulations would need to be well formulated so that the buildings constructed and classified within it would be approved in all three countries and thus also "triumph over" the various national regulations. All related ongoing work in this sector in the EU should also be taken into account.

Borderless public services

To create sustainable growth and communities in the North, coordination of the regulatory framework has to cover other areas besides those directly linked to freedom of movement or business. For example, effective public services in sparsely populated areas in the North are something both people and companies have to consider before moving there.

Just arranging these services is a major challenge for municipalities, regional governments and other authorities in all three countries. Sometimes even the smallest move towards a borderless, shared services point of view helps. Therefore **we recommend that the cooperation potential between border municipalities in the Scandinavian Arctic should be recognized and supported by national Governments.** Instead of new studies or guidance from the capitals, any available resources should be directed towards **supporting local initiatives.**

Living in the North should be secure and attractive. A very important parameter for this is access to good medical care. Sparsely inhabited areas and long distances emphasise the importance of developing health care and medical care at distance using new technology so that people can feel secure in living and

residing in the North. In health care, one regulatory framework as a goal could mean **new solutions based on telemedicine and e-health, the division of labour between central hospitals in the North, and the freedom for patients to go to the nearest hospital regardless of borders.**

The university hospitals in Tromsø (Norway), Umeå (Sweden) and Oulu (Finland) each has a catchment area that is too small for maintaining competence in highly specialised care. But if the **three university hospitals were to start intensive cross-border cooperation**, the catchment area would grow significantly and be sufficient for retaining highly specialised care in the Scandinavian Arctic. In connection with this, **the regions or county councils in northern Norway, Sweden and Finland should be given the status of test areas for cross-border cooperation in highly specialised care.**

In search and rescue, the three countries should strive towards **more seamless cooperation between public safety answering points and other emergency services in the North.** The sharing of equipment and practice grounds across the Finnish-Swedish border in the Tornio-Haparanda area is a good example of concrete cooperation between national emergency services.

In law enforcement, the police forces of Sweden, Finland and Norway have a long tradition of close cooperation. Combining decreasing personnel resources with long distances in sparsely populated areas in the North calls for **innovative working methods and more contact with colleagues across borders.** While strengthening the cooperation between police forces in the Scandinavian Arctic, the citizens' sense of security and right to get service in their own language need to be assured.

2.2 One Pool of Talent and Labour

Lack of competent labour, imbalance between national labour markets

Despite growing industries and an innovative business environment, there is a lack of competent labour in some parts of the Scandinavian Arctic, especially in Northern Norway. During the last few years, the job vacancy rate in Norway has been almost constantly higher than in Sweden and Finland.⁴ At the same

4 Eurostat [http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/File:Job_vacancy_rate_2014_Q2.png]

time as there is a growing need for engineers, mining professionals, health care workers and electricians in Northern Norway and Northern Sweden, unemployment continues to grow in Northern Finland.

Labour mobility

The need to increase labour mobility across borders in the North is obvious. As freedom of movement in the Nordic countries is something we have taken pride in for several decades now, it is embarrassing that we still have national regulation that severely hampers the employment of a qualified worker from one country to another. For example, a Finnish electrician educated and qualified in Finland needs to complete a training period of up to 6 months in Norway before entering the Norwegian job market, while Swedish nurses can work in Norway without any additional certification.

We suggest, that the Governments of Norway, Sweden and Finland take immediate action to harmonize the education and qualification standards in all regulated professions. The number of nationally regulated professions is high – especially in Norway. If we truly believe in the concept of a common Nordic labour market, we should seek to remove such obstacles.



A system for mutual recognition of professional and vocational qualifications (*nordisk examensgiltighet*), and for mutual recognition of vocational education (*ömsesidigt erkännandet av yrkesutbildning*) are ideas that were put forward decades ago, but their full implementation is unfortunately still topical. It is essential that Governments commit to a speedy implementation of these ideas.

As proficiency in Swedish or another Scandinavian language is a central qualification for many jobs in the Scandinavian Arctic, **we strongly encourage the Finnish Government to foster the teaching of the Swedish language across the educational system, and particularly in vocational schools and universities of applied sciences.** It is worth emphasizing, that command of the Swedish language opens up employment opportunities in an area both geographically and economically over twice the size of Finland.

To boost labour mobility especially in the North, **we suggest trying innovative new solutions in and between national labour service agencies.** Taking jobseekers by bus to job fairs and recruitment events in the neighbouring country is a good way of dispelling potential preconceptions. Expenses can be shared between labour service agencies, jobseekers and the biggest recruiters. Personnel exchanges between the northernmost offices of national labour service agencies could also be tried. In the recruitment service industry and among service companies in general, the Scandinavian Arctic can be seen as an interesting, growing market.

Student and researcher mobility, collaboration in research and higher education

Besides labour mobility, building sustainable growth in the North requires more student and researcher mobility, and increased levels of collaboration in research and higher education. In addition to the skills learned in a neighbouring country, exchange students returning home bring with them contact networks that can help them and their employers later in their working life. Researchers establish contacts that make joint projects, funding and public-private cooperation easier.

Although the majority of universities in Norway, Sweden and Finland are part of at least one Nordic exchange network such as Nordplus, the numbers of students moving between them are distinctively low. The story told by statistics for university students going to Finland is perhaps the saddest. For example, in 2013 only 25 students from Norwegian universities and 61 students from Swedish universities went to Finland.⁵ In comparison: during the same year

1 423 students from Germany, 115 from Slovakia and 332 from the Netherlands chose to study in Finland. Nordic neighbours are apparently not interesting enough as exchange destinations.

We suggest that universities in all three countries make better use of existing Nordic exchange networks such as **Nordplus**, **Nordic Five Tech** and **Nordtek**. The exchange possibilities offered by these networks and the increased chances of finding employment after a Nordic exchange should be made clear to all students. Many study programmes in technical universities and business schools could include **one semester in another Nordic university**.

The Nordic Mining School, a joint venture between the Universities in Luleå (Sweden) and Oulu (Finland), is a perfect example of developing a local Nordic knowledge base in mining. **We recommend strengthening the Nordic Mining School with one Norwegian university**. Also NordMin, a Nordic network of expertise for a sustainable mining and mineral industry funded by the Nordic Council of Ministers, deserves the full support of Norway, Sweden and Finland after the three-year funding period ends in 2015.

Joint master's programmes, PhD and research programmes and part-time joint professorships should be inaugurated in the areas of other important drivers of growth in the North. A Nordic Energy School, a Nordic Tourism School and a Nordic Ice School have still not been established. Benchmarking innovation programmes and supporting closer cooperation between academia and the private sector are integral parts of finding new growth from the North.

2.3 One Long Term Transport and Infrastructure Plan

In order to fulfil the potential of the four drivers mentioned above, a jointly coordinated transport and infrastructure plan is needed. While cooperation works at the practical level between civil servants, there is a definite demand for prioritizing and political leadership in developing the infrastructure in the Scandinavian Arctic. Connections in the North are increasingly significant on a national level for all three countries, and therefore deserve more attention from decision makers in the capitals.

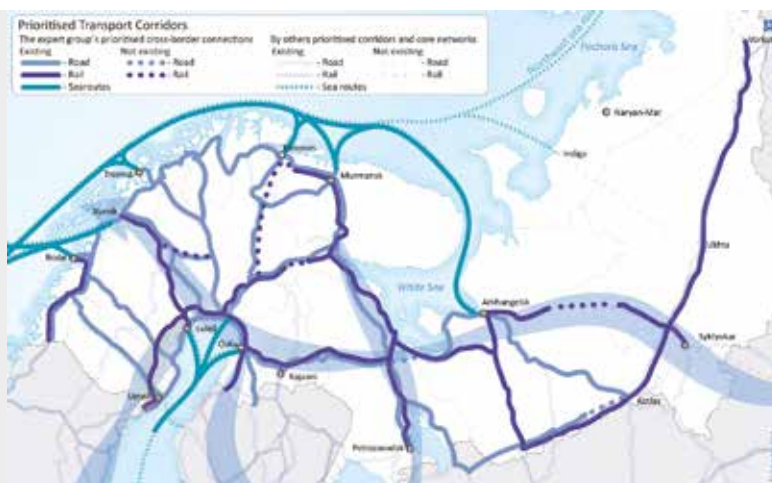
5 CIMO [http://www.cimo.fi/instancedata/prime_product_julkaisu/cimo/embeds/cimowwwstructure/32240_7._Korkeakoulut_kohdelahtomaittain20042013.pdf]

The Joint Barents Transport Plan, a proposal paper for development of transport corridors for further studies published in September 2013 by an expert group appointed by the Barents Euro-Arctic Transport Area steering committee, is a good starting point for moving ahead, but further prioritizing and courage are needed. As large infrastructure projects take years, and drive economic growth as well as enable it, prioritizing plans cannot be left waiting indefinitely for growing traffic volumes or transport needs. **We encourage Governments to take decisive steps in choosing, planning and funding prioritized infrastructure projects in the Scandinavian Arctic.** This inter-governmental dialogue and long-term planning (e.g. towards the year 2050) must be carried through with broad and in-depth expertise and visionary approach.

Geographically, Norway, Sweden and Finland are all relatively narrow north-south countries with the bulk of population and economic and political power concentrated in the south. That is why north-south transport connections are better developed than east-west connections in the Scandinavian Arctic. Yet both are needed for the economic and social development of the region.

Creative funding

All discussions on border crossing infrastructure projects in the North eventually come to the question of money. Funding is a big challenge, but if growth from the North is truly expected, funding cannot be the subject



BEATA's Expert Group's prioritized transport network. http://www.barentsinfo.fi/beac/docs/Joint_Barents_Transport_Plan_2013.pdf

that ends discussions. In fact, stakeholders in northern infrastructure plans should begin discussions by addressing the question of funding. How can we market the Scandinavian Arctic as an investment opportunity of the century? How can we get connections in the North to the EU's TEN-T (Trans-European Transport Network) plans? Are there funding options we haven't previously even considered?

We encourage the Governments of Norway, Sweden and Finland and other stakeholders in northern infrastructure planning to explore opportunities of creative funding. The Nordic Investment Bank, the NDPTL (Northern Dimension Partnership on Transport and Logistics) Support Fund and other established regional financiers are valuable partners for funding feasibility studies and smaller projects, but various public-private arrangements need to be considered for bigger projects.

Understanding the nature of the Government Pension Fund Global, owned by the Norwegian Ministry of Finance on behalf of the Norwegian people, as a sovereign wealth fund with a distinct investment strategy seeking long-term returns globally, **we propose examining the possibility of changing relevant management mandates and other regulations, so that the Fund may provide financial support for infrastructure projects in the Scandinavian Arctic in one way or another.**

We suggest, that the Governments of Norway, Sweden and Finland work closely together to convince the Commission and other relevant actors in the EU of the importance of transport connections in the Scandinavian Arctic before the TEN-T Core Network is revised in 2023.

Railways

During the last few years discussion on transport connections in the Scandinavian Arctic has revolved mainly around railway connections. The importance of the existing Iron Ore Line between Kiruna (Sweden) and Narvik (Norway) has been underlined, and the possibility of a railway connection from Northern Finland to a deepwater port in Norway has been heatedly discussed. We would like to emphasize, that **the transport network needs to be considered as a whole, and consensus on prioritized routes needs to be achieved before discussion on funding for big projects can begin.**

While connections to the Arctic Ocean are important, we urge the Governments of Sweden and Finland not to forget the Bothnian Corridor, that stretches out

on both the Swedish and the Finnish side of the Bothnian Gulf. The Corridor is a strategically important link within the transnational transport system of goods in Northern Europe. Electrifying the railway connection across the Finnish-Swedish border in Laurila – Tornio/Haparanda would be a positive step for the whole region.

Highways

Improving the highway and road connections in the Scandinavian Arctic is vital especially for heavy traffic, forestry, marine industry and tourism. National transport agencies and responsible Ministries in Norway, Sweden and Finland should pay special attention to the condition of highways used by heavy traffic from all three countries, such as the European route E8 from Tromsø to Finland along the Swedish border. **Cooperation in the maintenance and development of such highways could be considered.**

Air traffic

East-west flight connections are lacking in the Scandinavian Arctic. For example, it takes longer to travel by air from Rovaniemi to Tromsø or Luleå than it takes to fly from Rovaniemi to Paris. Better east-west flight connections would benefit regional business, academia, tourism and cross border health care.

The Governments should encourage and support the establishment of new regional air routes across borders in the North, if such routes are commercially viable and desired by regional actors. The recently established Arctic Airlink, a flight triangle between Oulu, Luleå and Tromsø, is a good example of regional initiative.

Maritime transport

There are still many constraints for any major expansion in shipping on the Northern Sea Route: harsh natural conditions, lack of adequate infrastructure, lack of search and rescue preparedness, lack of oil spill preparedness. It is in the interests of Finland, Sweden and Norway to continue monitoring the development of the Route. Expertise from the Nordic countries is already in use in many vessels navigating the Northern Sea Route, and in the future the same expertise can be used in developing the necessary navigational and safety-related infrastructure along the Route.

In November 2014 the International Maritime Organization (IMO) adopted the International Code for Ships Operating in Polar Waters (Polar Code), and related amendments to the International Convention for the Safety of Life at Sea (SOLAS) to make it mandatory. Norway, Sweden and Finland should continue advocating a speedy entry into force of strict safety and environment provisions for ships sailing the harsh, remote and vulnerable Arctic seas. **The three countries should together contribute to the education of captains and other crewmembers sailing the Arctic seas, for example by establishing an Arctic maritime competence centre.**

The EU Sulphur Directive can expedite new patterns of transport where the importance of northern ports grows, and there is an increased need of east-west connections to these ports. One important prospect is the transport link between Mo i Rana (Norway), Umeå (Sweden) and Vasa (Finland), where an efficient ferry service over the Kvarken Strait is the missing link today. **The ferry connection should be prioritised nationally both in Sweden and Finland.**

Electricity grid

To improve security of supply and to meet growing energy needs, **the electricity grid in the North should be developed in close cooperation between responsible agencies and companies in Norway, Sweden and Finland.** Today, the electricity grid in many parts of the Scandinavian Arctic is aging and has a relatively low voltage. Cooperation in modernizing the grid can also promote the development of renewable energy sources, currently hindered by limited transmission capacity.

Data communications and digital services

Because of its safe and secluded location, cold conditions and relatively high level of R&D activities, the Scandinavian Arctic could be in the forefront of **developing leading ICT solutions, cloud services and green data centre services** for the rest of the world. Norway, Sweden and Finland should make sure that the infrastructure needed for this kind of development is in place. Special attention should be paid to frequency coordination and optical fibre connections across borders.

The satellite-based earth observation systems in use today are not adequate for future needs in communication and monitoring in the Arctic. For example, there is currently little or no satellite coverage north of the 75th northern

parallel. Developing the satellite-based infrastructure in the Arctic is important for safer navigation in Arctic waters, better communication, search and rescue operations and other maritime activities, and can also provide opportunities for economic growth. High-tech businesses and research institutions in Norway, Sweden and Finland should look for **new possibilities in the space industry**. With some multinational research clusters and ground stations already established in the Scandinavian Arctic, the region has potential to produce internationally significant space industry hubs.

Political level

The Norwegian, Swedish and Finnish Ministers of Transport and Communications meet each other rather regularly in various multilateral forums. However, trilateral meetings concentrating on a specific subject are not common, and years have passed since the Norwegian and Finnish Ministers of Transport met bilaterally. Connectivity of the Scandinavian Arctic enables growth in so many ways, that it is too essential to be left to the bureaucratic level.

We recommend, that Ministers of Transport and Communications from Norway, Sweden and Finland meet regularly once a year to discuss transport policy in the Scandinavian Arctic and topical developments elsewhere in the circumpolar region. To raise awareness and to keep transport connections in the North on national political agenda in all three countries, the national Delegations to the Conference of Parliamentarians of the Arctic Region together with the Transport and Communications Committees from each Parliament should organize joint seminars where the Members of Parliament would hear experts and exchange views on Arctic infrastructure.

2.4 One voice in Arctic matters

Policy coordination

International cooperation in the Arctic occurs at various governmental and non-governmental levels, in forums of different status and composition. This diversity is good in many ways, but the sheer number of cooperation organizations, working groups, funds used to finance projects in the Arctic, and other international actors and agencies relevant to the region, is staggering and can lead to poor policy coordination both inside one country and between like-minded countries.

We encourage better policy coordination and sharing of information between Nordic delegations in various Arctic organizations as this will strengthen Nordic influence in the Arctic and allow more effective targeting of key messages. We recommend, that Norway, Sweden and Finland together with Denmark and Iceland actively seek ways for effective policy coordination between Nordic delegations and representatives in the Arctic Council, IMO and other international organizations relevant in the Arctic. Instead of an increased coordination workload for individual delegations and representatives, this could mean simple things like **two or three common policy objectives per year**, agreed upon for example in the Nordic Council of Ministers.

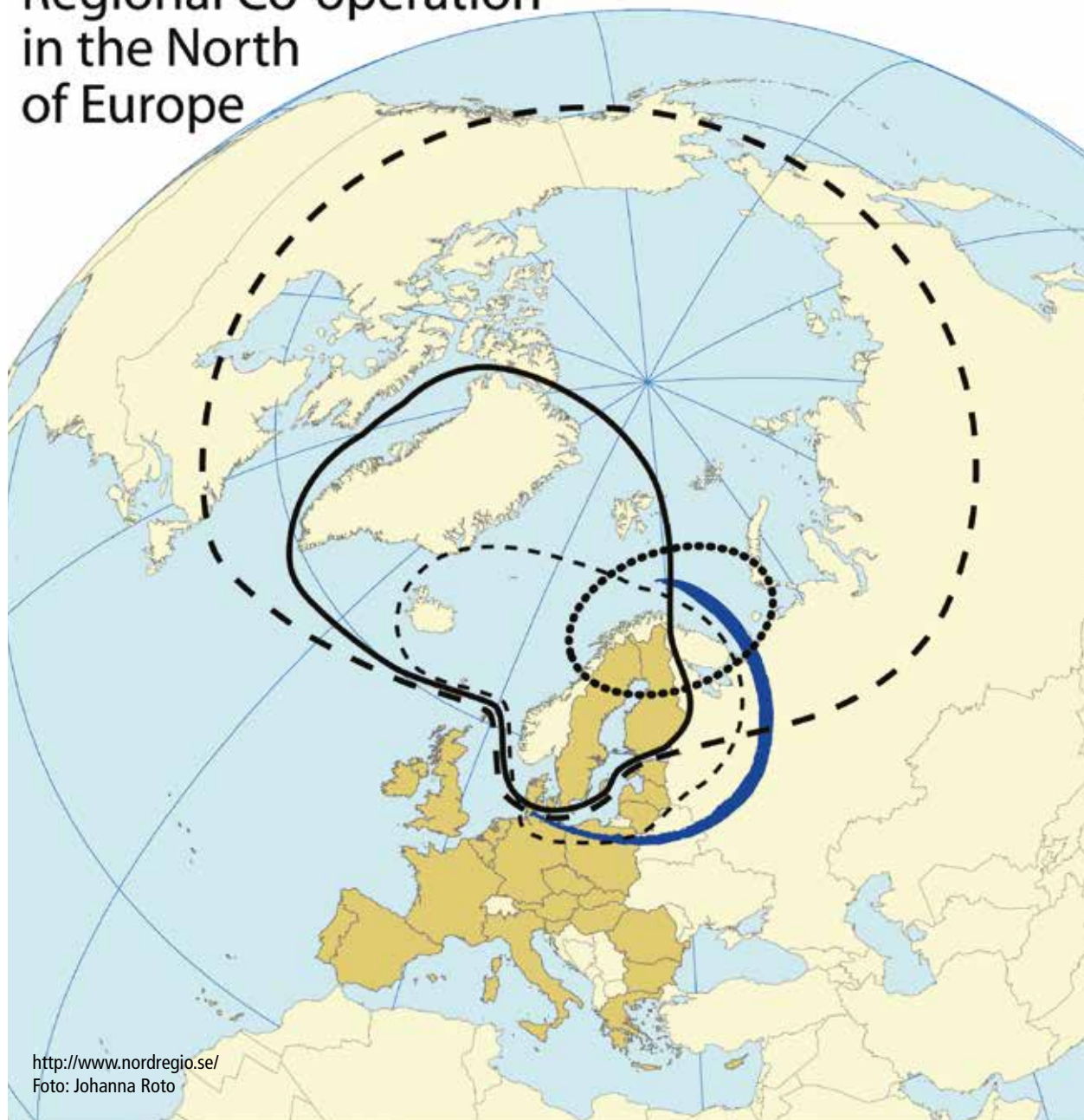
To reduce bureaucracy and complexity in Arctic governance, **the Arctic Council with its Working Groups should be seen as the most important forum for addressing Arctic issues**, and strengthened institutionally by establishing the Council as an international treaty-based organisation. The recently established Arctic Economic Council (AEC) can contribute significantly to the economic development and welfare of people living in the Scandinavian Arctic. **Business representatives from Norway, Sweden and Finland should work closely together to ensure that the AEC fosters circumpolar business partnerships and provides a business perspective to the work of the Arctic Council in the way marked out by the Task Force that facilitated the creation of the new body.**

European Union

As a major contributor to research and investment in the Arctic region, as a strong proponent of greater international efforts to fight climate change, and as a major destination of resources and goods from the Arctic region, the European Union has a stake and lots to offer in Arctic cooperation. Sweden and Finland are members of the EU, Norway is perhaps its closest partner state, and all three have the opportunity to influence the EU's Arctic policy. **Awareness raising and lobbying together in Brussels should be a natural part of the trio's Arctic diplomacy.** Together it is easier to secure EU funding for key research projects and influence the drafting of future Trans-European Networks (TENs).

Regional actors in the Scandinavian Arctic should cooperate more closely in coordinating the use of funds from the Interreg programme and other regional programmes. Northern regions can also together create critical mass to influence the EU's Arctic policy based on their Arctic experience and need to overcome challenges such as long distances, harsh climate and

The Geography of Regional Co-operation in the North of Europe



<http://www.nordregio.se/>
Foto: Johanna Roto

- Nordic Council of Ministers**
 Denmark, Finland, Iceland, Norway, Sweden,
 and the *autonomous territories* of Greenland, Faroe Islands and Åland
- Arctic Council**
 Canada, Denmark, Finland, Iceland, Norway, Russian Federation, Sweden, USA
- Barents Euro-Arctic Council**
 Denmark, Finland, Iceland, Norway, Russian Federation, Sweden, European Commission
- Council of the Baltic Sea States**
 Denmark, Estonia, Finland, Germany, Iceland, Latvia, Lithuania,
 Norway, Poland, Russian Federation, Sweden, European Commission

- The Northern Dimension**
- European Union**
- National boundary**



remoteness. **The Northern Sparsely Populated Areas (NSPA)** network between the northernmost counties and regions of Norway, Sweden and Finland gives voice to these regional actors in the European Union, and should be strengthened.

CONCLUSION

Instruments offered

In this paper we have offered ideas on which to base new growth in the North. We have also laid out a toolset that can be used to enable and support this growth. With LNG and renewables, green mining, sustainable tourism, and world-leading ice and cold climate solutions as main drivers of growth, the Scandinavian Arctic can rise to become the most innovative, industrious and environmentally friendly growth region in Europe. By coordinating regulation, creating a single pool of talent and labour, choosing prioritized transport routes together, and by raising just one voice in the most important issues in the Arctic, the Governments of Norway, Sweden and Finland can ease this growth and try building the Scandinavian Arctic as a model of regional economic integration and cooperation.

Commitment expected

The four drivers of growth and four instruments we have suggested in this report will be nothing without real political commitment. It is not enough to write reports, agree on the need for cooperation or even to streamline certain policies. Deep political commitment is needed, if lasting growth from and for the North is expected. That is why we suggest that the Governments of Sweden, Norway and Finland weigh our recommendations and introduce some **similar goals into their national policy programmes**. Common Arctic policy between the three countries should not be seen a speciality, but a priority and an integral part of national growth policies.



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