

# FUTURES OF NORTHERN CROSS-BORDER COLLABORATION

Edited by Urban Wråkberg



The University of Tromsø



**FUTURES OF NORTHERN CROSS-  
BORDER COLLABORATION**

PROCEEDINGS OF A CONFERENCE HELD ON THE  
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## INTRODUCTION

URBAN WRÅKBERG<sup>1</sup>

Cross-border regional collaboration between Russia and its Scandinavian neighbours has been fairly successful in the post-Soviet era. In contrast, the partnership between the EU and Russia that was established in the 1990s has proved more problematic and today is in need of revision. Geographically, historically and culturally, Russia is part of Europe and a land-bridge connecting Europe with Asia. Europe and Russia are in many regards ideal trading partners, most obviously so in the energy sector and in the trade of raw materials such as minerals. However, the views on the causes for the brief lapses in Russian gas deliveries during some recent winters have been different in Russia and in Western Europe, and Russia's downstream market access in Europe has been impeded by international demands for improved conditions for foreign direct investments in Russia. This should be largely remedied by Russia's recent membership in the World Trade Organisation (WTO). But it has been granted a long transfer period extending until 2020 before it will comply fully with all WTO regulations.<sup>2</sup>

Northern regional interaction between the Nordic countries and Russia in partnerships of the so-called Barents Euroarctic Region, established in 1993, have successfully dealt with issues related to the environment, health, research, education and culture, although more potential than actual progress has been made so far on developing joint enterprise and the industrial sector.<sup>3</sup> Nevertheless, through cross-border work in many sectors of society, the north-western regions of Russia and neighbouring counties in Norway, Finland and Sweden to-

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  - 2 On the state and implications of Russia's WTO membership, see comments by Hannu Himanen, Alexander Dynkin, Grigory Dudarev and Irina Novikova in *Baltic Rim Economies Quarterly Review* (2012) no. 6.
  - 3 Atle Staalesen (ed.), *Barents Borders: Delimitation and Internationalization*, Barents Review 2012 (Kirkenes, 2012).



University of Groningen, the Netherlands.<sup>4</sup> It is a global overview of several current national and institutional strategies for northern Europe, which identifies areas of common interests and collaboration in the Euroarctic including north-western Russia. The study ties this discussion to the post-Cold War turn in geopolitics from realist to geo-economic outlooks on the circumpolar North.<sup>5</sup>

A set of smaller research and outreach assignments were supported by the programme and undertaken by early-career professionals and university students and presented at the round table conference just mentioned entitled “Futures of Northern Cross-Border Collaboration”. It was held at the Moscow State Institute of Foreign Relations (MGIMO) in September 2011. At the round table, additional policy statements, reports and research results were delivered by acknowledged Russian and Scandinavian experts on the sub-Arctic and Arctic regions. Opportunities for undertaking the special assignments were announced to early career scholars by an open call on the websites of the Northern Dimension Institute at Lappeenranta University of Technology, Finland and the Barents Institute of the University of Tromsø, Norway.

The programme committee prioritized multidisciplinary studies of sustainability and modernisation, particularly but not exclusively in the industrial and energy sectors. The overarching interest was in cross-border collaboration between Russia and its north-western neighbours—a European policy field of major importance. All papers were reviewed and, in some cases, translated into English before publication online in this edition in 2013.

The Futures of Northern Cross-border Collaboration Project aimed to illuminate how globalisation affects trade and how climate change

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4 Urban Wråkberg, “Euroarctic Strategies and Synergies”, in Louwrens Hacquebord (ed.), *LASHIPA: History of Large Scale Resource Exploitation in the Polar Areas* (Groningen, 2012), pp. 161–172.

5 Urban Wråkberg, “The Great Game of the North: A Global Scenario for Domestic Use?”, in Stian Bones & Petia Mankova (eds.), *Norway and Russia in the Arctic* (Tromsø, 2010), pp. 152–163; Christopher S. Browning, “Westphalian, Imperial, Neomedieval: The Geopolitics of Europe and the Role of the North”, in Christopher S. Browning (ed.), *Remaking Europe in the Margins: Northern Europe after the Enlargements* (Aldershot, 2005), pp. 85–104; Matthew Sparke, “From Geopolitics to Geoeconomics: Transnational State Effects in the Borderlands”, *Geopolitics* 3 (1998) 2 Autumn, pp. 62–98.

and Arctic melting may impact resource-utilisation and life in the north. In so doing, it also considered the recent end of the Cold War and the ongoing important development of new post-modern geo-economic outlooks in Russian, Nordic and EU policy-making that are promoting cross-border collaboration.



Figure 0.2 Some of the participants in the round-table held at the Moscow State Institute of Foreign Relations (MGIMO) on 26-27 September 2011. From left to right: Alexey Konovalov (partially visible), Olesya Dolzhenkova, Ekaterina Khlebutina, Mikko Vähätalo, Galina Baturova, Bjørn Gunnarsson, Sergey Balmasov, Kseniya Bestuzheva, Alma Karabeg, Yana Bakunina, Willy Østreg and Remi Strand. Photo: Urban Wråkberg

Considering this major and complex change of conditions in the high north, many commentators have been discussing what has been called the “New North,” “the melting Arctic” or the “meltdown of Arctic security.” Several similar dramatic headlines have recently been used to label alarmist or optimist journalism on the environmental challenges and the likely military and business futures of the Arctic.<sup>6</sup> Given the uncertainty of what is yet to come, many northern stakeholders with access to sufficient resources now request professional scenario-building to guide their future plans. The “New Arctic” is characterised

6 Among these can be mentioned the influential alarmist commentary by Scott G. Borgerson, “Arctic Meltdown – the Economic and Security Implications of Global Warming”, *Foreign Affairs* 87 (2008), pp. 63–77. Cf. the nuanced set of articles in *The Economist Special Report: The Arctic* June 16th 2012.

by diminishing sea ice and the challenges and opportunities that will materialise for off-shore oil and gas extraction as well as by the extensions of the navigation seasons for sea routes in the Arctic Ocean. Forecasts of the extent and implications of these major shifts are based on combining large amounts of data with analysis. Understanding the relevant historical background is crucial to the ensuing scenario-building.

An additional aim of the Futures of Northern Cross-Border Collaboration Project was to share experiences on the EU Northern Dimension strategy and practices. The revised new Northern Dimension (ND) policy is an instrument to further collaboration between the EU and its ND partners. As previously noted, cross-border regional interaction between Nordic countries and Russia has been regarded as a positive example for such work, dating back to the pioneering North Calotte collaboration, which was effective during the Cold War.<sup>7</sup>

The Futures of Northern Cross-Border Collaboration Project created a platform for dialogue on the Euroarctic that is of lasting importance for the individuals and organisations involved. It opened multilateral discussions on issues of environmental and social sustainability in northwest Russia, Scandinavia and the EU. It demonstrated how economic development in the sub-Arctic can further both international business and local society while aligning with national priorities. The meeting in Moscow was successful in strengthening professional networks among experts, entrepreneurs, analysts and consultants and was helpful in illuminating key features of Russia-EU cooperation within the project's framework.

The Futures of Northern Cross-Border Collaboration Project was based on an ongoing collaboration between the Barents Institute in Kirkenes, with Director Dr. Aileen Espíritu, and the Centre for North European and Baltic Studies, directed by Prof. Lev Voronkov from the Moscow State Institute of Foreign Relations (CNEBS MGIMO). Prof. Voronkov was a member of the Project's programme committee together with Urban Wråkberg and Alexandra Chuvarayan, executive advisor on environment and climate, JSC RusHydro, Moscow.

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7 Pami Aalto, Helge Blakkisrud & Hanna Smith, (eds.), *The New Northern Dimension of the European Neighborhood* (Brussels, 2009); Dmitri A. Lanko, "Russian Debate on the Northern Dimension Concept", paper presented to the 6th Pan-European International Relations Conference "Making Sense of a Pluralist World" – Torino, Italy, September 12–15, 2007.

This initiative was part of the efforts conducted under the umbrella of the so-called Pomor Research Forum. This forum is led by the CNEBS with the Barents Institute as its main partner. The forum's general scope of interest is cross-border regional development in northern Fennoscandia including northwest Russia. The main objective of the forum is to evaluate various concepts of cross-border business development including visa free zones, business parks, innovation centres, so-called "twin city collaborations" and opportunities for establishing some variant of a Special Economic Zone on the coast of northwest Russia. Three reports have been published so far by the Pomor Research Forum.<sup>8</sup>

The round table for the Futures of Northern Cross-Border Collaboration Project brought together different generations of academics and managers. This publication in English of a selection of the presentations from Moscow also mirrors the diversity of professionals at that meeting. The group included professionals from the academic research sector, those from the business sector with an entrepreneurial outlook and public sector officials engaged in developing northern infrastructure and its human capital as well as furthering the life-quality of those residing in the northern rim communities.

In the first part of the book, Willy Østreng sets the scene of the "New North" in his overview of the contemporary geopolitical and geo-economic power-fields of the Arctic. Arctic melting causes not only environmental problems and rising sea-levels but also construction difficulties for buildings and other terrestrial infrastructure by the loss of permafrost in large parts of the Arctic. On the bright side of things, at sea, diminishing ice opens new routes in the Arctic Ocean that will be important to international shipping. This also provides the fishing

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8 Lev Voronkov, "Geopolitical Dimensions of Transport and Logistics Development in the Barents Euro-Arctic Transport Area (BEATA)", Barents Institute On-line Publication (2010); Victoria Tevlina "Norwegian-Russian Contacts in the Social Sphere in the North: The Experience and Perspectives", Proceedings of V Northern Social and Environmental Congress, Moscow, 21-21 April, 2009, (Moscow, 2010) [in Russian]; Urban Wråkberg, "Pomor Zone: A Cross-Border Initiative to Further Regional Development in Northern Norway and Northwest Russia," *Transborder Cooperation of Russia with Northern Countries: Conditions and Perspectives on the Development: Proceedings of V Northern Social and Ecological Congress, Moscow, 21-21 April, 2009* (Moscow, 2009), pp. 19-29 [in Russian].

industry with new marine expanses and facilitates access for off-shore fossil fuel extraction on the large continental shelves of the circumpolar North.

In the next chapter, Victoria V. Tevlina and Jens Petter Nielsen illuminate the traditions of good diplomacy in high latitudes and draw attention to the continued importance of the commitment and dexterity of the individual diplomat to represent his or her country and advise wisely its capital ministries on their policy-making regarding the country where the diplomat is stationed.

A constellation of Finnish researchers consisting of Tiina Jauhainen, Katja Lahikainen and Kaisa Henttonen next discuss one of the basic ideas behind the Futures of Northern Cross-Border Collaboration Project. They argue that to contribute to the understanding of issues of strategic economic importance to contemporary society, research communities must interact systematically and apply various means to facilitate their outreach and feedback from industry, the political establishment and the public.

Bjørn Gunnarsson, in his chapter on the launching and operation of the Centre for High North Logistics and its data-base ARCTIS, demonstrates the importance of gathering and making accessible reliable and up-to-date information on scientific, technological and administrative factors of importance to Arctic shipping to facilitate its secure growth for the benefit of all stakeholders in the high north.

The second section of this book includes five chapters that illuminate the various policies and activities that are important in the “New North” to attain sustainability in our uses of its raw materials, to attain economic growth based on good social values and to promote cross-border neighbourliness that will foster cultural understanding and create among other a more open labour market. Petri Tapio and Mikko Vähätalo analyse and reconsider the idea, previously taken for granted, that economic growth will always entail an increased use of non-renewable fuels—a resource in which the north is still rich.

Alexandra Chubarayan and Alma Karabeg, in their respective chapters, present experiences from the industrial sector of Russia, putting this in a relevant international context to facilitate discussing public-private interaction in the business sector. Attention is drawn to the potential of joint ventures in large-scale energy projects and the patience needed to develop bilateral enterprises in win-win cross-border collaboration by a set of publicly sponsored organisational arrangements.

Kseniya Bestuzheva, in her chapter, addresses what is often referred to as the soft means to achieve good societal developments through bilateral partnerships. One of her conclusions coincides with the experience of the Futures of Northern Cross-Border Collaboration Project as a whole: skills in social science and profound knowledge of your neighbour's culture and history is important for fostering efficient, respectful and friendly collaborations in all sectors of society. Mr. Remi Strand, barrister and Norwegian parliamentarian from the County of Finnmark, concludes this book by emphasising the value of knowledge and professional competence in building a sustainable future in the north.

Finally, let me take this opportunity to specifically thank several people who made this book and the Futures of Northern Cross-Border Collaboration Project possible. First, of course, are the authors of this volume, mentioned above. Invaluable advice in the initial process of conceiving the project was provided by Prof. Helga Haftendorn of the Freie Universität Berlin, based on the northern collaboration of the so-called Calotte Academy, energetically run by Associate Prof. Lassi Heininen of Helsinki University, Finland. For persistent advice and ideas, my colleague at the Barents Institute Dr. of Historical Sciences Victoria V. Tevlina should be thanked. Regarding administrative matters of Scandinavian and Russian exchange in the university sector, Prof. Jens Petter Nielsen of the University of Tromsø provided many pieces of experienced advice. Thanks are also due to M.Sc. Alexandra Chuvarayan who, besides being one of the authors in this edition, was a member of the project's programme committee and a helpful advisor on local matters in Moscow. Many thanks are due to the kind staff of the Centre for North European and Baltic Studies at MGIMO University in Moscow for providing the venue of our round table meeting and arranging all vital details. In particular, I would like to thank Professor Anatoly Chekansky and Research Fellow Vladislav Vorotnikov. Last but not least, I send many thanks to our ingenious colleague and host in Moscow, chairman of the round table in 2011, Professor Lev Voronkov, Director on Northern Europe at the CNEBS of the Moscow State Institute (University) of International Relations of the Ministry of Foreign Affairs of Russia.

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PART I  
GEOPOLITICS AND GLOBALISATION IN THE  
“NEW NORTH”



## Chapter ◊ 1

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### RECENT TRENDS IN ARCTIC GEOPOLITICS AFFECTING THE OPPORTUNITIES FOR ISSUE- AREA COHABITATION AND CROSS-BORDER COLLABORATION

WILLY ØSTRENG<sup>1</sup>

Geopolitics concerns the relationship between *geographical space* and *international relations*. E.W. Said reasons: “Since no State is outside or beyond geography, no State is completely free from the struggle over geography.”<sup>2</sup> In practice, this is to say that the world image of States is conditioned by their own geographical location and horizon; technological changes transform the strategic significance of an area, and supply lanes for energy and mineral resources tie regions together and show their vulnerability and interdependency.<sup>3</sup>

In this chapter we address the *space of the Arctic Ocean*, which is attracting political interest from an increasing number of states, European as well as Asian, big as well as small, polar as well as tropic. This interest relates in varying degrees to five interdependent geopolitical features of the region:

1. Its geographical location between three continents—North America, Europe and Asia
2. Its assumed abundance of strategically important industrial resources, in particular oil and gas
3. Technological developments, military as well as civil
4. Its dwindling sea ice regime
5. The distribution and bathymetry of the Arctic seabed

The purpose of this chapter is to discuss how these features – collectively and individually—may provide conditions for cohabitation be-

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  - 2 Edward W. Said, *Culture and Imperialism* (New York, 1994), p. 35.
  - 3 Øyvind Østerud, *Statsvitenskap: Innføring i politisk analyse* (Oslo, 1996), p. 325.

tween military and civil issue areas and cross-border societal collaboration in the Arctic in the post-World War II period.

### THE GEOGRAPHICAL LOCATION OF THE ARCTIC OCEAN

None of the major industrial areas in Russia, North America, Europe or Japan are located more than 3,860 nautical miles from the North Pole. That is to say, some 80% of world industrial production takes place north of 30 degree N. latitude, and some 70% of all metropolises lie north of the Tropic of Cancer. Thus, the Arctic Ocean offers the shortest distance between the world's most advanced and productive continents (Figure 1.1). If suitable technology is available, this fact makes the Arctic an ideal place both for strategic deterrence/nuclear bombing and for the shortening of trade distances. International political circumstances at any one time will determine the content of utilisation. In modern history, these conditions have attracted more attention from the military-industrial complex than from ship owners and industrialists.

### THE MILITARISATION OF THE ARCTIC

Developments in military technology during the Second World War, combined with the geostrategic location of the Arctic Ocean, situated between the superpowers, made the Arctic a suitable deployment area for strategic, high-tech weapon systems. In the 1950s and 1960s Arctic airspace served as a deployment area and attack route for strategic bombers. This deployment pattern was further accelerated in the 1970s with the deployment of new generations of intercontinental ballistic missiles. In the course of the 1980s the Soviet Northern Fleet, based on the Kola Peninsula, moved its strategic submarines from the fringes of the Arctic Ocean to the water columns beneath the ice cover of the Central Arctic Basin, and US submarines took up a pattern of forward deployment in northern waters.<sup>4</sup> Thus, in a short while, the Arctic was transformed from a *military vacuum* in the post-World War II period into a *military flank* in the 1950-1970s and into a *military front* in the 1980s.

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4 Willy Østreng, "Political-Military Relations among the Ice-States: The Conceptual Basis of State Behaviour", in Franklyn Griffiths (ed.), *Arctic Alternatives: Civility or Militarism in the Circumpolar North* (Toronto, 1992), pp. 59-69.



Figure 1.1 Depiction of distance difference between the Atlantic and Pacific Oceans through the Northern Sea Route and the Suez Canal. Source: Wikimedia commons

The gradual inclusion of the high north into Cold War strategic planning made most governments conceive of Arctic security solely in military terms. Due to the hegemonic features of the East-West conflict, areas of civil concern such as circumpolar transportation, resource extraction, scientific research, environmental protection and trade were not accorded autonomous significance of their own. The two sets of issue areas, civil and military, were tightly interlinked, for strategic and political reasons. Not only were few distinctions made between them, but civil affairs were subordinated to military requirements. As a rule, military interests and security considerations gained the upper hand in

national priorities for the North. Whenever military establishments perceived a conflict between the two types of interests, the obligation to yield usually rested with the civil sector. The conflict pattern became *cumulative* in the sense that conflict in one field spilt over to other areas. Nurtured by ideological competition, conflicts took on an *all-embracing* and *hegemonic* turn. Thus, the Arctic became a region deprived of international cooperation in most issue areas and lacking in large-scale civil involvement.

### CHANGES IN GEOPOLITICAL THINKING

The first public attempt to break out of this Cold War security thinking came on 1 October 1987, when Secretary General Mikhail Gorbachev gave a speech in Murmansk in which he signalled willingness to initiate international cooperation in four civil issue areas: *energy planning*, *environmental protection*, *scientific cooperation*, and *transportation*.<sup>5</sup> In identifying these areas, Gorbachev indirectly introduced a distinction between *military* and *civil* security. Both were regarded as vital for safeguarding national security, but the civil component was to be given priority from then on.<sup>6</sup> Actually, the new approach held that security lay in the political rather than military sphere and that national security was a comprehensive and complex matter cutting across the two sectors. The demand of the new era was for *extended security* through international cooperation and *decoupling* of military and civil issue areas. Coexistence between rather than exclusion of interests was the prescription suggested to transform the region into a cooperative arena for civil activities to take place on their own preconditions and on an equal footing with military activities.<sup>7</sup> Military security has become *extended security*, inviting the civil sector to take part in securing national interests in the region. Whereas the Cold War concept was one of *military partiality and dominance*, in which civil activities were regarded as a potential obstacle or even a threat to military security, the new thinking was one of *comprehensiveness*, regarding civil cooperation in many fields as one of two sets of measures to prepare nations to meet

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5 David Scrivener, *Gorbachev's Murmansk Speech: The Soviet Initiative and Western Responses* (Oslo, 1989).

6 Bruce Parrott, "Soviet National Security under Gorbachev", *Problems of Communism* 37 (1988), pp. 1–36.

7 Østreng, "Political-Military Relations among the Ice-States", pp. 26–52.

all kinds of threats to national security. A New Arctic in terms of cohabitation between military and civil issue areas and cross-border civil cooperation is in the making.

In the course of the 1990s a whole new set of cooperative political forums—among them the Barents Euro-Arctic Region, the Arctic Council and the Northern Forum—were established for scientific and environmental cooperation at different levels of government.<sup>8</sup> In accordance with the new security thinking, on 1 July 1991 the Soviet Union opened the Northern Sea Route (NSR) for international shipping, and in 2008 the Norwegian oil company Statoil was invited by Russian authorities to take part in the development of the gigantic Stockman gas field in the Barents Sea.

### COMMERCIAL TRANSIT SHIPPING IN ARCTIC WATERS

There is an obvious, and at times considerable, advantage in terms of the distance involved in using the three Arctic transport routes—the Northeast (NEP), Northwest (NWP) and Transpolar Passages (TPP)—between ports in the Pacific and those in the Atlantic, as compared to the Suez and Panama Canals (Figure 1.2). The distance between Yokohama, Japan, and Hamburg, Germany, for example, is only 6,600 nautical miles by way of the NEP, compared to 11,400 through the Suez Canal. This implies a 42% reduction in freight distance. Another example: If one uses the TPP across the North Pole, the distance is shortened by yet another 700 nautical miles. It is just as far from London to San Francisco via the Panama Canal as via the NEP. Most of the North American west coast, the Russian east coast, Japan, China, South Korea and Taiwan are all closer to the European Union/European Economic Area in freight distance through the Arctic than by way of the Atlantic and the Mediterranean.

Voyages previously undertaken by Soviet and Russian freighters have shown the time-saving benefit of using the NEP instead of the Suez and Panama Canals between the Atlantic and Pacific Oceans. In the summer, 10 to 15 days may be saved by using the NEP instead of the

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8 Willy Østreg, (ed.), *National Security and International Environmental Cooperation – the Case of the Northern Sea Route* (Boston: Kluwer Academic Publishers, 1999), pp. 29–48.

Suez Canal between Japanese and northern European ports.<sup>9</sup> Transit time between the US northwest coast and Hamburg through the Suez Canal averages some 28 days. Via the Arctic Great Circle Route, passing north of the large island masses in the Arctic Ocean, calculations indicate an 18-day voyage.<sup>10</sup> The attraction of the Arctic passages to civil societies also relates to sea ice melting and the region's presumed rich deposits of strategically important resources, not least oil and gas.

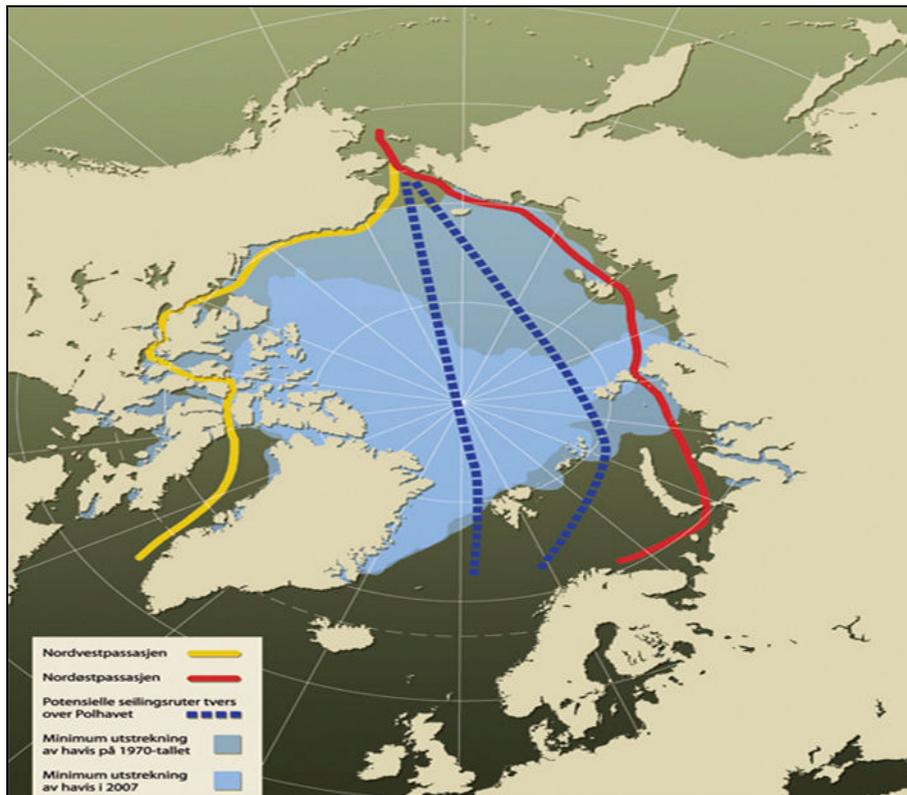


Figure 1.2 The three passages of the Arctic Ocean. Source: Norwegian Ministry of Foreign Affairs, St. meld.nr.15 (2008-2009)

9 Tor Wergeland, "The Northern Sea Route – Rosy Prospects for Commercial Shipping?", *International Challenges* 12 (1992) 1, pp. 43–57.

10 P. Fuhs, "Marco Polo in the 21st Century", in Henning Simonsen (ed.), *Proceedings from the Northern Sea Route Expert Meeting* (Lysaker, 1992), pp. 73–82.

### SEA ICE MELTING AND AVAILABILITY OF STRATEGIC RESOURCES

Due to global warming, the annual reduction in sea ice extent in the Arctic Ocean in recent years amounts to 45,000 sq. km., that is, more than the size of Denmark. Since 1978, the overall reduction of sea ice extent has been more than 10%. In the period 1976-1990 the extent of sea ice was reduced by 1 million sq. km. that is, an area larger than Norway, Denmark and Sweden combined. This reduction, which is most pronounced in the marginal seas of the Arctic Oceans, is accelerating and opening up sizeable chunks of previously "ice-closed" continental shelf areas for exploration, exploitation and transport. Expectations are that the petroleum industry will follow the ice edge northward until it reaches the edge of the continental slope bordering on, but not overlapping, the deep sea bed area of the Arctic Ocean. Thus, the access to Arctic shelf resources is continuously improving.

According to the most recent estimates of the US Geological Survey (USGS), the Arctic may hold up to 22 per cent of the world's undiscovered hydrocarbons, that is, 50 billion tonnes of oil equivalents. Of these resources, the shelf is supposed to contain a reasonable share—up to 84%—with the Russian shelf taking up about 40% of the Arctic Ocean seabed. In the view of the USGS, most of the undiscovered oil and gas resources are concentrated between the shoreline and the 500 m contour and within the 200 nautical miles-limit. The interest in exploiting these resources is fuelled by two extraterritorial and geopolitical circumstances.

First, the global rate of oil finds has dropped drastically since the late 1960s, indicating that world energy production may be on a steep downhill track in the years ahead. At the same time the demand for oil is expected to increase by some 60 per cent over the next 30 years. Here, find rates, supply and demand are on a fatal collision course. New energy forms, sources and provinces are in high demand. The assumed role of petroleum in this rather bleak futuristic scenario is that oil and gas will remain the dominant form of energy supply for at least 40 more years.<sup>11</sup> The Arctic may become a new and important petroleum province.

Second, extracting energy resources from the Arctic complies with the policy of most oil and gas importing countries to reduce their vulnerability in being subject to energy blackmail from governments in

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11 *BP Statistical Reviews of World Energy June 2005* (Egham, 2005).

politically unstable and volatile areas. The attraction to Arctic oil and gas is fed by the war against terrorism, piracy in southern waters and the enduring political dramas of the Middle East and Central Asia, which provide the bulk of fossil energy to import-dependent countries in the West. Transport through the Arctic will avoid these southern challenges, but will it avoid the traditional competition for operational space between the military and civil sectors in the waters of the Arctic Ocean? Polar history is no source of comfort in this regard.

### **SEPARATION OF OPERATIONAL SPACES: THE DISTRIBUTION AND BATHYMETRY OF THE ARCTIC SEABED**

The Arctic Ocean is an ocean suited for submarines, not for surface warships. Surface warships are constructed with thin hulls because of speed requirements, whereas cargo vessels are ice-strengthened to cope with ice at the expense of speed. According to Admiral Anatoly Yakovlev, this is why the NSR has never been used for the operation and battle training of Soviet/Russian surface warships, and why “transference of Russian warships [between the Pacific and Northern Fleets] along the NSR has nearly stopped”.<sup>12</sup> What is more, the coastal shelf areas are in general not suitable for strategic submarines due to the combination of their size, shallow shelves and presence of sea ice. These vessels experience limitations in manoeuvring ability through the restricted underwater spaces between deep extending ice and the extremely shallow waters covering the shelves off Siberia and North America. In general, strategic submarines (SSBNs) are simply too large to operate in most of these areas.

As an example, the Russian Delta class submarines are much longer (150 metres) than a soccer field, wider than a handball court and as tall as a 10-storey building (approximately 25 metres). It goes without saying that such a vessel, as big as the largest battleships of the Second World War, needs considerable space to manoeuvre, horizontally as well as vertically. As US submarine experts note: “It is axiomatic that a short submarine is more manoeuvrable than a long one. Any submarine longer than 350 feet [approximately 105 metres] probably is incapable of meeting manoeuvrability requirements under ice in shallow

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12 Anatoly N. Yakovlev et al., *Political Aspects of International Shipping along the Northern Sea Route*, INSRP Working Paper no. 75 (Lysaker, 1997), pp. 10-11, 43.

waters”.<sup>13</sup> The operational space needed between surface (ice) and sea bottom has been estimated at between 180 to 200 metres.<sup>14</sup>

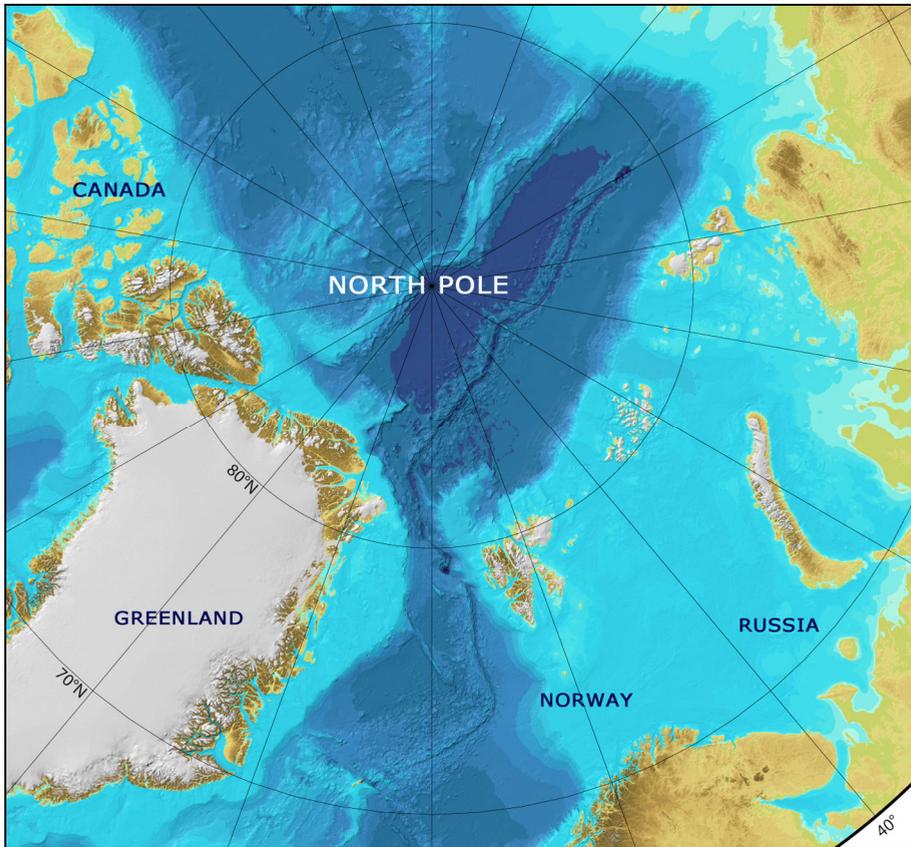


Figure 1.3 The separation scheme of the Arctic Ocean between military (deep sea bed) and civil activities (continental shelf). Detail of the International Bathymetric Chart of the Arctic Ocean.<sup>15</sup> Source: National Oceanic and Atmospheric Administration, National Geophysical Data Center

The Kara, Laptev and Chukchi Seas all have average depths of less than 100 metres. In the East Siberian Sea, depths are generally less than 40

13 Richard Boyle and Waldo Lyon, “Arctic ASW: Have we Lost?”, *Proceedings of the United States Naval Institute* 124 (1998) no. 6/1 June, part 1144, p. 33.

14 Helge Ole Bergesen, Arild Moe and Willy Østreg, *Soviet Oil and Security Interests in the Barents Sea* (London, 1987), pp. 68–85.

15 Martin Jakobsson et al., “The International Bathymetric Chart of the Arctic Ocean (IBCAO) Version 3.0”, *Geophysical Research Letters* 39 (2012) 12: June.

metres, and 53% of the Laptev seabed has a depth of less than 50 metres.<sup>16</sup> In fact, in extensive parts of these areas, a Delta class submarine sitting on the sea floor would have its tower protruding above the surface of the ocean. The depth of the Canadian Archipelago is on average somewhat deeper than the offshore areas of Siberia, but several of the channels of the NWP are too narrow and too shallow to allow the access and effective operation of large strategic submarines.

With or without the presence of ice, the depths of these seas do not suffice to fulfil optimal operational requirements of large strategic submarines.<sup>17</sup> No admiralty in its right senses would gamble with the survivability of its strategic submarines in such waters as long as better alternatives are immediately at hand. The deep Central Arctic Basin is one such alternative, offering depths of thousands of metres and a moving ice sheet producing more than enough ambient noise to provide adequate noise protection to strategic submarines (Figure 1.3). The only area where clashes of interests may occur is in the Barents Sea, with an average depth of 229 metres, and where submarines in a future scenario may have their thoroughfare restricted and narrowed by oil, gas and other civil installations.

Thus, by and large, nature to a certain extent sees to it that the civil and military sectors can fulfil their objectives and activities in separate parts of the Arctic Ocean, avoiding interference in each other's activities. The shelf areas seem to be "reserved" by nature for the civil sector—shipping and resource mining—whereas the Central Arctic Basin is the prime operational space of strategic submarines—a strategic "sanctuary" for submarines.<sup>18</sup> This natural separation scheme is in no way absolute, but for the time being it seems to suit the needs of the two sectors to conduct most of their activities without continuous and undue interference from the other.

This is not to say that the geographical separation scheme is to last for eternity. In the long term (50 years or more) the Central Arctic Ocean may become an operational area for both sectors. In an ice-free ocean, international shipping may in the future choose to use the Cen-

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16 Geir Hønneland, *Navigating the Straits of the Northern Sea Route*, INSROP Working Paper no. 81 (Lysaker, 1997).

17 Willy Østreng et al., 1999, pp. 290–297.

18 Willy Østreng, "The Strategic Balance in the Arctic Ocean – Soviet Options" in William Gutteridge et al. (eds), *European Security, Nuclear Weapons and Public Confidence* (London, 1982), pp. 106–113.

tral Arctic Ocean to further shorten the transport distance and time between destinations in the Atlantic and Pacific Oceans. Thus, intersectoral contacts may be re-established. From the perspective of the military, this may not necessarily be to its disadvantage. With an ice-free Arctic Ocean the noise emanating from moving sea ice is no longer an operational feature to be utilised in SSBN operations. In times of crises, an ice- and noise-free ocean will make SSBNs more susceptible to detection and eventual destruction. Thus, the ambient noise generated by increased commercial shipping in these waters may actually be welcomed by military planners.

In geographical areas where the two sectors may establish contact and possibly have a negative impact on each other's activities—for instance in the Barents Sea, which hosts both military and civil interests—changes in regional politics may act to ease and restrict the potential for conflict. In the post-Cold War era, regional conflicts have become more *issue-specific*—that is, they are kept and resolved within the bounds of the issue area itself—and do not automatically spill over to other fields in a cumulative manner. In such instances cooperation in one field may coexist with conflict in another without the latter hurting the former. An example: In 2010 Norway and Russia reached agreement on the delimitation of the Barents Sea but continued to disagree on the legal status of the Fishing Protection Zone around Svalbard. What seems to emerge among Arctic states is a shared interest and behaviour in *containing* conflicts and *proliferating* cooperation among themselves.<sup>19</sup>

### SOME CONCLUDING REMARKS

The five interdependent geopolitical features discussed above in the context of post-Cold War politics provide for cohabitation between military and civil actors in partially separate areas of the Arctic Ocean. The civil commercial sector will restrict their operations to the shelf areas to a large extent and for a long period of time, whereas the military establishments will operate their submarines in the Central Arctic Ocean. This implies that both sectors can fulfil their obligations on their own terms without necessarily interfering too heavily in the activities of the other. Thus, the geographical separation of the two sectors

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19 Willy Østregren et al., *Shipping in Arctic Waters: A Comparison of the Northeast, Northwest and Transpolar Passages* (Berlin, 2013).

in the region becomes an important precondition for cross-border cooperation in civil affairs. In areas of mixed presence, like the Barents Sea, the policy of issue-specificity to contain conflicts has made cooperation in other fields a more viable possibility.

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## Chapter ◊ 2

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### FACILITATING FRIENDSHIP: INTERACTIVE PRACTICES OF THE RUSSIAN AND NORWEGIAN CONSULAR SERVICES IN THE NORTH

VICTORIA V. TEVLINA<sup>1</sup> AND  
JENS PETTER NIELSEN<sup>2</sup>

During a visit to Arkhangelsk in late September 2011, Norway's energetic consul-general in Murmansk (and former Norwegian ambassador to Russia), Øyvind Nordsletten, stated: "Everything is so interesting in our cooperation now, and the broad scale of Russian-Norwegian relations is not only pleasing but also makes a magnificent impression. I will spare no effort on my part to make sure that our common projects become even more substantial and concrete".<sup>3</sup>

The Norwegian consulate-general in Murmansk (established in 1993), the only foreign representation Norway has in the Barents region, now plays an important role in mediating co-operation between interested Norwegian parties and Northern Russian regional authorities, organisations and citizens involving business, the banking sphere, culture and education. Actually, it has revitalised the pre-revolutionary tradition of working directly with the North-West Russian provinces. Starting from the early nineteenth century and right through the late 1930s, a Norwegian-Swedish (from 1905 solely Norwegian<sup>4</sup>) consulate/consulate-general in Arkhangelsk took care of these contacts on the regional level. After the disintegration of the Soviet Union, the establishment of the Barents Euro-Arctic region created the conditions needed to reopen a Norwegian consulate-general; this time Murmansk

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3 Speech of Øyvind Nordsletten during his first official visit to the Northern (Arctic) Federal University (NARFU) in Arkhangelsk, 21 September 2011. <http://narfu.ru/university/news/>.

4 The Swedish-Norwegian Union, established in 1814, was dissolved in 1905.

was chosen as the location, it actually being much closer to the Norwegian-Russian border than Arkhangelsk. There is also continuity back to the era of the Swedish-Norwegian Union since the Norwegian consulate-general today also cares for Swedish citizens in Russia and issues visas for Russian citizens who want to visit Sweden.

Following the Norwegian-Russian agreement on the delimitation of the Barents Sea of 17 September 2010, Norway opened an honorary consulate in Arkhangelsk.<sup>5</sup> It has also been called a “reopening”, since the first Norwegian-Swedish consul was appointed in this important seafaring city on the White Sea almost 200 years ago. Until 1921 the city of Arkhangelsk was the capital of the large Arkhangelsk province, which also included the present Murmansk province, at that time called Aleksandrovska district or *uyezd*.

The Swedish-Norwegian consulate in Arkhangelsk has a remarkable and dramatic history. In this chapter we will try to show how this history reflects the changing tides of Russian-Norwegian relations from the beginning in 1815 until the 1920s, when the last remnants of pre-revolutionary links between Russia and Norway were broken. We will give an overview of the entire period but look more closely into the part played by the Arkhangelsk consuls/consuls-general in Norwegian-Russian relations during the 30 years or so preceding the Russian Revolution—with special consideration given to how they interpreted and understood the essence of these relations.

The Stalin period, a time when the consulate became a base for brutal NKVD operations (1937-1938), will not be covered here. Many years later, in the Ulitsa Popova in Arkhangelsk, you could still see a beautiful mansion with a large garden and some enormous lilac bushes (which at that time were unusual for Arkhangelsk), all surrounded by a high fence. It was the *Norvezhskoe konsulstvo*, the Norwegian consulate. On the ground floor, in the consul’s office, there was a large collection of books and journals—and an immense desk covered with green baize and a magnificent collection of quill pens. Once upon the time activity here had been hectic, but now the house was empty and deserted, and the building was guarded by the Soviet secret police.<sup>6</sup>

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5 <http://www.regjeringen.no/nb/dep/ud/aktuelt/nyheter/2010/utenriksministeren-apnet-norges-konsulat.html?id=614606>.

6 V.A. Tevlin, Note concerning the Norwegian consulate on the Ulitsa Popova, Arkhangelsk [unpublished manuscript, 2010].

The origins of the Norwegian consulate in Arkhangelsk can be traced back to the so-called Russian or Pomor trade, which had its breakthrough in northern Norway in the eighteenth century. As some readers may know, this involved summer trade, basically Russian flour and forest products for Norwegian fish, which was enormously popular in Finnmark and soon led to the abolition of the Finnmark trade monopoly (1681-1789). In the nineteenth century several hundred vessels from the White Sea conducted this trade in northern Norway. Seen from the perspective of local fishermen, the main advantage of the trade was that it took place in the middle of the summer, a time when the fish could not be hung on drying racks because the weather was too hot and would soon be crawling with maggots. This was not a problem for the Russians, however, since they bought or bartered for the fish raw and salted it on board their own vessels. This meant that the Norwegian and Sami fishermen could now sell fish even in the “maggot period”. In practice this meant that they could supply themselves with flour provisions for the entire winter by paying with fish that they otherwise would not have taken the trouble to catch.<sup>7</sup>



Figure 2.1. The still preserved Russian houses of the old Pomor trading station at Hamningberg on the Varanger Peninsula, north-easternmost Norway. Photo: Urban Wråkberg

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<sup>7</sup> See Einar Niemi, *Pomorhandelen sett med norske øyne*, *Ottar* 1992:4 [Tromsø].

As a result of the Pomor trade and increasing Russian fisheries in northern Norway, there was a need for a consular outpost in the White Sea area, and a Danish consul was on the spot as early as 1786, while a Swedish-Norwegian, consul was established, as noted above, in 1815, just as the Napoleonic wars were coming to an end and the Swedish-Norwegian Union was forged. These were honorary consuls, as a rule, merchants of non-Norwegian origin whose task was to help Norwegian citizens and safeguard their interests in this foreign country.<sup>8</sup> However, with an increasing number of ships calling, the situation was not satisfactory; by a royal decree of 17 December 1851, the position of consul became salaried at the considerable sum of 1,000 riksdaler a year, enough for the officer to devote all his time to his duties. From a Swedish point of view, there was no need for such a consulate; in practice it was to be run by Norwegians, mostly recruited from the Norwegian navy or army. In many documents it was emphasised that the man holding the office of consul or consul-general in Arkhangelsk was to be Norwegian and also preferably a young man because of the hard climate and the demanding nature of the job.<sup>9</sup>

After the Crimean War, the job of the consul in Arkhangelsk became more demanding because of the Norwegian economic expansion in the Russian territory of the north, which started in the 1860s. Many Norwegian colonists settled on the Murman coast, which bordered Norway, and more and more Norwegian fishers found their way into Russian waters. One of the consul's duties was to oversee measures adopted by the Russian authorities on the Kola Peninsula and the Murman coast.<sup>10</sup> But the Murman colonisation was only the beginning of the Norwegian economic penetration into northern Russia. From 1867 Norwegian sea mammal hunters started to hunt seals and walrus-es at the mouth of the White Sea and Novaya Zemlya, and by the late nineteenth century Norwegian timber merchants began to establish

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8 N.A. Shumilov, "Shvedsko-norvezhskie konsuly v Arkhangelske (XIX-XX veka)", *Barents-Journal* 2002:1, pp. 83–101.

9 Gjenpart av Indredepartements underdanigste Foredrag af 14 November 1898, som ligger til Grund for Kongelig resolution av samme Dato. Swedish National Archives, 1922 dossiersystem, box 745. See also "Generalkonsulatet i Arkhangelsk", *Aftenposten* 11 January 1886.

10 Gjenpart av Indredepartements underdanigste Foredrag af 14 November 1898, som ligger til Grund for Kongelig Resolution av samme Dato. Swedish National Archives, 1922 dossiersystem, box 745.

operations in the White Sea area. By a royal decree of 22 June 1883 the Norwegian-Swedish consulate in Arkhangelsk was upgraded to a consulate-general. On this occasion it was emphasised that, with this upgrading, the Swedish-Norwegian representative in Arkhangelsk would appear “stronger with a higher rank and position, that would also give him more weight in the negotiations that are often conducted directly between him and the highest local authorities”.<sup>11</sup> The consular district, which until then had been defined as the harbours in the White Sea, was enlarged in 1885 to comprise the whole of the province of Arkhangelsk.

The Norwegian consuls-general were visible characters in the city of Arkhangelsk, at a time when there were no other staffed consulates in the city, often referred to as the Pomor capital. Highly respected people in this position in the second half of the nineteenth century were the sea officers Balthazar Fleischer and David Christian Bodom, and then Conrad Falsen, a captain-lieutenant in the Norwegian army, newspaper editor, and a grandson of “the father of the Norwegian constitution”, Christian Magnus Falsen.<sup>12</sup> After his untimely death in 1898 Conrad Falsen was followed by his son, Henrik Anton Falsen, who was a specialist on fisheries, had studied at the University of Moscow, and was at that time no doubt one of Norway’s foremost experts on Russian matters. The Falsens ran the consulate in Arkhangelsk from the 1880s right up to the Russian Revolution, that is, the period in the history of Arkhangelsk which Eugenie Fraser describes with such spirit in the book *The House by the Dvina* (1984). The Falsens belonged to the same bourgeois milieu that she recounts, and H.A. Falsen’s daughter was indeed one of her friends.<sup>13</sup>

In their numerous reports to Stockholm and Christiania (many of them with political content), the Falsens father and son maintained a Norwegian policy towards Russia with a peculiar northern perspective, where Norway’s security requirements vis-à-vis Russia were counter-

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11 Gjenpart af den Kongelige Norske Regjerings underdanigste Indstilling af 15. Mai 1883, Swedish National Archives, 1922 dossiersystem, box 745. See also Gjenpart av Indredepartements underdanigste Foredrag af 14 November 1898, som ligger til Grund for Kongelig Resolution av samme Dato. Swedish National Archives, 1922 dossiersystem, box 745.

12 Conrad Falsen, *Slegten Falsen* (Kristiania, 1915)

13 Eugenie Fraser, *The House by the Dvina: A Russian Childhood* (London, 1984).

balanced by the assets of the Pomor trade and the considerable market potential in Russia, especially for Norwegian fish.<sup>14</sup> In leading circles in Christiania and Stockholm there was a certain scepticism about the Pomor trade, which was viewed as a kind of Russian economic penetration of northern Norway that could be dangerous for this part of the Swedish-Norwegian Union in the future. Radical newspapers in Finnmark, however, like *Nordlys* in Tromsø and *Finmarken* in Vardø, argued that people in Finnmark could not do without the Pomor trade, and it is characteristic that the editors of these newspapers did not believe there was a Russian threat to northern Norway.<sup>15</sup>

The Falsens represented a third position. They were convinced that there was a Russian threat, and they shared the widespread idea that Russia needed ice-free harbours in northern Norway. In his application for the position of consul-general in Arkhangelsk in 1886, Falsen senior even wrote that the Russian threat was what sparked his interest in Russia in the first place.<sup>16</sup> This was during the Russian-Turkish war of 1877-1878, when he worked as an attaché as a scholarship recipient at the Swedish-Norwegian legation in Berlin:

Already at that time it seemed to me as a not too distant possibility that within the Russian nation agitators would come forth, who would try to lead the expansive forces of the realm in other directions, where ice-free ports and easily available ocean were to be found.

More specifically he was thinking about Finnmark, the northernmost county of Norway, and he decided to apply for a position there in order to gain useful knowledge about this potentially vulnerable area bordering Russia, in the hope that it would help him to obtain a position in the Swedish-Norwegian foreign service. So in the period 1880-1885 he is a lieutenant at the garrison of Vardøhus fortress, preparing himself,

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14 See Conrad Falsen, "Bemærkninger angaaende norsk-russiske Fiskeri- og Grændseforhold foranlediget ved en Reise fra Archangelsk til Vardø", Høsten 1890. The confidential archive of the Finnmark Province, the State Archive in Tromsø, Norway.

15 See Lene S. Brustind, *Nordnorske holdninger til Russland: en studie av Nordlys' og Finmarkens dekning av Russland i perioden 1900-1918*, Master thesis, Department of History, University of Tromsø, 2005.

16 Conrad Falsen's application to the King for the position of Swedish and Norwegian consul-general in Arkhangelsk, dated Stockholm 3 December 1886. Swedish National Archives, 1922 dossiersystem, box 745.

so to speak, for higher commissions in the future. He also founded and edited a local newspaper, *Vardøposten*, which published many interesting articles about Russia and Norwegian-Russian relations.

Despite their Russophobic predilections, the Falsens, both father and son, wholeheartedly supported the Pomor trade, which in their opinion did not represent any danger to northern Norway at all. On the contrary, the Pomor trade created security, because it effectively worked against the development of independent Russian fisheries in the north. It was a good thing that the Russians preferred to buy fish in northern Norway, instead of fishing themselves, because then they would not develop a large fishing fleet of their own that “will always bring danger of collisions in Norwegian border waters and possibly resulting claims from the Russian side”, as Conrad Falsen wrote in a report from Arkhangelsk in 1890.<sup>17</sup> Because the White Sea was ice-covered most of the year, such a fishing fleet needed to be based on the Murman coast, close to the border with Norway. But it was in Norway’s best interest that such large Russian settlements did not develop in the immediate vicinity of the Norwegian border.

When the Russian Ministry of Foreign Affairs established a Russian consulate in Hammerfest in 1870 to perform approximately the same functions as the Swedish-Norwegian consulate in Arkhangelsk (including monitoring the colonisation of the Murman coast), it was to be manned only during the summer months, the time of the year when the Pomor trade took place. The rest of the year the consul and his vice-consul worked in the Ministry of Foreign Affairs in St. Petersburg. A similar arrangement would have been even more appropriate for the Swedish-Norwegian consulate in Arkhangelsk, since while Hammerfest harbour was open in all seasons, there could be no shipping arrivals at all in Arkhangelsk for 7-8 months, and the city was almost completely isolated in the winter. Consul-general Falsen suffered from this Russian Fimbul winter, when everything came to a standstill and the temperature reached minus 30°C. In the end he raised the question of whether he should not, like the Russian consul in Finnmark, spend the winters in the capital of his own country, or use the cold season to carry out official journeys in northern Norway, where the coastal waters were open. Anything was better than frozen Arkhangelsk.

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17 See Falsen, “Bemærkninger angaaende norsk-russiske Fiskeri”.

In the mid-1890s Conrad Falsen was influenced by the view, held among others by the governor of the Arkhangelsk province, A.P. Engelhardt (1893-1901), that Arkhangelsk was losing much of its former importance as a port for exports and economic centre in the Russian North.<sup>18</sup> A significant component of economic modernisation in Russia was railway construction, which accelerated in the 1860s and 1870s, in the so-called reform period under Alexander II. For many districts, however, its consequences were mainly negative. The railway diverted transport from the rivers, and many old transit centres for unloading and loading now became superfluous.<sup>19</sup> Arkhangelsk had a strong position in northern Russia as long as river transport predominated and transport conditions in the northeastern provinces were more or less primitive. Grain, flax and other products from the eastern provinces were carried to Arkhangelsk via Vologda and then exported abroad. However, all the new railways were built in the direction of Russia's western and southern borders; as capital was unavoidably diverted from the Russian North, trade and industry stagnated and the area became more and more isolated. The introduction of steam power had a similar impact on some of the big rivers. It became easier and cheaper to transport agricultural products from the Vyatka province along the Volga via Rybinsk to St. Petersburg, instead of to Arkhangelsk. The Vyatka province, wrote Consul-general Falsen, "completely changed fronts as a result of this. It turned its back, so to speak, to the North".<sup>20</sup>

Since the Arkhangelsk province seemed to Conrad Falsen more and more of a dead end, isolated from the world at large, late in his service he actually proposed to the Ministry of Foreign Affairs in Stockholm that the Arkhangelsk consulate-general be downgraded to a mere consulate. Then, out of the blue, came the Russian government's decision to link the city and province of Arkhangelsk to central Russia with a railway. That changed the situation and meant that the market for Norwegian fish in northern Russia could grow immensely, and the Swedish-Norwegian consulate took on a new perspective. Suddenly Arkhangelsk was no longer a backwater, and everybody was talking

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18 See Aleksander P. Engelhardt, *A Russian Province of the North* (Westminster: Archibald Constable and Company, 1899).

19 Peter Lyashchenko, *History of the National Economy of Russia to the 1917 Revolution* (New York: Macmillan, 1949), p. 512.

20 UDA, P5 Æs/33, Gjenpart av generalkonsul Falsens innberetning 1898 ang. fiskehandel m.v. i Nord-Russland, p. 27. Norwegian National Archives.

about the great future of the Russian North. In the summer of 1894, the powerful Minister of Finance and architect of Russian industrialisation, Sergey Witte, visited the city on his way to the Murman coast and the Kola fjord, where he wanted to explore the possibilities of building Russia's new main naval base.<sup>21</sup>



Figure 2.2. Transshipment of cod in the harbour of Arkhangelsk in 1896, contemporary post-card. Source: US Library of Congress Prints and Photographs Division

During his meeting with the city authorities in Arkhangelsk and later at a solemn dinner given by the Arkhangelsk business community, Witte used the opportunity to speak enthusiastically about the flourishing northern areas and the readiness of the Russian government and the Emperor to support the Russian North through energetic measures. He appealed forcefully to the local merchants to take advantage of the opportunities that they would now be offered. Northern Russia, Witte said, “is connected with the rest of Russia by the most

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21 Afterwards he visited Vardø and Hammerfest, and returned to St. Petersburg via Scandinavia.

prominent pages of our fatherland's history and bears witness to the great power of the Russian people".<sup>22</sup>

Consul-general Falsen was introduced to the Minister of Finance Witte, who during the dinner, after first having proposed a toast to the Russian Emperor, drank to the health of the King of Sweden and Norway, directing this toast to Falsen himself.<sup>23</sup> This was probably his greatest hour as consul-general. Falsen was infused with new enthusiasm for Arkhangelsk, but at the same time his health was failing and soon he had to leave the reins to his son, Henrik Anton, who finally took over his position as consul-general when Falsen senior died in 1898, only 51 years old.

The twenty years prior to the Revolution were indeed a period of increasing optimism and expectations for the future of Russian-Norwegian relations. Because Arkhangelsk was connected to the Russian railway network in 1898, Norway also faced a radical expansion in the market potential for Norwegian fish, which Falsen junior often repeated in his reports to Stockholm and Kristiania. All of Russia was about to open up, and many thought this would become "the new America" for Norwegian business. This optimism was embraced not least by the fishery industry and Norwegian forest and sawmill entrepreneurs, who invested tens of millions of Norwegian kroner in Russia in the years before and during the First World War.<sup>24</sup> Northern Russia and western Siberia, as noted, became the last leg in a gradual expansion of Norwegian forest eastwards in the search for large, untouched forestland, starting from the second half of the nineteenth century. It first reached Sweden, then Finland and continued eastwards until it penetrated far into the realm of the Tsar.<sup>25</sup>

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22 Falsen to the Swedish-Norwegian Minister of Foreign Affairs 19 June / 1 July 1894. Swedish National Archives, 1922 dossiersystem, box 4497a.

23 Ibid.

24 See Tevlina, Victoria V., *Inostrannoe predprinimatelstvo na Yevropeyskom Severe Rossii vo vtoroy polovine 19 – nachale 20 vv. (1861-1917)*. Dissertatsiya kandidata istoricheskikh nauk. Petrozavodskiy Gosudarstvennyy Universitet, 1994. See also Jørgen Sølværd 1992, *Spekulanter i jobbetid: En analyse med basis i aksjetegnerne i selskapet Russian Forest Industry LTD våren 1917*. Master thesis, University of Oslo.

25 See Francis Sejersted, "Veien mot øst", in Sivert Langholm and Francis Sejersted (eds), *Vandring: Festschrift til Ingrid Semmingsen på 70-årsdagen 29. mars 1980* (Oslo, 1980).

Visionary Norwegian forest entrepreneurs like Jonas Lied with his Siberian Steamship Manufacturing and Trading Company and Frederik Prytz with his Russian Forest Industry Ltd were not particularly worried about political developments in the country and launched major investments in Russia as late as 1916.<sup>26</sup> The consulate-general became increasingly occupied with their interests; during the war, Prytz became vice-consul in Arkhangelsk while Lied was appointed Norwegian consul in Krasnoyarsk in western Siberia. For them the Revolution came as a bolt of lightning from out of the blue. However, they did not give in. Lied stayed in Russia for another 14 years after the October Revolution, leaving the country only in 1932. Prytz, on the other hand, started negotiations with the Bolsheviks and managed to negotiate the establishment of a new Norwegian-Soviet forest firm, *Russnorvegoles*, which on the basis of concessions from the Soviet government operated until 1927, when it too was nationalised. Prytz, together with Vidkun Quisling, later became one of the founders of the Norwegian Nazi party, and in early 1945 ended his life as Minister of Finance in Quisling's government.<sup>27</sup>

This was the final link between pre-revolutionary Norwegian-Russian relations and the new Bolshevik era introduced by Lenin and Stalin. Other authors have examined what happened with the Norwegian consulate in Arkhangelsk during the Stalinist purges.<sup>28</sup> Suffice it to say, what happened with the Norwegian consulate in 1937-1938 inevitably cast shadows over the opening of the new honorary consulate in Arkhangelsk in September 2010, which Norway's foreign minister, Jonas Gahr Støre, and hundreds of other Norwegian guests attended. On the other hand, it is hardly justified to consider the new honorary consulate in Arkhangelsk without further ado as the heir to the old Norwegian consulate. When Norwegian authorities decided to establish a new consulate-general in northern Russia after the dissolution of the

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26 Jonas Lied, *Over de høye fjelle* (Oslo, 1946); Jonas Lied, *En sjøvei blir til: Det sibirske kompanis historie* (Oslo, 1958).

27 A.V. Repnevsky, "Kapitan F. Pryuts – gibkiy biznesmen i norvezhskiy profashist", *Vestnik "Barents-tsentra" MGPU* 9 (2010). Hans Fredrik Dahl, *En fører blir til* (Oslo: Aschehoug, 1991).

28 See A.V. Repnevsky, *SSSR – Norvegiya. Ekonomicheskie otnosheniya mezhoennogo dvadtsatiletiya* (Arkhangelsk: Izdatelstvo PGU, 1998), pp. 251-262 and Ye. Ovsyankin, *Arkhangelsk kupecheskiy* (Arkhangelsk: Arkhkonsalt, 2000), pp. 360-369.

Soviet Union and the launching of the Barents region in 1993, they did not choose Arkhangelsk, but rather Murmansk, which should rightly be considered the heir to the old consulate in Arkhangelsk.

This was a choice that reflected the historical development in northern Russia after the Revolution and the fact that Russia has moved much closer to Norway since then. What Falsen father and son feared and worked energetically against, namely increased Russian activity on the Kola Peninsula, became a reality during the Soviet era. The basis was laid when Tsarist Russia, on the verge of crumbling, organised the construction of a railway to Kola Bay in 1915-1916. The Kola Peninsula was then still a “sleeping beauty”, but the foundation was laid. Then came Lenin in the role of the fairy tale prince and kissed the sleeping beauty. That was the start of intense industrial and demographic growth on the peninsula. Over the course of several decades, a new city the same size as Arkhangelsk developed on Kola Peninsula, in the vicinity of the Norwegian-Russian border.

A Russian consulate-general was established in Kirkenes in 1993, as “heir” to the Russian consulate in Finnmark (1870-1917), which was situated in Hammerfest. Its history, while much shorter than that of the Norwegian consulate in Arkhangelsk, is no less interesting.<sup>29</sup> Today, however, Kirkenes is the natural location for a Russian consulate in northern Norway, given its proximity to the border between the two countries and all the more preferable since the town also hosts the Norwegian Barents Secretariat and the International Barents Secretariat (IBS). The IBS was led by the Russian diplomat Alexander Ignatiev from 2007 to 2011. Today its leader is the Finnish diplomat Ari Siren. So Kirkenes has in several ways become a centre for co-ordinating activities in the Barents region. Since the declaration establishing the Barents Euro-Arctic Region was signed here in 1993, the town has also become a symbol of this trans-national region and a bridgehead in Norwegian policies towards Russia.<sup>30</sup>

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29 See Jens Petter Nielsen, “A Russian Consulate on the Shores of the Arctic Ocean”, in Kari Aga Myklebost and Stian Bones (eds.), *Caution and Compliance: Norwegian-Russian Diplomatic Relations 1814-2014* (Stamsund: Orkana akademisk, 2012), pp. 23-35.

30 A somewhat shorter and in certain respects different version of the present article appeared in Myklebost and Bones (eds.), *Caution and Compliance*, pp. 51-59 under the title “A Consulate on the Dvina”.

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## Chapter $\diamond$ 3

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### RESEARCH COMMUNITIES AS CONTRIBUTORS TO REGIONAL DEVELOPMENT – THE CASE OF THE NETWORK OF THE NORTHERN DIMENSION INSTITUTE

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#### 1. INTRODUCTION

Research networks have been seen as a potential source of producing benefits for both the public and private sectors.<sup>3</sup> In addition to the benefits generally produced by such networks, including enhanced learning, more efficient use of resources and an improved ability to plan and solve complex problems, research networks are considered more specifically to serve as a neutral space for generating independent knowledge. They also expand access to available knowledge, allowing firms and other organisations to extend their knowledge.<sup>4</sup>

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3 Olga Tretyak and Nikita Popov, “Explaining Scientific Networking with B2b Network Theories: The Cases from the EU and Russia”, *Journal of Business & Industrial Marketing* 24 (2009) 5/6, pp. 408–420; Donal Fisher et al., “Changes in Academy/Industry/State Relations in Canada: The Creation and Development of the Networks of Centres of Excellence”, *Minerva* 39 (2001) 3, pp. 299–325; Jonathon Cummings and Sara Kiesler, “Coordination Costs and Project Outcomes in Multi-University Collaborations”, *Research Policy* 36 (2007) 10, pp. 1620–1634; Jos Rikers and Jos Hermans, “Regional Centre of Expertise (RCE) Rhine-Meuse: A Cross-Border Network”, *International Journal of Sustainability in Higher Education* 9 (2008) 4, pp. 441–449.

4 On raising productivity by systematic networking, see Catherine Alter and Jerald Hage, *Organizations Working Together* (Newbury Park, 1993); Daniel

Regardless of all the progress in research related to network organisations over the past few years, there is still little knowledge about the functioning of networks and research networks in particular. In general, these types of networks are studied less than business networks. In this chapter, network functioning is understood to cover the processes by which network conditions lead to certain outcomes. Understanding network functioning is important because only then can a greater understanding be achieved of why networks produce certain outcomes even though some networks result from bottom-up processes while others emerge because of strategic decisions made by network participants or government officials. Complex networks require a great deal of effort to make collaboration function.<sup>5</sup>

In this study, a research network, namely the Northern Dimension Institute (NDI), is introduced. This academic network was established by order of high-level government officials in the Northern Dimension (ND). The main reason for the officials to order the set up of NDI was to supplement the ND structures with academic expertise. Consequently, the primary aim of NDI is to increase interaction between universities and policy-makers and to generate new knowledge about priority areas in the ND policy. NDI has been in existence for about two years and is working towards the goal of being a useful knowledge provider for end-users of this knowledge and contributing to regional development.

The focus of this study is to investigate how the NDI network functions and make comparisons with five other non-profit networks. The chapter is structured as follows: First, network functioning is given a theoretical framework. Second, a brief history and a description of the

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Brass et al., "Taking Stock of Networks and Organizations: A Multilevel Perspective", *Academy of Management Journal* 47 (2004) 6, pp. 795–817; Huxham, Chris and Siv Vangen, *Managing to Collaborate: The Theory and Practice of Collaborative Advantage* (London, 2005). Networks as a means to widen the scope of the knowledge applied in problem-solving is discussed by Fisher et al., "Changes in Academy/Industry/State Relations".

- 5 Keith Provan and Patrick Kennis, "Modes of Network Governance: Structure, Management, and Effectiveness", *Journal of Public Administration Research and Theory* 18 (2007), pp. 229–252; Don Mankin et al., "Developing Complex Collaborations: Basic Principles to Guide Design and Implementation", in Michael Beyerlein et al. (eds), *Complex Collaboration: Building the Capabilities for Working across Boundaries* (Amsterdam, 2004), pp. 1–26.

main functions of NDI are presented. Third, empirical evidence is provided by using data collected by conversational networks from six networks, including NDI, in spring 2011.

## 2. NETWORK FUNCTIONS TARGETED TO PRODUCE ADDED VALUE FROM RESEARCH EXCELLENCE

### 2.1 CONCEPTS OF THE NETWORK AND NETWORK FUNCTIONING

In this study, a network is seen as a group of three or more legally autonomous organisations working together, not just to achieve their own goals but also to achieve collective goals. In general, these types of networks may be self-initiated (by the network members themselves) or be mandated or contracted.<sup>6</sup> Goal-directed networks, which are of interest here, evolve through conscious efforts to build coordination. This type of multilateral coordination is more than simply to achieve the goals of a particular individual organisation.<sup>7</sup> It also demands collective action and governance of these activities. Following previous studies,<sup>8</sup> it is argued that organisational governance is critical to the effectiveness and success of the network. The challenge is that, in contrast to organisations, networks must be governed without the help of a hierarchy or ownership. Furthermore, network members typically do not have formal accountability for network-level goals (or it is limited), and following rules and procedures is to a large extent voluntary.

Mankin et al. present some factors that support the functioning of complex networks: high-level management support, access to resources needed and the prior experience of key people in complex collaboration. These crucial factors are considered further in our empirical analyses.

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6 Martin Kilduff and Wenpin Tsai, *Social Networks and Organizations* (London, 2003).

7 Laurence O'Toole, "Treating Networks Seriously: Practical and Research-Based Agendas in Public Administration", *Public Administration Review* 57 (1997) 1, pp. 45–52.

8 See for example Keith Provan and Briton Milward, "A Preliminary Theory of Interorganizational Network Effectiveness: A Comparative Study of Four Community Mental Health Systems", *Administrative Science Quarterly* 40 (1995), pp. 1–33.

## 2.2. SPECIFIC FEATURES OF NON-PROFIT NETWORKS

The focus of this study is on the networks in which public organisations hold central positions. The most distinctive difference between public and private networks is that public networks are typically non-profit by nature. Specifically, non-profits differ from for-profits in at least the following ways: 1) they aim to create social welfare, not profits, 2) they produce public goods, and 3) they rely on volunteering in their activities. Consequently, the level of non-profit orientation of a for-profit organisation can be assessed by the extent to which it relies on volunteering and the extent to which its actions are guided by goals other than profit-seeking.<sup>9</sup>

Reasons for participating in non-profit networks can differ significantly from the incentives for participating in business networks. Some public organisations are altruistic, for instance trying to attain improved outcomes, while others are self-interested, perhaps aiming to maximise organisational resources, such as in the search for external funding. Regardless of the motivation, the collaboration partners are likely to take part in some form of coordinated action to achieve their goals. The nature as well as the degree of coordination is likely to vary depending on the collaboration, the context, and the parties' ideas of what is possible and worth pursuing. However, the coordination is likely to be within the following range: 1) cooperation including shared information and mutual support, 2) coordination with common tasks and matching goals, and 3) collaboration containing integrated strategies and collective purpose.<sup>10</sup>

In the following chapter, network functioning is introduced as a key factor in the value creation of non-profit networks, especially networks producing and disseminating knowledge resulting from multi-party collaboration, where academics have a central role in knowledge generation.

## 2.3 ANTECEDENTS FOR CREATING VALUE FROM RESEARCH EXCELLENCE

Network benefits do not emerge by themselves but result from management processes and other coordinated activities of network partici-

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9 Tretyak and Popov, "Explaining Scientific Networking".

10 Robyn Keast et al., "Getting the Right Mix: Unpacking Integration Meanings and Strategies", *International Public Management Journal* 10 (2007) 1, pp. 9-33.

pants in the network processes.<sup>11</sup> Understanding network functioning is crucial because only then can a greater understanding be gained of the reasons why networks produce certain outcomes, even though some networks result from bottom-up processes while others emerge because of strategic decisions made by network participants or government officials. Complex networks require a great deal of effort to make collaboration function, and this is yet another important reason for taking a closer look at network functioning.<sup>12</sup>

Tretyak and Popov have noted that non-profits create value through their unique value-creating activities, that is, producing public goods by means of a great deal of voluntary work. Open knowledge exchange is the most valuable outcome of joint activities, and for the actors in non-profit networks the feeling of self-accomplishment is often more rewarding than achieving a large economic benefit.

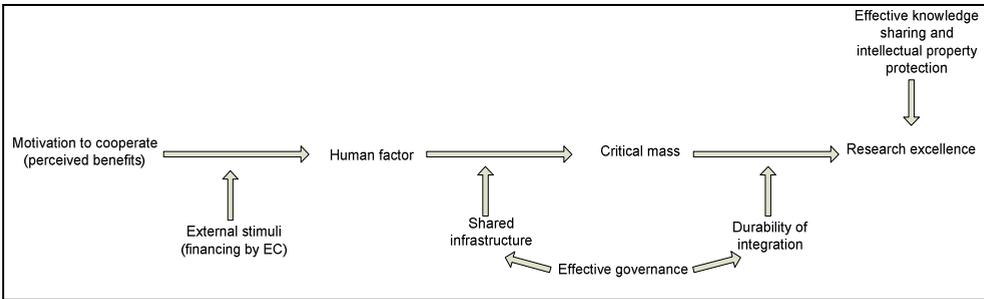


Figure 3.1. Process of obtaining research excellence, from Tretyak and Popov.

Tretyak and Popov have modelled the process of targeting in research excellence and further gaining benefits for society in the following way: First, the motivation to cooperate has to be awakened both at the individual and organisational level. External stimuli, often in the form of financing, have to be organised at least to some degree to make the network function economically viable. Second, organisational governance, in the form of shared infrastructure and the durability of integration, is important; network coordination and management activities play key roles here. Finally, with the help of effective network functioning, research excellence and value creation, which help to address the

11 Tretyak and Popov, "Explaining Scientific Networking".

12 Provan and Kennis, "Modes of Network Governance"; Mankin et al., "Developing Complex Collaborations".

challenges raised by society, can be achieved. The process described above is shown in the form of a chart in figure 3.1.

Tretyak and Popov's model, supplemented with theoretical considerations about network functioning, is used as a conceptual framework in conducting the empirical examinations in this study. Here, the empirical examinations consist of an introduction to the case network, presentation of the data and methodology, and finally a report on the empirical results highlighting the key success factors of the non-profit network organisations for targeting added value in society and for regional development.

### **3 CASE NETWORK: THE NORTHERN DIMENSION INSTITUTE (NDI)**

#### 3.1 ESTABLISHMENT OF NDI

The idea of having an academic institute for the Northern Dimension was placed on the ND agenda at the ND Senior Officials' Meeting in St. Petersburg on 21 November 2007. The concrete development work for establishing the institute began in April 2009. This work was made possible by funding granted to the institute by Finland's Ministry for Foreign Affairs from the Neighbouring Area Cooperation Funds.

During the establishment process for NDI, 14 universities and research institutes from the EU, Russia and Norway combined their efforts in order to formulate the founding documents and principles for NDI. The NDI Development Group was created as a temporary tool for establishing NDI. The NDI concept paper drafted by the group was approved by the Second Senior Officials' Meeting of the Renewed Northern Dimension in Stockholm on 12 November 2009. Soon after the ND SOM meeting, the Constitutive Meeting of NDI was held in Helsinki on 26 November 2009, and NDI was officially launched. Since its establishment, the NDI network has expanded considerably. Currently the NDI network consists of 27 universities from 11 countries.

#### 3.2 NDI MISSION: KNOWLEDGE GENERATION AND DISSEMINATION THROUGH SCIENTIFIC NETWORKS

The main aim of NDI is to bridge the gap between universities and policy-makers and to promote knowledge and welfare in the European Union, especially in the Northern Dimension (ND). NDI complements the ND structures by generating new, independent knowledge for decision-makers about the priority areas in ND policy, which are: 1) energy and the environment, 2) culture and society, 3) public health and

social well-being, and 4) transport and logistics. Moreover, NDI acts as a content provider for the implementation and development of the EU's Northern Dimension Cooperation.

The activities of NDI are strongly supported by the ND structure. The ND structure forms a unique platform for collaboration between political decision-makers, academia and business. In addition to political support, NDI receives practical guidelines and recommendations from the ND structures in order to conduct concrete activities for the implementation of the ND policy. Moreover, practical cooperation is realised through close collaboration with the ND Partnerships and Northern Dimension Business Council (NDBC). Information is exchanged on a regular basis between these parties. In addition, joint project development has already been started with the ND Partnerships. Collaboration with the Partnerships enhances the identification of research gaps and makes it possible to respond to the need for research, development and innovation activities in the ND region. In turn, communication between NDI and the ND Business Council brings practical relevance for NDI activities by connecting the private sector to the development of the ND policy through common activities.

#### **4 EMPIRICAL EVIDENCE: EXAMINING NDI'S NETWORK FUNCTIONING WITH OTHER NON-PROFIT NETWORKS**

##### 4.1 DESCRIPTION OF THE CASES

The empirical part of this study was based on a comparative case setting consisting of six multi-party non-profit networks, including NDI. Within the limited scope of the study, it was argued that this "sample" meets Patton's criteria and constitutes an "intensity sample" for qualitative research, since it possesses common defining characteristics.<sup>13</sup> The defining characteristics in this case are presented in Table 4.1 below. The multi-party networks were selected based on a careful examination of the networks' web sites. The characteristics and missions of several suitable networks were summarised and compared; finally, the most appropriate ones were chosen for the interviews. The key person in the case organisation was first contacted by email and then by

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13 Michael Patton, *Qualitative Research and Evaluation Methods* (Thousand Oaks, 2002).

phone within a few days. The people contacted in every organisation selected agreed to be available for interviews.

#	Criterion
1	Central position of universities
2	Non-profit and public organisations as majority
3	Voluntary participation
4	Expanding tendency at the time of the interview
5	International operations

Table 4.1. Criteria for selecting appropriate case networks

The professionals interviewed held mainly expert and/or coordinator positions in the networks they represented. Table 4.2 also describes the main goals and characteristics of the multi-party networks under study.

#	Description of the network goals	Founding year	Organisations involved	Interviewee	No. of interviewees
1	To provide high-quality collaborative research on specified themes and to bridge the gap between universities and policy-makers.	2009	About 20 universities and institutes	Coordinator and initiator	2
2	To manage a coherent and cumulative process of collecting judgments from people in different areas worldwide.	1996	About 30 sub-networks, hundreds of organisations	Expert	1
3	To promote collaborative multi-national higher education and research on specified themes.	2008	About 140 higher education institutions and other international institutions and networks	President/ Board member	1
4	To promote and achieve progress (academic and practice as well as policy-making) in a specified field of interest.	1993	Dozens of individual members from universities, institutes, governmental bodies and businesses	Coordinator/ Expert	1
5	To connect experts in a specified field of interest, to promote research and educational collaboration.	1983	Hundreds of individual members of public and private organisations, also includes organisation members	Board member/ Expert	1
6	To promote a new collaboration culture for specified themes and areas, and to initiate research.	2009	Over 30 universities, institutes, and governmental organisations	Coordinator	1

Table 4.2. Goals, founding year, organisations involved, positions and number of interviewees

The case networks were typically born globals, that is, they had acted internationally from the very beginning of the network functioning. All of the networks were specialised but emphasised multi-disciplinarity. The initiative for the network had come either from an individual person or an organisation, and the idea typically had a third party referent, e.g. ministries or other governmental offices, the European Union or the United Nations. The networks had their roots in the passionate interest and voluntary work of the experts (academics and business), since these people wanted to cooperate and share ideas.

#### 4.2 METHODOLOGY

The study used qualitative methodology based on conversational interviews. The interviews lasted 40-80 minutes. Each interviewee was made aware that the aim of the research was to explore the development and success factors of the multi-party network in which they were involved. Beyond this, the interviewees were encouraged to talk about their experiences in their own way. The questions were repeated if necessary. In addition, iterative and circular questioning and discussion were allowed. Furthermore, during the interview, the information received was clarified and verified on a continuous basis. The idea was to generate the life story of the network in order to determine what factors have impacted the network's development positively or negatively. This type of phenomenological approach is described by Patton as exploring how human beings make sense of experience and transform experience into consciousness both individually and as shared meaning.<sup>14</sup> This requires carefully and thoroughly capturing and describing how people experience some phenomenon—how they perceive it, feel about it, judge it, remember it, make sense of it, and talk about it with others. To gather such data one must undertake in-depth interviews with people who have directly experienced the phenomenon of interest. That is the approach adopted in this study.

#### 4.3 RESULTS AND DISCUSSION

In the following section, the results of the interviews are reported using the model adopted from Tretyak and Popov. The model consists of three sequential stages: 1) Individual and organisational motivation to cooperate, including external stimuli, often in the form of financing, 2) Organisational governance, in which network coordination and man-

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<sup>14</sup> Patton, *Qualitative Research and Evaluation Methods*, p. 104.

agement activities, for instance, play key roles, and 3) research excellence that results in added value for society and contributes to regional development.

#### *4.3.1. Motivation to cooperate*

The initiative to establish the network communities studied in this chapter had come either from an individual person or an organisation, and the idea typically had a third party referent, e.g. ministries or other governmental offices, the European Union or the United Nations. The networks had their roots in the passionate interest and voluntary work of experts since people wanted to cooperate and share ideas.

One crucial common feature for the case networks was that in the initial phase of network development, there were insufficient human as well as financial resources. Consequently, one of the most important tasks for the next stage was to find more formal ways of working in order to also show external stakeholders the necessity of the network and receive external support in the form of financial resources. Some of the networks interviewed were launched without external funding, but some start-up money was needed. The role of stakeholders and/or funders increased in importance when the networks needed to promote their work in order to be recognised and to stabilise their positions. The following excerpt from one interview describes the role of the external funder:

This project has been very successful in terms of collaboration with the external funder. The people involved have been able to solve even big problems in order to influence the progress of formal, as well as informal, issues ... The main funder has acted not only as a mediator but as a negotiator and a problem solver as well. (Translated from the original interview in Finnish)

The high level of personal commitment, motivation and confidence of the initiator(s) and key people were considered critical success factors for the networks. The good reputation and internal motivation of the network and/or key person was emphasised in every phase of the network's life cycle. The degree of personal commitment and work was clearly expressed in the interviewee's opinion:

[The network] is not born one day and spoken about by everyone the next day. Therefore, I had to work very hard. Make a lot of trips and try to pitch the network in the right places and make agreements. We're not talking about [member] institutions now,

we are talking about entities, the big entities like the European Union. (Translated from the original interview in Finnish)

Nevertheless, even once the networks had reached a more mature and stable position, the roles and voluntary and informal work of key people were irreplaceable despite the growing external support, formality and common rules. In addition, functioning and a strengthening of interpersonal relationships played an important role at every stage of network development. Moreover, a possibility to focus on one's own interest areas, finding the most interesting partners in the network and finding the most interesting collaborations were important factors influencing individuals/organisations to contribute to the network.

Compared to other networks interviewed, NDI was no exception in terms of motivation to cooperate in the network. Individual motivation for researchers in the NDI Development Group to cooperate in laying the foundations for NDI was high and based on volunteering. Coordination of the establishment process was financially supported by officials so that the NDI coordinator could devote him- or herself full-time to NDI. However, considerable personal interest motivated the NDI coordinator to push the relatively short-time process of establishing NDI in order to achieve this goal.

Continuous support for NDI development was obtained from the ND officials, making it possible to maintain both individual and organisational motivation. Like other networks interviewed, NDI has to make sure that each member university and research institute can provide their own interest areas and expertise to the NDI collaboration and simultaneously guarantee their future motivation to be involved in the network. Additionally, securing future funding requires that a network functions effectively.

#### *4.3.2. Organisational governance*

Typically the governance modes of the networks were very loose, and the gathering of ideas was quite unsystematic. Given the lack of systematic operations, the results could not be clearly evaluated and measured, and the achievement of vaguely defined goals could not be sufficiently assessed. When the common goals had been crystallised, it was possible to act more systematically. At this stage of network evolution, the key activities were established, the management for the whole network was clarified and common ways of collaboration were agreed. The flexibility of the network, a minimum amount of bureaucracy and a loose federation of people were identified as the key success factors

as the evolution of the networks proceeded. One interviewee describes finding the balance between formal and informal governance modes in the following way:

The process needs to be built up in a relatively formal manner in order to achieve concrete results. In the event the governance mechanisms are too loose, nothing comes out. In any case the work is mainly based on voluntary actions. (Translated from the original interview in Finnish)

After the critical mass needed for the network to function was obtained, one of the crucial challenges for the future of a network was whether to expand the network or not. On the one hand, the need to attract more members and have a wider scope of activities was considered important. On the other hand, having more members in the network was seen as a critical factor—the more organisations the network included, the more complex the governing of its functions became.

Similar to other networks interviewed, NDI functions in a loose way, mostly on a virtual basis, but is on its way to more systematic operations. At the moment, NDI has a specified mission, mainly set by external forces, that is, by ND officials, and a niche area based on the priorities of the official ND Cooperation. However, the mission has to be further clarified so that it is clear to all stakeholders. The main resource of NDI is inevitably the expertise included in NDI. The challenging work of NDI coordination is to make the mission and niche area of NDI available to NDI members so that NDI's research potential can be utilised in contributing to regional development.

NDI is gradually expanding, but currently the main focus of NDI's development is ensuring effective network functions with a limited work force, thus still relying on the generous work of volunteers. For the future of NDI, securing solid funding for its activities is crucial. Even though producing research excellence in networks is cost-effective, it is by no means free of charge.

#### *4.3.3. Research excellence*

All the networks interviewed identified obtaining sustainable funding as the most challenging success factor guaranteeing the continuity of their network's activities. Nevertheless, funding alone will not keep a network alive; there has to be a need for the network on the market in order for it to attract funders and maintain the motivation of network members. The mission of the network needs to be significant and concrete to reassure the individuals, member organisations, and stake-

holders. The mission of the network also has to be clearly focused, that is, have its own niche area.

Every case network identified research excellence in their mission. Consequently, the networks saw research excellence as an important asset in providing benefits for society and regional development. Each person interviewed shared the opinion that without the functioning process of the networks, based on the motivation to cooperate and supplemented by some means of organisational governance and an endeavour to achieve research excellence, there would not have been any benefits resulting from the networks.

For NDI, providing research excellence to benefit regional development is the first priority. Therefore, most efforts are focused on enhancing the ability of researchers to recognise the potential of NDI collaboration and work for a common goal to produce independent new knowledge beneficial to the region. This work is done in close collaboration with various stakeholders. Thus once again, a central role is played by efficient coordination, which supports the entire network functioning.

## 5. CONCLUSIONS

This study provided information about the functioning of complex public non-profit networks, in which academics play important roles. Non-profit networks have been given far less attention in previous studies than for-profit networks. In order to study the network functioning theoretically, and to report on the empirical evidence, the model of network functioning developed by Tretyak and Popov was primarily used. The model consisted of three sequential stages: 1) Individual and organisational motivation to cooperate, including external stimuli, often in the form of financing, 2) Organisational governance, in which network coordination and management activities, for example, play key roles, and 3) research excellence that results in added value for society and contributes to regional development.

The findings of the study support prior research in that non-profit collaboration is strongly based on voluntary work and informal procedures at every stage of the network's evolution.<sup>15</sup> Therefore, active, en-

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15 Grahame Thompson et al., (eds), *Markets, Hierarchies and Networks, The Coordination of Social Life* (London, 1998); Tretyak and Popov, "Explaining Scientific Networking".

thusiastic volunteers enable the functioning of the networks and set the foundation for future collaboration. The networks typically had their roots in people who desired to share knowledge based on their expertise, with the characteristics and experience of key people ranking high on the list of critical success factors (Das & Teng 1998; Powell 1990). It is not an overstatement that without the strong efforts and commitment of initiators and/or other key people, collaboration would not have been developed in any of the networks. Furthermore, transparency and mutual fairness in collaboration, not only inside the network but also towards its environment and external stakeholders, support the functioning of the network.

Despite our findings on the centrality of semi-formal network governance, the importance of agreeing on and documenting the common goals, structures, practices and means of communication cannot be ignored in governing complex collaboration. They are the cornerstones of any network governance because, without them, coordination would not be possible. Indeed, the analyses also showed that a well-defined mission, specified niche area and clearly expressed goals, for example, all helped the networks to acquire funding from external sources.

Furthermore, it should be emphasised that no network, not even a non-profit one, can survive without financial resources. After laborious fund-raising to maintain network functions, balancing the resources in the network among the partners becomes a focal issue. The people interviewed in our study noted that what kept them involved in the network was the fact that they could apply their expertise, benefit from knowledge sharing, and focus on their own interest areas in collaboration with very interesting partners. At least this is true for non-profit networks, where expertise, learning, and the possibility of having an influence in social matters are often equal in value to financial compensation.

To conclude, the results of the empirical analyses showed that in comparison to other non-profit networks the Northern Dimension Institute (NDI) made no exception in terms of the importance of network functioning in the network's development. NDI, like other case networks, is relatively young and immature, so perhaps it is too early to evaluate whether it has succeeded in establishing effective network functioning, and further, what NDI's contribution to regional development in the area of the Northern Dimension will be. The develop-

ment of NDI is continuously monitored and documented, thus providing data to be analysed in future studies.

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## Chapter ◊ 4

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### KNOWLEDGE TRANSFER AND COOPERATION ON SHIPPING AND LOGISTICS IN THE HIGH NORTH

BJØRN GUNNARSSON<sup>1</sup>

#### 1. INTRODUCTION

There are several challenges linked to shipping and logistics in the high north, not the least the current insufficient infrastructure, vast geographical distances, and harsh climatic conditions. Any future developments of the shipping infrastructure and safety of navigation along the Northeast Passage (NEP); and the Northern Sea Route (NSR), would benefit greatly from close collaboration and sharing of available know-how between Norway and Russia as well as with the other Arctic states.

The Centre for High North Logistics (CHNL) based in Kirkenes in North-Norway is an international centre collecting high quality and up-to-date information that will contribute to economically viable, doable, and environmentally friendly transport and logistics solutions for the NEP/NSR and for other transport corridors in the Arctic.<sup>2</sup> This information will be made readily assessable to various businesses, governmental and educational/research organizations, and will for example provide shipping and logistics companies with the best available information to make informed decisions about their future business activities in the Arctic Ocean. To serve this purpose CHNL has developed a web-based database, Arctic Resources & Transportation Information System (ARCTIS),<sup>3</sup> and established the Arctic Logistics Information Office (ARCLIO) in both Kirkenes, Norway, and in Murmansk, Russia.<sup>4</sup>

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2 <http://www.chnl.no>.

3 <http://www.arctis-search.com>.

4 <http://www.arctic-lio.com>.

There is an abundance of hydrocarbon and mineral resources in the Eurasian Arctic and the exploitation of this resource base is accelerating. This development in the Arctic is now more realistic than ever before due to: 1) sea-ice reduction; 2) technological developments; 3) interest from Russia and the other Arctic states; 4) and high commodity prices. The Arctic presents business opportunities for commercial shipping, oil, gas and mineral exploitation, as well as fishing and tourism. As a result of this potential, the Arctic's geopolitical significance has increased.

With natural resource exploitation increasing in the Arctic, it is becoming essential to establish the proper marine transport and logistics infrastructure to be able to take advantage of this resource potential. At the same time provide the needed safety and reliability of marine transport, and last but not least adequate pollution prevention to safeguard the fragile Arctic environment. The task at hand requires an international cooperation, not the least due to large distances, current limited or lacking infrastructure, harsh environment, and challenging operational conditions on possible Arctic trade routes.

The first thing needed is updated information and data on the current state of affairs regarding natural resources, shipping and logistics in the Arctic and knowledge-sharing between various interested stakeholders. We need to answer the following question: which are the key issues in favour of developing the NEP/NSR into a predictable and commercially viable sea route attracting large volume on recurring basis?

This should then be followed by simulation studies of needed infrastructure for reliable, safe and economically viable cargo transport, and various scenario/feasibility/sensitivity analyses for different cargo types and trade flows. Finally, partnerships and cooperation for putting the required infrastructure in place need to be established. The built-up of new infrastructure will take many years and will be very costly.

All eight Arctic nations and international shipping and natural resource companies need to be involved, as well as other nations and industries that see benefit in better access to Arctic resources and shorter trade routes between markets in North- and West-Europe, East Coast of North America, and Asia (China, Japan, South Korea).

The transport of cargo between Northeast Asia and North/West Europe via the NEP/NSR has potential savings which are too large to be ignored. In this case, the route is up to 40% shorter in travel dis-

tance compared to the Suez Route, providing quicker access to markets for transported goods, with subsequent savings in ships' fuel costs, and reduced CO<sub>2</sub> and other greenhouse gas emissions. Currently this is only an option for 4-5 months during the summer season when large parts of the Arctic sea-ice cover has melted providing transit possibilities in largely open waters.

The Arctic Ocean will re-freeze during the winter months. To be an alternative trade route option to the Suez Route between markets in Europe and Asia, we would need to establish a year-round operation on the NEP/NSR. This on the other hand will require a fleet of high ice-class cargo ships which are able, with assistance from icebreakers, to plough through winter seasonal ice at an acceptable speed. Because of their design features to break through winter seasonal ice, these ships should not sail for any long distances in ice-free waters and should deliver their cargo between two transshipment hubs in the Arctic. One hub should be located in the ice-free waters in the Barents Sea and the other would need to be located in ice-free waters past the Bering Strait in the North-Pacific Ocean. Then, non-ice-strengthen feeder ships will deliver the cargos from the two transshipment hubs to final destinations.

In the short to medium term the NEP/NSR will not revolutionize world trade or rival the Suez Route (with about 19,000 ship transits per year). Regional destination transport will be the most relevant activity on the NEP/NSR, i.e., transport of resource material from within the Eurasian Arctic such as oil, gas condensate, LNG, coal, and minerals/ores by specialized high ice-class carriers - such as oil tankers, LNG carriers, dry bulkers, as well as purpose built offshore vessels and multi-purpose vessels for transport of equipment. Though most of this transport activity will originate from within the Barents Sea (and the joining White and Pechora Seas) it is likely that increased shipping activity will also take place east of the Urals, where most of the Russian on-shore oil activity is located, including several mines and heavy industries. Here the large Russian rivers, which all flow north into the Arctic Ocean, act as major transport connections to the NEP/NSR, essentially un-locking the large resource potential of Siberia.

The extensive Russian experience in operating ships in ice-infested Arctic waters for more than 80 years needs to be shared with the other Arctic nations and internationally. In the same way Norway needs to

share its unique experiences in offshore oil and gas exploitation in the Barents Sea.



Figure 4.1 MV *Nordic Odyssey*, TTB *Vengeri*, MT *Marilee* and MV *Kapitan Danilkin* ice-piloted by Russian icebreakers IB *Yamal* and *Vaygach* on 12–22 July 2012. Photo: Rosatomflot

## 2. MARINE TRANSPORT INFRASTRUCTURE CHALLENGES IN THE ARCTIC

The Arctic Council's Arctic Marine Shipping Assessment has identified several deficiencies in the current marine transport infrastructure in the Arctic that need to be addressed if NEP/NSR and other Arctic routes are to become widely used transportation corridors.<sup>5</sup> These include:

*Aids to Navigation*—need for improved systems to support safe navigation in the Arctic Ocean. Currently there is insufficient number of navigational charts due to lack of hydrographical data. Better real-time information concerning the operational environment is also needed. This includes: ice charts; satellite images of ice-infested waters; text messages describing ice conditions; and accurate marine weather information (forecasts for sea ice distribution, wave height, wind direction and speed, visibility, temperature and superstructure

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5 Ben Ellis and Lawson W. Brigham, *Arctic Marine Shipping Assessment 2009 Report* (Akureyri, 2009).

icing). There are also communication difficulties in the Arctic. Subsequently, improved voice and transmission coverage is needed.

*Search and Rescue (SAR)* is particularly challenging in the Arctic due to the remoteness and long distances that are involved in responding to emergencies. The current SAR infrastructure in the Arctic is very limited. There is also a lack of adequate shore-side infrastructure and communications to support and sustain a SAR response of any significant magnitude, but such infrastructure is needed to provide basic logistics and support functions for SAR missions. The potential number of people needed to be rescued from, for example, a cruise/passenger ship far exceeds the capacity of SAR response in the Arctic. This includes lack of sufficient food, lodging and medical facilities.

*Pollution Prevention & Response Technologies.* Oil spills in ice are more complicated to address than oil spills in open water. The oil is less assessable in ice-covered waters; it can be spilled onto the ice; in open pools between ice floes; in open channels behind the vessel; or under the ice. There is no multilateral oil spill response agreement for the Arctic. But, Norway and Russia have a bilateral oil spill response agreement for the Barents Sea and Russia and the United States for Chukchi Sea. Effective Arctic oil spill response operations require advanced planning and international cooperation. All available oil spill response methods must be available and considered for each situation (mechanical recovery; chemical dispersion; in-situ burning; and biological degradation).

*Ports & Terminals.* Port infrastructure and support facilities, such as deepwater ports, places of refuge, marine salvage (ship repair), adequate port reception facilities for ship-generated waste, and towing services are rarely available in the Arctic. In recent years Russian Arctic ports in the Barents Sea area, including Murmansk, have though expanded significantly and are providing increased services due to increased ore, coal and oil production and transport. Some other ports in satisfactory condition are located in the Kara Sea, including the port of Dudinka on the Yenisei River, but further east ports are in very poor condition (including the Laptev Sea, The East-Siberian Sea, Chukchi Sea, and the Bering Sea) and only support the basic needs of local settlements.

*Icebreakers.* If a vessel navigating in the Arctic Ocean has readily available a polar icebreaker and marine salvage support, the risk to the vessel and corresponding financial risk to owners and insurers is sub-

stantially reduced. Government-operated and private icebreakers are a key resource in the further development of the Arctic. The Russian fleet is by far the largest (33 in total) and most powerful. The world's icebreaker fleets are aging and will require significant investment during the coming years to maintain their effectiveness and capabilities. The average age of these icebreakers is now about 30 years.

*Fleet of Ice-Strengthened Cargo Ships & Transshipment Hubs.* A large scale global investment is needed for the construction of a fleet of large powerful ice-class cargo ships and transshipment hubs to transfer cargo between ice-strengthened and non-ice-strengthened feeder ships.

As can be seen from the above, Arctic transit shipping currently suffers from lack of essential infrastructure. But also needed is better sharing of information and know-how about operational conditions, navigational aids, available support services, and the whole regulatory framework for shipping in Russian waters, including information about insurance and tariffs. The Centre for High North Logistics (CHNL) was established in Kirkenes in North Norway, close to the Russian border, to address those informational and knowledge deficiencies and to actively participate with key stakeholders in finding the right transport and logistics solutions for the Arctic.

### **3. THE CENTRE FOR HIGH NORTH LOGISTICS (CHNL)**

The Centre for High North Logistics (CHNL)<sup>6</sup> was launched as a part of the Norwegian national research initiative “The Global Maritime Knowledge Hub“ which was initiated by the Norwegian Shipowners' Association and the Oslo Maritime Network. The establishment of CHNL was suggested by the Tschudi Shipping Company in collaboration with the Norwegian Ministry of Foreign Affairs and Det Norske Veritas (DNV). The Centre was then formally established on the 27<sup>th</sup> of May 2009. CHNL is organized as an international non-profit foundation and encourages participation from all nations and institutions interested in Arctic transport and logistics.

The mission of CHNL is to build-up an international knowledge network with key businesses, educational/research institutions and public authorities on Arctic resources, transport and logistics. CHNL provides access to up-to-date information on transport and logistics in

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6 <http://www.chnl.no>.

the Arctic, and act as a gateway for creating and developing more efficient and sustainable infrastructure and logistics solutions with a particular focus on the NEP/NSR. This will only be accomplished by promoting strong collaboration between businesses, academic institutions and public authorities. Shipping and logistics companies need access to the best available information to make informed decisions about their future business activities in the Arctic. CHNL has six main focus areas:

1. Develop and operate ARCTIS (Arctic Resources & Transportation Information System), a user-friendly online database with a wiki-based architecture, providing high quality and up-to-date information on shipping, transport infrastructure, non-living resources, and logistics in the Arctic. No such database exists today.
2. Operate an Arctic Logistics Information Office (ARCLIO) in Kirkenes and Murmansk, providing practical information on shipping and logistics along the NEP/NSR to commercial shipping companies and offshore industries. ARCLIO works closely with Russian partners in Murmansk and Arkhangelsk as well as in Moscow, which are the main providers of information and data.
3. Initiate and sponsor workshops on shipping in Arctic waters and supportive port developments and other needed infrastructure in the Arctic. These workshops should bring together all the relevant players or stakeholders on a particular topic/theme, and each workshop should be a forerunner for a research project/case study or a demonstration project—i.e., go from discussion (workshop) to action (demonstration or project).
4. Facilitate and coordinate case studies/demonstrations where the shipping and offshore industries work closely with research and scientific institutions on finding practical and innovative solutions to various transport and logistics problems in the Arctic.
5. Promote cross-border cooperation and networking activities on Arctic shipping and logistics with partners coming from businesses, academia and public authorities.

CHNL puts emphasize on bringing relevant Russian, Norwegian, and international companies together, representing the whole logistic value chain, to discuss what changes needed to take place to accelerate commercial shipping along the NEP/NSR as a predictable and reliable trade route and alternative to the common Suez Route in the long term.

#### **4. THE ARCTIS ONLINE DATABASE**

Much international research has been carried out on different topics and issues regarding shipping and logistics in the Arctic. Little has been done to coordinate this knowledge and few of these studies have a holistic and cross-disciplinary approach.

One of the most comprehensive studies of the sea routes in the Arctic, INSROP (International Northern Sea Route Program) was a 6-year (June 1993–March 1999) international research program designed to create an extensive knowledge base about the ice-infested shipping lanes running along the coast of the Russian Arctic, from Novaya Zemlya in the west to the Bering Strait in the east. Acknowledging the need to establish an extensive NSR knowledge base, the multidisciplinary INSROP was created to investigate all aspects of potential increased international use of the NSR. The program, which was primarily a joint Norwegian-Japanese-Russian venture, enlisted more than 450 scholars in 14 countries in writing and publishing 167 reports on a very broad range of subjects.

More than 12 years have passed since the INSROP research report was presented. In 2009 CHNL decided to allocate financial resources, with additional support from Innovation Norway, to make an update of the international research that was carried out since the INSROP research project and the AMSA (Arctic Council's Arctic Marine Shipping Assessment) study were completed. Research scientists, affiliated with Oslo based Ocean Futures but also from DNV, were hired to do the update. Their extensive report from June 2010, which has recently being updated and published as a book by Springer Verlag, together with the AMSA study and other related studies and documents on Arctic shipping and logistics, make up the initial core of CHNL's ARCTIS online database. The official launch of ARCTIS took place during the Arctic Frontiers Conference in Tromsø on 24 January 2013.

ARCTIS will provide up-to-date and high quality information on the Arctic and play a key role in informing our users about recent de-

velopments, operational conditions, technical improvements, and opportunities related to resource development, shipping and logistics in Arctic waters. ARCTIS will strive to be the preferred gateway to know-how for businesses, governments and the research community itself on Arctic shipping and logistics.

The focus of ARCTIS is on shipping and other means of transport, infrastructure development, non-living Arctic resources (excluding fisheries and forestry) and on innovative logistics solutions. The content of ARCTIS and the information provided will be tailor-made for the needs of the maritime-logistics and resource-exploitation industries in particular. The information provided can be divided into the following eight main topics:

- a) *General* (including: Arctic climatology; marine geography; Arctic sea ice; Arctic coastal seas; history of Arctic marine transport; Arctic marine transport programs; and Arctic policies & Arctic governance).
- b) *Marine Transport & Logistics* (including: Legal and regulatory framework; technical requirements for ships; types of vessels in the Arctic; icebreaker assistance; ports & terminals; tariffs & port dues; communication & navigational systems; crew competence requirements; marine safety/support—search & rescue; marine insurance; and environmental impacts of shipping).
- c) *Arctic Sea Routes* (including: Transport passages of the Arctic Ocean; navigation on the Northeast Passage (NEP) & Northern Sea Route (NSR); navigation on Northwest Passage (NWP); navigation on the Transpolar Passage (TPP); connecting corridors in southern waters; statistics on transit voyages; and cost comparison between Arctic sea routes & Sues/Cape routes).
- d) *Natural Resources & Infrastructure* (including: Location & types of hydrocarbon resources; energy infrastructure & transport; location & types of mineral resources; mining infrastructure & transport; marine transport infrastructure; road, rail & river transport; transport volumes of natural resources).
- e) *People, Industries & Institutions* (including: Marine transport industries; oil & gas industries; off-shore support industries;

coal industries; mining industries; research & university institutions; and profiles of influential people).

- f) *Maps & Charts*
- g) *Case Studies/Business Studies*
- h) *Concepts & Definitions*

ARCTIS will pursue a dissemination role for the international research community by making research results and results of demonstrations/case studies known to key stakeholders in as user-friendly way as possible. The aim is to make scientific reports more accessible and more understandable for the shipping and logistics industry so latest research results will be included in the decision-making process and business development. The aim is to contribute to more economically viable, doable, and environmentally friendly transport and logistics solutions for the Arctic.

#### 4.1 THE DATABASE STRUCTURE

The ARCTIS system has a wiki-based architecture and is equipped with a number of additional support-tools from CogIT, the IT-company working with CHNL in the development of ARCTIS with additional support from the Norwegian Kunnskapsforlaget ANS well-known for its online publications of encyclopaedia, textbooks and dictionaries.

The idea behind ARCTIS was inspired by online encyclopaedia such as the *Store Norske Leksikon* by Kunnskapsforlaget and the popular Wikipedia. Both are wiki-based allowing exchange of information and knowledge by means of well-organized short articles, called wikis. Wiki-based technologies belong to a category of web technologies often referred to as Web 2.0. Wiki-technologies are now typically used to collect and share information for the general public on the Internet (e.g. Wikipedia) as well as for various businesses and interests groups. The idea behind the technology is that provided information can be tailor-made for the user, and the system can direct interested users to more detailed data and related information.

#### 4.2 THE EDITORIAL PROCESS

The editorial process of ARCTIS should allow for both high quality as well as timeliness of the information provided. Each type of wiki entry in ARCTIS will be supported by a default template and tools that should make writing articles and formatting speedy. Additional con-

siderations are made when introducing multi-media elements like videos and images.

Each theme or subcategory (over forty) of the eight main topics of the ARCTIS database will have its own editor, and each theme will be supported by a group of experts providing content material for ARCTIS and participating in the editorial process. There will be one chief editor and several theme editors. The editor group will consist of highly qualified individuals dedicated to the success of ARCTIS. Only well established and respected researchers and professionals will be recruited for this effort from leading research organizations and industry.

A network of contributors will be created around each theme, assuring qualified coverage. In addition to members of energy/mining companies, shipping and logistics industries, it is likely that younger scientists and researchers will be important contributors to ARCTIS, though established scientists will also serve an important role as content providers. The goal is that researchers will choose ARCTIS as a medium for dissemination of their research results.

The editorial process is divided into two distinct parts. The first part is a closed editorial network of experts for: a) article suggestion/nomination; b) article writing/creation and finally; c) peer reviews before publication in ARCTIS. The second part is visible to ARCTIS users and calls for public reviews/comments of the newly published article and general endorsement. Before an article is published in ARCTIS it will be peer-reviewed by the particular theme editor and his/hers group of experts. This review process is not meant to be an in-depth review or take up allot of time as is the case for peer-review research articles for scientific journals, but more to check that the article's facts and figures are correct and that the article is written in good English, presenting relevant information in a clear and understandable manner for our ARCTIS users. After this peer-review process the article is ready for publication, and this is done by the theme editor in charge. This review process should not take up more than a few weeks.

Once the article is published it can be viewed and commented on by ARCTIS users. This public endorsement is done by "not having significant objections" to the published article. The theme/topic group members must evaluate if reported comments represent valid objections or criticism. If such objections arise, the article is either revised or removed. The public endorsement evaluation is much longer than the initial review process (can be up to one year).

Over time the content of an article may no longer be relevant and/or present information which is out-of-date and needs to be revised. Then the article is removed from ARCTIS, and the theme editor in charge determines if the articles should be revised and re-submitted, or archived. Articles undergoing re-writing will get the label “under revision”. The old version will continue to be publicly available until a new updated version replaces the old one.

#### 4.3 MAIN TARGET GROUPS OF ARCTIS

##### *Business enterprises*

ARCTIS should appeal to businesses, government and the research community alike. The shipping/transport companies are the primary target group along with all those businesses and organizations that serve the transport industry. Additional target group are oil and gas companies and mineral mining companies involved in the exploitation of hydrocarbon and mineral resources in the high north.

Mining and oil companies are enterprises that venture into new frontiers for resources that the world demands. Resource exploration and production in the Arctic will require marine sea-based support and new logistics solutions. Today the majority of the drilling facilities available on the world market are operated by shipping companies. Tools and equipment must be brought into the area and ports and passages need to be kept open. Ice-strengthen cargo ships, specialized supply vessels, and service ships such as icebreakers will be in demand. In addition, increased focus on the Arctic has attracted interest from the general public. This has opened a new and significant market for cruise ship owners.

Quality information and intelligence that can be captured early could make a big difference. This could be related to securing available transportation capacity, ensuring port access, obtaining privileges and negotiating lower prices. The requirement here is that an enterprise has adapted an approach that allows new relevant knowledge and information about current and future opportunities in the Arctic to be integrated into the company’s operational strategy and subsequently become a focus of R&D. It also requires that those working on R&D are well informed about Arctic issues and able to highlight facts, issues, opportunities and threats in a clear and precise manner. This is where ARCTIS will play a major role in assisting companies with relevant information and data.

ARCTIS will for example highlight data regarding current and potential Arctic resources, provide scenarios regarding future flow of raw materials and goods, future infrastructure needs and transport capacities, sailing conditions, services of ports and terminals, but also pertinent constraints and risks. More insight on the regulatory framework, permits, tariffs, insurance, and icebreaker assistance is also stressed among those who are contemplating operations in Russian coastal waters along the NEP/NSR. The same information can also help banks and insurance agencies to estimate risks and assess future opportunities along with their clients.

*Governments and public authorities*

ARCTIS will provide national and local governments with the best available information on resources, transport and logistics in the Arctic. Subsequently, ARCTIS could be a key source of new insights that could help in revitalizing regional politics, increase governance and transparency in the high north, and help law makers balance different concerns.

The information provided by ARCTIS can for example help authorities better understand the various technical challenges that the transport, hydrocarbon, and mineral mining industries are faced with in the Arctic environment, as well as the need for strict environmental protection. It can further aid national funding agencies in getting a better overview on Arctic matters, gauge the state-of-the-art and pinpoint what research topics should be emphasized in the years to come to fill critical knowledge gaps.

ARCTIS has a purpose to fulfil with respect to: ministries; law and policy makers; law enforcement (i.e. police, customs, and coast guard); military; regulators; diplomacy; government agencies; research funding authorities (i.e. NFR, EU Commission, IN); and regional and municipal authorities. ARCTIS will provide relevant information on Arctic resources, transport and logistics from all eight Arctic States—Russia, Norway, Sweden, Finland, Denmark/Greenland, Iceland, Canada and United States—highlighting all possible Arctic sea routes and connecting transport corridors.

Additionally, information coming from countries outside the Arctic area regarding such issues as market trends, technical developments in the maritime sector (shipbuilding) and other relevant matters will also be displayed in the ARCTIS database (e.g. from EU, China, Korea, Japan).

*Research institutes and universities*

This target group is likely to have a dual role when it comes to ARCTIS. The major content contributors to ARCTIS will likely be recruited from research institutions and universities. However, members of this group are also likely to be consumers of the information provided by ARCTIS. Students are likely to become prime users of the knowledge and information, while researchers will both write ARCTIS articles and use the database in their teaching and research.

ARCTIS has plans to work closely with the research institutions involved in the Norwegian Maritime Knowledge Hub (MKH) and the corresponding professors supported by the initiative. The goals of the Maritime Knowledge Hub is to link together all segments of the maritime industry in Norway and further strengthen Norway's position in the global maritime industry. Additionally, plans include establishing cooperation with a number of international research institutions and universities, which are devoted to Arctic research, to provide material for building up the ARCTIS's database.

**5. CHNL'S ARCTIC LOGISTICS INFORMATION OFFICE (ARCLIO)**

The year 2010 was a breakthrough year for commercial transit shipping on the NEP/NSR (4 transits), and interest from the international business community grew further in 2011 (34 transits) and in 2012 (46 transits). However, from a practical point of view planning of transit shipping within Russian territorial waters for many foreign charterers, cargo owners and ship-owners is a both challenging and intimidating endeavour. Knowledge of the Russian regulatory framework for shipping, the permitting process, of the technical requirements for ships, navigational routes, and icebreaker assistance is all essential. At present there is no one source that contains such relevant information in English for the commercial shipping industry.

CHNL's Arctic Logistics Information Office (ARCLIO) was established in April 2011 in Kirkenes. Added support came from FSUE Rosatomflot (providing consultation) and the Norwegian Barents Secretariat (partial financial support). ARCLIO strives to become an important source of practical information on Arctic ports and on NSR transits for the shipping industry.

The main activities to date include establishing cooperation with all those Russian organizations which are directly involved in the arrangement of shipping and logistics on the NSR, i.e. those that are the

primary sources of important information and knowledge about shipping in Arctic waters. This will allow ARCLIO to present relevant and reliable information to the international shipping community, oil and gas industry, and other business enterprises interested in the region.



Figure 4.2 Andrey A. Smirnov from Rosatomflot (left), Sergey Balmasov Head of the Arctic Logistics Information Office, Rune Rafaelsen from Barents Secretariat, Felix Tschudi from Tschudi Shipping Company, State Secretary from Norwegian Foreign Ministry Erik Lahnstein and Mikhail Belkin from Rosatomflot joining forces for high north logistics. Photo: Jonas Karlsbakk

Already much information has been collected such as a number of books and documents listing the requirements for the proper design, equipment and supplies of vessels navigating the NSR; rules and regulations for navigation on NSR; navigational guidelines and charts; tariffs; procedures to obtain a permit for icebreaker assistance; and other related materials. All essential documents not available in English will be translated from Russian to English. This information will then be made available in as clear and understandable fashion as possible on ARCLIO's own website,<sup>7</sup> which will be linked to both CHNL's website<sup>8</sup>

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7 <http://www.arctic-lio.com>.

8 <http://www.chnl.no>.

and the ARCTIS database.<sup>9</sup> The ARCLIO's webpage was launched at the 8th Annual Arctic Shipping Forum in Helsinki on 25 April 2012.

## 6. CONCLUDING REMARKS

The accelerating natural resource exploitation in the Eurasian Arctic and subsequent increase in marine transport makes it essential to establish an adequate transport infrastructure to take advantage of this resource potential, as well as provide the needed safety and reliability of marine transport and pollution prevention to safeguard the fragile Arctic environment.

If NEP/NSR is in the future going to be an alternative route option to Suez for general cargo, then large scale investments are needed in the new infrastructure, not the least in a fleet of high ice-class cargo ships operating on a year-round basis in the Arctic Ocean and subsequent trans-shipment hubs on either side of the NEP/NSR, in the Barents Sea in the west and Bering Sea in the North-Pacific in the east. The task at hand requires sharing of all available information, data, and knowledge about operational conditions in the Arctic, and a strong international cooperation on the design, financing, and construction of the new transport infrastructure. CHNL is actively working on providing much needed information on shipping and logistics in the Arctic and on innovative infrastructure and logistics solutions.

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<sup>9</sup> <http://www.arctis-search.com>.

PART II  
SUSTAINABILITY, HUMAN RESOURCES AND  
ECONOMIC GROWTH



## Chapter ◊ 5

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### DECOUPLING ENVIRONMENTAL HARM FROM MATERIAL PRODUCTION AND MATERIAL PRODUCTION FROM ECONOMIC GROWTH: THE CASE OF ENERGY AND CARBON DIOXIDE IN FINLAND, NORWAY, RUSSIA AND SWEDEN

PETRI TAPIO<sup>1</sup> AND  
MIKKO VÄHÄTALO<sup>2</sup>

The decoupling of environmental harm from economic growth has two major components—the decoupling of environmental harm from material production (dematerialisation) and the decoupling of material production from economic growth (immaterialisation or amaterialisation). The same components can be analysed on the national economy level (GDP), enterprise level (turnover), or household level (disposable income). An examination of relative growth rates over a period of time reveals various decoupling patterns. In this chapter, we use the national data of Finland, Norway, Russia and Sweden to analyse the decoupling patterns of these countries. GDP is used as the measure of economic growth, total primary energy supply (TPES) as a measure of material production and carbon dioxide (CO<sub>2</sub>) emissions as a measure of environmental harm. We place the findings in a Decoupling Diamond framework. Future prospects of the trends are discussed, and important directions for further research are outlined. We note that in addition to trend extrapolation and econometric models, wider, more communicative and action-oriented methods of futures studies should be used.

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## BACKGROUND

Different countries have different challenges since the patterns and volumes of consumption and production are far from uniform, even in neighbouring countries. However, one requirement is crucial to all countries—in a sustainable economy, the level of environmental harm should be decoupled, or delinked, from economic growth. Relative, or weak, decoupling means that the economy is growing faster than environmental harm, in this case greenhouse gas (GHG) emissions, whereas absolute, or strong, decoupling means that environmental harm is decreasing while the economy is growing.<sup>3</sup> A relative decoupling of GHG emissions and/or carbon dioxide (CO<sub>2</sub>) emissions from gross domestic product (GDP) can be discerned in long-term trends in the energy and food sectors.<sup>4</sup> In some countries absolute decoupling in the energy and agricultural sectors has also been found. As for transport, decoupling has been modest and in many countries non-existent.<sup>5</sup>

The decoupling discussion originates in different disciplines, which is why no generally accepted concepts are available. Instead a multitude of concepts can be found describing the same issues, and similar concepts seem to have been given different meanings by different authors.<sup>6</sup> However, the issue is clear and can be analysed and measured

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3 Iddo Wernick et al., “Materialization and Dematerialization: Measures and Trends”, *Daedalus* 125 (1996) 3, pp. 171–198; John Ballingall et al., “Decoupling Economic Activity and Transport Growth: The State of Play in New Zealand”, New Zealand Ministry of Transport, Report (2003) AT RF 03.

4 EEA, *EEA Greenhouse gas data viewer* (2011).

5 Petri Tapio et al., “Global Decarbonisation Patterns – Total and Transport CO<sub>2</sub> Intensity”, forthcoming; Kristiina Regina et al., Maatalouden rooli kasvihuonekaasupäästöjen tuottajana ja osana ilmastopoliittikkaa. Selvitys Maa- ja metsätalousministeriölle 19 September 2011; Petri Tapio, “Towards a Theory of Decoupling: Degrees of Decoupling in the EU and the Case of Road Traffic in Finland between 1970 and 2001”, *Transport Policy* 12 (2005) 2, pp. 137–151; Tapio et al., “Energy and Transport in Comparison: Immaterialisation, Dematerialisation and Decarbonisation in the EU15 between 1970 and 2000”, *Energy Policy* 35 (2007) 1, pp. 433–451.

6 Daniel Bell, *The Coming of Post-Industrial Society: A Venture in Social Forecasting* (New York, 1973); Julian Simon, “Resources, Population, Environment: An Oversupply of False Bad News”, *Science* 208 (1980) 4451, pp. 1431–1437; Martin Jänicke, “Ökologische Modernisierung, Optionen und Restriktionen präventiver Umweltpolitik”, in Udo Ernst Simonis (ed.), *Präventive Umweltpolitik* (Frankfurt am Main, 1988), pp. 13–26; Jesse Ausubel, “Tech-

reasonably well with a set of quantitative indicators using the Decoupling Diamond (Figure 5.1).

### THEORETICAL FRAMEWORK

In addition to weak and strong decoupling, there are other logical alternatives. Based on reviews of the issue, in 2005 by Tapio and in 2007 by Vehmas et al. they have constructed comprehensive frameworks of the different aspects of decoupling, further defined in 2012 by Finel and Tapio.<sup>7</sup> According to the Decoupling Diamond, eight logical possibilities can be distinguished. The growth rate of GDP and environmental harm (or material production) can be coupled, decoupled or negatively decoupled. In order not to over-interpret slight changes as significant,

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nical Progress and Climatic Change”, *Energy Policy* 23 (1995) 4/5, pp. 411–416; Cutler Cleveland and Matthias Ruth, “Indicators of Dematerialization and the Materials Intensity of Use”, *Journal of Industrial Ecology* 2 (1998) 3, pp. 15–50; Ji Wu Sun and Tarja Meristö, “Measurement of Dematerialization/Materialization: A Case Analysis of Energy Saving and Decarbonization in OECD Countries, 1960–95”, *Technological Forecasting and Social Change* 60 (1999) 3, pp. 275–294; Friedrich Schmidt-Bleek, *Luonnon uusi laskuoppi* (Helsinki, 2000); John Robinson and Deborah Herbert, “Integrating Climate Change and Sustainable Development”, *International Journal of Global Environmental Issues* 1 (2001) 2, pp. 130–149; Sander De Bruyn, “Dematerialization and Rematerialization as Two Recurring Phenomena of Industrial Ecology”, in Robert Ayres and Leslie Ayres (eds), *A Handbook of Industrial Ecology* (Cheltenham, 2002), pp. 209–222; Olli Hietanen and Sirkka Heinonen, *SIS 2010: Kuvolaan kaupungin kestävän tietoyhteiskunnan visio*, Tutu-julkaisuja / Turun kauppakorkeakoulu, tulevaisuuden tutkimuskeskus 2002:3 (Turku, 2002), pp. 26–27; Paul Waggoner and Jesse Ausubel, “A Framework for Sustainability Science: A Renovated IPAT Identity”, *PNAS* 99 (2002) 12, pp. 7860–7865; Sirkka Heinonen et al., “How to Approach the Sustainable Information Society? Criteria and Indicators as Useful Tools”, *Progress in Industrial Ecology* 2 (2005) 3/4, pp. 303–328; Michael Raupach et al., “Global and Regional Drivers of Accelerating CO<sub>2</sub> Emissions”, *PNAS* 104 (2007) 24, pp. 10288–10293; Tapio et al., “Energy and Transport in Comparison”; Stiglitz et al., *Report by the Commission on the Measurement of Economic Performance and Social Progress* (Paris, 2009).

- 7 Tapio “Towards a Theory of Decoupling”; Jarmo Vehmas et al., “Linking Analyses and Environmental Kuznets Curves for Aggregated Material Flows in the EU”, *Journal of Cleaner Production* 15 (2007) 17, pp. 1662–1673; Nufar Finel and Petri Tapio, *Decoupling Transport CO<sub>2</sub> from GDP*, Finland's Futures Research Centre FFRC eBook 2012:1.

a +/-20% variation in the elasticity ( $e$ ) values around 1.0 is still regarded here as coupling. On the other hand, the growth of the variables can be positive or negative, expressed as *expansive coupling* and *recessive coupling*.

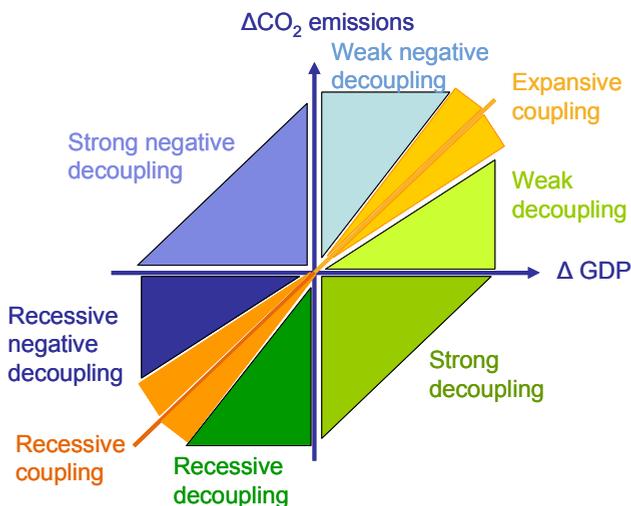


Figure 5.1 The Decoupling Diamond—Relations of the development of paired indicators.<sup>8</sup>

Decoupling can be further divided to three sub-categories: *weak decoupling* occurs when GDP and environmental harm both increase ( $0 < e < 0.8$ ), *strong decoupling* occurs when GDP grows and environmental harm decreases ( $e < 0$ ) and *recessive decoupling* occurs when GDP and environmental harm both decrease ( $e > 1.2$ ). Similarly, negative decoupling includes three sub-categories: in *weak negative decoupling* GDP and environmental harm both increase ( $e > 1.2$ ), in *strong negative decoupling* GDP decreases and environmental harm increases ( $e < 0$ ), and in *recessive negative decoupling* both variables decrease ( $0 < e < 0.8$ ).

Previously, cases of every category have been found in the analysis of transport CO<sub>2</sub> emissions and the GDP of 140 countries using five-year intervals between 1975 and 2005.<sup>9</sup> Here we extend the analysis to the relationship of three pairs of indicators—GDP & energy use, energy use & CO<sub>2</sub> emissions and GDP & CO<sub>2</sub> emissions. Furthermore, the focus will be widened from transport to the entire energy sector. The re-

<sup>8</sup> Modified from the research referred to in the preceding note.

<sup>9</sup> Finel and Tapio, *Decoupling Transport CO<sub>2</sub> from GDP*.

cent downward trend in the global economy, especially in Europe, brings additional interest to the analysis. What happens to environmental harm in a recession? If consumption decreases, is it reflected especially in material production? Does technical development slow down due to a lack of funding for investment or do consumers increasingly buy technically improved products, saving money in the long run?

## OBJECTIVES AND DEFINITIONS

This chapter identifies trends in the sustainability of the economies in the northern European countries. The case countries for the project are Finland, Norway, Russia and Sweden. We will analyse and compare country-wise trends of decoupling in the energy sector between 1990 and 2010 using five-year intervals. The basic components that are, or should be, decoupled from each other are:

- *Economic production* measured in monetary terms, here the Gross Domestic Product (GDP) measured in purchasing power parity (PPP);
- *Material production and consumption* measured by a unit of commodity-specific output, here the total primary energy supply (TPES);
- *Environmental harm* expressed here by carbon dioxide (CO<sub>2</sub>) emissions.

The following definitions of the forms of decoupling are based on a review of the literature:<sup>10</sup>

*Immaterialisation* describes the decoupling of material production and consumption from economic production. The same phenomenon has also been labelled qualitative economic growth, amaterialisation, post-industrialism and ecological structural change. Immaterialisation can be measured by using indicators such as energy intensity (TPES/GDP) (Figure 5.2).<sup>11</sup>

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<sup>10</sup> Tapio et al., “Energy and Transport in Comparison”.

<sup>11</sup> Petri Tapio, “Climate and Traffic: Prospects for Finland”, *Global Environmental Change* 12 (2002) 1, pp. 53–68; Hietanen and Heinonen, *SIS 2010*, pp. 26–27; Heinonen et al., “How to Approach”; Bell, *The Coming of Post-Industrial Society*; Jänicke, “Ökologische Modernisierung”.

*Dematerialisation* refers to the decoupling of the specified environmental harm from material production. The same phenomenon has also been called increasing eco-efficiency. It may consist of technical development or qualitative shifts within the sector observed, for example fuel switching. Dematerialisation can be measured by changes in the carbon intensity of energy production (CO<sub>2</sub> emissions/TPES).<sup>12</sup>

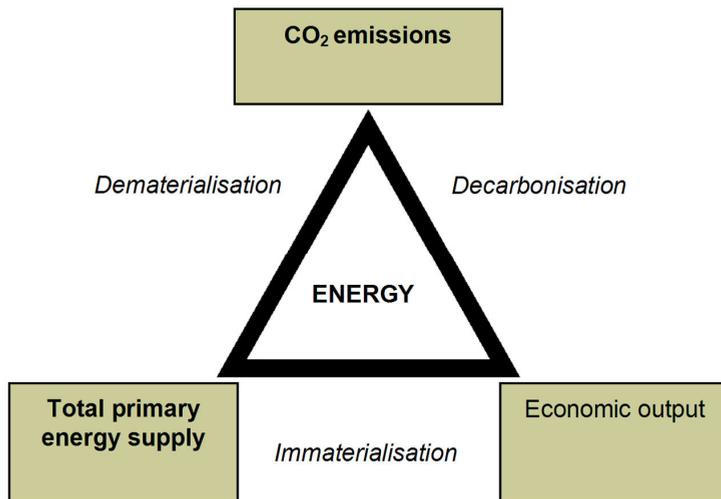


Figure 5.2 Key systems and concepts in the analysis. The concepts in **bold** are the key variables and the concepts in *italics* refer to the decoupling of the key variables (modified from Tapio et al. 2007).

*Technical dematerialisation* means lowering emissions per unit of material consumption (for instance, grams of CO<sub>2</sub> emissions per vehicle kilometre) without changing consumption and production structure. *Structural dematerialisation* is based on change in the consumption and production structure (for instance, change in modal split). These aspects are explained in detail in Table 5.1.

*Decarbonisation* refers here to the combined effect of immaterialisation and dematerialisation that can be measured by CO<sub>2</sub> per eco-

12 Ausubel, “Technical Progress”; De Bruyn, “Dematerialization and Rematerialization”; Schmidt-Bleek, *Luonnon uusi laskuoppi*; Simon, “Resources, Population”; Jänicke, “Ökologische Modernisierung”; Jari Kaivo-oja and Jyrki Luukkanen, “The European Union Balancing between CO<sub>2</sub> Reduction Commitments and Growth Policies: Decomposition Analyses”, *Energy Policy* 32(2004) 13, pp. 1511–1530.

conomic output (Figure 5.2). The transitions towards sustainability can be broken down into the forms of decoupling described in Table 5.1.

Factors decreasing environmental harm	Examples in energy	Examples in transport
Immaterialisation (Lowering volume)	Lowering room temperature	Travelling less
Structural dematerialisation (Changing economic structure)	<i>Consumption:</i> From electrical heating to firewood burning <i>Production:</i> From bulk electricity to green electricity	<i>Consumption:</i> From car to public transport <i>Production:</i> From gasoline to bio-fuels
Technical dematerialisation (Efficiency improvement)	<i>Consumption:</i> From unsparing to efficient airing <i>Production:</i> From condensate power to combined heat and power	<i>Consumption:</i> From average to smart driving <i>Production:</i> Improving fuel efficiency

Table 6.1 The forms of decoupling in the energy and transport sectors with examples

## RESEARCH METHODS AND MATERIAL

We compiled data on the past development of the three sectors in question, from 1990 to 2010. This gives us sufficiently long trends of the past to compare the patterns over time. The decoupling analyses describe relative growth (or decrease) rates where two components are related to each other, which is elasticity. In addition, per capita data will be used to describe the development of absolute values. This allows comparisons between the four case countries. We used databases from BP, UNFCC and the World Bank.<sup>13</sup>

<sup>13</sup> British Petroleum statistics on Total Primary Energy Supply, British Petroleum Statistical Review of World Energy 2011; United Nations Framework Convention on Climate Change (UNFCC) Global Greenhouse statistics; World Bank GDP statistics.

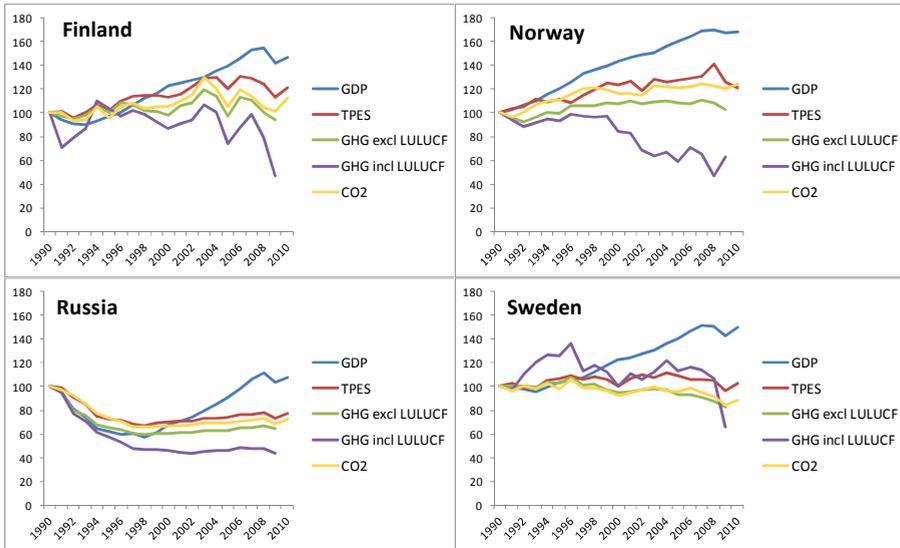


Figure 5.3 Economic output (GDP), energy use (TPES), greenhouse gas emissions (GHG) with and without land-use, land-use change and forestry (LULUCF), and carbon dioxide emissions in Finland, Norway, Russia and Sweden, 1990-2010

## RESULTS

### OVERALL TRENDS IN ABSOLUTE VALUES

Since the decoupling framework describes relative changes in the relation of the variables, we first observed the development of the absolute values where the 1990 value was given an index value of 100 (Figure 5.3). From these graphs we can see that there has generally been some decoupling since GDP has the highest values at the end of the period in all four countries. The recession in the early 1990s was deepest in Russia, followed by Finland and Sweden. The current recession has treated these three countries in a similar way. Norway, in turn, has survived both recessions with less severe problems.

Energy use has increased in all four countries since the mid-1990s but more slowly than the increase in economic output. Energy use in Russia declined rapidly from 1990 to 1995, with subsequent decreases in GHG and CO<sub>2</sub> emissions. After this, slow growth in energy use can be seen, like in the other three countries. Emissions did not grow at a similar rate as energy use in Finland, Norway and Sweden, whereas they did in Russia. This is explained in Sweden by increased R&D in renewable energy, and in Finland by outsourcing energy-intensive in-

dustry to countries with lower labour costs. It can also be seen in the decrease in total GHG emissions when emissions from land use, land-use change and forestry (LULUCF) are included, particularly with respect to Finland. Finnish companies have begun cutting forests extensively in Russia.<sup>14</sup>

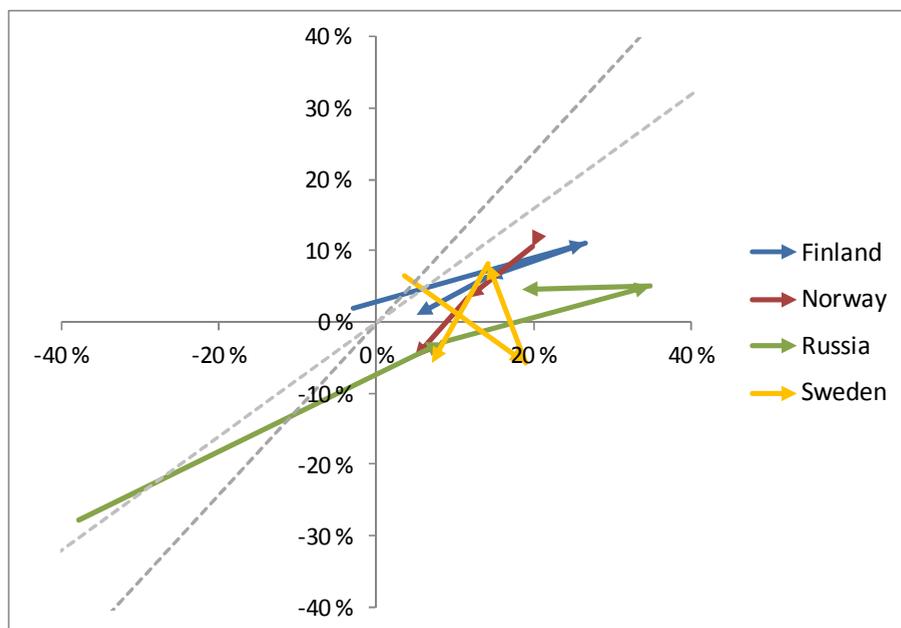


Figure 5.4 The change in GDP (x axis) and total primary energy supply (y axis) in Finland, Norway, Russia and Sweden in five-year periods between 1990 and 2010

#### DECOUPLING IN RELATIVE TRENDS

*Immaterialisation.* The development of GDP and TPES in Finland, Norway, Russia and Sweden has been placed in the decoupling framework in figure 5.4. It includes the growth rates of both indicators during five-year periods. All four countries have changed positions between 1990 and 2010. Energy-efficient, “good” development would be in the lower right-hand corner, a strong decoupling, where the economy grows but energy use declines. Sweden has two hits in this segment (the latter part of both decades), Norway and Russia one (2005-2010 and 1995-2000, respectively), and Finland none.

14 Audrey Mayer et al., “Importing Timber, Exporting Ecological Impact” *Science* 308 (2005), pp. 359-360.

*Dematerialisation.* The development of TPES and CO<sub>2</sub> emissions in the decoupling framework is shown in figure 5.5. Here too, all four countries have changed position between 1990 and 2010. Here, “good” development would be a recessive decoupling, where both variables are reduced but CO<sub>2</sub> emissions are reduced faster than TPES. Sweden has one hit in this segment in 2005-2010, Russia one (1995-2010), Finland and Norway none. Part of the Finnish “bad” performance in the last period can be explained by the fact that there was a three-month strike in the forest industry in 2005, which caused a substantial drop in energy use in that particular year.

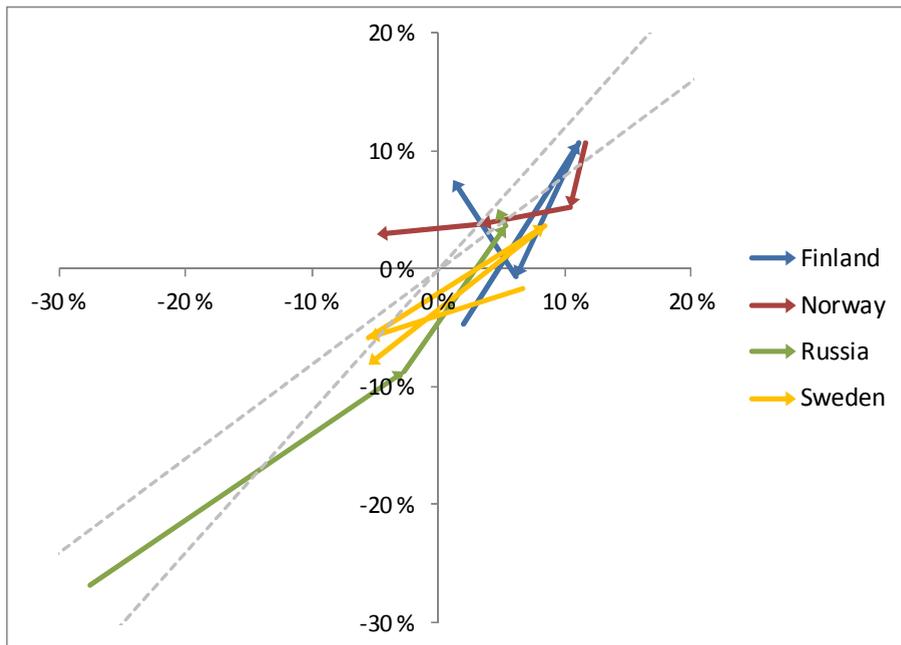


Figure 5.5 The change in TPES (x axis) and CO<sub>2</sub> emissions (y axis) in Finland, Norway, Russia and Sweden in five-year periods between 1990 and 2010

*Decarbonisation.* The last analysis concerns the decoupling of CO<sub>2</sub> emissions from GDP, summing up the effects of the two previous analyses (Figure 5.6). Similar to immaterialisation, “good” development would be in the strong decoupling segment, where the economy grows and emissions decrease. More hits can be found than in the two previous analyses—Finland in 2000-2005, Russia in 1995-2000 and Sweden during every period except 2000-2005. Norway had an unusual development, staying in the expansive coupling segment in all four periods.

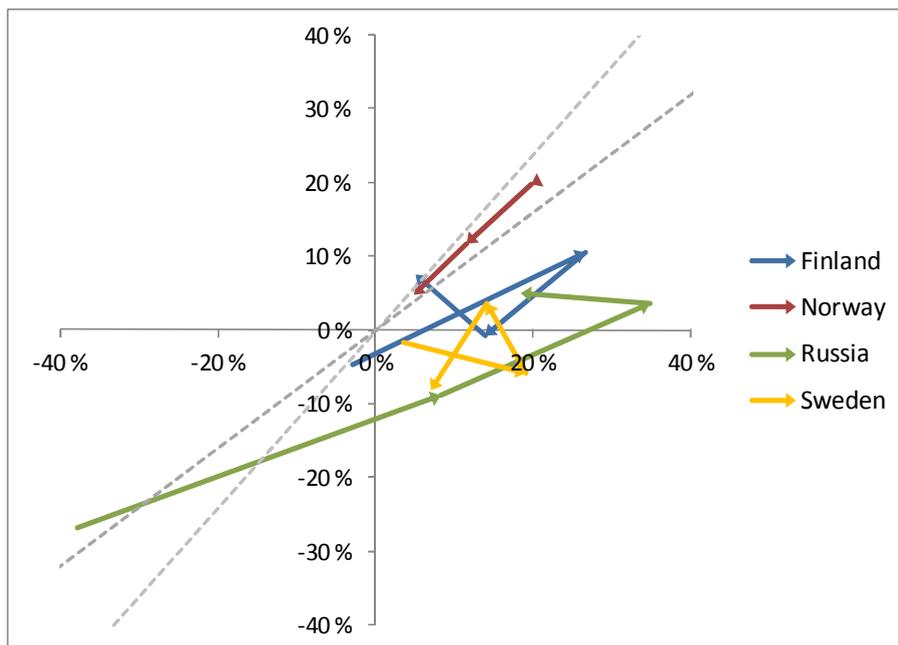


Figure 5.6 The change in GDP (x axis) and CO<sub>2</sub> emissions (y axis) in Finland, Norway, Russia and Sweden in five-year periods between 1990 and 2010

## DISCUSSION

This chapter has gathered and analysed comparable information about decoupling patterns in four countries in northern Europe. The results reflect some general features of the energy policy of these countries: Finland puts considerable effort and faith in nuclear power, Norway continues to use mainly hydroelectric power in domestic consumption while exporting oil products, Russia aims for efficiency gains for economic reasons and Sweden tries to create high competitiveness in the renewable energy sector.

We note that further studies should be conducted to generate more information about the technical, societal and cultural factors affecting the decoupling of CO<sub>2</sub> emissions of energy use from economic growth. Scenarios of alternative future paths could well be used in communicating the results to policy-makers, the business sector and the general public. Scenarios are descriptions of alternative future paths of the observed system. In addition to quantitative trend extrapolation and mathematical modelling performed by the Intergovernmental Panel on Climate Change (IPCC), a mixed method approach including both

quantitative and qualitative material to build scenarios might be appropriate.<sup>15</sup> For example a Delphi study on expert views of the future might be the basis of scenarios. The Decoupling Diamond will be used to analyse cluster means similar to the background data of the past.

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## Chapter ◊ 6

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### THE PUBLIC PRIVATE PARTNERSHIP AS AN INSTRUMENT OF ECONOMIC REGIONAL DEVELOPMENT: THE EXAMPLE OF THE HYDROPOWER SECTOR

ALEXANDRA CHUVARAYAN<sup>1</sup>

The aim of this chapter is to analyse the Public Private Partnership (PPP) as an instrument of regional development, focussing on the experience of the hydropower sector. The chapter will examine:

- the essence of the PPP, its forms and its place in regional development;
- the legal basis of PPPs in Russia and the main investment risks in carrying out core infrastructure projects;
- international experiences of developing PPPs in the hydropower sector;
- the Russian experience of developing PPPs in the hydropower sector.

The term Public Private Partnership (PPP) encompasses a number of forms of medium- and long-term interactions between governments and businesses established to share risks and profits through a union of professional knowledge and with joint financing, intended to attain certain political results. The essence of the PPP is that investors take shared responsibility of the risks arising from carrying out (for the most part) large-scale strategic projects. The state acts as the guarantor ensuring fulfilment of obligations on the part of the partnership's members; the state also provides administrative support and takes on part of the responsibilities of co-financing the infrastructural aspect of projects. Depending on the nature of specific projects to be determined within the framework of the PPP, all of the many existing and newly arising partnerships can be subdivided into different forms.

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## CURRENT PRINCIPLES OF PUBLIC PRIVATE PARTNERSHIPS

The categories of PPP in practice throughout the world are generally accepted to be those given below:

*Contracts* are an administrative agreement concluded between the state (an entity of local self-governance) and a private firm to carry out determined forms of activity which are essential and useful to society. The most common forms of PPP contract are considered to be those that are drawn up to construct works, provide social services, manage and deliver production for state needs, and provide technical assistance. In administrative contractual relationships ownership rights are not transferred to the private partner, and expenditures and risks are borne in full by the state. The private partner's interest lies in the fact that, according to the agreement, the partner receives the right to a stipulated percentage of revenues, profits or collected payments. As a general rule, contracts with state or municipal bodies represent extremely attractive business opportunities for private enterprises, as the prestigious reputation acquired through this form of partnership guarantees the enterprise access to a sustainable market and revenues, as well as to potential concessions and preferences.

The *Lease* refers to a lease agreement in its traditional form and in the form of a special lease. The particular nature of lease agreements between power structures and private businesses is that a transfer of a state or municipal property is made to the private partner for temporary use and for a set fee, according to conditions stipulated in the agreement. The traditional form of lease agreement assumes recoverability of the object of the agreement whereby authority to manage the property is reserved by the proprietor and not transferred to the private partner. Where specifically stipulated, agreements can be concluded by purchase of the leased property. In the case of a special lease agreement the lessee always reserves the right to purchase the state or municipal property.

*Concession (concession agreement)* is a special form of relationship between the state and a private partner which is becoming more and more popular. Its distinguishing feature is that the state (or municipal institution) retains, within the framework of the partnership relationship, full ownership rights of the property which is the object of the concession agreement, and can authorise the private partner to carry out functions within the terms of a fixed period as stipulated in the agreement. To these ends, the public entity can invest the private party

with the relevant powers necessary to ensure normal operation of the object of the concession agreement. The concessionaire pays a fee for use of the state or municipal property according to conditions stipulated in the concession agreement. Ownership rights for any products or produce generated within the conditions of the concession agreement are transferred to the concessionaire. A number of characteristic features of the concession can be identified:<sup>2</sup>

- the state (or municipal) property is always the subject of the agreement, as is any exclusive form of activity on the part of the state or municipal body
- the state or the municipality (represented by the corresponding bodies of administrative power) constitutes one of the parties of the concession agreement
- the aim of a concession is to satisfy social needs and demands
- the concession always has a contractual basis (the concession agreement)
- the concession hinges upon recoverability of the subject of the agreement which is rendered to the private partner for a fee defined in the agreement

In the case of contracts, if the state or municipal body acts as a subject of Civil Law in the lease agreement or other contract and the norms provided by the Civil Code are fully sufficient for them to conduct their activity effectively, then within the framework of the concession the state is first of all an agency of public authority. In this capacity it does not simply render a part of its authority as a proprietor to partners of the agreement, but also delegates a part of its functions of power (its exclusive sovereign rights) to them. This can only take place on the basis of a corresponding Act of state authority. Therefore, the exclusivity of rights can be rendered as per the concession agreement not as a result of the state's status as proprietor, but due to its prerogative power as an organ of public authority. The exclusive (sovereign) nature of rights rendered by the state to a concessionaire (the private partner) is such that, within the limits of the territory or form of activity for which

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2 Michael E. Porter, "Russian Competitiveness: Where Do We Stand?", U.S.-Russian Investment Symposium, Boston, Massachusetts, 13 November 2003 (Boston, 2003).

exclusive rights are given, no analogous activity can be authorised to any third party, including to the state itself.

One of the public and legal characteristics of concessional agreements is their anchoring of public interests, with the state serving as their exponent and representative. According to the concession agreement “the state’s private partner (the concessionaire) is obliged to meet the demands of public interest, that is, by providing and operating services uninterruptedly, by not discriminating between service-users, by making services generally accessible and by charging the same tariffs for the same services. Moreover, obstacles that put public interest under threat or impair public interest provide legal foundations for measures which are specifically not included in the agreement.”<sup>3</sup> With a view to protecting public interest the concession agreement can also provide for sovereign unilateral regulations and advantages to the organ of public authority over the concessionaire. It is well known that concessions are most widespread in infrastructural sectors where a flow of private investors and highly qualified management are essential.

It is possible to identify at least three forms of concession: for already existing infrastructural facilities; for construction or modernisation of infrastructural facilities; and for transfer of objects of state ownership into the hands of a private management company. Variations are possible within the rough frameworks of these forms of concession agreement based on differences in conferral of ownership rights between the state and private concessioners, as well as in the permissible limits of their concrete enterprise and investment activity (construction, operation, management). In Russia the law on concession agreements has been active since 2005, although no agreement of this nature has yet been concluded. The main reason for this is the insufficient protection of rights on the part of the concessionaire. The risks born by the concessionaire and the high overheads for concession activity exacerbate the situation, as does the obligation to pay a high concession fee to the state. The most likely forms of concession to be signed in the Russian Federation are those that deal with modernising and operating existing complexes, such as airports, ports, stations and other transport terminals.

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3 S.V. Generalov, “Meri po razvitiu mekhanizmov gosudarstvenno-chastnogo partnerstva”, *Strategiya 2020: ot ekonomiki direktiv k ekonomike stimulov*, p. 7.

*Production Sharing Agreement.* This form of partnership agreement between the state and a private business is reminiscent of the traditional concession, but nonetheless differs from it. The main distinction is in the configuration of ownership relationships between the state and a private partner. In the case of a concession, as already mentioned, the concessionaire has ownership rights to all produce, whereas in a Production Sharing Agreement the private partner possesses the rights only to a part of the produce. The conditions and order of sharing production between state and investor are defined in a special agreement. In worldwide practices, such agreements are particularly actively used in oil production. As in the case of concessions, the state renders its exclusive resource management rights to the private investor on a billable basis and for a specified term. Private partners (including foreign partners) are given access to exclusive rights with a view to attracting investments to capital-intensive spheres of activity. There are different models for production sharing, such as immediate division into two parts or division after deducting the investor's expenses. Specifics regarding taxation must also be accounted for.

*Joint Ventures* are a widespread form of PPP. Depending on the structure and nature of the joint capital, they can be either Joint-Stock Companies or Joint Ventures with the participation of investors. Public entities and private parties can act in the capacity of shareholders in the joint-stock company. The possibilities for a private partner to take independent administrative and management decisions are generally determined by the size of his shareholder stake. The risks assumed by the parties are also dependent on the size of capital.

The essential distinguishing feature of any kind of Joint Venture is the state's constant involvement in the given production, administrative and investment activity. Independence on the part of the private partner in taking decisions is more limited here than, for example, in concessions. It is important that changing the structures of investment capital for the benefit of one of the parties of a Joint Venture assumes only the reallocation of stocks between investors but does not lead to increasing the size of the entire capital (and correspondingly of basic funds and the number of jobs). In the case that a joint-stock company, which lists the state as a partner, is nationalised, stocks can be bought in the appropriate manner and do not depend directly on the volume of capital initially invested by the private investor. It should be noted that, in accordance with global practices, when concession ventures

are nationalised the state is obliged to reimburse the concessionaire for the value of invested capital and to pay compensation for lost profit.

### **PUBLIC PRIVATE PARTNERSHIP MECHANISMS**

There is a variety of mechanisms for cooperation between state structures and private business enterprises that are employed when PPP projects are carried out. These differ in terms of the degree of ownership rights transferable to the private partner, the investment obligations of the parties, the principles of dividing risk between partners, and responsibility for carrying out different kinds of work. The most widespread partnership mechanisms are listed below.

- BOT (Build, Operate, Transfer). This mechanism is mainly employed in concessions. The costs incurred for the construction of the infrastructural object are born by the concessionaire, who, upon the completion of construction, receives the right to operate the newly built object for the period of return on invested assets. Upon expiry the object is transferred to the state. The concessionaire receives rights of use, but ownership rights belong to the state.
- BOOT (Build, Own, Operate, Transfer). In this case the partner receives rights not only for use, but also for ownership of the object for the period of the agreement's validity, after which it is transferred to the public authority.
- BTO (Build, Transfer, Operate). This mechanism assumes transfer of the object to the state as soon as construction is completed. At this point it comes to be operated by the private partner, but without transfer of ownership rights to this partner.
- BOO (Build, Own, Operate). In this case, the object is not transferred to the public authority upon expiry of the agreement but remains in the hands of the investor.
- BOMT (Build, Operate, Maintain, Transfer). Here the emphasis is on the private partner's responsibility to also maintain, as far as necessary, the infrastructural facilities that he has built.
- DBOOT (Design, Build, Own, Operate, Transfer). The distinguishing feature of agreements of this type is that the private

partner is responsible not only for construction of the facility but also for its design. In the case of DBFO agreements (Design, Build, Finance, Operate) the responsibility of financing construction is specifically stipulated.

As far as regulatory provisions for PPP mechanisms in the Russian Federation are concerned, legal relationships arising as a result of realising PPP mechanisms are regulated by the Legislative Acts given below:

- Russian Civil Code (part 1), dated 30 November 1994, № 51-FZ consists of basic norms concerned with the activities of judicial entities, their legal status and legal capability, the investment of authority, allocation of risks, the bases and order of conducting business transactions, acquisition of ownership rights, responsibility and so on.
- Federal Law dated 29 April 2008, № 57-FZ “On procedures for foreign investments in business entities of strategic importance for the provision of national defence and state security” establishes the procedures to be followed by foreign investors upon their participation in registered capital of business entities which have strategic significance with regard to the provision of national defence and state security, as well as upon completion of business transactions resulting in acquisition of control over designated business entities.
- Federal Law dated 6 October 2003, № 131-FZ “On general principles of organising local self-government in the Russian Federation” can be applied in cases whereby a municipal body or organ of municipal administration acts as the public party in a PPP project. The law determines the legal status of municipal bodies and their functions, and establishes the system of organs of administration and their basic powers.
- Federal Law dated 6 October 1999, № 184-FZ “On the general principles of organising legislative (representative) and executive bodies of state authority of the subjects of the Russian Federation” can be applied in cases where a subject of the Russian Federation and/or its organs of power act in the capacity of the public party of a PPP project. The law establishes a system of legislative (representative) and executive bodies of authority of subjects of the Russian Federation, their training,

formation, activity, authority and responsibility, as well as procedures for interaction between themselves and federal bodies of state authority.

- Federal Law dated 9 July 1999, № 160-FZ “On foreign investments in the Russian Federation” is applied in cases where foreign investments are being attracted for PPP projects. It establishes the legal status of foreign investors and the basic guarantees of foreign investors’ rights with regard to investments and the resulting revenues and profits, as well as the conditions binding foreign investors’ business activities within the Russian Federation.
- Federal Law dated 25 February 1999, № 39-FZ “On investment activity in the form of capital investments in the Russian Federation” determines the legal and economic laws regarding investment activity in the form of capital investments within the Russian Federation, and also establishes guarantees to equal protection of rights, interests and properties which are the subject of investment activity in the form of capital investments, regardless of the form of ownership.
- Regional legislation regarding regulation of activities based on PPPs (regulated by the Subject of the Russian Federation).

The PPP mechanism is particularly successful within the framework of regional development partly due to the fact that both the state and the business determine their obligations in bringing projects to fruition (and mutually funding them). The Russian Federation aims to practice integrated development in remote regions (including isolated areas of the Far East and Siberia), which will have knock-on effects. When we talk about regional development we have in mind, above all, energy security (including infrastructure), development of industrial production and implementation of social projects (provision of housing, medical facilities and so on). In connection to this it is possible to identify the basic risks for the potential investor:

- initially high capital expenditures in the generating facility, and low rates of return
- lack of infrastructural development (greenfield projects)
- lack of industrial consumers in remote regions (in Russia: Siberia and the Far East)

- limitations of budgetary co-financing on the part of “not valuable” areas of the Russian Federation
- environmental risks in bringing projects to fruition
- high infrastructural expenditures (in hydropower: the dam, reservoir and network)

The development of the PPP mechanism as demonstrated by the experience of many countries, including the Russian Federation, helps to decrease risks for the investor and realise the general aims and commitments of the state. The state realises the proposed commitments in energy security, infrastructural development, removal of systemic limitations in the transfer and distribution of electric energy in domestic and foreign markets, and attraction of foreign investors. The business benefits from the extra advantages of broadening its activity into new markets and gaining access to the energy sector and other infrastructures, and also lowers initially high investment risks and increases marketability and rates of return on investments, receives extra state guarantees, and can make long-term plans for invested assets. Let us now look at instances where PPP mechanisms have been put into practice in different countries relative to large-scale hydropower projects.

### **CANADA’S EXPERIENCE**

In Canada the scheme given in figure 6.1 is used to examine PPP projects, in relation to which the relevant ministry (the Ministry of Finance) authorises the PPP Fund to carry out a project evaluation, classifying them according to the volume of capital investments up to 25 million dollars and above.<sup>4</sup>

In the 1960s and 1970s, the state made huge investments in the development of hydropower (capacity was increased from 15GW to 30GW). Energy assets in the province of Quebec were gradually nationalised from 1962 to 1965. This led to the formation of the state company HydroQuebec which controls practically all of Canada’s large-scale HEP facilities. The largest energy companies are: HydroQuebec (33.5GW), BC Hydro (11.2GW), ManitobaHydro (5.5GW), Newfoundland and Labrador Hydro (7GW). PPP mechanisms are now widely used in Canada with the aid of the National Council for PPP

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4 PPP Canada, website.

Canada (Ministry of Finance) and the P3 Canada Fund (an investment fund).

**Действующие схемы рассмотрения проектов ГЧП: опыт Канады**

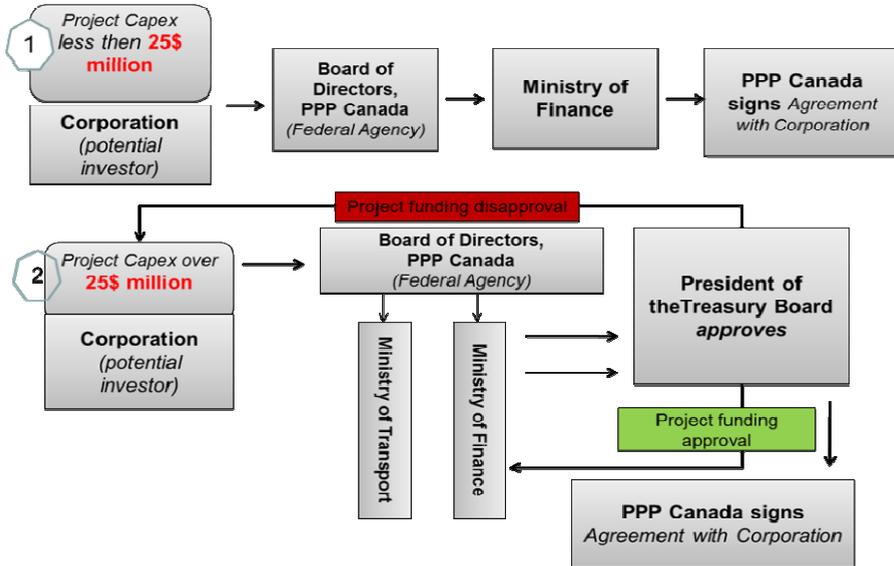


Figure 6.1 Operational Schemes for Evaluating PPP Projects: Canada’s Experience. Source: PPP Canada

**THE AMERICAN EXPERIENCE**

In the USA regional development has mostly taken place through development of large-scale hydropower facilities and the successful implementation of PPP mechanisms. The biggest federal agencies are: the US Army Corps of Engineers (20.7GW), the US Bureau of Reclamation (USBR)(14.5GW), and the Tennessee Valley Authority (TVA) (33.9GW, hydro – 4.8GW). TVA and USBR act according to the rules of state corporations and bear full responsibility for the development and implementation of programmes; they control assets according to the rules of state ownership in the dimension of 8 billion US dollars and finance events as part of the programme. TVA and USBR are to this day accountable only to Congress and the President of the USA. Regional development programmes (the Tennessee and Columbia rivers) have led to palpable results: the presence of economically effective electric energy has been stimulated through the creation of new enterprises and

growth in the regional economy, and the aluminium, mechanical engineering, boat-building and nuclear industries have been established.<sup>5</sup>

### CHINA'S EXPERIENCE

Since 2000 the People's Republic of China has followed a policy of developing PPPs, which encompasses the development of the regulatory framework, for example:

1. "Declaration of the State Council on the development and support of the private sector in the economy", 2005. This policy promotes the mobilisation of private investments in infrastructural projects, including in energy and industry by establishing Joint Ventures, through project financing and other methods of participation.

2. Temporary measures to regulate foreign investments in concession mechanisms (BOT) – 2010, currently in development.

Today, China is the world's leader in hydropower resource provision, as well as in total capacity of hydropower facilities at 100GW. The capacities of the largest hydropower facilities which have recently become operational are:

- Three Gorges, 18.2 GW (2007)
- Longtan, 5.4 GW (2008)
- Xiaowan, 4.2 GW (in construction, projected for 2012)

### PUBLIC PRIVATE PARTNERSHIP IN RUSSIA

The Russian Federation, still in the early stages of developing PPP mechanisms, is also carrying out a number of large-scale infrastructural regional development projects, one of which is the "Korporatsiia razvitiia Yuzhnoi Yakutii (YuYaGEK)" ["Corporation for Development of Southern Yakutia"]. The government of the Republic of Sakha (Yakutia), OAO<sup>6</sup> "RusGidro", OAO "Tekhsnabeksport", OAO "ALROSA' Investment Group", ZAO<sup>7</sup> "Yakutskie ugli – Noviye tekhnologii" ["Yakut Coals – New Technologies"], and OAO "Gazprom" comprise the membership of this Corporation.

The implementation of the project will include the construction of seven large-scale hydropower facilities with a total capacity of

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5 Tennessee Valley Authority, website; US Corps of Engineers, website.

6 OAO, the Russian abbreviation stands for "Open joint-stock company".

7 ZAO, that is "Closed joint-stock company".

8,500MW and a total output of 38.9 billion kWh, with the first facilities becoming operational in 2017. The cost of realising the first stage of the project (Kankunskaya HPP) is 91.3 billion rubles (\$3.5 billion) at 2009 prices, and it is clear that initial capital investments of this size present a colossal risk for the investor, and that this risk can be removed only through state involvement.<sup>8</sup> The functions of the state in the PPP mechanism include:

- development of a general scheme for finding sites for hydro-power facilities by 2030, including YuYaGEK
- creation, by means of a Presidential Decree, of a Commission for development of the Far East, the Republic of Buryatia, and Irkutsk and Chita oblasts
- initiation of a proposal to apportion 114.49 billion rubles from the Russian Federation's Investment Fund

Independent investment projects for the integrated development of Southern Yakutia, above all those such as the construction of the Kankunskaya HPP and the Elkonskii Mining and Metal Facility, are extremely capital-intensive (91.3 and 90.1 billion rubles respectively), will require considerable periods of time for their construction (13 and 10 years respectively) that lead to lengthy payback periods (discounted payback periods—34.4 and 31.6 years respectively), and complicate the investors' ability to obtain credit, especially in the Russian market.

One of the key conditions required to bring the Project to fruition is the need to establish infrastructural facilities which, in accordance with current legislation, come under or should come under state ownership (automobile and railway sectors, main lines of electricity transmission, technical equipment for HEP stations (dams)). In the event that investors' assets and contracted loans are used to cover the entirety of expenses for designing and constructing facilities for industry and infrastructure, the Project, as a whole, and independent construction projects of new industrial enterprises, specifically, will sustain negative financial and economic indicators in the forecasted 10-year period.

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8 JSC "Rushydro", website.



Figure 6.2 Railway construction commissioned by the investment project Integrated Development of Southern Yakutia. Source: South Yakutia Development Corporation

## CONCLUSIONS

By analysing the experiences of different countries in carrying out PPP projects it is possible to identify stages of maturity in PPP mechanisms. The first stage is the formation of a framework for employing PPPs (the development of political priorities and regulatory foundations): the state sector plays the role of project initiator, management bodies for the PPP are created, and the mechanism for competitive selection of projects and the market for PPP projects takes shape.

During the second stage, “hybrid” PPP forms appear (financing by the state sector is realised at various budget levels): the market for PPP projects is developed, specialist subdivisions are created in sectoral bodies, and financial institutions become involved in project implementation.

During the third stage, practicable forms of PPP are refined and complex programmes begin to appear; meanwhile, interaction between public and private sectors is characterised by greater flexibility, and project risk distribution schemes become more complex. PPPs begin to be used and applied at all stages of a project and not solely at distinct

stages, while the circle of players in the PPP market broadens (pension funds, private equity funds) and the private sector makes greater use of internal funds vis-a-vis borrowed funds in financing PPP projects. Moreover, the transfer of managerial experience from the private to the public sector can be observed, facilitating heightened effectiveness and competitive potential of state institutions. Currently only the UK and Australia find themselves at the third stage of PPP. At the second stage are the majority of developed European countries (France, Spain, Italy, Greece, Germany) and the USA, Canada, Japan, and New Zealand. At the initial, primary stage of developing the PPP market are the countries of Eastern Europe, Latin America and the CIS, including Russia.

To sum up, in order to put the PPP mechanism into practice in the Russian Federation, the following steps must be taken:

- revision of regulatory frameworks for PPPs in Russia, as well as the creation of a specialist authorised body to coordinate PPP projects (to support the procedure) at federal and regional levels
- development of a mechanism for competitive selection of PPP projects, that is, the “creation of a market” for PPP projects
- orientation of the state budget towards long-term projects (up to 25-30 years)
- adoption of greater transparency and precision in taking decisions related to state contracts and in explaining choice of partners
- adoption of a balanced policy with regard to “corporations of regional development”—their investment with greater powers (to coordinate design works and market research and to resolve environmental and legal issues, etc)
- adoption of tax-break policies for investors during projects’ payback periods

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## Chapter ◊ 7

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### CROSS-BORDER CHALLENGES FOR SMALL AND MEDIUM ENTERPRISE – BETWEEN THE PUBLIC SECTOR’S POLICY MAKING AND COMPANIES’ NEEDS

ALMA KARABEG<sup>1</sup>

#### INTRODUCTION

Cross-border cooperation is crucial because it facilitates the use of opportunities and advantages that lie across borderlines. It also contributes to stability in any border zones in a political, economic and social sense. Thus, states are obliged to develop strategies on the national level that will benefit the border zones in their countries and provide opportunities to explore the benefits across the border. States demonstrate this political will by establishing dialogues and working groups for cross-border cooperation.<sup>2</sup> In this chapter I will focus on the opportunities that such strategies provide to Norwegian small and medium-sized enterprise (SMEs) in northwest Russia. Methodologically, this presentation is based on data from participant observation of work activities over the past several years. SIVA, a Norwegian state-owned corporation, promotes Norwegian–Russian cooperation and facilitates the establishment of Norwegian SMEs in the Murmansk province; this puts it in a position to get direct feedback from the companies and to

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2 One such group is the Norwegian-Russian Working Group for Regional and Cross Border Cooperation of the Norwegian-Russian Intergovernmental Commission on Economic, Industrial and Scientific-Technical Cooperation. This alliance is focused on cooperation among the three northernmost counties in Norway and regions in northwest Russia. Norwegian Ministry of Trade and Industry, “News Story 28 October 2011: Styrket norsk-russisk samarbeid”, website of the Norwegian Ministry of Trade and Industry.

identify the factors that are obstacles to successful cooperation in the borderland.<sup>3</sup> This has high value for policymakers, and such information can be important in adjusting policymaking to realistic needs and opportunities in cross-border business collaboration. Challenges are identified and fields of improvement are noted throughout this chapter. Furthermore, cross-border cooperation like this, between the EEA zone and the post-Soviet zone, can be used as a case study to examine similar situations in cross-border zones between countries that belong to different economic and political systems.

Adopting a policy agenda to foster innovation requires a strong mandate from the highest level of policy-making. The task of creating innovation cannot be carried out at this level, so it is important to have institutions that will engage in innovative efforts. SIVA is a state-owned corporation that creates and develops innovation systems and is owned by the Norwegian Ministry of Trade and Industry. It is important for Norway to build sustainable long-term growth, and one of the measures to achieve this is to establish institutions and implement policies that lead to innovation. Structural and macroeconomic changes in the country have created the new knowledge-based economy, which is marked by internationalisation, a shift to the service sector, investment in ICT and expansion of the R&D environment. SIVA's framework strategy and business development are determined by the Norwegian government and *Stortinget*, the Norwegian parliament. The Norwegian government describes SIVA as a "national enterprise for innovation, value creation and new workplaces". The Norwegian Ministry of Trade and Industry has stated that: "SIVA is a prioritised tool in the government's work for the broad development of Norwegian innovation ability and the creation of value across the whole country. SIVA and its network contribute to close cooperation between the business sector and the R&D environment, financial environment and public agents". At present, its strategy consists of three elements:

1. To develop SIVA as an independent enterprise; as described in the Report to the Norwegian Parliament no. 30 (2004-2005)  
1: "Through ownership, SIVA should develop infrastructure where companies have access to network and competence."

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3 SIVA International Management is a wholly owned subsidiary of SIVA SF. SIVA IM is the operator of SIVA's activities in the Murmansk region.

2. To hold national responsibility for an innovation network assigned by the Norwegian parliament, in this: “SIVA shall have two main fields of interest: real estate and innovation. These two areas are closely interrelated because investments in real estate provide physical infrastructure for innovation enterprises and also make financing possible. It is positive that SIVA has as its important strategy the development of an infrastructure and innovation network in cooperation with private agents, founders, investors, research environments and education institutions.”
3. To undertake international work including its presence in northwest Russia. The Norwegian government believes it is positive for SIVA to participate in building infrastructure in other countries, since this can also strengthen domestic economic activity. Oil and gas activities in the Barents region attract Norwegian involvement in the high north and northwest Russia.

The emphasis in this chapter will be on the third component of the strategy. SIVA has carried out this strategy for the last 15 years and has today physical infrastructure along with soft infrastructure in Murmansk aimed at attracting and supporting Norwegian SMEs in Murmansk.

## **BACKGROUND**

SIVA fosters a large innovation system in Europe. More than 1,500 stakeholders, including private investors, industrial and financial corporations, companies, universities and other important R&D institutions, participate in SIVA's activities. SIVA is a co-owner in 145 companies in Norway and functions as an exchange for sharing approaches to industry and innovation. SIVA is a partner in 54 business gardens, 31 business incubators, 19 industry incubators in core industries, 25 science and research parks, 10 seed-venture companies and 12 Norwegian Centres of Expertise across Norway. The Norwegian Ministry of Local Government and Regional Development funds the support schemes for innovation concepts like business gardens, while the Norwegian Ministry of Trade and Industry supports other concepts. These centres represent important networking hubs for companies, investors and R&D

environments. In addition SIVA owns and manages 44 industrial parks.<sup>4</sup>

### SIVA'S INTERNATIONAL ACTIVITIES

In recent years SIVA has become involved in establishing a number of locally based innovation concepts in countries with a transition economy and in less developed countries where there is a need to grow sustainable businesses. SIVA's international activities have mostly been demand-driven and often on a bilateral basis. SIVA has been engaged in projects and feasibility studies in the Baltic States, Russia, Romania, Bosnia-Herzegovina, Croatia, Kosovo and South Africa.

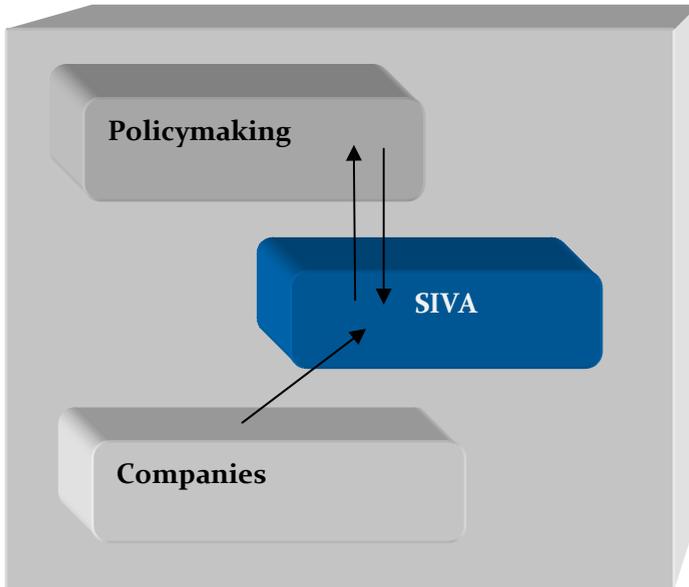


Figure 7.1 SIVA's roles as a policy implementor and receiver of feedback from the SME sector.

As part of its mission in northwest Russia, SIVA offers soft-landing support to small and medium Norwegian companies. SIVA's activity in Murmansk is carried out on behalf of the Norwegian Ministry of Trade and Industry and the High North policy.<sup>5</sup> SIVA is a tool/facilitator in

4 SIVA - Selskapet for industrivekst SF, website. <http://www.siva.no>.

5 Norwegian Ministry of Foreign Affairs, *The Norwegian Government's High North Strategy* (Oslo, 2006) p. 71.

the middle that has the task of carrying out the directives of the Ministry and the government's High North policy. This task is accomplished by creating offers for small and medium Norwegian businesses in the private sector that wish to establish business activity in the Murmansk region. Offers include access to an innovation centre and SIVA premises for companies that can be seen as a co-localisation or clustering of companies oriented towards adding value to the Norwegian economy.<sup>6</sup> In addition to physical infrastructure, soft infrastructure is developed to stimulate and support Norwegian business activity in the Murmansk region.

Figure 7.1 illustrates how SIVA is in a position to get direct feedback from the companies that are users of its services and thus uncover the factors that are obstacles to successful cooperation in the border zones. This has an enormous value for policymakers, and such information can be valuable in adjusting policymaking to realistic needs and opportunities as well as providing information to make rational choices in the public sector in terms of designing services to stimulate cross-border cooperation and support to the SME sector in Norway with international ambitions. Furthermore, such a situation can be used as a case study to examine similar situations in cross-border zones between counties that belong to different economic and political systems (for instance, the EEA zone and post-Soviet zone).

### **SIVA'S ACTIVITIES IN MURMANSK**

The offer that SIVA has created in Murmansk includes SIVA's first international involvement since the early 1990s. Its first establishment, called SIVA Center in Murmansk, was officially opened in spring 1999. Since then, SIVA Center in Murmansk has provided some 50 Norwegian companies with opportunities for industrial activity in the northwest Russian market. This engagement in northwest Russia is on behalf of the Norwegian government and is defined in the Norwegian Parliament's "High North strategy" White Paper. SIVA's Center in Murmansk achieved the status of innovation centre in January 2006 and was named the "Polar Star Innovation Centre". Activities in the

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6 See the websites of Barentsnova, the Polar Star Innovation Center and Norsk Etableringssenter.

centre range from the purchase and sale of fish to engineering for the oil and gas industry.<sup>7</sup>

The Polar Star Innovation Centre also includes a business incubator to facilitate new businesses and for stimulating entrepreneurship. Incubator Polar Star has at disposal 800 m<sup>2</sup> on the first floor inside the Polar Star Innovation Centre. The incubator opened on 8 April 8 2008 and has nine companies in incubation, with two companies having already graduated from the incubator. The incubator provides space at heavily subsidised rent and offers a range of services to help incubating companies grow and develop in the market. Target groups are Norwegian start-up companies establishing operations in Murmansk and Norwegian-Russian companies with projects oriented towards adding value to the Norwegian economy.<sup>8</sup>

Norsk Etableringssenter is part of the Incubator Polar Star, which offers soft-landing services to Norwegian SMEs in the Russian market and facilitates entry there. Such services are also carried out in cooperation with local partners. SIVA in Murmansk has an extensive network built over the past decade through its presence and activities in Murmansk.<sup>9</sup>

SIVA has bought a logistics centre in Murmashi at the Murmansk airport together with its partner Innovation Norway. The logistics centre has 8,000 m<sup>2</sup> of space, facilitates the internationalisation of Norwegian SMEs and strengthens Russian-Norwegian cooperation. Technopark Nor has an administration building, terminals and cargo transport options available by air, road and rail.<sup>10</sup>

A website, [www.barentsnova.com](http://www.barentsnova.com), has been specially designed to promote innovation in northwest Russia and Norwegian-Russian cooperation and is continuously updated with all the news, events and business opportunities in the region. Barentsnova contains several databases and a detailed overview of business activities in both Norway and northwest Russia. It is an interactive portal that includes an online dictionary, a forum and an event calendar. It also contains an online map of the city of Murmansk.<sup>11</sup>

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7 Norwegian Ministry of Foreign Affairs, *The Norwegian Government's High North Strategy*.

8 See the website of the Polar Star business incubator.

9 Norsk Etableringssenter, website.

10 Website of Technopark-NOR, Murmansk.

11 Murmansk city guide on-line map. <http://www.murmanskguide.com>.

Several other programmes/concepts have been designed lately, such as the Business Train for Norwegian companies coming to the Murmansk region and the Business Safari for Russian companies engaging in Norway. Business Train consists of workshops and study trips to encourage Norwegian-Russian cooperation and to stimulate interest in the Murmansk region among Norwegian companies.

Business Safari is a study trip designed to fulfil the business needs of Russian entrepreneurs who want to meet Norwegian industry representatives. The initial step entailed exploring opportunities and demands of Norwegians. The second step was selecting suitable candidates from their Russian counterparts that meet Norwegian demands. The main component was categorising the participants into industry-related groups before their study trip to Norway and arranging seminars and business-to-business B2B meetings.



Figure 7.2 The Technopark Nor offices at the logistics centre in Murmachi close to Murmansk Airport. Photo: SIVA

All these programmes and concepts have provided a platform for collecting feedback from Norwegian companies on their challenges in the Murmansk region, and as a side effect also the expectations of Norwe-

gian SMEs for their Russian counterparts/SMEs. SIVA is also in a position to gather information from all those involved in the process, and identifying the needs and challenges of companies is an important starting point in designing the concepts that will facilitate the task of helping companies. Nevertheless, it is important to adjust this work to the policies adopted by the Norwegian government. It has to meet the government's expectations and policies, on one hand, and the needs and aspirations of private companies on the other hand. One important factor in this particular case is that Russia is not a member of the EU, the EEA or Schengen, and was only recently made a member of the WTO, while Norway is a participant since long in all of these collaborations except the EU. This creates a challenge for companies because they need to operate in different systems, so crossing the border is not always a smooth transition. SIVA's task is to make this transition as smooth as possible, and providing physical infrastructure lowers the risk for companies. However, there are some factors that cannot be addressed by SIVA directly, but the knowledge it gains can provide a platform of information that influences decision-makers.

Another important variable in this case is trust in the system—the social and legal context of business. While there is generally trust in the system in Norway, a variable like this generates low scores in Russia.<sup>12</sup> The extension of business across the border may seem full of risks to Norwegian companies, trust is a variable that can jeopardise successful cross-border cooperation, thus it needs to be built for companies to become involved in business across the Russian-Norwegian border. While building trust is not an easy task, one option to ease this process is to create a common voice through an association for interested parties/companies that articulates their challenges clearly to the local decision/policy makers. Such incentives cannot come from disorganised, sporadic enquiries that appear from time to time from different businesses in the borderland. It should take the form of unified organised communications from stakeholders, with each one contributing expertise in their field.

One such initiative started by SIVA in Murmansk is FIBA, which promotes the interests of foreign companies in the Murmansk region.<sup>13</sup> It has a dialogue with regional and federal authorities and carries out

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12 European Social Survey, website. <http://www.europeansocialsurvey.org>.

13 Foreign Investors Business Association, FIBAssociation, website.

activities to improve the business and investment climate. It is convinced that the economic development of Russia is furthered by opening its markets internationally and welcoming foreign investors.

The relationship between the EU and Russia is another variable that influences the relation between Russia and Norway. There are several programmes involving Nordic members of the EU together with Norway and Russia. The cross-border business cooperation between Russia and Norway has to be seen in the context of the EU dimension as well.

### JOINT EFFORTS: COMMON BORDERS PRODUCE COMMON GOALS

In order to overcome the challenges that SMEs in cross-border zones face, institutions and bodies on both sides of the border need to cooperate and establish strategies that satisfy one another. Each sector/segment/department needs to fulfil its tasks in order to achieve the common goal.

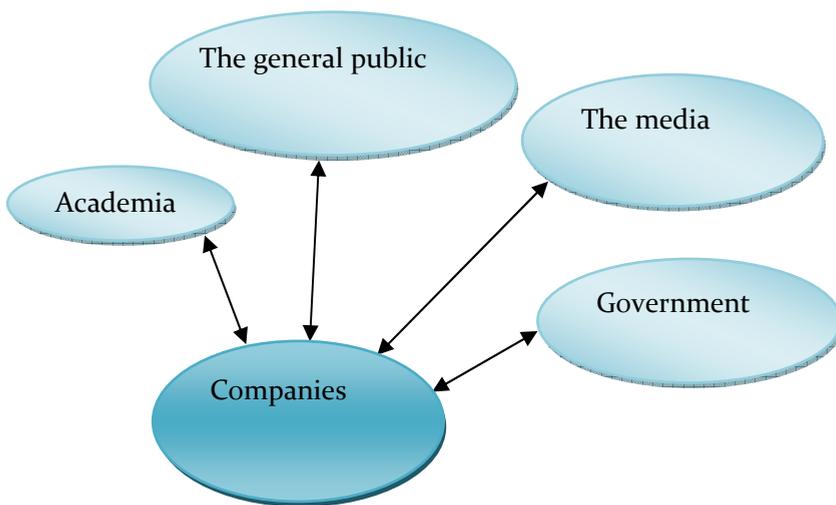


Figure 7.3 shows the main classes of stakeholders that exert a reciprocal influence with companies: the media, academia, government and the general public.

The media and journalists need to be trained and educated to focus on the important issues and highlight the real business challenges in the border zone. Such an approach will also help to educate the general public, which will acquire better knowledge about cross-border busi-

ness opportunities, and this in turn will stimulate the growth of trust between the neighbouring countries and in their borderland.

Academia: it is important to educate people in this group of stakeholders, especially those on both sides working in the field of economics. Some Norwegian-Russian initiatives have already been taken.<sup>14</sup> Cross-border research and courses are needed to educate future employees who will implement business in practice, and to raise the awareness among the educated workforce about opportunities. It is crucial that decision-makers receive input from academia and professionals with higher education about any adjustments or change required in for example legislation to further cross-border business.

The government needs to show the political will, maintain dialogue and engage in intergovernmental working groups in order to revise legislation, motivate businesses and create an environment to carry out its strategies. All three stakeholder groups create and influence general opinion. Without general opinion, it is difficult to motivate or support businesses.

## CASES

The results of two recent surveys will be discussed below. They were carried out by SIVA International management in 2011 to determine the demand from the Norwegian SMEs in Sør-Varanger Municipality in north-easternmost Norway, bordering on Russia, for operating in the Russian market. In one survey enterprises in this municipality were inquired to help identify their interest in the Russian market and willingness to cooperate in Russia. The other survey was aimed at clarifying the practical interests of SMEs in SIVA's network in cooperation with Russian businesses.

### SØR-VARANGER: LIKELIHOOD OF INCREASED TRADE AND TOURISM BETWEEN NORWAY AND RUSSIA IN THE NORTH

According to the survey conducted by SIVA in collaboration with Kirkenes Business Park (Næringshage) the companies in Sør-Varanger Municipality with the border-town Kirkenes, think there will be more interaction with Russian companies after a northern visa-free zone in

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<sup>14</sup> Among other a Norwegian–Russian MSc programme in energy management with the University of Nordland in Bodø as Norwegian partner. “Study Programmes at Bodø Graduate School of Business”, website of the University of Nordland.

the north between Norway and Russia is put in effect in 2012. This visa-free zone extends 30 km on each side of the boundary and has been agreed upon earlier by the governments of Russia and Norway. The majority of companies believe that this is a positive development that will pave the way for new business opportunities, especially in border-trade, tourism and the exchange of labour.

Norwegian companies from every industry in Sør-Varanger were represented in the survey, and the majority of the respondents are SMEs companies with fewer than ten employees. Some of the companies have Russian employees and they expressed interest in hiring several Russian employees in the future. Only a few companies in Sør-Varanger Municipality do not currently have Russian employees but state that they consider the possibility.



Figure 7.4 The Kimek shipyard in Kirkenes with parts of the Sydvaranger Iron Mine enrichment plant visible on the hill in the background. Photo: Urban Wråkberg

A small number of companies are in need of physical premises for their own business, but the majority focus on the new opportunities to interact with Russian companies and potential Russian customers. Regardless of their experience with previous cooperation, most of the companies want to establish a meeting place where they can discuss and gain insight into the knowledge of other Norwegian companies about cooperation with Russian enterprises, as well as to access a network to find potential Russian partners, and to share expertise and learn about the neighbour's culture and language. Respondents believe that such a forum can be a catalyst for new markets, especially in the

trade and service industry and tourism, which are deemed to have especially good opportunities for growth as a result of the new visa-free zone.

Some companies also hope that experiences of this waiver of visa in the local border zone will be good enough to motivate a further expansion of it in the future. The Russian city of Murmansk about 240 km east, with over 300 000 inhabitants, is of course of particular interest also because companies in Sør-Varanger that are established in the Russian market mostly have operations there. They would like to combine their pursuits in this city with the visa-free zone between Pechenga in Russia and Sør-Varanger in Norway so that the flow of goods and services and exchange of labour become easier.

#### NORWEGIAN COMPANIES' IDEAS FOR NORWAY'S RUSSIA STRATEGY

SIVA International Management has also conducted a survey that should serve as a basis for input for the Norwegian Government's strategy for Russia. Two identical questioners were used. One was sent to companies established in Russia today; we received a total of 38 responses in this survey. The second survey was sent to SIVA's network in Norway, and respondents were companies that consider Russia an interesting market; we had 10 respondents in this study. The survey also focused on input issues, enabling us to receive input that is not covered by questions in the survey.

The respondents represent various industries and different parts of the country. Two of the respondents are from businesses established solely in Murmansk in northwest Russia. The majority of answers are from companies with 1-50 employees, that is, SME businesses.

- The majority of respondents who have established business in Russia considers them to be successful.
- The majority of companies aims to be leaders in their industry, and believes that Russia will become more important as a market in the years to come.
- Most companies think that industrial activity in Russia brings growth to their company in Norway and is important for their company and their Norwegian partners in the future.
- The market for companies today is primarily northwest Russia and the St. Petersburg region. As for geography and the new Russia strategy, the majority of respondents think that the strategy should not be tied to any geographical boundaries.

- The respondents in general believe that the strategy should not be defined relative to company size. All sizes must be included.
- The majority of businesses thinks that a Russia strategy should focus on industries where Norway has the potential to succeed.
- Most finds it of outmost importance that the company has a clear business plan and access to necessary financial resources as well as human capital, while less focus should be placed on the business history and existing establishment, for example, in the domestic market.
- The most important demand among the companies is for assistance in finding Russian partners, identifying customers and for help in dealing with Russian bureaucracy.
- In terms of the difficulty of doing business in Russia, respondents highlighted: unpredictable regulations, incomprehensible bureaucracy, the business culture, corruption, language difficulties and a lack of Norwegian business instruments. Instruments regarded as important for doing business in Russia are: guarantees for exports, loans on commercial terms for the purchase of machines, facilities for physical creation, access to venture capital, offers for a lease of premises in the Norwegian industry, knowledge transfer and consulting, Norwegian grants and support schemes.
- With regard to the physical establishment in Russia, companies preferred to rent their premises from Norwegian landlords or rent offices in major Norwegian-owned industrial parks.
- When asked if a Russia strategy should also include ways to attract Russian establishments in Norway, the majority of respondents answered in the affirmative.

#### NIKEL AND KIRKENES

Companies have many different opinions, but the majority of companies are not interested in space in Kirkenes and Nikel. Only three or four respondents were interested in facilities in Nikel and four respondents were interested in Kirkenes. Many are interested in a forum where they can learn from each other's experience with Russian com-

panies and employees. The majority believe that the revised visa regime will have a positive impact on business, and the majority also believe that it will affect trade and commerce.

Suggested improvements:

- Encourage the international companies with major resources to take on more students for exam project and for specialisation/traineeship on the high north
- Better language skills
- Simplify product approval and permissions for intermediate products for direct border transit, this applies especially to ships on international voyages with stops in the Kola region
- Continue facilitating traffic in a border zone to expand tourism
- Customs restrictions on imports into Russia should be alleviated for Russian customers to Norwegian firms

## CONCLUSIONS

The concept of innovation is common in both emerging and more developed economies, but the challenges are different in emerging economies. SIVA believes in the method of “learning by doing”. It is important to create a set of rules and predictability in innovative environments. By establishing innovative concepts in other countries with emerging economies, SIVA hopes to transfer not only its professional expertise in managing these concepts, but also some of its CSR experience in creating strong institutions in order to maximise the benefits of natural resources on the road to a knowledge-based economy.

Cross-border cooperation needs to be based on common priority areas. Alliances can be formed across the countries. Priority areas of cooperation can be found in education/academia as well as in business initiatives. These two are also correlated, since professional systems and company cultures are fostered by the education system. Such cross-border unions could preserve common interests. Another important dimension is the division between central and regional power and at what level plans for business development are made. Central plans could be a factor, which explains why regions close to the border cannot always take advantage of regionally evident opportunities for cooperation. A region could see the need and potential to apply vari-

ous cooperation models but would not have the authority to implement them. Using agent-principal theory, we could say that the agent in the region is closer to the user, but the principal is the one ordering the goal. The effect is that there could be a gap between the needs and opportunities on one side and the estimated needs and opportunities provided in the central plan.

For successful cross-border cooperation, it is important to keep up bilateral negotiations on several levels and to integrate national strategies on the regional level. This should be based on continuous feedback from all relevant stakeholders with the aim to coordinate improvements in infrastructure, logistics, transport and legislation issues across the border. This would also be the basis to launch joint programmes targeting other challenges of the border regions.

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## Chapter ◊ 8

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### THE HUMAN DIMENSION OF THE BARENTS EURO-ARCTIC REGION

KSENIYA BESTUZHEVA<sup>1</sup>

In the second half of the twentieth century, in a period of conflict, contradictions and military and economic stand-offs, when wars were fought regularly or were supplanted by crises, the global community urged for world stability and public security. The development of a stable world could only be achieved through the establishment of democratic governance and cooperation among governments, societies and people. The global agenda began to feature questions on human rights and the proliferation of democracy, requiring the steadfast attention of governments around the world.

The 1970s witnessed a significant increase in humanitarian interactions thanks to the easing of international tensions. There was a growth in exchanges in the fields of culture, information, and education, with further development of tourism and contacts between people. The positive experience of the 1970s culminated in the Helsinki Final Act in which the member states of the Commission on Security and Cooperation in Europe (CSCE) defined the four fundamental lines of humanitarian cooperation: contacts between people, and cooperation in the fields of information, culture and education.<sup>2</sup>

#### ENVISIONING THE HUMAN DIMENSION

At the Belgrade meeting in 1977, the CSCE officially identified the “third basket” to address the main goals of the organisation, which included the so-called human dimension, or more precisely human rights, the development of democratic institutions, humanitarian issues and other related topics. The process of democratising institutions began, as did the rapid growth of interdependence between the states

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1 PhD student, Northern (Arctic) Federal University, Arkhangelsk, Russia.

2 Conference on Security and Cooperation in Europe, *Final Act* (Helsinki, 1975). <http://www.osce.org/mc/39501>.

and peoples of the world. The adoption of the final protocol of the CSCE meeting in Vienna in early 1989 served as a major step for further development of humanitarian cooperation. This document established the concept of the “human dimension of the Europe-wide process”, which detailed the relationships between the East and the West in the field of humanitarianism, provided safeguards for citizens’ rights and freedoms and facilitated human interactions. It was at the Vienna meeting that a mechanism facilitating cooperation between governments on these issues was developed, paving the way to bilateral and multilateral interactions, such as the three-stage conference on human rights and humanitarian relations in Paris, Copenhagen and Moscow, as well as the Information Forum in London and the Symposium on Cultural Heritage in Krakow.<sup>3</sup>

Today the human dimension is an actively developing aspect of the daily endeavours of the OSCE, the UN and other organisations. Every session invariably entails a discussion on the stance of a given government with regard to human rights. The quantity of measures and events dedicated to humanitarian issues is growing and these deal with an ever-broader range of topics. This humanisation has also introduced the human dimension into global politics, bringing the issues of human rights provision in their totality in line with other vital commitments such as the prevention of wars, disarmament, development, and the resolution of environmental and other global problems.

Various international organisations also began to integrate the human dimension into their work. One outstanding examples of the development of cooperation within the human dimension is the Barents Euro-Arctic Region. The idea to create a regional trans-border collaboration with participants from sub-Arctic Scandinavia and the north-western oblasts of Russia was first proposed by leading Norwegian politicians. This cooperation was made possible by the geographical proximity of these regions and, more importantly, the long historical tradition of good neighbourly relations and contacts between ordinary people from the countries involved. A number of factors contributed to the creation of the Barents Euro-Arctic Region. Undoubtedly, European cooperation played a part, guiding and developing the trends and mechanisms of collaboration and activating and expanding the

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3 Andrey Zagorskiy, *Helsinki Process: Negotiations within the Conference on Security and Cooperation in Europe 1972–1991* (Moscow, 2005) [in Russian].

negotiation processes which comprised not only the usual domains of political, political-military and economic relations, but also one of the most important domains—that of humanitarianism and human rights, brought together in the so-called human dimension.

### **THE KIRKENES DECLARATION OF 1993**

The creation of the Barents Region was formalised in the Declaration of Cooperation in 1993. The Declaration's preamble expresses the participants' support for Russia's course of reform and the desire to support the age-old commitment of the peoples of the Barents Euro-Arctic Region to friendship and cooperation. There was much attention given to cooperation in science and technology, tourism, education and cultural exchange, as well as to projects tailor-made to improve the position of the indigenous people of the North. The initial document featured a section on the human dimension, although it was worded very carefully as "contacts between people". Similarly, the following phrase of fundamental significance also appeared: "the development of contacts between people and of cultural cooperation in the region should be encouraged with a view to facilitating constructive cooperation and good neighbourly relations". This came to form the basis and starting point for the development of this trend.<sup>4</sup>

There were other sections relating to human development and human relations: support and development of cultural relations, which have come about as a result of the previous so-called "Nordkalotten" collaboration dating back to the days of the Cold War and continuing into the current twin towns movement; in parallel with Academic cooperation in science and technology, including fields such as geology, oceanography, atmospheric physics, ecology, construction, fishing, aquaculture, forestry, communications, the mining industry, off-shore hydrocarbon extraction and cold region technology. Moreover, the need to exchange experiences and information was noted, as was the need to encourage the sharing of technologies by, for example, establishing collaborative scientific laboratories and expeditions as well as

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4 The 1993 Declaration on the Barents Euro-Arctic Region, also called the First Kirkenes Declaration.  
<http://barentsculture.karelia.ru/site/1077013786/1077106320/1081942971.html>.

cooperation in training scientific professionals and specialists in the fields mentioned above.

Other sections of the Barents collaboration looked into safeguarding the rights of the indigenous people of the North: within this context it was agreed to create a specialist working group to deal with issues regarding indigenous peoples, and to prepare corresponding regional programmes by setting up Saami cultural centres in Lovozero (in Murmansk oblast) and Nenets cultural centres in the Nenets Autonomous Okrug (or the Nenets Autonomous Territory). Similarly, another section encouraged tourism on a national, regional and local level, and included paragraphs on developing contacts in tourism and developing the relevant infrastructure. The development of economic cooperation, trade and business is rooted in people, and these collaborative domains cannot exist in the absence of dialogue and mutual understanding between people. In 1993 working groups, encompassing the scope of the human dimension, were created to deal with issues such as: culture; higher education, science and student exchanges; secondary education and school exchanges; issues regarding indigenous people; and women.

### **THE FIRST DECADE**

Ten years after the cross-border collaboration of the Barents Euro-Arctic Region (BEAR) was founded, 2003 proved to be a benchmark year. Work took place on two important projects in the domain of the human dimension in the Barents process—the programme for cultural cooperation and the BEAR youth programme. In January of the same year the Declaration by the Heads of State was signed, as was the Memorandum of the Regional Council. The opening section of this Declaration emphasised that in ten years much had been achieved by the collaboration. It was also pointed out that the initiative to create the Barents Region confirmed the value of close interaction and straight-forward cooperation between people, while plans were made to establish cultural cooperation and involve the indigenous population in cooperative relationships. The Memorandum of the Regional Council, which was named “Challenges for the Next Ten Years”, highly

praised the results of the ten-year collaboration and emphasised the importance and value of cooperation between people.<sup>5</sup>

The ninth session of the Barents Regional Council which took place in the Swedish town of Umeå on 1-2 October came to serve as a kind of concluding cadence to the Barents Region's most significant political events of 2003. The joint communiqué that was adopted according to the conclusions of the Barents Regional Council session in Umeå gave expression to many contemporary issues regarding the Barents cooperation, and it was here that the future agenda was set down. The provisions of this document concerned cooperation in the human dimension and in the development of scientific research. Special clauses of the concluding communiqué referred to involvement of the region's indigenous peoples in the Barents cooperation and the issue of gender equality.<sup>6</sup>

### THE HUMAN DIMENSION

Currently in the Barents Euro-Arctic Region there are operational working groups tackling the human dimension, such as the working group on the affairs of indigenous people, the working group on education and research, the working group on cultural cooperation, the working group on tourism and the working group on youth cooperation. Today the field of socio-humanitarianism continues to be developed actively. As far as cooperation in the field of human rights is concerned, this boils down to cooperation in women's rights, youth rights and indigenous people's rights.

The notion of the "human dimension" within the framework of the Barents Region was first invoked at a high level by the leaders of the founding states in 2002 in the joint declaration of V. Putin, President of the Russian Federation, and K. Bondevik, Prime Minister of Norway, and encompassed cooperation in the fields of economic and social development, social security, gender equality, issues relating to children and adolescents, culture, education, scientific research and ethical problems.

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5 Memorandum of the Regional Council called "Challenges for the Next Ten Years". <http://www.gov.karelia.ru/Karelia/996/23.html>.

6 The "Joint communiqué" of the ninth session of the Barents Regional Council held in the Swedish town of Umeå on 1-2 October 2003, see *Barents-Journal* (2003) 1, pp. 95-98.



Figure 8.1 Swedish, Norwegian and Danish Barents Region enthusiasts demonstrating at the three-nations' border cairn between Norway, Finland and Russia in August 2011. Photo: Urban Wråkberg

In terms of the development of the human dimension, the Barents Region is the most successful region in Europe. The BEAR has always focussed its attention on humans, and on the interests, rights and freedoms of man. The BEAR is a brilliant case boasting high indicators on the human development index, such as social tolerance and transparency. All aspects of the human dimension feature in the region, ranging from cooperation between children, youth and the indigenous population to cooperation between universities and cultural and scientific institutions. It follows, then, that *under the term "human dimension"* in the Barents Region can be understood all issues relating to man and the development of man, as well as issues concerning hu-

man rights, cultural and scientific cooperation and contacts between people.

Thus, the following tendency can be observed today: the BEAR boasts very rich cultural potential and a well-developed system of treaty relations, and of all the topics constituting the “third basket” by far the most preference is given to the development of exchanges in the fields of culture and education. Let us dwell on these two fields and highlight some examples of successful cooperation within them.

### TRACK RECORD OF THE BEAR

The first meeting of the Ministers of Culture of the countries of the Barents Region took place between 31 August and 1 September 1993 in Kirkenes, during which a declaration delineating the trends of cooperation in this sphere was put together. In an interview with the regional newspaper *Finnmarken* on the eve of the meeting, the Norwegian Minister of Culture, Åse Kleveland, highlighted that “culture is of decisive significance for the future of the region and for the self-awareness of its peoples,” adding that “this is not mindless spending, but a very safe investment”.<sup>7</sup> Years of experience of cultural interaction were gathered in the previous cross-border framework of Nordkalotten, and it was proposed that this experience should be used and developed in the context of the Barents cooperation.

Between 1995 and 1999, 1 to 1.8 million Norwegian kroner of the Barents Programme’s resources were allotted per annum to cultural cooperation, comprising 4% to 9% of the overall financing of the project. Extremely successful was the project to create a Euro-Arctic contact network for cultural directors. Participants of seminars were presented with a management training programme in the fields of culture and working with financial funds. The meeting of the Ministers of Culture of the Barents Region countries in Arkhangelsk on 9-10 September 1998 and the resulting communiqué served as a starting point for formulating a new future programme of cooperation. The report on Barents cultural cooperation of September 2001 named 416 implemented projects, most of which were carried out by two or three countries. The progress of preparing the Plan of Action on cultural cooperation was discussed at the Barents Region Cultural Committee meeting in Kostomuksha on 26–27 June 2002. The basic aims of cultural coopera-

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7 *Finnmarken* 30 August 1993.

tion were established for the period 2003-2006, as was the timescale for preparing this document.<sup>8</sup>

The main aims of cultural cooperation in the Barents Region were identified: 1) to make the cultural aspects of the Barents Region prominent in international relations and thereby facilitate economic cooperation; 2) to create spaces for new cultural meetings where different people of both sexes, especially youth, can interact; and 3) to create horizons of awareness of regional identity and give life to Northern cultural trends.<sup>9</sup>

Simultaneously, the Barents Regional Council carried out work on the Barents Region Youth Programme for 2003-2006. Official youth cooperation at the regional level in the Barents Region began with the Meeting of the Barents Region Youth in Kiruna on 4-6 September 1998. This cooperation was formalised through the organisation of the Barents Regional International Forum in 2000, which hosted a number of conferences after its creation.

At the May 2001 conference of Ministers on affairs regarding Barents Region youth, a Plan of Action, prepared in consultation with the abovementioned working group as part of the Youth Programme, was adopted.<sup>10</sup> It was declared that the aim of this Programme was to lay the foundations for: improving the living conditions of youth in the Barents Region by prioritising youth issues within the Barents Cooperation; the growing participation of youth in basic activities within the framework of the contact network of the Barents Region; the consolidation amongst young people of the feeling of belonging to the Barents region by establishing contacts across cultural and geographical borders; promoting the allure of the Barents Region to young people by improving their living conditions, with a view to encouraging youth to remain in the region or return to the region after completing their studies. The priorities of the cooperation were declared to be educa-

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8 V.I. Goldin, "Mezhdunarodnoe sotrudnichestvo v Barentsevom Evro-Arkticheskom regione: desiat let istorii i vzgliad v budushchee" [International Cooperation in the Barents Euro-Arctic Region: Ten Years of History and a Look into the Future], *Barents-Journal* (2003) 1, pp. 6-7.

9 *Voices in the Barents Region: Action Plan for Cultural Cooperation in the Barents Region, 2003-2006*, pp. 18, 27.  
<http://barentsculture.karelia.ru/site/1077013786/1077106320/1082022562.html>.

10 "Molodezh Pomorya" [The Youth of Pomors]. <http://www.molarh.ru/>.

tion and enterprise, culture, sport, the environment, social issues and health, and the indigenous population and minorities.<sup>11</sup>

The International Conference of the Barents Euro-Arctic Region “Culture, Tourism, Information: Interdependence for Sustainable Development” ran from 29 June to 1 July 2005 in Arkhangelsk. The participants included over 80 representatives from libraries, information institutions, tourist offices, museums, government authorities, scientific and social organisations, and mass media organisations from Arkhangelsk, Murmansk and Vologod oblasts, the Republic of Karelia and the Komi Republic, and from Finland and Norway.

Participants’ interventions at the conference told of activities relating to the creation of information resources and organising access to them, the preservation of cultural heritage, and development promotion of cultural development of peoples living in the Barents Region. Issues dealing with the development of culture and tourism, as well as the opportunities for libraries to provide information support in these fields of activity, were also considered. Thanks to the conference the main directions of cultural cooperation were delineated<sup>12</sup>. Particular significance was given to the growing role of libraries in building bridges between information and people.

On 18 June 2008, the international forum “Culture of the Barents Region” was opened in Arkhangelsk. The main task of the forum was to establish a new programme of cultural cooperation for 2008-2010, entitled “New Trends in the Barents Region”.<sup>13</sup> The experiences acquired in the wake of the first programme, “Voices of the Barents Region”, were taken into account in drawing up the new Programme, as were the results of the 2001 report on cultural cooperation in the Bar-

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11 “Molodezhnaya Programma Barentseva Regiona na 2003-2006 gg” [Youth Programme of the Barents Region for 2003-2006], pp. 4-6, 14.  
<http://barentsculture.karelia.ru/site/1077013786/1077106320/1081947508.html>.

12 “Text of the Conclusive Document of the International Conference of the Barents Euro-Arctic Region: Culture, Tourism, Information: Interdependence for Sustainable Development”, *Culture, Tourism, Information: Interdependence for Sustainable Development: Materials from the International Conference of the Barents Euro-Arctic Region, Arkhangelsk, 29 June - 1 July 2005* (Arkhangelsk, 2005), pp. 268-272.

13 “Na forum ‘Kultura Barentseva regiona’ v Arkhangel’ske soberutsia ministry kultyury” [Ministers of Culture gather at the ‘Culture of the Barents Region’ forum in Arkhangelsk]. <http://www.regnum.ru/news/1015050.html>.

ents Region. It is clear that cultural cooperation in the Barents Region has developed and continues to develop with great success.

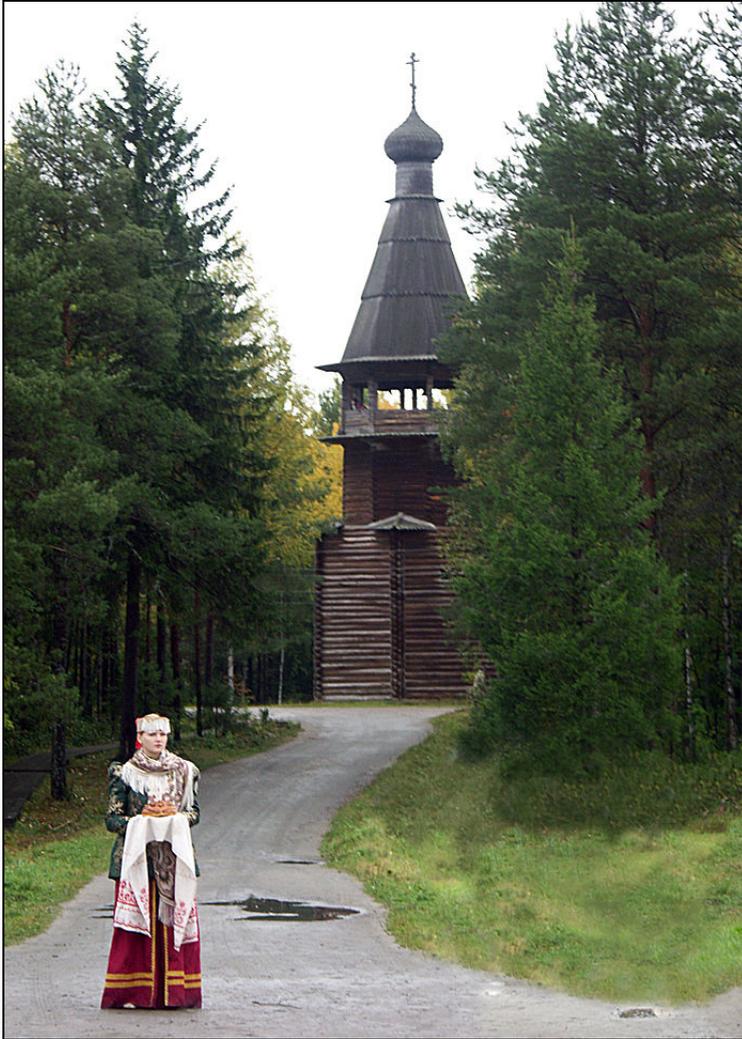


Figure 8.2 The Russian “bread and salt” tradition of greeting guests welcome, about to be performed at the Malye Korely open-air museum outside Arkhangelsk. Photo: Urban Wråkberg

Today, the range of projects realised in the sphere of culture is very wide, and includes events such as sports competitions, dances, festivals, collaborations in the ambits of literature and the Christian Church, art exhibitions, music and cinema. In recent years cooperation has begun to give greater voice to the need to create a virtual network

of information centres, services and organs of information activity in the Barents Region. One of the main achievements of the Barents cooperation in the field of culture is that it is facilitating the development of contacts between ordinary people.

With regard to cooperation in science and education, only three months after the foundation of the Barents Cooperation, an impressive international conference was held in Arkhangelsk in April 1993 (the Pomor State University initiated the conference and served as one of its organisers), which featured presentations by politicians and scientists on the theme of “The Barents Region: Cooperation in the Field of Education and Research”. The conference broadened and concretised the agenda and the direction of the cooperation<sup>14</sup>.

The 1990s saw the process of internationalisation in the spheres of science and higher education swiftly gather momentum in the Barents Region, culminating in the signing of international agreements by tertiary institutions and the initiation of scientific projects and programmes, including multidisciplinary projects. So-called networks were created, which essentially functioned as research consortiums for different branches of knowledge—a network of ecology centres in the Barents Region, for example, or a network of gender centres.

Time has shown that the process of international research cooperation was by far the most actively and successfully developed in the humanities and social sciences, or more precisely in history, ethnography, religious studies and folklore, thereby facilitating the formation of the human dimension in the Barents Region.

A meeting was held on 11 January 2003 to coincide with the tenth anniversary of cooperation in the Barents Region, bringing together heads of states of the Barents Region and the European Commission. The resulting Declaration highly valued the significance of cooperation in the Barents Region and of cooperation in education and scientific research geared towards the development of the region. In May of the same year the Barents Region working group on science and higher

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14 V.I. Goldin, “Pomorskii gosudarstvennyi universitet imeni M.V. Lomonosova v sisteme mezhdunarodnogo sotrudnichestva so Skandinavskimi stranami i Finliandiei” [Pomor State University in the System of International Cooperation with Scandinavian Countries and Finland], *Barents-Journal* (2008) 1, p. 27.

education embarked upon an initiative to create a shared space for science and education in the region.<sup>15</sup>

In 2006 the Barents Institute was founded, earmarked to become an important centre that would consolidate and support international social science research in the region. A focus has been placed on border studies, an interdisciplinary field of research exploring borders and cross-border cooperation across regions. This subject covers a wide range of historical, socio-humanitarian, environmental, energy-related and natural sciences issues.

### CONCLUDING REMARKS

The Barents Euro-Arctic Region is a leading region in the sphere of development of research and higher education and in the creation of shared scientific space. This, in turn, promotes sustainable development in the Barents Region on the basis of science, education, innovation and an economy of knowledge.

Cooperation in the sphere of culture and education has developed successfully and is continuing to do so. However, it is also important to broaden cooperation within the Barents Region with regard to the observation of human rights, allowing for a fresh perspective on the economy, politics and laws through the lens of real human interests.

The BEAR, comprising thirteen regions in four countries, presents an important example today of how a peripheral region of Europe is able to develop through exchange and cooperation in research, culture, education and tourism, despite the cultural and political differences of these regions, not to mention the large distances, severe climate and economic and demographic challenges. The BEAR can be seen as a kernel of the development of mutual understanding and interdependence between people, and these become the best guarantees of stability and extended peace. Just as the North in the twenty-first century acquires major significance, so cooperation in the Barents Region is of huge importance and can be regarded as an integral part of the construction of a flourishing Europe and of a “Europe of the Regions”.

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15 V.I. Goldin, “Protsesy internatsionalizatsii v sfere vysshego obrazovaniia i nauki v Evrope i v Barentsevom regione” [Processes of Internationalisation in the Sphere of Higher Education and Science in Europe and in the Barents Region], *Barents-Journal* (2007) 1, pp. 17–21.

The main task of the wider research behind my overview in this chapter is to determine what is understood by the human dimension in the BEAR, how recognition of the human dimension has taken place, how it has evolved and what has been achieved in relation to it. People, human relations, the human dimension—lie at the core of the BEAR, and it is therefore important to determine how the development of cooperation in the domains of human relations influences other spheres of cooperation, the efficacy of this sphere, what has been done and what needs to be done in the domains of the human dimension, and how much success this sphere has had relative to other regions. Through further research, it will be possible to draw conclusions on how cooperation in the sphere of the human dimension in the Barents Region compares in relation to the Europe-wide process.

It is essential that research and joint work within the human dimension should continue, as it is precisely cooperation between people that paves the way to the development of harmonious relationships between them and to the expansion of interaction between countries in the various domains of our lives. And if such interaction is established on a human level, then the development of international dialogue at the level of governments may well take a new turn.

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## Chapter ◊ 9

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### BUILDING COMPETENCE IN THE BARENTS EURO-ARCTIC REGION BY PROACTIVE PROFESSIONAL DEVELOPMENT

SPEECH AT THE MOSCOW ROUND-TABLE “FUTURES OF  
NORTHERN CROSS-BORDER COLLABORATION”

REMI STRAND<sup>1</sup>



#### 1. INTRODUCTION

**D**ear participants,  
my name is Remi Strand.

I live in Vardø which is a relatively small city even by Norwegian standards and my location is as far north-east as you can go in Norway. Vardø is the oldest town in Finnmark County, which is the name of the most northern county of Norway. Of profession, I'm a lawyer, working as attorney at law. I have recently been elected a member of the local city council of Vardø and also of the regional parliament in the county of Finnmark. For the two last years I've been leader of the committee of international affairs in the regional branch of the Norwegian Social Democratic Party. For many years I've held assignments in boards of private industrial corporations. Out of personal interest I've also been active in the public debate concerning the utilisation of northern natural resources and the application of international law on the high north. I've been active in different cross-border projects, from business to law, from sport to humanitarian issues and the protection of women's rights.

I want to start by expressing my sincere gratitude to the Pomor Research Forum for giving me the possibility to speak in this seminar.

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Our theme is: Futures of Northern Cross-Border Collaboration. My theme in this will be: the rise in northern oil and gas investments and the need to prioritize societal development and higher education in the Barents Region.

I will start by some general arguments about the forces of change in the Barents Region. Next I will introduce my thesis. Thereafter, I will try to develop some concrete aspects of my thesis: concerning jurisprudence, about the protection of the environment, and shed some light on the issue of how to improve the standards of living in the Russian countryside of the Barents Region. In the end I will say some words about what I, from my personal stand-point, mean should be the next step in dealing with the northern challenges of tomorrow.

## **2. WHAT WE HAVE ACHIEVED**

For the last twenty years we've been happy to experience big changes in the political power-field between east and west in Europe. This opened the floor for the former Norwegian Minister of Foreign Affairs Mr. Thorvald Stoltenberg—in the Barents Region sometimes called “Daddy-Barents” for his many initiatives to further cross-border, people-to-people understanding and cooperation. Ground-breaking among his achievements was the very establishment of the Barents Euro-Arctic Regions based on the agreement on the Kirkenes declaration signed in 1993 by the foreign ministers of Norway, Russia, Finland and Sweden. Next the Norwegian Barents Secretariat was inaugurated in the town of Kirkenes; many other more specialised Barents organisations followed and many hundreds of cross-border projects have been completed since then. In 2007 a jointly governed International Barents Secretariat opened its doors, also in Kirkenes.

For twenty years now sportsmen, artists, scientists, steadfast regional politicians—like for instance Thor Robertsen from Finnmark, and ordinary people have all developed and strengthened activities and understanding across the borders of the Barents Region. This has resulted in a much improved dialog between Norway and Russia on all levels. The latest highlight in this, of circum-Arctic if not global importance, is the 2010 agreement between the Norwegian and Russian governments closing for good the issue of the formerly disputed area between our two nations in the Barents Sea.

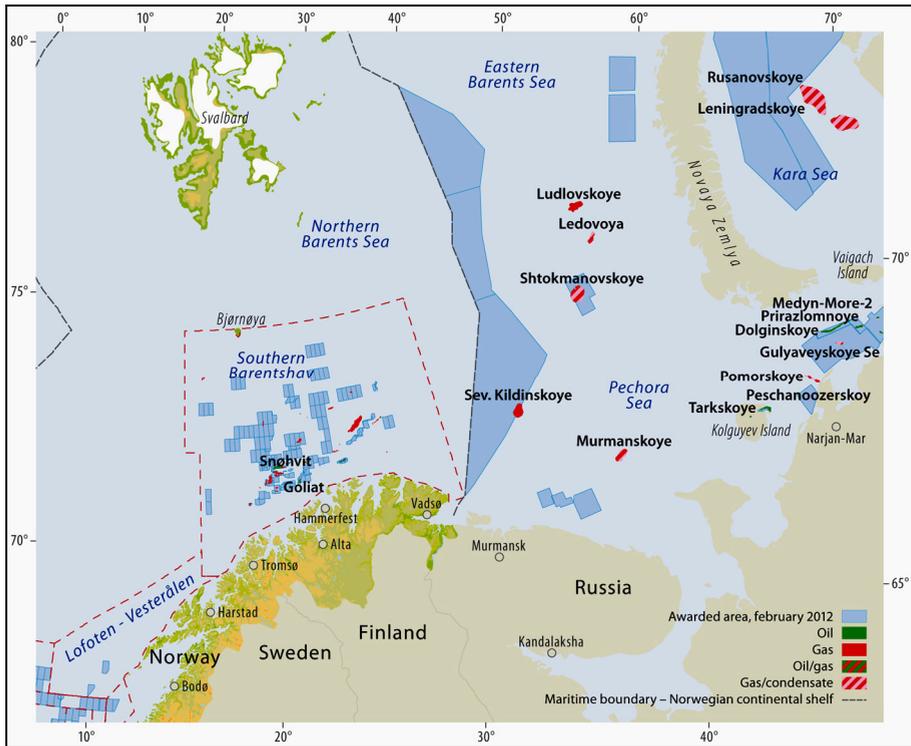


Figure 9.2 Areas awarded for exploration in the Norwegian and Russian parts of the Barents Sea per March 2012. Source: Norwegian Petroleum Directorate

This agreement does not only end forty years of negotiations. In the preamble the agreement makes positive and optimistic political statements for the futures. The preamble says that the parties “desire to maintain and strengthen the good neighbourly relations”. I am after this rather optimistic about future collaboration in the Barents Region, because both the Norwegian and the Russian governments make positive, political statements about the need for future joint undertakings. I see these statements signalling awareness of the win-win-basis of cross-border partnership between Norway and Russia. This means we are well prepared and ready to step into further future cooperation.

Time has now come to use the good political and cultural dialogue we have in the Barents Region to launch more cross-border business projects. The timing is good, because the world persistently demands energy and it is looking north. The global demand will grow in the medium and long term over the years to come. Some are looking for best prices on spot markets and short-term contracts but one global

problem is the lack of secure, environmentally friendly and steadfast providers of energy. This will move Norway and Russia to cooperate in developing national energy recourses, and to keep selling energy on the global market.

We know for a fact that Russia and Norway have tremendous energy reserves in the Barents Sea, three out of the four major exploratory drillings made on the Norwegian side of the shelf last season hit new deposits of oil or gas. The Melkøya plant at Hammerfest is condensing natural gas from the Snøhvit deposit into LNG, the Goliath platform is underway, more gas is waiting in the Shtokman mega deposit on the Russian side, and production is coming on stream from the Yamal Peninsula.

The need of energy in the global market will lead to future industrial development, and push more money to the Euroarctic part of the high north. The Norwegian and Russian sides of this will, taken together in the years to come, see the biggest investments programs in our part of the world. On top of this, given continued economic growth in many countries outside of Europe like China, several large investments are now also made in mining in northern Sweden, Finland and on the Kola Peninsula—investments in our common transport infrastructure are having problems in keeping up with it all.

This is giving us new cross-borders challenges in the north in the years to come. The question is how shall we deal with this, how do we best prepare ourselves?

### **3. MY MAIN ARGUMENT TODAY**

My proposal in this speech is that we need a proactive scientific offensive in the Barents Region. We have to use the strong and positive cross-border experiences we already have in many sectors, such as in our common understanding on the sustainable management of northern fisheries, in order to embark on a wider expansion of joint research to build solid knowledge on many crucial issues both in social, economic and natural science, and of course on the special technologies of cold regions.

You may ask: on what issues do we need improved knowledge, I will then answer: on all issues. In the following I will illustrate my point of view with some examples.

#### 4. JURISPRUDENCE

It is necessary also on my own academic field to develop new systems to meet the cross-border challenges of tomorrow's Barents Region.

One issue at stake is the interaction between business actors. In jurisprudence it is necessary to develop common ethical principles for mutually binding commercial contracts. The national laws on contracts in Russia and in Norway are certainly not 100% similar in all details. Too often this gives problems in a cross-border perspective. With increasing trade over the border in the future, it's necessary to do something to decrease misunderstandings among businessmen. The basic and later detailed development of a catalogue of common ethical principles of contractual law is a project in need of joint academic input.

In jurisprudence, it is also necessary to examine and contribute to the modernisation of the legal relationships between industry and national authorities. This applies equally on both sides of the border, but also to the relationship between companies on the one side of the border and the authorities across it. Among the hot spots today are for instance that it is too difficult for Russian skilled labour and businessmen to get work permits in Norway. Other entrepreneurs claim that the Russian customs barriers are preventing Norwegian businesses to move production equipment and semi-finished goods into Russia. There are many other similar questions about border trade and cross-border regional development where the promoters of expanded business relationships are calling for jurisprudence to study complexities and to propose wise and progressive answers.

For example, conditions are indicating that the current visa regime needs to be evaluated and modernized with the aim to facilitate movement across the Norwegian-Russian border. Today, approximately 95% of all applicants for a visa are granted one. It may be questioned whether the modest number of rejections is reason enough for maintaining a rigid application process in both countries that affects everyone who wants and needs to move across the national borders.

We also need experts to look into, and make forecasts on, how an expanded flow of capital might lead to increased economic growth in the Barents Region.

Internationally legal experts and macro economists are already speculating on the effects of Russia's successive adjustment to the obligations and rights of a full membership in the World Trade Organisation; we need to focus our own best minds on what opportunities this opens in the Barents Region and find out what proactive policy-making we should bring about. According to the text-books Russia's membership should lead to a more open economy, more competition among industrial agents in the Barents Region, and increased industrial activities in a cross-border perspective.

## 5. PROTECTING THE ENVIRONMENT

The European high north is bordering to the Barents Sea—a southern section of the Arctic Ocean. It holds today one of the largest and best managed fish recourses in the world. We must keep up our excellent joint research to get an even better basis for our stewardship, and to understand the moving patterns of the valuable stocks of fish and the basic marine resources of this sea.

The ecosystems of the north are particularly vulnerable. The raw-material industry, and especially mining, typical so-far of the sub-Arctic regions, has had a bad track-record of environmental problems and it sometimes impacts the landscape to an unacceptable extent. But deposits of the residual rock, sand and slag that are separated from the valuable metals during the enrichment of ores and in metallurgical plants are unavoidable side-effects of a metal production that we all need. Deposits of residual matters need to be managed in best possible manners, follow best-practices and international standards; viable plans in line with this are to be made in advance of starting any mining, and funding is to be put aside to restore the land when operations are concluded. Accidents can always result in pollution, and at sea the risk of oil spills is causing concern. We often get reminded of this and it demonstrates to my and many other's minds that there's an increased need for scientific work to preserve the ecosystems in the north.

The continental shelf of the Barents Sea contains, as we know, petroleum. We should not hesitate to get started and to move on with extensive seismic shooting to explore these petroleum resources in the seabed. Seismic work is necessary to map and make strategies on the possibilities ahead. We also need to find new methods to extract and

transport petroleum resources, by shipping and through submerged pipe-lines and choose the method which presents the least possible risk to the environment.

To minimise the hazards to the ecosystem up-north, we should review all relevant research and know-how to identify the best response methods and equipment to handle oil pollution. We need to test them out under extreme sub-Arctic conditions. Today's equipment, including oil booms, should be improved to withstand the weather conditions of the northern seas such as icing, strong winds and big waves. We must also face the challenges of having to collect oil-spills in drifting sea-ice. Moreover, we need social and technical studies to develop a common protocol of communication during oil-spill response operations, so that in critical situations we are able to eliminate the language barriers in the Barents Region.

Through joint scientific work we should be able to establish common ethical standards in many branches of industry regarding the proper treatment of their waste products.

## **6. IMPROVED LIVING STANDARDS UP-NORTH**

The difference in living standards between people in cities and in certain parts of rural Russia is tremendous. This makes rural areas less attractive to young, talented people. Businesses do not flourish in the Russian countryside. This means in turn that commercial opportunities in rural areas are not exploited.

The petroleum industry will be able to change this trend. The slumbering, former fishing village of Teriberka, on the coast of the Barents Sea some 100 km east of Murmansk, is a potential example. The numbers, and the standard of living, of citizens in this rural location would get a boost if and when the development work starts on the Shtokman gas field on the bottom of the sea some distance off the coast at Teriberka.

Other areas will not benefit from such large-scale industrial enterprise. In Norway, we have over many years studied how regional development benefits from the establishment of oil- and gas industry. It is motivated also in Russia to study and develop methods in order to make the living standards of ordinary people raise in the Russian rural north through increased industrial development. We should study

conditions and potentials, on both sides of the borderland, to understand the positive regional effects that increased cross-border travel and trade will bring.



Figure 9.3 View over part of Teriberka, Murmansk Oblast, in June 2010. Photo: Vyacheslav Lobanov, Wikimedia commons

What could be done to encourage anyone to establish small businesses in northern, rural areas? In Norway, we often run feasibility studies to guide local business initiatives. It would be natural for universities and colleges in the Barents Region to collaborate on developing a methodology for such studies suited for this area, and perhaps with the help of their students conduct field studies on related matters outside the major towns of the Russian Barents Region.

It would also be interesting to see research on what local financing institutions and funding mechanisms there are, or could be created, to further local initiatives, and to reflect on how wealth from any production in the high north could be encourage to stay locally, and increase the local standard of living.

From my Norwegian perspective, I would like to engage through the Barents and other cross-border work to improve the living standards in rural areas of the Russian northwest. This would in itself build the demand for further expanded contacts and trade across the borders of our region.

## **7. HOW TO ACHIEVE A PROACTIVE PROFESSIONAL DEVELOPMENT IN THE BARENTS REGION?**

To master the challenges of tomorrow, we must provide solid knowledge to the stakeholders and the future agents in the Barents Region.

The universities and colleges have many of the potential resources needed. Young people are available and ready on the campuses. They are motivated to learn the skills they need to use in the future. With that spirit half the work is already done.

Educational institutions must be proactive and generate professional skills for the Barents Region at all their faculties. Systems for student exchange across the Norwegian-Russian border must be expanded even further. The same should be said about the opportunities and programmes available for cross-border interaction among experienced professionals in most branches of society.

Competence must be built in the Barents Region!

An important task for the universities and colleges will be to popularize the findings of their research. The results must reach out and find their way to those active at the first line of developing the Barents Region; and feed-back and experiences of their work must find their way back to the research communities.

This has been a short overview on some quite large issues. I have mentioned the challenges, and presented some suggestions that might move our steps in the right direction. I hope I have managed to catch your attention and raise your enthusiasm for pulling together in a good Barents spirit to work for a sustainable and prosperous development of our future north.

Thank you for your attention!

The Barents Institute of the University of Tromsø and the Centre for North European and Baltic Studies of the Moscow State Institute of Foreign Relations (MGIMO) jointly launched, in 2011, the so-called Futures of Northern Cross-Border Collaboration Project. It brought together academic researchers and public and business managers with different specialities into a multidisciplinary network. This publication is a selection of the presentations held by the group at a round-table organised at MGIMO in 2011.

In the first part of the book the “New North” is discussed, i.e. the new geopolitical power-field that has resulted from Arctic melting. The latter causes many environmental problems but on the bright side of things, at sea, diminishing ice opens new routes in the Arctic Ocean that will be important to international shipping. This also facilitates access to off-shore fossil fuel extraction on the large continental shelves of the circumpolar North.

The second section of this book discusses the various challenges that are now urgent to address. Sound stewardship and sustainable economic growth can only be based on proactive development of knowledge through research, by continuing the successes of cultural and professional partnerships in the European north and by expanding the scopes and availability of cross-border programmes in higher education.



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